

A combinatorial approach of comprehensive QTL-based comparative genome mapping and transcript profiling identified a seed weight-regulating candidate gene in chickpea

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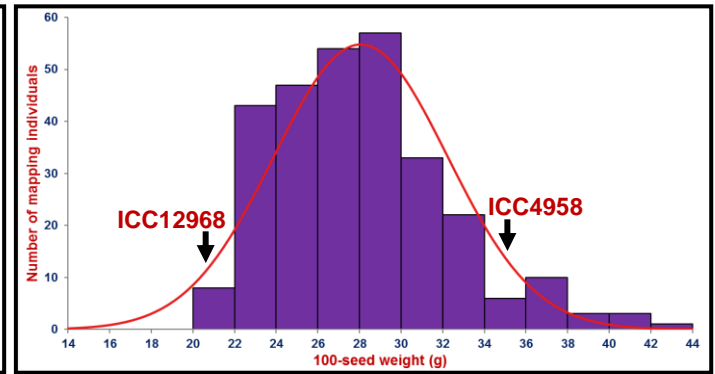
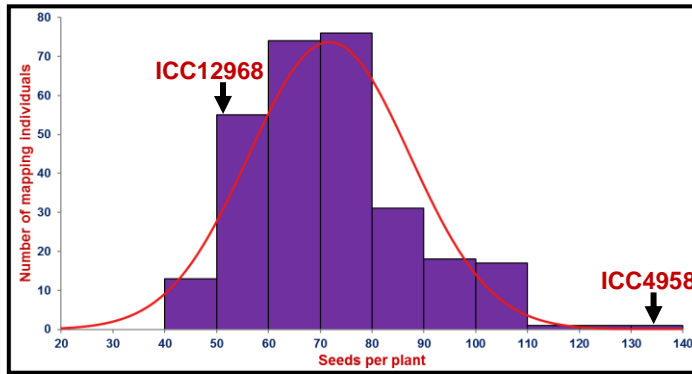
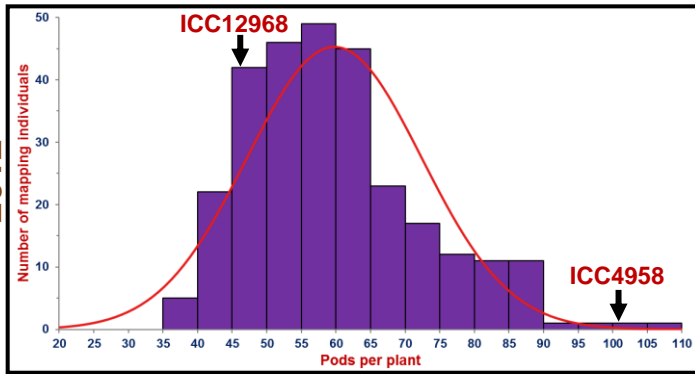
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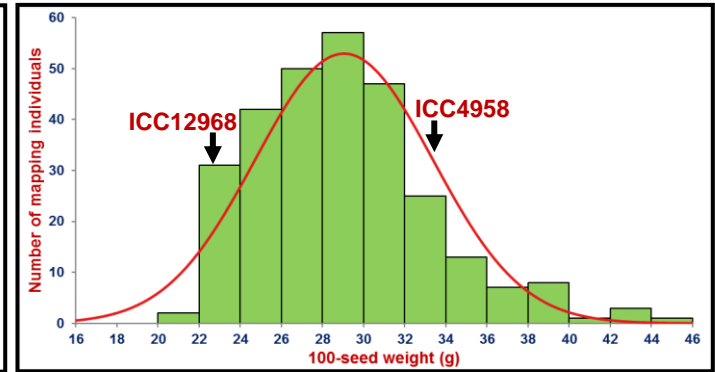
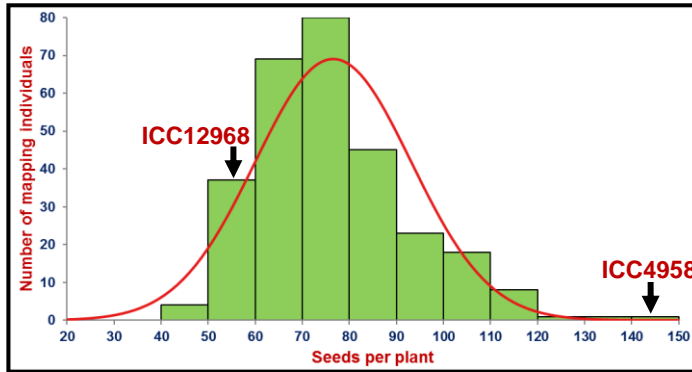
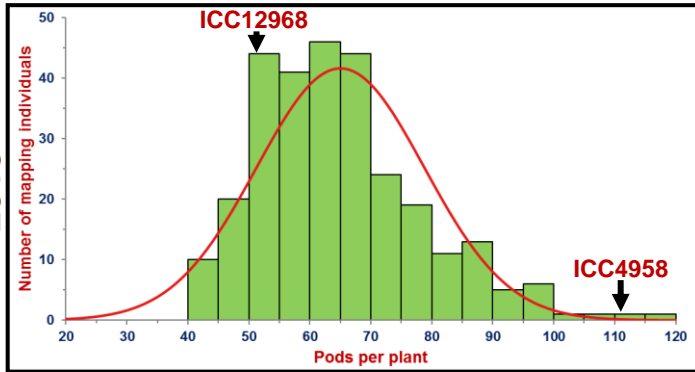
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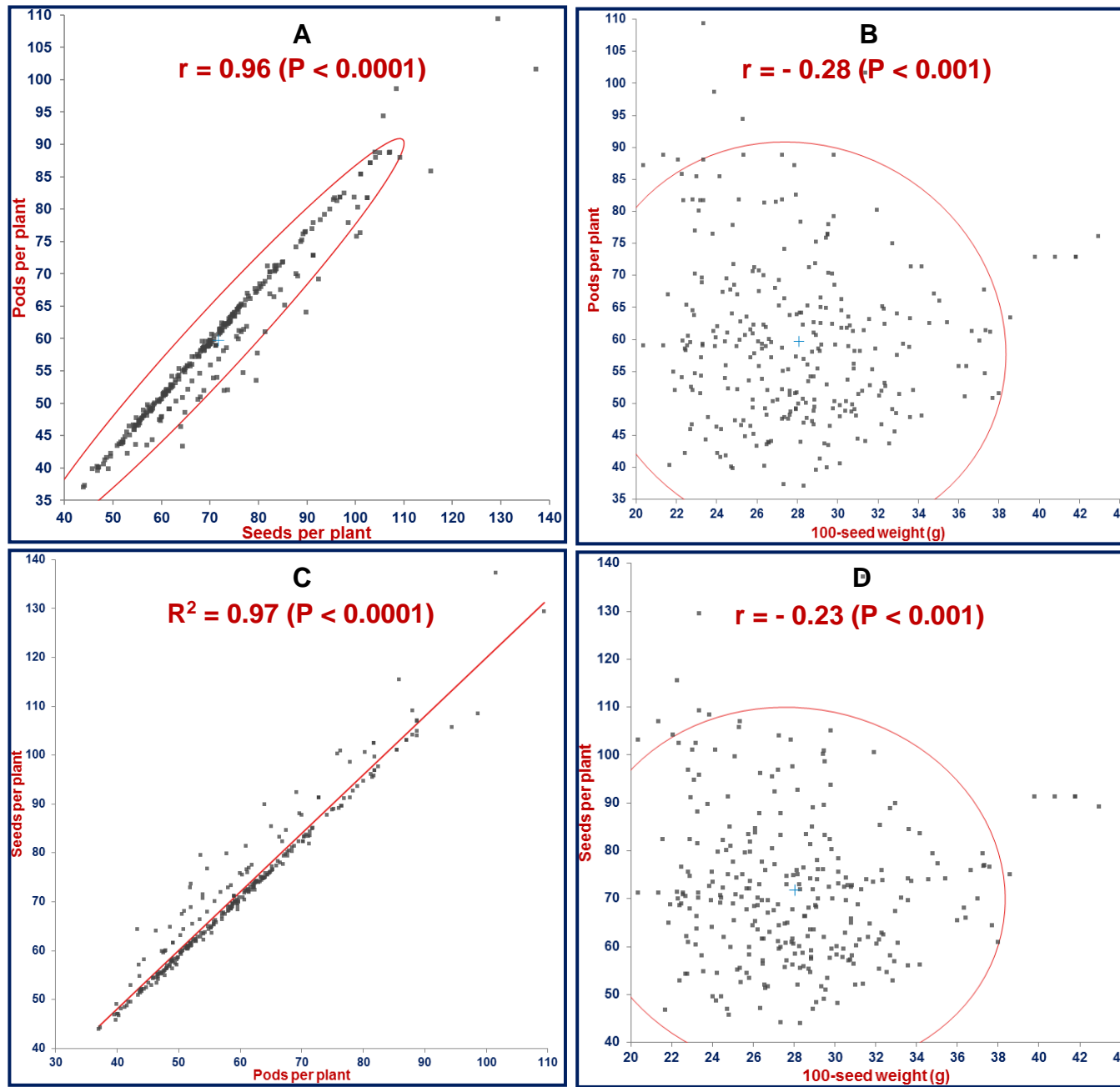
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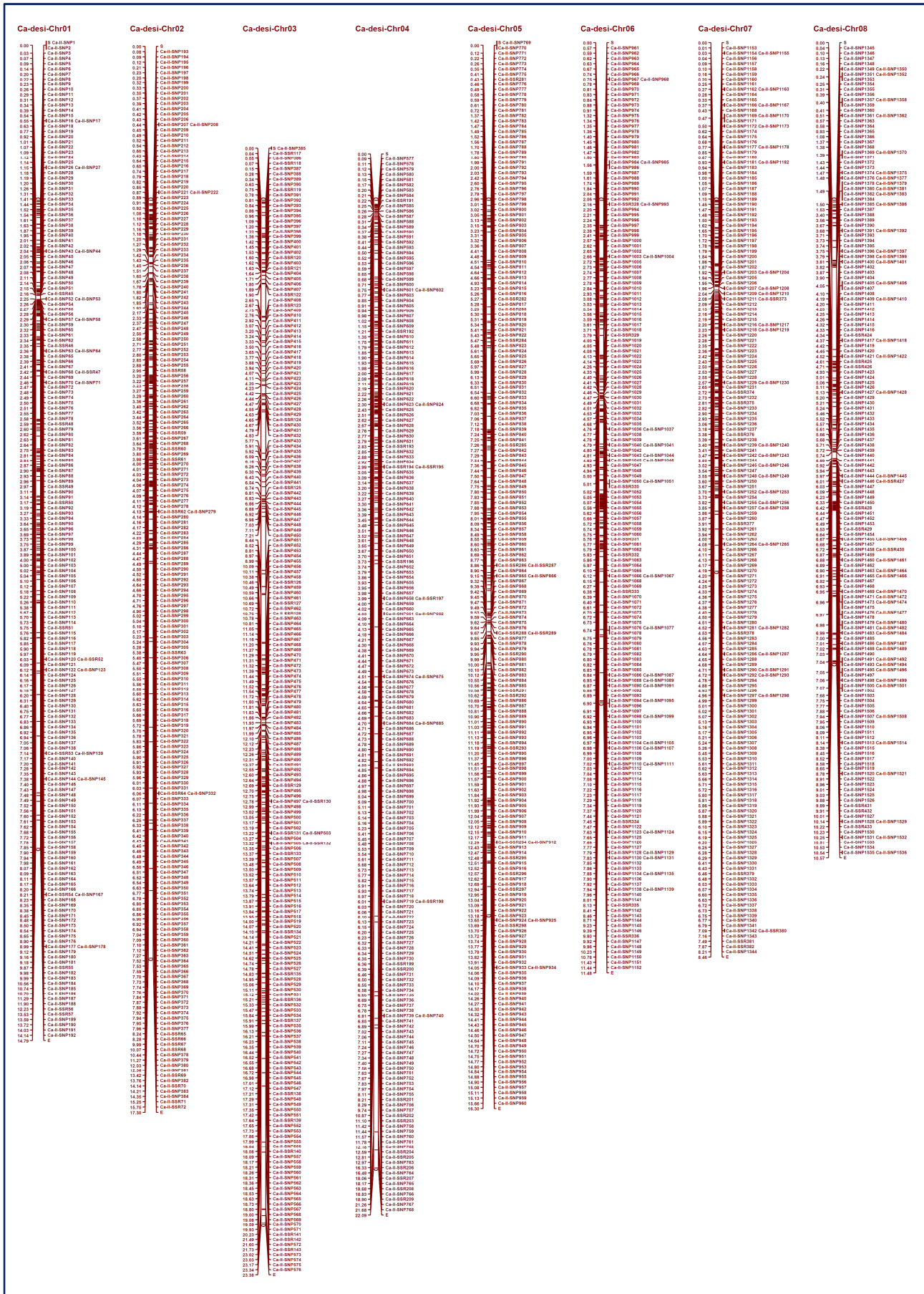
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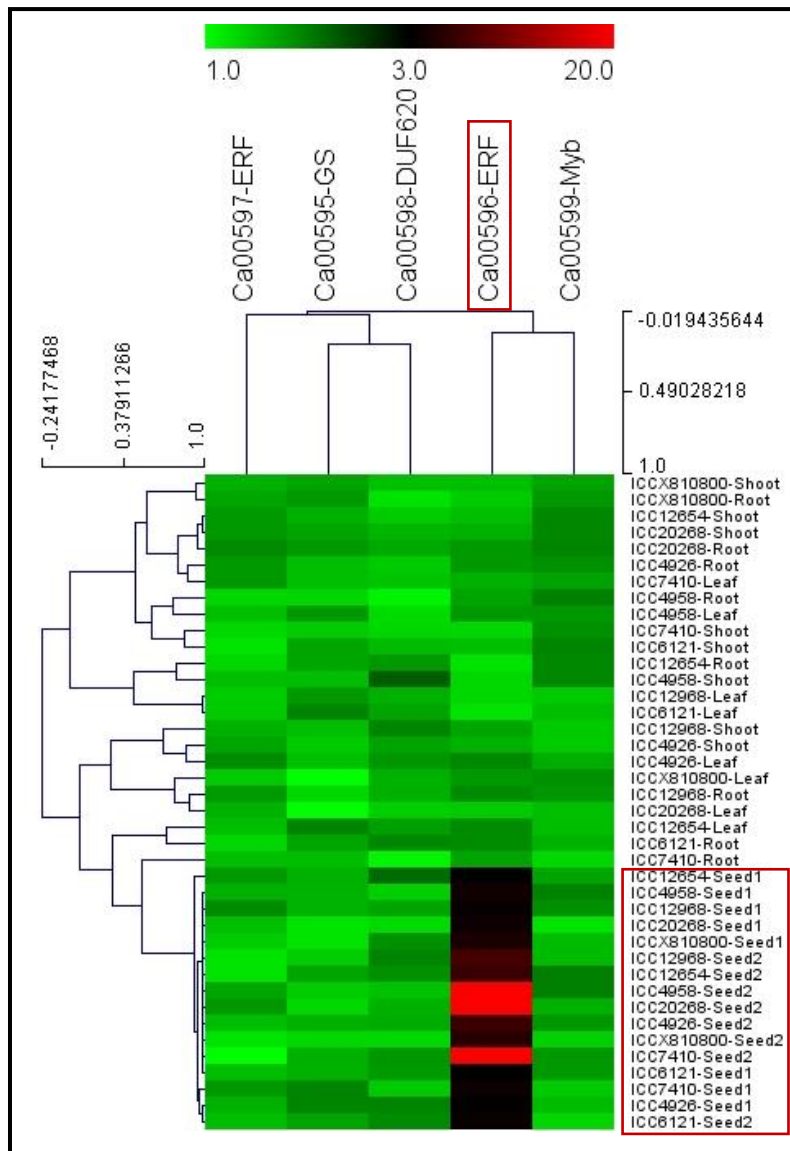
Supplementary Fig. S1: Frequency distribution of three quantitative agronomic traits, pod number per plant (PN), seed number per plant (SN) and 100-seed weight (SW) in 190 F₄ mapping individuals (ICC 4958 x ICC 12968) and parental chickpea genotypes across two experimental years (2012 and 2013) depicted a goodness of fit to the normal distribution.



Supplementary Fig. S2: Pearson's correlation coefficients estimated among three quantitative agronomic traits (PN, SN and SW) in a mapping population (ICC 4958 x ICC 12968).



Supplementary Fig. S3: A physical map of *desi* chickpea constructed using 2008 markers (including genetic and genomic 1536 SNP and 472 SSR markers) showing their genome-wide physical distribution over eight chickpea chromosomes. The physical distance (Mb) and identity of the marker loci integrated on the eight chromosomes are indicated on the left and right side of the chromosomes, respectively. The identity of markers mentioned on the right side of chromosomes that corresponds to the marker IDs “Ca-IISNP” and “Ca-II-SSR” as mentioned details in the Supplementary Table S1. The size of the chromosomes (Mb) is based on the draft genome sequence (Pseudomolecule V1.1) of *desi* chickpea (Jain et al.⁴⁷).



Supplementary Fig. S4: Hierarchical cluster display illustrated the differential expression profiles of five selected *desi* genes underlying a major SW-associated QTL (*CaqSW1.1*) exhibiting pronounced seed-specific expression at two seed developmental stages (S1 and S2: Seed development stages 1 and 2 occurring at 10-20 and 21-30 days after podding, respectively) compared to vegetative (shoot, root and leaf) tissues of eight low (ICC 12968, ICCX-810800, ICC 4926 and ICC 12654: 100 seed weight 8.9-20.8 g) and high (ICC 4958, ICC 20268, ICC 7410 and ICC 6121: 30.7-47.0 g) seed weight contrasting chickpea genotypes as well as parents of mapping population. The colour scale with green, black and red colours at the top signifies the low, medium and high average log signal expression values of the genes, respectively. The genes and tissues/seed developmental stages of the chickpea genotypes and mapping parents used for the expression profiling are mentioned on the top and right sides of the expression map, respectively. Details on the genes are provided in the Fig. 5. The endogenous control elongation factor-1 alpha was used in quantitative RT-PCR assay for normalization of gene expression values across different tissues/developmental stages of genotypes used. One seed-specific *ERF* TF gene revealing a higher differential up-regulation in eight chickpea accessions during seed development are indicated with red boxes.

Supplementary Table S1: Summary of SNP and SSR markers mapped on an intra-specific chickpea genetic linkage map (ICC 4958 x ICC 12968)

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1	0.00	Ca-desi-LG(Chr)1	262	TTTTGAGATACTTGAGTATGATCGAAAATATTGATCTTTTGCTTGGTGCTGATTGTTGTGTTTTGTTCTTCAACTTGACGCTGCATTTATAGACTCCAAG	A	G	TTGATGCAGCTCATCAATCTTGCTTTTGGCAGAACTTATCCAACAACCTTTTATGACAGTTGGTCCTTTCCAACCTGACACATGAGCTGTCTAAGCC T	NA	NA
Ca-II-SNP2	0.95	Ca-desi-LG(Chr)1	509	GTACTTTGTGATTTGTGTCAGTATGTCAGCCTTGA GTATAGGATGAATATTGTTCCAGGATTGATCTTTGTTTTCCAGAAGCTTCAAGATCAATCTG	C	T	TTGAGTGTGTTAAAAACAAGATAGGAATCAAACA TCACAAATCAGATCAAAGAAAGCAATTCTGGAA AACGCAGATTGATCTTGAAGCAGTTCTGGAAAA C	NA	NA
Ca-II-SNP3	2.85	Ca-desi-LG(Chr)1	27315	TCCGCAGAAGTCAGGCAGCTAGTAGACCACCTCA GTGAGCAAGCCAGGGAGGTGGCCAGTGAAGCTT CAATGGAAAAGAACCAGAGCTCTTGCAATGT	A	G	TTTCCAGAAAATTCAGGCTCGTATTAATAACC AGTATAACCCCGACCTTTTGAGCAAGCGCTAT GGAGATAGCGAATGCTAGCGTTAGCCCAGCCA TC	NA	NA
Ca-II-SNP4	3.80	Ca-desi-LG(Chr)1	66474	GTAGAACTCTGATACAAGTTGTCTATACTAGGTTT GTCTGGGCTATTTTATCTTGGGACTTCGTGGTTAA TAATCTGTCTTGACAAATTTGAGCAGTGCC	G	A	TGTTTTGAGTTTCAAAAAATAATTTCAAATAA ATTTGTGCAATCAAAGATATTATTGGGTTGAGT CCGGAGACTAAGTTGCTTTCTTTAAGACGTTTTG	NA	NA
Ca-II-SNP5	4.75	Ca-desi-LG(Chr)1	93741	CAACTACAGATGGGTCCTAAATGCAAACAAAAG TTTGGAAGGAGCCCTTACCTTCGCGGTAGCTCTA ACGTGCGATTACGGCACCGTGAGTAAATCCG	A	G	TAAACGTCGTTTCAAGAAGTGATAGAAGGGAAG GTTGCTCACCTCCGTGCTACGGTGCTAGTGAA CTAAATTTGGAAGCGGCGTTGCGAGCGGAGATT TTA	NA	NA
Ca-II-SNP6	5.70	Ca-desi-LG(Chr)1	137009	TTCTTTTGGGTTGCGTTTTATTTTTAAACCGGAAGA CTGTAATACTTTTGTATGTTAATATTTGAATTCA TGGATTGAGAACTTTTTCCGCTGCTTGAA	T	A	TTTTCAAAGCGAGGGTGTACTTTTTTTTCAAAA GAAATTAATAAAAACAGAGAAATAAATAAGGTA ACACCTTTGGATAAGTAATTAAGTCATTATAAT	NA	NA
Ca-II-SNP7	6.65	Ca-desi-LG(Chr)1	199705	AGAATAACATATTTTTTTATGAAGTTCAATTTA TCTCGTTGATTCTGGGTATCCATATACTAGAGGTT TGCTTCTCCTTATAGGGGTGAAAGATAT	T	C	AAACAACGTTCAATTGTCATCCGTAGAGATGAG TGTCTGTAGTTAAATAACTCTTCGGGACTCCTA GGTTGTCTACCTTGGCCTTTATATTTTTGGGCA T	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP8	7.60	Ca-desi-LG(Chr)1	216154	GCACTTGGTTTGACTCCAATTGGACATCTACAAC CAAGATATGGCTGAAATACTCTACATATGTCATGT TGATTTCTCACCAAATTCAGCACTGCACT	G	A	ATATTTTGTGTATTTTGTCTTTGAGTTAATAA AATGTTTTGTGTTTTATTTTCATTGATTAAGTATG AATTTTTCGTAATTTTACATTGCGTTGTGTTT	NA	NA
Ca-II-SNP9	8.55	Ca-desi-LG(Chr)1	232647	CATGCTTCACATATTTTATCTTTATCAAATTGAGT TTGGGTAATCCTCTAACATGATCTAACTTTGAGAT TTTTGAAATTGTTTTCATGCTGATATGTC	T	C	TAGAAAGAAAAATTTATACGTTTTATATCTTGAA GAACTACCTAATGAATCTTGTTTTATGTCATCA ATAAAGATAAATGGATATGGCATAAAAAGAGCT	NA	NA
Ca-II-SNP10	9.50	Ca-desi-LG(Chr)1	263358	TGCAAAGTAGAAGTTTGAAGGAGCCCTTACCTTA GCGTTAGCTTTAACGTGGTTTTCCGGTACCGCGA GTAATTCGGTAAAATCTTCGCTCGCAACGC	C	A	ACCCCTCCGTTTCTTCTAGATCCAAACCTCATT TCTCAAAGAGATAGAAGGAAAGTTGCTCACCA CCACACTACGGTGTAGTGAACATAATTTGGAAG C	NA	NA
Ca-II-SNP11	10.41	Ca-desi-LG(Chr)1	290259	TTGAAAAAGAAAAATTTGTCATCATCTTCTCAACT CTCTAAATCCGTTATTTGTTTGAAGATCTATGTGA CATACTCTGATCATGATATCCTCTACTCT	A	C	GATATTGATTCGCCATTAACCTTGTCCAACAA TAGTCCTTGTAAATGATTATGTGTATCTTGATAT GGATGATTTTGTGTATCTTGATATGGAGATAGA	NA	NA
Ca-II-SNP12	11.32	Ca-desi-LG(Chr)1	307564	GTTTTACTACTACCGTTTTTGTGTTATTACTA GTTTCAGTTTTATGTTGATGATTATATTAAGTTTT TTCCATGATTATCCTTTTATATGTTGCC	A	T	AATATAAAAAAGTATATGACCAAGACGTTCTCT CCACTGAATTAATAAATAAATAAATTAAGG ATTTCAACTTGGGTTACTTGTGTTGATATGA	NA	NA
Ca-II-SNP13	12.23	Ca-desi-LG(Chr)1	342387	TGTTTGTGTTTGACTGGCTTGGCCTTGCCTTTCG GAAATCGCAGTTATTACAAGTTAATGAGTCTTGAA GTTCAAGTTTGAGAGAAACCTCGCTCTGATA	A	G	TTAATTCAAAAATTTACTAGTACTAAGGTTTTTC ATATAAAAAGTCATTTGTAATTACATAACTAAAA TATAAATTACAACCTCTAAATTCCTGGTATCAC	NA	NA
Ca-II-SNP14	13.14	Ca-desi-LG(Chr)1	388218	CCATATGCTTCCCTTGTATATGCCTTTAAGCAAGTG CCACAAGTGAGATTGAACGTCGTCCAAACAATGTT TTTCAATCATACTTGTGCAACAGCGGAGC	G	A	AAGGTGTTCCAGATAACATTATGAGACGGGATAT GGACAGGCATTGTATAACTGTTTGTCCAATGAA GCTTGTAATTTGCTTTTTATGCAGTCGGTTG T	NA	NA
Ca-II-SNP15	14.05	Ca-desi-LG(Chr)1	544347	TGCAAAGTAGAAGTTTGAAGGAGCCCTTACCTTA GCGTTAGCTTTAACGTGGTTTTCCGGTACCGCGA GTAATTCGGTAAAATCTTCGCTCGCAACGC	G	A	CTGCAACATCCGCAGAGCAGTGTATAACTTAGC TGACAGATTCAAGTCTACTTCAGTTTGATGTTG GTCAGGAATGTCAAAGGGAAGATTGAGTTCC CAGATGTCAGAGAACCTTTGGCTGGAGTTGGA TCACATTTCCCTGGCTTTGATGCTTTCACAAGA GACGGGAATCTCAATATAATTTGTTGCCACCA AACAGCACATTCTGAACCTTTGCTTCATTTACC TTCAATCTTCATCATCTCATCCATAAAAATCAC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP16	14.96	Ca-desi-LG(Chr)1	547496	TTGAAAAAGAAAAATTTGTGCATCATCTTCTCAACT CTCTAAATCCGTTATTTGTTTGAAGATCATGTGA CATACTCTGATCATGATATCCTCTACTCT	G	A	GCACGACTCCAGCAGAGCCAAATAGACAGCAT TGAACACCCATGCCAAATAATTACTTGGGTGTA GAGGGTGGCTTCTGACAATTTTGGGTGTAGA GGGGTGGCTTCTGGTTTGGGCTTTATTTAAGT TTGCTCCATGCTATTGTCTGTTATGGAATGTT GATGGTAGAAGAGCTCATATGTCCAACCTCCCT AGTGATATACAAATCAAG	NA	NA
Ca-II-SNP17	15.87	Ca-desi-LG(Chr)1	549097	CAGTCATTGAAAGTCCATTTTTCTGCCACTGTTCT AACAGCACATCTATAGCTTCCATTTCTGCATGTCT AGTAGCCTGTAAAAATGATTTAGCAATAA	C	T	ATATTTTCATCACTTTATGCAATTCCTAATC ATGCATTTGTTTTAGATTTTCTTACTACTATTA TGTCTTTTTCGTACCTGTGAATTTCTTCTGTT	NA	NA
Ca-II-SNP18	16.78	Ca-desi-LG(Chr)1	627392	TTCTGACTGTTCTCTCCTAAATAGTGAATGTTTGG TTGAGCTTGTATGGGCTTAACTTATTGCATAAATT TGCATACATGCTTGAAAAACTTATGAAAA	G	C	AAATCCAGCATAAACTGAAAACAACCTTATGACA ATAAGCAAGCAAACCTGGAGGAGCTTTCTGAAAA TAAGTTGAAAACAACCTTATGGAATATCACAAAGC T	NA	NA
Ca-II-SNP19	17.69	Ca-desi-LG(Chr)1	770437	GCTCATTCTCATTGAGTGGTTACATTAAGGT TCCTCCATTTTTTAATTGAATTGCACCTTCACTC TTCTATTCTAGTAATTAGTAACGATTAAT	T	A	TTATTTCCAAACGCTGTCTAGGATAACTCTTTA TAACAACTAATAGCTTATATGAAAATTGTTTGAC TTAATGATTTATATGATAAGCACTTATAACTT	NA	NA
Ca-II-SNP20	18.60	Ca-desi-LG(Chr)1	923863	GACTTTGTGATGGCACTAATTGATTCTTCTTTTTC ATCTCTTACTTTTACCCCATACAACCGCATACAA GCCACATACTATTAACACTGCTCCAATGAT	G	A	TTGTTTACCTAATTTTTAGTTGAATAAAAAAGT TATTATGGATCAAATTGATTGATTTAATGGCT CACTTGAACCTTATTGATTTGTTAATTTTCAG	NA	NA
Ca-II-SNP21	19.51	Ca-desi-LG(Chr)1	1009711	CTTATGAAATATTAATCCATGTGTTAAATTTTCTG ATGAAATCATTTATTTTTCTTCCATCTATGTCTG CCAATTTTCAGTGAATTTGTTGAAGCCT	T	C	ACAGGATGCAAAATCAATACCACAATCACTTAA TTTTCTTACAACCTTTCGTAGAATAGGCTCCAG TGACGAGCAAAGTTTCTGCAGACTGTCCACCTT C	NA	NA
Ca-II-SNP22	20.42	Ca-desi-LG(Chr)1	1066513	GACTTTGTGATGGCACTAATTGATTCTTCTTTTTC ATCTCTTACTTTTACCCCATACAACCGCATACAA GCCACATACTATTAACACTGCTCCAATGAT	A	G	AAAGGATAAAGATAGATAGGTCCCAAGACAAT TGATATACTTCTCACTTCTAGCAAGGAAAC TCAATTCGCCAAGTGGAAAAGAAAGAAAA ACTGATGATTTCTTACAACCTCATAGATCATG TCTTCAAACAACATTTCTATTCAAGAATCCAAC ACTACTATACAACATAGACAACACAACAAGC CGAATAGCAGAAAAGAGTAAAGTACATAGA ACACAGCTCAATTCAGTACTGCCCCAGAAAA TCTAGTGAATAACTAAAGAAAATAGTAAAAAG ATAGATGGGAGATAGAAGAGAACAATTTAATA TAAACATCTCCATAAGTTCACTAATTTATGTTTT	NA	NA
Ca-II-SNP23	21.33	Ca-desi-LG(Chr)1	1089631	TAGTTTTTGTGTTTTTGTGTTGAAACGGTCTT TCTTTACCCATGGGCAATGAGTCTCTCTTTCCG GACAACACATACAAAGAGACCCGCCAACA	G	T	TCTAGTGAATAACTAAAGAAAATAGTAAAAAG ATAGATGGGAGATAGAAGAGAACAATTTAATA TAAACATCTCCATAAGTTCACTAATTTATGTTTT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP24	22.24	Ca-desi-LG(Chr)1	1120966	TGTTTAAATTATTTTTATGTCCTTTTTTTTTTTGTTGG TGAAATTGCATTTCATTGAGTCACTTTAATGACA TTAACACCCTCTAATTTGAGAAAACAA	C	T	ATCAAACATGTTTTTGTACACTTATATATATT TCACTATGTTCTTAATAGCACAAATTAATATATAT ACACAATTTTTTAATAAGTATAGAAAAGGTC	NA	NA
Ca-II-SNP25	23.15	Ca-desi-LG(Chr)1	1136888	GTCCTACTAACATTAGTCTCTGAGTTTGTAGCAG GGGAAACCATGGTTAATTAGGCTCATTGTCACATC ATGTCCTTCTCTGCTTCAAAAATGAACAA	T	C	CAATATTATAGTTTGCAAGTGTATCTGTGACCTC AACTGCAAAATAGAAGTATGATTATTATTCGAAG ATTTACCTGCAAGTTGGAAAATGATAAATGTGT	NA	NA
Ca-II-SNP26	24.06	Ca-desi-LG(Chr)1	1145410	TTTTGCAAAATACGTGCCACATGAACTGAGGGC CACAAAGTGACATTGTGTTGGTGAGAGTGGTTTTG CAGCTAGGACAAATGTAGGTCCTATCAAGAGC	A	G	CTACCAGTACTCTGTCCAGAAGGTAACGAGA AACTGAAGTTAAAGACACTTTCCCTGTCCAGT TCACTGAAGTACTAGTGAGCAGAAAAATCCA A	NA	NA
Ca-II-SNP27	24.97	Ca-desi-LG(Chr)1	1147254	TTGGGACGTGAAGTGGAGAAGTGGAGTATCTCAT GAGAATCATTGAGTTAGTCATGGGCAGAGCAGAA AGATCTGTTCTCTAAATGAGCCTAGCTCTGGG	A	T	ATATATATATATATATATCTGATGATTGCCA ACATATTACAATTCATAAATATATTTTTACTCTA ATTCTTGAGACAGAGGAATGAATATTCCTGC	NA	NA
Ca-II-SNP28	25.88	Ca-desi-LG(Chr)1	1184107	TACTGGACTGGACAAGCGATTTAACATTATATGT GGAATAGCTAGAGGGCTTCTTTATCTGCATCATGA TTCAAGACTCAGGATTATCCATAGAGATCT	C	T	ATGTATTTGCTTCTGTTGATCTTTGCCGAATAT TCTAGCCATCCCAAAGTCTGATATTTAGGGTT CATTTTCGCTGTCAAGTGAAGTGTGCTTGCCTT	NA	NA
Ca-II-SNP29	26.79	Ca-desi-LG(Chr)1	1188582	GTCCTACTAACATTAGTCTCTGAGTTTGTAGCAG GGGAAACCATGGTTAATTAGGCTCATTGTCACATC ATGTCCTTCTCTGCTTCAAAAATGAACAA	G	A	GGCGTCGAGATTCGAGTAACATCATGGAAAAG CCAAGATGATCCATCAAGTGGTATGTTATTT CAGTCTTGATTATCATGGTATCCAGATATTTAC TTGTGGACAAGCAACAAGGGTGTGTTAGAAGT GGATCATGGAATGGTGAAGTTTTGGTGGAGT ACCAATACTAAAT	NA	NA
Ca-II-SNP30	27.70	Ca-desi-LG(Chr)1	1203450	GTTACACCTTATGGTTACAGGAACATATGCAGGGGA TGGCTCAAGACAGCCTAGTGAGTTAGAATTGGCT CAAGCTTTTCATCAGGGGAAGTACTTTGCTGG	A	T	ATACATAATTATAAATGACAATATGTTAAGTGG TACATAACTTAATGAAAGATTGAAGGACATA AATCATTGTGGTCCCTGAGCTTCTTAGCAAT	NA	NA
Ca-II-SNP31	28.61	Ca-desi-LG(Chr)1	1262058	TTGGTGTTAGGGCTTTGGCTTCTATCCACTTAGG TCCAATAAAAAGGTAAGTGGTGAAGCATGTTAC TGCTATGTTGGAGGACTTTTATTCGTCA	T	A	GTGAAAGCACATTTGAGCTCTGGTAGAGTCTA GTATTTTCAGATAGACAACCTCAAAGTGAACA ATGATACCATCATTATCTGCATAGAGCCATTCT CC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP32	29.49	Ca-desi-LG(Chr)1	1306596	GGCAATCGATTGAGTGAGTATTGAGCTCCAGGT TTTAAGCCAATCGATTTCCAATCGATTTGGTCGA ATATGAATGAGTCCCTGACTTAAGGCCAAT	C	T	TGGATGGTAGACAGGGACTTGGCCAAATGGAC AAAATCGATTAGCCAATCGATTTGTAATCAGTT TTCGAAAATCATTACGAAATCGATTGCCAAT C	NA	NA
Ca-II-SNP33	30.37	Ca-desi-LG(Chr)1	1413807	AATGGTCATTTTTCTTCTTTCTTTATGGCTACCT TTTTGAGATTATTACTGCTACAACCTGTAAGATTT TTTTAGAGAGCTAATGAAAACAATTTAT	G	A	TAAAATAAAGTCATACTTTTCTTATATAAACTAT AAGTTGTTTTTAACTATCCTAGAGAGATTGT AAAAATAAATTGAAAACAACATATTGACATGT	NA	NA
Ca-II-SNP34	31.25	Ca-desi-LG(Chr)1	1440076	ATTTCTCAAACCTCGTGTGATGATACTCACTACCT CCATTTGTCCTTAGCAATTTGATAGTTTTTCCAATT TGTTTTCAATTTTCACTTTGAAATCTT	G	A	CACTGGGAGGTAATAAGTACTTCATAATATTTG TTGATGAATTTAGTAGAATATTGTTGATTTATTT GATAAAGACCAAAGATAAAGTATTTGAAATATT	NA	NA
Ca-II-SNP35	32.13	Ca-desi-LG(Chr)1	1524692	AATGGTCATTTTTCTTCTTTCTTTATGGCTACCT TTTTGAGATTATTACTGCTACAACCTGTAAGATTT TTTTAGAGAGCTAATGAAAACAATTTAT	G	A	GCGATTTTTACCAAACAGTTCCTGGCCCTC CTGTCCTGCCTACGATCTCAACTGTTCTGTTTG CTAAAAACCATGTGGCAAGAAAATGAAATGATA GAAAGCAGAACTTGGGGAGTAAAGGCAGATTT GGGTAAATCTAAACATTGCAGCGTCTATTTGG TTTCAAAAAATTATTTTCTTTCTGTTATTGCTT TTATTTGCGATACA	NA	NA
Ca-II-SNP36	33.01	Ca-desi-LG(Chr)1	1536229	CTATGAGTCTTGCCATACTATCCTTTTTCTCCTTT TCTGGTAGTGCGGGTGCATGCTTTCTCTCCTC CCAGTGCTCCTGCCAACCTTGATGAACCA	A	G	TATTCGATTCAAAGGAAAGATGACATAAACAAA GTATGTACTTGAAAAATTCGATGGGAAGAATGA TTTTGTGTTACGGCGTCTCAAGATGAAAGCGTT G	NA	NA
Ca-II-SNP37	33.89	Ca-desi-LG(Chr)1	1609264	AAACTCAAATGTTAATTTTTTCCCTAATCTGTAA TCATCTATTCCATACATCTGTTACTATTACACAAAT CATGCTCTCATGATGTCATAGGTGGTT	C	T	TTTACTTTTCGGGTTAAAATTGTCGACAAGAA GGTCCTCATCCCAAAGAAATATAAATTGTAGT CGGCAACTATATCTGGATGCAAAAACCGTTTTG C	NA	NA
Ca-II-SNP38	34.77	Ca-desi-LG(Chr)1	1628335	TCGGATTAAGATGTCAAATATTGATTTCCCTCCCT TAGTCAATCTATTTCTGCATTTCACTTCTTTTATT AATTTCCCTTTTTCTTGTTTTTTATTC	A	T	TGTGTTGACACAATATTAATGAATCCTTCATG AAACAATACATAAAAATGTTAGAAGTGTATGAT GCTAATGGTATAGCCAAAAAGGAGTCAGACAT	NA	NA
Ca-II-SNP39	35.65	Ca-desi-LG(Chr)1	1870704	AATCGATCGGTGGGTTTGTGAGTCATTGCGAGTG GGACTTGGTGTGGAAGGTATGGTGTAGAGTG CCAATGATTGCATGGCCATTGTATGCAGAGCA	G	A	AAAGTCTTCAGTTGAACTTCCAGTTTGAATGGC CATATATGTAGAGTATGAAAATGTAAGAAGTG ATGTAATAATTAGGCTACAAGTCCATGATAGCAT G	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP40	36.53	Ca-desi-LG(Chr)1	1946438	GCCTCATTCCCACCTACCTCTAGAACATATTTTATTT ATTTTAATTTGATTGTGAGTGAATAATGTCATGAG ATTTATTTTCATATATTATGTGCACCTTCTT	G	C	TGTACACCACCATATGAAGCCATGAACTCAACA GGAAACACCCACAACCAACATTGCATTACATCT GACCTCCTTTTCATCATCACACATACCCTTGTA T	NA	NA
Ca-II-SNP41	37.41	Ca-desi-LG(Chr)1	2008908	TGCTGTGATTGCAGAATGTGGTGATGCTTGTTTA ATACTCAGAAATTGAACTTCCACAAGGATGCGG GTAACCATTTTTTATTCAAATTCATTAAG	A	G	ACCAATCGACCAACCTAATGATGCATATTGCAG TTGAGCTTCAAACCTATAAAATAAAATAAAAGC AATGAAATATTGGCATGATTTATATTACTATAT	NA	NA
Ca-II-SNP42	38.29	Ca-desi-LG(Chr)1	2019308	AAGGCCATTGATATTTCTGGTGTCTCTATGCTGGT AGGTTTTCTTTATAATGTCCATGTAGAGAAGTCT TTCTTCTTTTGGCTACTATCATACACTTAT	C	G	AACATGAAGTTAGAAGATAAAAAAGTTTGAAA TGTGCTTGAAGTTCCTGTTTAAAGATGGTTGCT TTCAGTCAAAATTTTCCCAATAATAACAACG	NA	NA
Ca-II-SNP43	39.17	Ca-desi-LG(Chr)1	2036194	AACCACATTTTCATTCCTGAGACTGAAAATAGTTAT GGCTTATATGGCCATGATGACTCTGATCAACTTCC TTCCACCACCACTGCCACTTACCATCCTTC	C	A	GGTATTCTCAAAGTGTCCTTGTGTAATACTT TGTGTTATATGCATCATTATTGTAGTACTTGTTG TTGATTTTGTGGTGTCTTCAAATTGAGTCTT	NA	NA
Ca-II-SNP44	40.05	Ca-desi-LG(Chr)1	2040493	TATTTCAAAAATTAGTCCAATTTTTCTTTGAAAAA ATGGGGCAGCCCGAAGTCTTGAGGGTTAGCCCG ACCCGACCAATTTGTAACCTGATCAATTGG	A	G	ATATGTAGAGCTATCAAAATGGTGTGGTCTATT AGCTCACATTATAGGTCATCAGATTGTAATAAAA GTTGATCCAAAAATAAAATCTTTTCTAGTCCAA	NA	NA
Ca-II-SNP45	40.93	Ca-desi-LG(Chr)1	2050795	TCACCTGATATTGGAATAGATGGCCCTGGTTTTTC AATGTGATTTAACTATGCTTTAGACAAAAGTAGCTA ATCCAGACTATCACTCAATTGGTTGCTTTC	A	C	TCGTTCTTGAGCAAAATCTAACCCTAATCAA AATTATATAGAGAAGTTCATTTTCTTGCAATAA GTTACTCAAAGTCAATAGGGTCTCATCATCTT	NA	NA
Ca-II-SNP46	41.81	Ca-desi-LG(Chr)1	2056298	TTTCTATTTAAGTACCAAGCTAGGTGTTTGACTTT GTTTTATTTAGTATTATTACTTTATTAATATATTAC CATTATATAAATTATAGTCTTATGTGT	T	C	GATATTGAATTTAATAATATCATTATGAATTGA AGGATAGCTGAATGACTTCTTTTTCTTGAAAGG TATACCTGAGTATTGGATGAACTCATTTTTTCT	NA	NA
Ca-II-SNP47	42.69	Ca-desi-LG(Chr)1	2073370	TCTAATCCATAATTCCTTGAAGTTCGTAGAGTTTG GATTTAATCTCATCAGTTTACGACATATTTCTCAA CCCTAATTCCTTGAAGCTGTAGAGTTTG	G	A	CATATAAAGACAAAGAAAGAGACATAAACACGA TTCAAGGTGTTCAAAGGGAGTAATTTACACACT TGAGAGAATATGTCGTAAACTGAGGAGATTTAA T	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP48	43.57	Ca- <i>desi</i> -LG(Chr)1	2084773	CGCGAATCTCAGCTGCATAGCGTCCCCATGGTCG CTTTCTAACACCTCTGTAGTGCCTTCGCGGTTAG CTGAAGAAGATGAAGATGAAGAATCCATTA	C	G	CGGCCAGCCGACAATTACGGGAGCAAATGTGG GTCCCATCACTTTTATAAACATCCATCCATTCCA ACACAATCACTTCAAATCTCTTTTCTTTCTTT	NA	NA
Ca-II-SNP49	44.45	Ca- <i>desi</i> -LG(Chr)1	2109647	GTTGTGCGCATCGACAATTTGGTCCATATATATCTA TAGAGGTGTCTACATATTGGTGGATATTACCAAGG TAGTATTATCATAGTATAGCATCTCTATCT	T	G	TGGGAAACCTCACGTAAGCCCAAAGACAACC GCAACAAGACAAAAATTTAAGATATAACTAGT CTTTTTTAGGCTCATTAAAGATTTGACAATGACCT T	NA	NA
Ca-II-SNP50	45.33	Ca- <i>desi</i> -LG(Chr)1	2140927	ATGGCTGTGTATATGTTTATTCATGCGGGTATTGA CCGGCCCAAAGAAGGTTAATATTTGGCAGAAATTA AATGGTACACCTGCGATGATAAATGTGTGA	T	C	TGGTACTCTTGTGCAACGATCAAATATTAACA ATAAGACATGTCAAACAATAAACCTTCTTTGG GTGCGATTTACTGCTCATGTATACCAAATAATT	NA	NA
Ca-II-SNP51	46.21	Ca- <i>desi</i> -LG(Chr)1	2148209	ATCATTCTCGTACCTTTCTCTTGCCTTTTGGCTA CTTTTCTTCAAAGACCTTTCTTTAAACATTTTAAAT AGTATTTTGTCTTTATTGAATGAATCAAA	C	T	CTCGCTGATTTTAAATTCATTAACAAGGCATA ATAGTATTAAAGAATGAATTTTGAATTCATT ACAAGGGCAGAATAGTATTAAGAATGAATT	NA	NA
Ca-II-SSR45	47.09	Ca- <i>desi</i> -LG(Chr)1	2162549	CTGTGAGAAAATGGTTGCCA	(CT)9	(CT)10	TCCAAAAGCAAAGCAACAAA	59.69	138.00
Ca-II-SNP52	48.87	Ca- <i>desi</i> -LG(Chr)1	2249502	TATTTTGGGAAATCCAACCCTTCCCTGTCTCA AAGAGCCACAAAATTACTTTGATAACGTTGCAAC TATTTTCTCTGTATACGGGCACTCTAAG	A	T	AAAAGTGTCCCGTGTGGTACAATAGTTGAAAT TGTTCAAACAAAATATGTGAAATCAAACAATTT TTAAAGTTTGACTCATCGTAGGACATACAATAC	NA	NA
Ca-II-SNP53	49.77	Ca- <i>desi</i> -LG(Chr)1	2251306	TGTTTGGGTGCTAGGTTTGGGCCTAAGCCCAATA AGGGGGGTGAGTACGGAAGTGAGGGGAGAAATG CTTATGGTGCAAGGGGTAAGCATCTGTATC	A	G	AGGAACCCAAATCAAGGTGAAATTGATAAATTG TATTATTGATTGAAAATAAGGAGAATGTATTACA AGAGGATCTCTCTGTAACCTGTAACCTCTGAA	NA	NA
Ca-II-SNP54	50.67	Ca- <i>desi</i> -LG(Chr)1	2261743	GGTTCTGCACCAGACCAATGTTCCGTCACGCTC AAGGGAAGTTTGAATGCTCTAATACCTTGACAA TTTGCCAGAAATCAGGCCTCTTATCTGGTTG	T	C	CTGTTATGTGATAATGTACTTTTCTTCAGAAAT AAGGCCGGTAATTCCTTCAGACTGTCCACCTG CAATGCGAGCTTTAATCGAGCAATGTTGGTCGT T	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP55	51.57	Ca- <i>desi</i> -LG(Chr)1	2272101	AACACTGATGTTGGGTGACCCAAAACCTTCGATTC ATCTCCTCATTGGTATGAGTTTGATCCTTTTCTTC ATCATCATCATCATCGAAATCCATTTGAAG	G	T	ACACTAGTAGTACTATTGCTGATGTTGAGTTTC AATTTCTTGATGATGATGATGAGGTATTATCTT GTCAAAGTTCTAGTAGTATGATCAGTGCATT C	NA	NA
Ca-II-SNP56	52.47	Ca- <i>desi</i> -LG(Chr)1	2282239	TAATTTTTTTCTTCGATTGTTGTTGTGATCTCT TCGTTTGAATGCGTTTTTTTTGTCCGGATTCAC AAAGTAACTTTGATCAATTAAGTTTTCA	A	T	ATACTAACTTAATAATGTAAAACAACAATATATC TACATATAACAATAAATTCAAGTGTCTGTTTCAG ATATGTAACGTTGACGATTTCAAGATCATTGG	NA	NA
Ca-II-SNP57	53.37	Ca- <i>desi</i> -LG(Chr)1	2289645	TTAACTATTTTTTTCTTTCATTGGATCCTTTGATT AATACTACATGTACCACCTTCAATTCATATTTTT ACTTTGCATTAATAATAATGATGAATTT	T	G	TGATTGTCTCAATATTTAATCTTTAATATAGAT TAACAAAAATGTATAAAATAAATGGAGAATAAT AATGTTGCGAAAATATCATTATCAAGTATTGA	NA	NA
Ca-II-SNP58	54.27	Ca- <i>desi</i> -LG(Chr)1	2293371	GGTTTGTGTGTTTGGGAGTACTTGAATGATGA AAATTTTGATGAGGGGGTGTGAAATGCAATGAGA GGAGGGTATGATCGTGAGGGTTTAGAGATAA	G	A	ATTGCTTTCTTGCTGTTTGAATTGGTGACAAAC CATTCTGTAGCTGTTTCTCAAAGATCCATAAC TACTAGAACAATACCAATGACCCACCACTCA T	NA	NA
Ca-II-SNP59	55.17	Ca- <i>desi</i> -LG(Chr)1	2304660	ATTTTATGCACATATTTAGGGTTGAATTTCTCGAT GGAAGAGGAAGTTTTCCATTGCACCATCTATAACT GTTTCGAAACCTTGAACCTTGAAGTGGT	A	T	CACACATGCAAAGGGATATAATATATTCATCTA AAATTTAAGATATTTGAATATGAGACTTCTCT CTTGTAACCATAGCCAATGCGGTATTCTATTTTT	NA	NA
Ca-II-SNP60	56.97	Ca- <i>desi</i> -LG(Chr)1	2317643	ATTTTTTTAAATGGTTTTCTAGTTTTATTTGATCA AAACGTCGCAATCCCTTTAGATTTTTAGTTCTTTTT GGTTCTTGCCTCATGAGTTTGGATATAT	C	T	GACTAGTGAGTACTTTCTCTAATCATTTTTCAAT AAGAAAAGCAAATGAAAACAACAAATTTGAAG ATAGTCATAAACTAAGCTGATAATATTTTGAAA	NA	NA
Ca-II-SNP61	57.87	Ca- <i>desi</i> -LG(Chr)1	2325015	CGATTAAGCTCACAAATGAGATTTCTGCTGTGTTG TCTTTTGAGAAAACAGGAGTACTGTTTTGGGCCAGAT ATGGAGTGAGAACTTGTGGTGAATCTGG	C	A	AAGATTTTCTTACTCTGTCAATTTCACTTACTTT GTATTGTAACCCAGGGAACCTCTTGATAACTT CCAGTTACCCTCAATCCAACACTACCAAAGTA	NA	NA
Ca-II-SNP62	58.77	Ca- <i>desi</i> -LG(Chr)1	2340803	AAGGAGATTGAAATTTTTTAAATAATTTTTATGTT ATTTAATTCTTGTGTAGTACACCTAGGGTGTGTG TGTGTGAGTTTGATAGAAAACCTTTGTGCT	A	G	ACATATATTGGATTTGAATCATTATCAAATCA TCATCCACTCAGCTTTTTGTGCACCAATTTA AGAGAATTTTGTATTATTATGAATAAAAAATAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR46	59.67	Ca- <i>desi</i> -LG(Chr)1	2351367	GTTGCAGTTACTGGGCTTCA	(TTA)6	(TTA)5	AAGCATCAAGATGGCAAACC	58.93	136.00
Ca-II-SNP63	60.57	Ca- <i>desi</i> -LG(Chr)1	2358985	GACATGTGTGGACTTTGATGGCCTACACATGCTTT TTGGTGCCGCTTTGTTTTAGTTCTTTCTTTTTGA AATTTAAGGAGTTATTTACTTTGTAAAAA	C	T	TGTTTCTAAAAATGTCGACAAATTATTCACTTAA AAAATATATTTCTTTTTATTAACGAATAAAATTG ACATAAAATTTTAAATATGAAAATATGAAAT	NA	NA
Ca-II-SNP64	61.47	Ca- <i>desi</i> -LG(Chr)1	2363519	CTGGGACTTGGTGAATTTTTCTGACTGGACC GACGACGGTCTTAACAGCTTCTTCGACGGTGTCTG ACGCCGGGTTTGAGTGACCCGAACGTTCTTT	A	G	AGGAAGAAACTAACCAAGAGCAAGAACTCAAGT ACCTTGAATTCGTGCAATTCGCAACAATTC AAG CTGTGATGCGTTGCGGATTCTCTATTCTACG C	NA	NA
Ca-II-SNP65	62.37	Ca- <i>desi</i> -LG(Chr)1	2381955	CATTGGGAAATTTGAGTCGAAATAATAATCCTTG TGTTGTGGTGTGATTATGCTTGCAATGTAAGTTGG TATCATATTGACTATTAACAAAGGGTCCA	C	T	GTAGGAATCAAATTCATTATCTTGAAGTTATAAC ACTCACACACCGTTCATCAGTTACTTATGCTAA GGCTTATGTTAGTCTAATTTTTGGTTTCAGCA	NA	NA
Ca-II-SNP66	63.27	Ca- <i>desi</i> -LG(Chr)1	2392790	TGTTCCAAAACGCGGGTGAATCGGAACAAAGCGA GGTAGAAATGGGAGATGTTGAGCGTCTGATGCAG AAGTCGTGAGTTGGTGGCACACAAATTCCTCG	C	T	TGCAACCAAATGAGTATACTACTTGCTATATAC TAACAAAATACTCGTGCGTATGCACAAGTCGTG CAACCTTAGTTACCATATCTAGAAGCTTAGTAC G	NA	NA
Ca-II-SNP67	64.17	Ca- <i>desi</i> -LG(Chr)1	2407032	ATTTTAGAGTACCTTTGTTAATTAGTTTTAAAGTAT TCCCTAGGATATTTTAGGTTGAAATTATGTTGGGT TATGTTGTAGCGTTCTATTAGAAAATCTT	G	A	GAGCATAAAATCTAAGATATAAATCTATTCTAGT TAGCTCATGATTTGTGTA CTCTTTCTGACTTT GCAGCAATGTGTTAGAATGTTACACCATTT CAT	NA	NA
Ca-II-SNP68	65.97	Ca- <i>desi</i> -LG(Chr)1	2422961	TACGCGGGCAAGTGCTGATGATGCTGTTACTGCT TCTAATGATGTGAATACTTCTGAAATAGTCATCT GGACCAGCCACTGAAATTAGTGGACGACGTT	C	T	GAAGCTAGTGGAAAAATTTATCATGAAGAATCA GACCTCTCTTTTCTTTTACCAGTCAAGGAAGAA CTATTCTTCTCAATGACTTGGGAATCTAAGCTG C	NA	NA
Ca-II-SSR47	66.87	Ca- <i>desi</i> -LG(Chr)1	2424978	GAGGATTTTGATGGCGAAGA	(GAA)5	(AGA)8	GTCTGAGACGAATCCGGA	60.16	214.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP69	67.77	Ca-desi-LG(Chr)1	2435676	CCTTTTATGTGGCTTTCTTGTGGGACACTTCTTGT TATATTGTTAAACATTAACTTTAGTTTTAGCTTTT CAGTTTATTGTAGTGCTTTAATGCAACAC	A	G	TTGATCCTTCAAGTAGCCTACACTTTATCCTGT CTAGACTCTGCAATCATACAATACATAGTTGTTT TAAGCCCTGATAGCAGCAGCAAAAAGCCACTTC	NA	NA
Ca-II-SNP70	68.67	Ca-desi-LG(Chr)1	2455899	CTCCTTACAAATCTTTCCAATTTCTCCATAGGTT GAAAACTCCAATCCCGTAGTTCACAACAATAACA TCGTGTTTGATGAGGGATGCTACTTTGGCAA	C	A	CTAATCATAGTTGTCTTGCATATTAAGCACAGT CTCTTCAATTTAATTCGTTTTATTTACTTATT TATGGCTTGCAACAACGCCGTGGAACCTCGCTC	NA	NA
Ca-II-SNP71	69.57	Ca-desi-LG(Chr)1	2464479	CGCTTATATTTGGTTCCGATAATGGGTTTGGCAGT CTCAAAAGTCCAATAAAGTTTTATTATTCATCTTCT TTACATTTTTAGCTTCTTGAAGCCGCGCC	G	A	CTAGAATTTTAAATACAATACACAATCTCAGTAG CACACCAAAATGGACTGCTGAGAAGCTGAATTTT AAATACAATACATAATCTCATTAGCACACTAAA	NA	NA
Ca-II-SNP72	71.37	Ca-desi-LG(Chr)1	2472975	CTTAGTTTTGAATTTGTGTGTTCTAGTGGTGATCAT TGCCCTTTCACCCCTTTAGTGAAGTATGTTGCTCTT TAGATGTGAGGAAGGAGAATTCATGAAGAG	G	T	GCAAAGAAATCTAATAAATTTGTTGCTTTCTAAT CACTGTAATCACGTACTAGTATATCCTATAAAA GTCTACATATTATTTCTCCTAAGTTAAGAAGAG	NA	NA
Ca-II-SNP73	72.27	Ca-desi-LG(Chr)1	2476682	GCCTAGTTTGAAAAATCTTCCCTTTTGATTTGTGT AGGTCTTTATCTCCTTTTCAAATTTCTCCACTTTT AATTTAATATGTTTAGTTTACAAATCATA	T	C	GTCAAAGAATAAAAATAACTTTTTGAACTACAAT ATAATAATTATCAAAATATGTGTGACTATGAAAT ACTCGGTTCAAATGATGAAGAGATGGATGGGG	NA	NA
Ca-II-SNP74	74.07	Ca-desi-LG(Chr)1	2487961	AATTTGTTGGGTTTTATTCGTCATGAGGTGTCAG AGCTTTTGATCTTGATGCTCAAGGGACGGAATTC AAATCCCTTCGTAGATGATTGTAACACGAC	C	T	AAAAAAAACAAGTTCATTTCAATGGTTAATCAC GAGTAAACCTAACAAATTTTCTTTTAAATAGGAG AAGGAGGAATGTTAATTAAGTGACACTAAT	NA	NA
Ca-II-SNP75	74.97	Ca-desi-LG(Chr)1	2495031	TAAGTGCCACGGAAAAACATACTTACCTGGATGG GGTCTATGGATGATCAATAAGGTCCATGTCTAAG TTGGTGACCTCCATTGCACTTTGGAGGGGTG	T	C	TATAAATTTGAACTGAATAGGAAGGGGGCCGG GCCAACGCTGGCCCCACTGCAACAAATATG ATGTAGGCTGTTCTACCTGAGAACACCTTAAGC GG	NA	NA
Ca-II-SNP76	75.87	Ca-desi-LG(Chr)1	2506596	TTAAGTATAGAATCCAATTTTTGGTAGAGTGATGC TGCCATTCTTATAGCTTCTAGCTTTTTGGAGGGGA AACCTTCAAACCGTGATAAAACCTACACAG	A	G	ATACAATACATAGCATTATCATATAAATTAATC AACATTTTTTCAATAATTAATACCATAACATA GACATATAAATAAATTCATTTTATGTATGTT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP77	77.67	Ca-desi-LG(Chr)1	2547484	TACGACATGAAATTTCAAATTTTATGACTACGACTT TTTATTTCTCCTATCCATTGCATTACATGCCATAT TTTCTCTATTTTCTATTTATTTTATG	A	C	AAAATTTGTAACAAAAACTTCACTATTGAAGGT TGGGATATACCATTGGTGGCAGCATGCATC GGAGGATACTCACGGAGGTGCATTGGTGGTGT GC	NA	NA
Ca-II-SNP78	78.57	Ca-desi-LG(Chr)1	2577406	TCTCAACTTTGTTCTCTATCGAATTCACAAAAAC AGTGTGGCTTTTACCTTCAAATGGACCAAGCTA GGTTTCTTCCATTTGGGTGTTCCGACAA	C	A	ACGATTGTGAACAATCAAGATCTAGCATTTTAC AAGTGAATCATCAGAAAAACAGACACCTCCTA CTCTTCTTTGGAAGAAGAACAGTGAAGAAG T	NA	NA
Ca-II-SSR48	80.30	Ca-desi-LG(Chr)1	2590753	ATAGTGGACCCCAATCCA	(CT)9	(CT)7	TCGCTGTTGTGTTTTGCTT	60.05	144.00
Ca-II-SNP79	81.13	Ca-desi-LG(Chr)1	2597468	GGCAATGTCATGTTATAAAGGAGGGTTATTTGTTG TTGTTGGGCAGCAAGTATAAATCAACAACATGTG TCACTCTTCAAAGATATTGGTCATTTTTT	A	T	TTGAGACATAGCATTCTGTCCAAACAACCAA TATCTTTAAACAACCCAAAGGCCAAAAACAACC AATAATTTTGGGGTTACAACCAATATATCCGT	NA	NA
Ca-II-SNP80	81.96	Ca-desi-LG(Chr)1	2615225	ATATATGTAGTTTTGAATTGTATAAAGCCACTGAAA AGTGAATATTTTATATTCTATTATTCAGTTGCTG TTGTGCGAGGAAGGACCCGTTCTCTGGT	T	G	CTTCATTACAAATTTTTCCACCTGTTTCATTTAT TGTGGGTAGGGATGGACTAATTTGATCTTCGCT GATTTGAACTCTTCCCTTCTTCAAACCTCTC	NA	NA
Ca-II-SNP81	82.79	Ca-desi-LG(Chr)1	2626185	AGGATGTTAGATATCTTAGTCGGTTAATTAGTTAA GTTAGTTAGTTAATTACACTAGTCAGTTAGTTATTT TACACAAGTTAGTTGTTTATCTAATTGAC	A	T	TTGAGTTAAGGTGTTGATAAAGAGAAATAGAG ATAAGTAAATTGAATGATATTGATAATTGAGAGA GTTAATTACATCAAGGGTTACAAACACTTATAT	NA	NA
Ca-II-SNP82	83.62	Ca-desi-LG(Chr)1	2639056	CAAGGTATGAATAATGCTTTTGTCTCTCCCTCT GCTGTTTTTTTTGAAAAACATATTATTTGATAA GAAAGAATCAATATAACCTCGTGCTTTTG	C	T	TAGCTCTAATTGTAATTCTATGATGTATCTCTGT TGAATTTGGGTCAAGAGCTGGTTGTGATATCTC CAAACCTTCTCCTTACAATTTTAAACGTATCT	NA	NA
Ca-II-SNP83	86.94	Ca-desi-LG(Chr)1	2752133	TGACTTCTGTGTGGACGCCTGTGTGGCTGGTTAT ATCCGGATCATATATGTTTAGGAGCATGCATGACT TGCATACATTTTTATGTTATTTTATTTTATG	T	C	ATTTTAAAAAATTAGATCTTTAATAGTTCTTAA AGATGTATCAAAGTCATAGAATGTATCTAAATA AATCAAGTAGCAATCGTATAGCAAATAATTA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP84	89.43	Ca- <i>desi</i> -LG(Chr)1	2808533	TTATATTTTTGAATCTGTTATTATAATACTTTGTAT ATAGTTTTGGATTTCAATTATGGATAAATTAGGAG ATGGGATTTTTCCAGATGAGGTTGTTAT	G	T	ATAATTGAATGAAATAATTATCCAACTCAACCT ATTCCACAATTTGCACACAGTTTTGGTCCTAAA AAGGGATTTCACTGGTAACTAGCAAGAATTTG	NA	NA
Ca-II-SNP85	90.26	Ca- <i>desi</i> -LG(Chr)1	2843332	TCCATCCTAAAAAACTAGTGACTTAACTATTCT TTTACTCTCCTTTATGACAAGATTTTATGACAATTC ATGGTTTTTCTTGGCATAATGTGCATTA	A	G	AAAAAGGAGAATAGTCATCTCTTAATTGCACAA AAAAAGAACTCATAATTAATTTATAATCTTCC TTTAAAAATAAATTAAGGTGTAAAAATGAG	NA	NA
Ca-II-SNP86	91.09	Ca- <i>desi</i> -LG(Chr)1	2865546	AATGATATCAATTTTCTTCTTGCATCTTATGTAATT CCTTATGTTGGTCTTACTGGCTATGTTGGTGCCAA TCCACTCTTGCAAAATGCTACTTCAAGGA	G	A	CAATAAGATCATAAGATCACAAGTACATGTCTA CTTTTTGATAAATACTTTTTCTTTTAGTTTGAAA AGTTTTCAAAGATTGAGCTTGAGATTATATACC	NA	NA
Ca-II-SNP87	91.92	Ca- <i>desi</i> -LG(Chr)1	2898518	TGCGTCCATAATTGGTTGGAGCCCAAAGTTGTGT GGTGCGTCCATAATTGGTTGGAGCACACAGATCC TTGCGGGAATTTTGGATTAGTGGTGTGCTTG	A	G	AAGATACAAATCAACCAAAATGCACAATCTATTT GTTGACTATTTGTCAATGCATGATTCCGGAAT ATCACATCCTCCGCAAGGTTTTCGTGGTCTCT T	NA	NA
Ca-II-SNP88	92.75	Ca- <i>desi</i> -LG(Chr)1	2927971	AGCGTGTAATATGCTTCTCATTGCGAACCATACG AACAAATATTGCTTGTACTAACCTCATTACGTAA ACTTCATACGCTTGTTCCTCTTCAATCT	T	C	TTACGGCGCAGAAATACGAACAAGAAGAACA CGCATAAATACGAATGGTTCGTAGGAGAGTAG GGTTTCGAGAAACAAGATGGTTCGCAATGAC AAG	NA	NA
Ca-II-SNP89	95.24	Ca- <i>desi</i> -LG(Chr)1	2958413	TTTGTGAATCGTTGAATGTTGTGGTGGCCTTAGA CATTATTGATTGCTTTAGTTCATTATTGTGTTTTCT TCCTTGAAGTGTGTGGAAGGAGCTTT	T	G	GTAGAGGAATATTATTCAGAGATAGTGAGG GTGCGAATAAGAATAGATAGCATGAGGAACACA CACCAATCTATTATCCTATAATCAAACCTCAAAA T	NA	NA
Ca-II-SSR49	96.07	Ca- <i>desi</i> -LG(Chr)1	2973501	GTTCCGTTCTCCACCTTCAA	(TAT)8	(TAT)6	TTTTGCGAGAGGTGTGTGAG	60.09	146.00
Ca-II-SNP90	98.56	Ca- <i>desi</i> -LG(Chr)1	3109215	TCCATCCTAAAAAACTAGTGACTTAACTATTCT TTTACTCTCCTTTATGACAAGATTTTATGACAATTC ATGGTTTTTCTTGGCATAATGTGCATTA	A	G	GAGAAATAATAGTAAGTGAGAATCTCTACTCTT TGCATGCTCGATCACCCGAAAATTACACAACAC TCCCCCTTATTGATTAATTAACCAAGCTTTTCCC TTACTATATGGTTCATACCCCACTTCTTTTTCTT TTTCTTTTTCT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP91	99.39	Ca-desi-LG(Chr)1	3141981	AATGATATCAATTTTCTTCTTGCATCTTATGTAATT CCTTATGTTGGTCTTACTGGCTATGTTGGTGCCAA TCCACTCTTGCAAAATGCTACTTCAAGGA	T	C	TGTACATGAGAATTTGTTTAAAGCACAAAAACAA AAGAGACACTCTCTCTTACATAGAAAACATCAA ACCAATTAACCACACCCCTTCTCCTCCATCAA CCAAAACAAAACAAAACACCTCCATTTTCGTTTT TTCATTTCATCGATGGCGGACGTGCTTTCTCAA AGGCAAAACACCATCAAAGAAAGAACATCGA GTCTTTACTTGGTTCGATTCGAAATGGGAAGC TCCTTCCCATCCAACTTTCCCAAGCTTACT	NA	NA
Ca-II-SSR50	101.05	Ca-desi-LG(Chr)1	3165102	CTGTTTTCTCGTTGCACCT	(TA)12	(TA)11	TCCATAAAGAACCAAGCATATCA	60.29	134.00
Ca-II-SNP92	101.88	Ca-desi-LG(Chr)1	3192156	TAGGATAAGAGGCCATGTAATTGATTGCACAACT CCATATTTAAATTAGTATTCCTTCTTATAAAATG TACCCTTCTATTCCCAATTTGTTCCCA	A	G	ATGGAGATTGCTCAAGTATCCAGATGATATTG ATCATGCAGTTTTAATAGTAGGTTATGGATCAA AAGGTGATGAAGATTACTGGATTGTAAGAATT C	NA	NA
Ca-II-SNP93	103.54	Ca-desi-LG(Chr)1	3270298	TGCGTAGCATCTCCCTTACCTTTCAATCCTTAAT AAGTATAGTCTTACTACTGTTACGAACCATAGAC TGACCGCTTAAAAATGTATTAATCTCCCTC	A	T	GTTTAATTATTGAGAGTATTATTGAAAAAAATT AGATATTCTAAAGTGAAAATTATTTGAGATGGA GAAATATTCCAAACATGACATTTATAATGATAC	NA	NA
Ca-II-SNP94	105.20	Ca-desi-LG(Chr)1	3329312	ATCCTAGATTAGTAATCCACTTAATGTTCACAATT CATGATAACTGTAGGCCTAAAATGTCTCATGCA ATCATTTCAATTTACTATAATTCGTTCTG	T	C	TTTATGAATTTGTTGGTAAAAAGTAATATGATGA CCCGCACAAATGTCCCAATAACACACATGTCT CCATCTACTCAATGCAAGGAAATAAAAAATGCA A	NA	NA
Ca-II-SNP95	107.69	Ca-desi-LG(Chr)1	3635583	TCACAGCAGGACTAGTTATAGCATTTAGTCTAAT TGGATCCTATCTTTTGTGATTCTAGCTGTGCACC CTTGTTGCTCATACAAGGATACATTCAAAC	A	C	AAAAAACAAATATATAAGTATACTTTCTATTGAT GGAATCGACGAAAAAATTGTTCAATAGGCCAAC CTTTGCATCAGAAGTGAATCCTTTGAGAACTT	NA	NA
Ca-II-SNP96	110.18	Ca-desi-LG(Chr)1	3654198	ATCCTAGATTAGTAATCCACTTAATGTTCACAATT CATGATAACTGTAGGCCTAAAATGTCTCATGCA ATCATTTCAATTTACTATAATTCGTTCTG	C	T	GGAAGACAAAACACGACAACATCAAAGAACTA GAGTCTTCTGTTAAAAACAGAGGAAATCTTAG ACCCAAAAGATAGTGGCATTAAAATAAATGGC TAAGTTTATTTCAAGTTATGGTACTCAAATTTT GTTTATGAGGAGTCTTTTCTGGGTTTTTATT TTATTATCACATATTTCTTCCAACCTTGCAACAT GTGGCTCCGTAGTAAAGTTCTTCTCTGG	NA	NA
Ca-II-SNP97	111.01	Ca-desi-LG(Chr)1	3693177	AGTTGCTCCTCCAGCGTGAATTAATTAACCTCCA GTTTTTTGTGGGTTACCGTTGGAGTTGTGCAAG ATGTCATCACGGTATTGTCAGGAAGGAACG	G	A	GTTAACGGCTATAAATTAATAAAATGATAAAT TTATTATTAATAAATTAATAAAAGGTAGCGG TTATAATTTATTATTATAAATTTGTAAGCA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP98	111.84	Ca-desi-LG(Chr)1	3734425	TTTTTTGGTTGTATTATTATTAATTAACATAAG ACAAGTCTCCTTACATTCTTTCACTCAACTTATT TTCTTCCTCCTACATCTCCTTAGCTTC	T	C	ACATAAACAAAAACAAAACAGTACCTTTTTTTT TTTTGTATGTTTCATATGTAAGTGTTCATTA TTCCAATGCCTAACGTTACCTTTTGAATGAAT GAAGTATAGAAAGTGAAAGTTAGAAGCTTTAA TTGTTATTGAAGGTGAAAGGAAGAGTGGTGGTT GGATTGAATCAAACCCAGATGGATTTTTCTTC TTTCTTAACCTCTCTTGGTACTTCTTTTTGATA TTTATCTTTTTCATCATTTTCTTCTTCTTCTTAC	NA	NA
Ca-II-SNP99	112.67	Ca-desi-LG(Chr)1	3754453	TGCAGAAGCAGAAGCTGACAAAAACATTGTTGGA ATCCATGCTGCAATGGGAAGTGCAACTGGCATGA ATATCTTCCTTCGCAGTTTCCCTTCAAGATGC	G	A	TGGGAGACCTAGAAAAATGGGAAGAGAAGTCT AAATGTCCAATCTGTTGGAGTTTACTACATTCT GCGGTTTCACTCACATGCAATCATCTTTCTGC AACTCGTGTATAATTAAAGTCCATGAAATCTTCAT CTTCTGTCTGTTTGTAAATACCTTCACTC GTCGAGAGGTTTCGTCTGCTCCTCACATGGAC AACTGGTTACCATCTACAAAAACATGGAAGCT CCTTCGCAATCAATTTTCTTCTCACTCAAAAT	NA	NA
Ca-II-SNP100	113.50	Ca-desi-LG(Chr)1	3867644	AGAAGTGTGAGACTGATCCTTACAGAGTGGAA GACATGGATATGTACTCCAATGTGCTATATGCTAA GGAATGCTTTTCGGCTTTGAGTTACCTTGCA	C	T	AAATATACAAGTACTTTTTCATGTTGCCCTTCA AACTGTAATAATTTCCCAATAATACAACAAGATT AGGTCGTATTTATCAGTCATGAATACTCTAT	NA	NA
Ca-II-SNP101	114.33	Ca-desi-LG(Chr)1	3888320	TTTTTTGGTTGTATTATTATTAATTAACATAAG ACAAGTCTCCTTACATTCTTTCACTCAACTTATT TTCTTCCTCCTACATCTCCTTAGCTTC	T	C	GATCAAAATATCCCAACTGAAATGCTAGTTAT TTGCTTCAGTTTTTGGTATAAGTTACAAACAAAT CAGTAGAAGAAAGTGAATTTAATCATAGCAATA	NA	NA
Ca-II-SNP102	115.16	Ca-desi-LG(Chr)1	4001436	TGCAGAAGCAGAAGCTGACAAAAACATTGTTGGA ATCCATGCTGCAATGGGAAGTGCAACTGGCATGA ATATCTTCCTTCGCAGTTTCCCTTCAAGATGC	T	A	TGCAAGAAGGATGAGTAAAGTGCACAAAAAGG CTTAAGACCTTACAAGCCAGACCTGCAGCAAA TGTAACAGCATGCTGTTCTGCTATCCCGACATC AA	NA	NA
Ca-II-SNP103	115.99	Ca-desi-LG(Chr)1	4998121	AATCATGTTCTCTTTGGTTGGATTTTGGAGCAT TCTTCTAAAATATGTTTTCTATCATACTTCTCAAT TATGTGATTTACTTTCTCAAATAAGGAA	G	A	CACTTAACAAGAGTCACTCGTAGAGAAAAAATT GCATAGTTGCACTCCTTCCAAATTTCCAAAAA GAAGCTAATCAAATCACTTGCAAGTAATTCTTG A	NA	NA
Ca-II-SNP104	116.82	Ca-desi-LG(Chr)1	5016574	ATATCCCTTCTTAGATCCTTTCTTGTAAATTTCT TTCAAACCTTGCCACCTTCTGTCTGCTACGCGC CTTGATGTTGCTATAATTAATCCAACAT	G	C	TATCTAATTAATAAATTAAGATGAAAAATTAAGAT GAAAGACATATATATTCAAATATATTTTTATTAT ATTTTGGTGATTTTTGTTGTTTACGATAA	NA	NA
Ca-II-SNP105	117.65	Ca-desi-LG(Chr)1	5041011	CTAACTAATTGTATCTCTTAGTTTGGAGATTGAA TCTGTAAGTACTGTGTTTTGGAGTGTATACTGCA ATACTAAATGGAACCTCATTTACTGTGTA	G	T	ACTACACACTCAAATAGTGGAAATTAACCTCTT GCAAAATGCAAGGTAAACAAAAACAATATATA GATTCACCTTTCCATATGATGCATGGTTATCA A	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP106	118.48	Ca-desi-LG(Chr)1	5101106	ATCATATTGTTTTACTATTTTCTTACATATTTCTTA GCTGTTATTCTCACCATTCTTTAGTACTTTAATCAA TATAGAGCCTTTTAAATGGGACCCCTTGT	T	C	ATAGACTTTGATCAATAGCATGCCAAAGCAACA TTTTAAATAACACCTCCATTTTTGGGTGCGCAT GTGAAACCCCAAGGAAATACTGGTGATTCTTT T	NA	NA
Ca-II-SNP107	119.31	Ca-desi-LG(Chr)1	5117310	ATTTGGAACAAGTCTAGCTTTGAATTTATCAATG CTAGCATCAACTTTTCATTTTCTTTAAAGATCCAT TTACAAC TTATGGTTTGGATCCAGGTGG	G	A	AAGAGGAAATAAAGTCTCAAGACTTTTCCTTTT GGAAAGAAGTCATCCAAGAGGAAATGGACTCA ATTATGGGGAATAAACTTGGAAATTAGTAGAC CT	NA	NA
Ca-II-SNP108	120.14	Ca-desi-LG(Chr)1	5178186	TGCTTTGTCAAGGAAGGGGAATACATATGAGAATC CTCTGGCTGCAAAATGAAGAACACCAAACCTCCT TCTCACCCACCAGGCTTTACCCGACTACC	C	G	TGTGATTGGTTTGGGTTTTGGGGTTGACGAC TAAAGGTGGAGTATAACTGGGTGGAAGACCAT ACATAGGAAATTGCATAGTTGTTGTATGAGGTT GTT	NA	NA
Ca-II-SNP109	120.97	Ca-desi-LG(Chr)1	5217919	TCTTAACTTCTAACTCAACTGATAAATGTCGATACT GTTAAGTTAGATGCTTTGTTTCAGATTCGAATCCG AGACCTCGCAGTTGTGTGAATTAATTTTG	A	C	TGGAACAGCAAACAAAAAGAAAAAATAATCTT ATTTAAATAAATAACTAAGGCTTGTGATAAAT TATATATATATTTAGAAGATGATAAATCCA	NA	NA
Ca-II-SNP110	121.80	Ca-desi-LG(Chr)1	5260586	TGGTTAGTAAGATAACCATTGTAACAACCGTTTAT TATAGGCAGCATTGGTCATGCTAATCCTATCAT TTGGCAAATGGTTTTGTCAAGTAAACCGGT	C	T	CTTCTTCTTAGTTCTTACTTACAACTATTCTTT TCACTCTTACATTTTTCCCATCTTTTTCACTC ACTCACCAAATCTATGGACCCACATCCTCCTA TCACCGCGTTTTCCACCCTCCTCCGACCGCT TACTCGCTGCTTCAATTCCTCTCCTCCTCCA CCGCTGCCACCACCTCCTTCGCCGAAGAGCTC AACGAAGCCGAACCTTTTTGGTCATCCGATAGC TCCAAATCTGAAATGACCCGACCCGACG	NA	NA
Ca-II-SNP111	122.63	Ca-desi-LG(Chr)1	5382171	CACTGAGTTTCATTGTGAAATGGAAGGAATTGA GTGATTTTCTCAGAGACTCCGCTGTACTTGCATT CCATCAAGCGGAGCTGCTCTGAGGTACATGT	T	G	TTTTTGTGAATTACAGACCAGCATGTTTCATTT CTTGTTATGTGGATGATGCAGTTGCTCTCCTGA CTGAGCGTTTGTCTTGGACCGCTCTCTCCCAA CACCCTCATGTTTTTCAGGCAAACCTCCATCA ATTCAAACAAAAGTAAAGCTACCACTAGAGATA TGCT	NA	NA
Ca-II-SNP112	123.46	Ca-desi-LG(Chr)1	5667198	GAGACAGTGGTCCACCGGTTAGTTGACGATTCG GGTTGTCTCTCAATTGGCTCTAGATACCATGTTGA ATATAAAGAGTATTGAGAGACATTGAATAAC	T	C	GGGCTGTAAGTATTCGGCCCGTTAGTATTACT GTAATTAGGGTTGCTTAATACTTTTGTCTATA TAAAGAAATTCGGTTGTAGTTGAAACACACG	NA	NA
Ca-II-SNP113	124.29	Ca-desi-LG(Chr)1	5701969	TATTGTATGGATTTGCTACTATTTGAAGTTTTTA GTTGTTTTATTGTTTTGGAGACTGTTCTGGAGGT GTTTAATTGTTTTAGTGTGATTTTGCTC	G	A	AGGACCAGGGAAGATTCACAAGATCATGAATC GTGAGATCGTAAAATCCTACCAAATTTGGGGTC ATTAGATTCATAAAACAACATAAACTGAGAA CA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP114	125.12	Ca- <i>desi</i> -LG(Chr)1	5732484	AATCCTTTGTGACCATAATGACGAGTTCATATGTG GTTTCTACTGCAATGTGGCAATCTGTAGCTCCTTA TTTTCTGAAATGTGGACTTTTTGCAGTGGT	A	G	AAAGTAAACTGAGTATAACATTTCTTGATCATG GAAGGGAGGGTTAGAGAGCCAGTTTAAAAAAT AACATTACAAATCCCTTTATCACGAGCCAATAA AA	NA	NA
Ca-II-SSR51	125.95	Ca- <i>desi</i> -LG(Chr)1	5754943	CCTCAATGAAGGGAGTTCAAA	(TAA)11	(TAA)10	TTGTCTGGTCAGCTTTCTGC	59.16	186.00
Ca-II-SNP115	126.78	Ca- <i>desi</i> -LG(Chr)1	5759582	GGATCTGGAAGTGGCAGTGATGGAATATATTAGA TATATCCAAATTGTCTCAAACACCTCTATGGTCGA TATTTCACTACCGTGTGCATAATCGAAGGT	A	G	ACATATTATTGATGCATTGACACTTGCGAATGC TATATGGAGACCATGGGAGAATCATAGGGGTG TCATTCCCTTTGATGATATCATGCTTTATACTGG T	NA	NA
Ca-II-SNP116	127.61	Ca- <i>desi</i> -LG(Chr)1	5815163	ATCAGACAGAGAAGGAAAACAAGAAATATTTTT TTTACAAAGTTTTCTCGTGTGGTTCCTAAGC GCAGTGTCTTCCCCCATGCCGCTATTG	A	G	GACACAGTGAACATGATTACGACTAGTTCGTT GTAAAACGACATTTTAACTATCAAATGAATATT TACTGCTGCTTGAAGTTATTTACCCTAGTA	NA	NA
Ca-II-SNP117	129.27	Ca- <i>desi</i> -LG(Chr)1	5854373	TGGTTAGTAAGATAACCATTGTAACAACCGTTTAT TATAGGCAGCATTGGTCATGCTCTAATCCTATCAT TTGGCAAATGGTTTTGTCAAGTAAACCGGT	T	C	GTTTGATATTACATTACAATTTATTTACACAATG CAAAGATAAATAAAAAGCTGAAAACAGCTGTA GTTAAACAAAGTAGCAGCAGAACATGATAATCA	NA	NA
Ca-II-SNP118	130.10	Ca- <i>desi</i> -LG(Chr)1	5898347	CACTGAGTTTCATTGTGAAATGGAAGGAATTGA GTGATTTTCTCAGAGACTCCGCTGTACTTGCATTCT CCATCAAGCGGAGCTGCTCTGAGGTACATGT	A	T	TGCAATAAATAAATGCCAAGCACCAACAAGAAC AAAAAGACATAATACCTCGGAGGCCGAATAACG AAATTGATGAATTGATCAATCATATTCTTGCTTC	NA	NA
Ca-II-SNP119	130.93	Ca- <i>desi</i> -LG(Chr)1	5970900	ATAAGAAGATACATGCCTTTTCAGATACCGATGAA GACAGAGACGGTGGTTCGCGGTGGAAGTTGAAAC GGCGGTGATGCTTTCTGTTCTTCTTCTTCT	T	C	AAAACTCTATAAATACATCCTTTTTTACAAAA GGGGGAGACATTTTTGAGGGGGAGAAATCGGA GATTAATACTGATAAGAAACATAAAAAAGAAA	NA	NA
Ca-II-SNP120	132.59	Ca- <i>desi</i> -LG(Chr)1	6029621	TTTTTTCCCTCTCCATGTCTTGACCGCCTTGGTG CCTCGTCTTCGCTTTCACATCTTTCCTCTGAAG TTGTTTGACAGGAGCCCCACTTTGCTGATAC	T	C	CAAAGAACAATGATCGGAATGATAGGTACAGT TCGGGACAAGAGCAAGGTAAGAGTCAAGACAT GCTCAGTCAAAGTGGGGTCTGACGATGAAA TGC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR52	133.42	Ca- <i>desi</i> -LG(Chr)1	6033499	ATACATAATTGGGCCGATGC	(AT)11	(AT)10	GGAACCAGAATTAGAGTTGAAGAA	59.65	150.00
Ca-II-SNP121	134.25	Ca- <i>desi</i> -LG(Chr)1	6088473	GATTTTCTATTCAAATTGGTGGTCCCGGTGCATT TTATTCCTAGACTATAAGACCCAACATCAAGTGG ATGCACCTTGCCCCAAAATTTGGAGACAGT	G	A	GGCTTAAATTGCAACTACACTTCCAATCTCTA CTGATCAGAAATGGGACTTCTTGGAAACAATGA TTAGCAGAGTACCAACAAGGCTATGAACACA A	NA	NA
Ca-II-SNP122	135.91	Ca- <i>desi</i> -LG(Chr)1	6115794	TTATTTATTTTCTCGCTTCTTTTTAAATAATTTGC TTTTTTTATTGGCATTGTAAAGTTCTCATTAGTTA TTAGTTATTGAGCATATATTCTACTTC	C	G	CATTAATAAATAATTGATAAATAAGATCAGGAG AATAATGATTTTATCATATTATTTTATTAGTCTT TGGTTTATTTAATATGACTATTATCTTAGGA	NA	NA
Ca-II-SNP123	136.81	Ca- <i>desi</i> -LG(Chr)1	6122870	CATTTTATTCAAAAACAAAATACTTGTTGTTTGA CCTAATCACATTTTATGTGTAGGATGATTTGGGTC ACTTATATAGAATATCTCTTTTATCTTT	C	T	GTTAAACTATTGATCTTTTATGATAAAAAAATAT ATATTTTTAATAATAAAAAAATAATGTATTATT CAAAGCTAACATATCAATATTTTTTCATGA	NA	NA
Ca-II-SNP124	138.61	Ca- <i>desi</i> -LG(Chr)1	6140856	AGATGAAAGTTCGTGTATCTTCTGCTCAAATTC CAATTGCTTTTTATCCTCTACTAACTCCTGAGAC ATCTGATCAGCAAGACGTTTTGCTTCCATG	G	A	GTTGAAAAACAGAAGACTGCTAGGGAAAATCG GCGTGCAGATGAGGAGCATGTTAAAGTAGAGG AGCAGAAGAAGCTTCTGAAGATAACAGGAAA AGCG	NA	NA
Ca-II-SNP125	139.51	Ca- <i>desi</i> -LG(Chr)1	6161052	ATTGGTGGCGTATATATTTTATTGGGGGTGAGAT GTTGAGGGTGATGAGGTAGATGTCATTGTAATAT GTTTCTTTGGGAGAATGAGTTGGTGGTAAA	A	G	AATCATATTTACATAGTACACCAATAGTAGA ATTTTTCCAAAGCAACAAATCATTGATGATCC TGCAAGTGAACGTTAGCTAACAAAACACACG	NA	NA
Ca-II-SNP126	140.41	Ca- <i>desi</i> -LG(Chr)1	6173569	TTAATACTACGGTAGTTTTTTTTAAGTCTCATAAT TTATTGTATTTATGTATAAACGATACAAGTTTTATT GAGTGAGTGGATAAGTTACTGCGTCCTT	T	C	AATTGGCGCATGGATCTATTTGACAGATGAAAT TCAAATTAAGGACGATTTTCTATTTCAATAAA TTCAAATATTAATTGATTGATAATTCAAATT	NA	NA
Ca-II-SNP127	141.31	Ca- <i>desi</i> -LG(Chr)1	6184142	CATATTGGCGGCTGAATTGATTACTGACTCAAAGA TGCGTGACCTTACCTTCGACGTTTTTTTTACTGA ATTATATTAGATGTTATCGAAACTATTTTC	T	A	CAGATAATTTAAATTATATTATAGATACAAAAT AACTGATCTCCTTCGAGTATGCTATGTTAGATT TTTTTAGTGAATTTTTTTGATGATTAAGATA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP128	142.21	Ca- <i>desi</i> -LG(Chr)1	6200464	ATTAATATACCATCAGTATCAATGGCTCAAATATTA ATGGTTCAATTATTGGTGCCAATCCTACTTGTGTT GTTGGTAGGGGCAGGGGCTAAACCTGAGC	C	G	TCTACAATCCATAGTACAATCATAAGGACAATC TTTAGGACAAGCATACACCACATTGTAGCAATA TTTGTACTTCTTTATCTCGCACTTTGCATACCCT	NA	NA
Ca-II-SNP129	144.91	Ca- <i>desi</i> -LG(Chr)1	6310910	TATACTGAACTCTGCAACGGTGGCTATGATGCCAA AGACTTTTCGTGTGCTTTTCGACACTATTACTCAG GAATGGACGAGCCTCTTGACCACTAAATTA	A	T	TAACAACACACTTTTTATCCAGTTTCATTGCATC AAATTAATGGTCTTACCATACAAGAAAACAATA CATAAAGAAGTTACATGATCTATAAGAATACT	NA	NA
Ca-II-SNP130	145.81	Ca- <i>desi</i> -LG(Chr)1	6397062	GCAAGTAATCATTAAATAATTCACATGCTTTTTTTT CTTTACAGGTTTCTGCTGCAACTACCACAGACAAT AGCTGTGAGTCTGTGGTAATGAGTGGTCA	A	T	CATAACATAAAATCAATTCATGATGCAAAAAAAG TTTGACTGACCCAGCTGGGTTGTTGGCATCCC TTTGAGGATGCTGAGTTGGGTTTTGCTGTTGGT T	NA	NA
Ca-II-SNP131	148.51	Ca- <i>desi</i> -LG(Chr)1	6745622	ATGATGTTTTAACATGTGGTTCCAAATGTTATTTT TTGTTGTTTTGTCTTAGGTTCTTCTGAAACGCT TGATGGCAAGCTTTTGAATTTCTGCGG	C	T	ATGATACATTTGCTAATTAACAACCAATAGTCC TTATAATGTACTAGTAGTAATAACCATAGAATCT ATGCTTAAGAACAGCAAAAATGATCACCACAT	NA	NA
Ca-II-SNP132	149.41	Ca- <i>desi</i> -LG(Chr)1	6773488	AACGAGACCCAATAGCACGTTTTCCAGGAGGAAG AGGTAATAATCCCAAAATTTGGTTTTGTGCAATG CAGAAAGTTCTTCTGCCATAGCCTGCTGCCA	T	A	TTGTCTATTCCACTTACTCAACTTCATTTGTTTC TTTCTTAACCTCTATTACAGTTTGTCTGAGCC CTCTTCTATAAAGAGGTTGTCTTGATCCTCT	NA	NA
Ca-II-SNP133	150.31	Ca- <i>desi</i> -LG(Chr)1	6829116	AGCTAACATGTAGGTCATGTTGCTAAATTTGATC CCTACTTTAACTCTCTACACGAATTAAGGATCCT TTTATCACTTGTGACTTGCATGTTATTGA	A	C	TACACTCACCTCCTTAATATGAATGAATAAACAC AAACATACCAATTAATCTCTCATTGATGATAGA AGTCAACCCCAATGAATTGATAACCAACGAAA	NA	NA
Ca-II-SNP134	151.21	Ca- <i>desi</i> -LG(Chr)1	6862783	TTGATTTATTTAGGAAAATTTGCTTGAGCAGGAG AAGGATTTGCCATGATGCTGGAACAGCATGGC TGCCCCACACATTGCTGGAATTGCTGCTCTT	T	A	TGTGCTAGAATTGGGCTTCTGCTGTCTAGA GTTGTTGATGTTGTAAGCAAGGCTGATTTAATG GCTGCAGGGCTCCAACGTGGATGTTTCTGCTT TA	NA	NA
Ca-II-SNP135	152.11	Ca- <i>desi</i> -LG(Chr)1	6918109	AAATTCTCGCATTCTACATCACAGTAAGAACTTC TTGATTCGCCATCGTGACATTCTCCTCTTTATGG TTGTGTGTTATTTTTCCATTTACTTCTCAT	T	G	TTGAAACTTTCCCATGGCTTGCTGTTGCAACA AAAACATACACAGAGGAAGAGTTAGGGTTTCAA AATAAAATTGGGTTTTAGTTTTTTTAATCAATT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP136	153.01	Ca- <i>desi</i> -LG(Chr)1	6942682	TTGATTTATTTAGGAAAAATTTGCTTGAGCAGGAG AAGGATTTGCCATGATGTCTGGAAGTGCATGGC TGCCCCACACATTGCTGGAATTGCTGCTCTT	T	C	ACTGATAATGTATAATATAAAAGAAAACTATGG GGCCTAGGTTAGAGCTCCTAAAGAATGAGACA AAAGGGTAAATTTACAAATCAGGAGAAAGAACT AGTATACAAAAAGAATGACACTAAACCACAATT TCTAATCTACAAATCGGGTATATTTTGGGAGCA TATACAAAAGGGTGACAGACATAATAATTT	NA	NA
Ca-II-SNP137	153.91	Ca- <i>desi</i> -LG(Chr)1	7046558	AGAAACGACGAGCAGTGACAACGGCGCGCAGTG ACGACGGCGAGCAGTGGCGACGGCGAGCAGCGA CCACGACGAGCAGCGACCACGAGAGCAAGTGA C	C	T	AAGAATAAAGATTGATGAATGAAACACATAGAA ATAAGATTAAGAACTTGAACCTGCGCCTGACGT TATCCTGGTCGTCGTCGTTGTCATTGCTCGTCC T	NA	NA
Ca-II-SNP138	154.81	Ca- <i>desi</i> -LG(Chr)1	7062230	CGCCACCCTGTAACCATTCTGTATAGATTAGCTC GTTCTTTTCGTTTGTGATGACGGTTGCCCCATT TTTTGGTACCCTTGAACGGGGCTCACCCA	G	T	AACACCAAAGAAGATGGAATCTGACAATGAAAT AATTGATTAGGAAAAAGTGGTAAAGCTCATAG AAGCTGGTCTCATTACTCCATCTCAGATAGCT C	NA	NA
Ca-II-SSR53	155.71	Ca- <i>desi</i> -LG(Chr)1	7137592	AACCTTCTCATGCACAAAATCA	(AT)14	(AT)17	TGGAGGTTTGTCTTTTCTTTTGA	59.62	176.00
Ca-II-SNP139	156.61	Ca- <i>desi</i> -LG(Chr)1	7141328	CAAAAAAATACTTCTTTTCTCAATAGCCTAGTAC CTCTTTCATCGGAAGTAACTTTTATCAACAAGTA GTTTGGCATTCCACCCTCCAGTGGCGGAT	C	T	TATAGAAGGTTTTATGGCAGCTTAAAAATAAAAT AATAGTATTATCCAAAGGATTTTTCGTTTTCCTG TGGGGCAAGAGCCCCCATTAGTTACACAGTG	NA	NA
Ca-II-SNP140	157.51	Ca- <i>desi</i> -LG(Chr)1	7166394	CGCAGATGACAATAAACCTTAGTATCTTCCTTG TCAAGCAATCCCTATCTCTTTACCTGTTATTGTGC TAGGGCTTCCCTTCTAACAGCAAAATAGGCC	T	A	GTTGCAGTGTCTTTGATATTTCAAATTAGAAAA TAAAAGTTACATTGTACAAGTGTTTTTTAGGAAA GATTTTTGCTCGAAAAGACTTAGCGCTTGGTC	NA	NA
Ca-II-SNP141	158.41	Ca- <i>desi</i> -LG(Chr)1	7204364	TCGTCTTCTGCTGCTGCACATTATTGTCTGACA GTAATGGCCATTATGGTCATAAACTGCTCATTTC TGCTGAACCGTTTTCTCCTATGAAATTCT	G	T	TAGTAAGAGATTGTGAGTAGGAATGTGTGTGTA AAACTGAGTATTTGGTAATTTTTATAGTCTAG GTGCCCTCATGAGCTTTAATTACAAGAAACCAT	NA	NA
Ca-II-SNP142	160.21	Ca- <i>desi</i> -LG(Chr)1	7282702	GGCAGGCATGTTGGGGTCGTAATCCCTCAGGTGG GAGAAATACAAGCAGCAAAATGGCCAAACAAGCT GCATTGGGATTTGTTAAACGGACATTGGAGCG	G	A	CTAGACGAACAATACTAAGCTGGGAAGAAGCA GCAAAGAACATATCCTTGAATGAAGGTTGTTG AAGCAGCTTGGCTGTATCTTCAAATTGACGG CA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP143	161.11	Ca-desi-LG(Chr)1	7349728	TCTATCAGTCACAATAACTTTAGAAATTAAGTCTC AGATTTGAACAACCTTTCGTACCTTTTCAAATGCC AGATGAAGTTATCTTGTGTCGCTCTTGT	A	C	TGATAGCACATACAAAACAAATAGATATTGGTT ACCACTACTTGAAATTGTCGGTGTACACATCTAC TAGTTTGTATTTTCGGTTGGGTTTGTATT G	NA	NA
Ca-II-SNP144	162.01	Ca-desi-LG(Chr)1	7380996	TTGATTTGGGGAACATCGAGTTGATCTCACGAG GTTGCTTCTCTCACTCTAGAGGAGCTTGAGGAG GAGAAGAGCTCGGGGAAGTGGACTACTAGTTT	C	T	GAGCATTAAGTCCATCTCTTGTGAGCTGGTGT TTTCCACCAACAACCGTATACCCGAAACTGACAT TCATCACAGCACCTTAGCCTTTCTGATAACC T	NA	NA
Ca-II-SNP145	162.91	Ca-desi-LG(Chr)1	7383209	TTATACCACCAGTCCAGATCAACCTTGATTTGTTA CAATCTTCACCTTTCAACCTAGAAAGGATTTTAC AATCACCTTTTCCAGCCTTGAATGATTGTTA	C	T	CGATGAAGTTGATGGGATAATGGAATATCATT AACTCTTGATGAGTGGATGAGACTAGATTCGG GTGAGATTGATGATATAGATGATATCAGTGAAC ATACTTTCAAACCTTCTTGCAGCCCATCATGCCA ACTCTTTCGACGTTGTCGGTGAAGTTCAAAG GAAGGAAGAAAAAGGCAAGGTCATGGCAGG AAATGTGGTTTGTAGGAAAC	NA	NA
Ca-II-SNP146	163.81	Ca-desi-LG(Chr)1	7404716	AAATTTTGGTTATTTTCTCTGTTGGAGAGATATG TATTTTATAGTCGCACCTTTAATTAATTTCTTAA TCCCACAAGGTACATTTGGATCACCATG	T	C	AAAAATGGTATTTTCGTCTATATTTTATCAATGA ATACAAGTTAATATGAATTTATGCAGGTTAAA AATCATGTTTTATATGAAAATAAAATCTCTC	NA	NA
Ca-II-SNP147	165.31	Ca-desi-LG(Chr)1	7432885	AGATAAGTCCCTAATGCAAACCTAGAAGTTTGAAG GAGCCCTTACCTCAACGTTAGCTTAAACGTGCGTT TCCGGTACCGCAGTAATTCGGTAAAAATC	C	T	TCTAGATCAAACCTCATTCTCGAAGAGATAG AAGGGAAGTTGTTCCACCACCGCTACGGTG CTAGTGAACATAATTTGGAAGCGGCTTGCAG CGG	NA	NA
Ca-II-SNP148	166.06	Ca-desi-LG(Chr)1	7481763	TTATACCACCAGTCCAGATCAACCTTGATTTGTTA CAATCTTCACCTTTCAACCTAGAAAGGATTTTAC AATCACCTTTTCCAGCCTTGAATGATTGTTA	T	C	TTTATCTCAAACAAGTGTGAGAAGTTAAGAT CCCAAACACTTTTATCATACACATATTTAACTC AAGTCTATCTTTTATGTTAGATTGAGTGTGTTT	NA	NA
Ca-II-SNP149	166.81	Ca-desi-LG(Chr)1	7490836	TTGAGATCACAAGGAAGTTTATGAACAAACCTGTG AGGATTCTTGTGAAGCGTGATGAGCTCACCTTGG AGGGTATTAAGCAGTTTATGCAATGTTGA	T	G	GCCAATCAACCTTCCGTCTGGTGTTCACAAAA TAACACTCTGGGTGATTGCCAATGCTCATAAA GATCACAGAGGGTGTCAAGCTTCCATTCCTCT T	NA	NA
Ca-II-SNP150	167.56	Ca-desi-LG(Chr)1	7515845	GCGATTTGTGTTTTAAATAATATTTTTGTGGTT GTCTAAGTGGCTTGTGATTTGTGTTTTGAATATT TATCTATATGGTTGTCTAAGTGAATTTGGT	C	T	CCAGCCACTTAGGCAACCACAAAGATAACAATA TTTTAAACACAAATCACCAGCCACTTAGGCAAC CACAAAGATAAAAAATGTTTAAAATACAAACCACC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP151	169.06	Ca-desi-LG(Chr)1	7558735	TCGATAATGTAATCCGAGACTCATTGTCCTTTTAA GGTATCTCATGACTCTTTGATAGCGTGCCAATGC TCCATACTAGGTCTACTAGTAAACCTGCAC	C	A	GGTGAAGGTGTTAGACAAAATGAATATGCGAG CATCATTGGCAGCCTCAAGTATGCCACTGACTG TACTAGACCCAACATTGCCTATGTCGTTGGATT GT	NA	NA
Ca-II-SNP152	169.81	Ca-desi-LG(Chr)1	7595734	ACGAGTTTTAATGTGTTTTGATGCGCGTCGCGCA CTTCAAGCGTGGATTGGCAGTGGCTTCAGCACGA AATGCGTTTTAGGCGCGCTTCAAGCGCACAAAT	A	G	AAATGAAAGCTAGGATCCATAGATACAACTTTT AGGAAGACCAAGAAACCAAAATTCGGAATCCAAA GAGGAGAAAAATGTACTACACTCCAGACAAAAG A	NA	NA
Ca-II-SNP153	170.56	Ca-desi-LG(Chr)1	7609528	TGGAATATCAAAATTGTTCTTCGTAATTTTACATC ATTAGATATTGAATCTTTTTTTGTTGTTGAGAATTT TGGTCTATTGAATCAACAAGTATGGTA	C	T	AATGAGATGTCATCATTATTACGATACACGAGA GAAATAATGAATTCAGAAAATATCATATGATTTA GTGTTTCTTCTGAACTTTATGCAATTTCTCTT	NA	NA
Ca-II-SNP154	171.31	Ca-desi-LG(Chr)1	7623150	TTTGTGGCGGCTTTGTAGCCACAAAATGCAAAAG GCTCAGGCTTTTGTGGCGGTCTTTCAGCCACAA AGTGTAAACATCCCTTCAGGAATTTGTGGCGGC	C	A	TGATTTTGTGAGGGCTTAGGCAGCCACAAAATC CACCTAAATTTTTAAGATTTTTGTGAGGGATTTT TCAACCACAAAATCTAAATTTTGTGAGGGTAAA	NA	NA
Ca-II-SNP155	172.81	Ca-desi-LG(Chr)1	7684333	TTTGTGATTTTGTATTTTTTAGTATTTTATGTTTT GTTTATATACTGTTTTTAGGCCCTTCGCAATAGCGG TCATCCCGCTATCCCATTTTTGGGATTC	G	A	GTGTTGGTGCCGACATTAGACACATCTTTAAT CTAAAGTGCAATATTACATAGAAGATAAGTCT ATGTTGTCAAATCTTAGATAGAAGCGCGGAGCA C	NA	NA
Ca-II-SNP156	173.56	Ca-desi-LG(Chr)1	7721091	TAGTTCTAACACCATTGAAGGAGTTTTATCAAGAA TTATTCATGAATCTTCTTGTAATTCTCTTTTATC TCTATCTTTGTATCTCTGTCATGAGTAA	C	T	TGAGAAAAATAATTCAAATAATTCATTTATATAA ATAGAAATCAAATCAGACAAAATAAGAGTTTCAT CTTGTTTCACTCATCCCTAACAAATAGAGTTTA	NA	NA
Ca-II-SNP157	174.31	Ca-desi-LG(Chr)1	7780059	ATCCCAATTATAAAATTTAATATCAAAATGGCCCAT TAGCTCAGTTGGTTAGAGCGTGGTGCTAATAACG CCAAGGTCGCAGGTTTCGAGACCTGCATGGG	T	C	ACGCGGGTGACCCGGGTTTCGATCCCCGGCAA CGCGGTTTGTATTTTTTATTATTATTATTATTTAT CAGAAGTTAGAATTAATAAATGAAAAACAATTTG	NA	NA
Ca-II-SNP158	175.06	Ca-desi-LG(Chr)1	7851353	GCCCTGTGTTAAAGCCAATCGATTGGGAAAATC GATTTCTGAGGGTTTTTCGTGAAAACGTACTCT GGGCTTAATCAATCGATTGGGAAATCGATT	A	G	CGATTTGGCAATCGATTGGATGCATTACAGGA GCTCAGCCATTTTGACAAAATCGATTTGGAAT CGATTTGGCTTTAATACAGGCGCTCAGCTATTCA TT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP159	175.81	Ca-desi-LG(Chr)1	7904001	TGGATGCATGGTATGATATATGTATGCAGGGTGAT AATGCTGATTTTTTATCGATAATAGTGATTTATA AAATTGTGATGAGTTTATATGATGATTAC	A	G	CAATATTCTCATCACAATTTTATAACGTCATTAA TCATACATAATCATAATCATCGTATAAACTCATC ACAATTTTATAACGTCATAATCATACATAAT	NA	NA
Ca-II-SNP160	176.56	Ca-desi-LG(Chr)1	7944510	TTCAATTGCAATTATGTTGTTGTTTATATTGTCAT TTTGTGTTGTTGTTGAACTAAAGTAAATCATTTTT ATACTTAATTCTGGAAACAATGTCTTGC	T	A	GTAAACGATCAAAGTGAACAACAAGCATCGCA CAAGTTCAACCATATCAATTCAGAACTAAACAA AATTCAAACAAGATAATGTTTCAATTCATACTGA	NA	NA
Ca-II-SNP161	177.31	Ca-desi-LG(Chr)1	7981054	TTTTCTTGCATGAATTTAGTTTGTCTGTTTTAAAA ATTAAAATTAGAAAGCAGTTTTAATTTAATTTTGT GCAGGTCGAAGCTGTTTGTGATGGAGCC	G	T	AGCACCAATATCAAATTTGTTTACTTGTCTATAG TAGATCAATTTTGTCCACTCTCTACAAGTGGCTT TATTGATTTGTAAACATATGAAGTAAAGGACATC	NA	NA
Ca-II-SNP162	178.06	Ca-desi-LG(Chr)1	8074774	CAGTCCTCACACTGTGAGATTTTCCACTAAGTGT TAAACAAAGAACCTTCTTGATCTTACAACACCTA GTCTAGATCAACCTTGATCTGTTCAATCT	T	C	AACTCAAACATAAGAGTTTCTTTATAGTTTGT TAGAGTACATTGAATCCTATCAAAGTTAGATAG GTACTGTTATTGCTTTCTGGGTGGAAAGTAATA	NA	NA
Ca-II-SNP163	178.81	Ca-desi-LG(Chr)1	8092533	TGTTGTGTAATGTTTTGGATTTATAATTGGAGAA ACTTTTCCGCTGCTTGAATTTATAATGACTCAATT ATTTATCCAATGCATTTTCTGATTTAAA	C	T	AAGTTAGTCAAACATGAACTTGTGAAAGGCTGT AACACCCCGTTTTTCAAAGCGAGGGTATATATA TATTTTTTTTTAAAGTAATTAACGAAACAAAG	NA	NA
Ca-II-SNP164	179.78	Ca-desi-LG(Chr)1	8111129	TAACATTATAATGTTTTGAAAAATGAAAAATTATAT TTGACATGTTGGCACATTCATCTTATTTTTAGCTTC CCTATATGCGCTCACTCTCTCTGTTCA	A	C	TCCAGTTTTAAGAAAAGTAACATTTTCTAAAAAA CTCCCCCTTAATTTTTCAAAGATATCCTTCA AAATTCAAAAACAAGTAAGATAAGATGGAT	NA	NA
Ca-II-SNP165	180.54	Ca-desi-LG(Chr)1	8169336	GCACTGGCCCCATCTTCTTCCAAATGCACTGGT ATCGAATAGGTCTCAGCACACTTTCAATAGTTTTG GTAGTCCCTTTGCCAACCATCGTCAAGGTT	A	G	CATCCAAATGAAACTGCAACAGTATTGGACTAG ATGATGTCCCTTCACTTGAAACAATCAACTTAAG TGGGACATGTCATCTGTGACTTGCACCAACGA CT	NA	NA
Ca-II-SNP166	181.30	Ca-desi-LG(Chr)1	8196164	ACCATTTGAACACACGAGCAACTTCACTATCAGAT CTACTATTGCTTCTCTCTGCATTTGAATGCTTT GCTCGATGACTCCAGTTTGTGGGTAATA	C	G	AGATTCACAACCATAGTCAACAAAATACCTTCT CTTGAGAGATGTCGGAATGAGTTGGTATTTCAA AATAAGATTGATAATAGTCACACAATGGCTGCC A	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR54	182.06	Ca- <i>desi</i> -LG(Chr)1	8205909	CTTTTAAAGCAATGTTTACCTTTTC	(AT)14	(AT)11	GCGACCTAGTTCCTCGAAACATC	57.06	136.00
Ca-II-SNP167	182.82	Ca- <i>desi</i> -LG(Chr)1	8210526	TTCATACTCGAAAGAGAAGAAACATGCAATATGCA CCGGACATCAGATAATGAGCGCTTGAGCGCGTC TGAAGCGCTTTTCCAGCATCTGCTACTGCC	T	C	ATAGTAAAAAGATCCCTAAAACAGTAAAAATC TGTGTTTTTATGGTTGCTGGTGCGGGTCGCGC TCCACAGGCGGAAAAACGCGCTCCAGACGC GTTT	NA	NA
Ca-II-SNP168	183.58	Ca- <i>desi</i> -LG(Chr)1	8232371	TAATTTAGTGAATTTTTTTGTTGCAGGAATTAATTT ATTCATTTAATTATTGTTAGGGACTTAATTGTCTAT TTTTAATTATTATCAAGGACCTAATTGT	C	T	TTTATGTGAACCACAGTTAAAAAATTGAGATTTT TTTTACTAATTTGTCTGATGACTCGTCAACTTGA TTTTCCACGTGTAATTTCTATATAAAAAAAG	NA	NA
Ca-II-SNP169	185.10	Ca- <i>desi</i> -LG(Chr)1	8345900	AGTTTTGACATAGAGAATGGACCCAAGGCTGCTG AGTATATTCAGGTTTGTTTTTATTATTTCCACTACG GGAAATGCTGATTGTTACTAGAGATGTTTG	C	T	GGGTTTGGACTTATAAGCAATCGGCTGACCATA CATGCGAGAGTGGGTAGTTATTATTTATAAGTG TTAGATGTTGCCACATATTATTCTTCTTTTCTT	NA	NA
Ca-II-SNP170	185.86	Ca- <i>desi</i> -LG(Chr)1	8383527	TCGCCACACAATAAGCGAAATCTTACCATCGGA TTTGATGTACTCATAGTTGATATCAATGCCATCTAT TATGTTAAAGCTCCAAGGATCCTTGACTT	T	A	CGCACTATTTTGTATTATAAGCAACATTTTGG GTGGGAATTGCAATGCTGCTGCTTGGCATCAA TATACACAAAATGATCCATTCTACAATGTCCC AATAAAGCATTACCTTACATGGCTTTTTATGGAA ACAAAAACAAGTCACCTTATATAGATAGAGCAT CTAGTAATTACACAAAAGCCATTTTATTAATGT ATATACCCTATGACTTATCCATTTCTCTTCATT CCATCATCATTCCCTCATTTCTGCTATAATT CCTGACATTTGTGTATTTGTTAAAGAGTATTC AAATCAGATAAAATTCACCTCACAAACAAAGGCC ACCCTTGGTTCACATAAGTAACATTGGTACCTCT	NA	NA
Ca-II-SNP171	186.62	Ca- <i>desi</i> -LG(Chr)1	8453603	AAATCAAGTATGTGAACCAAGGGTGGCCTTTGTTT GTGAGTGAATTTGGGGGTGACTTAAGAGGTACCA ATGTCAATGGCAGTGAATTTGGGGGTGACTT	G	A	CGGTTGGTGTGATGATAAACATCCATTCCATCC TGCTTCAAAGTAGATTGGGCTGACAATGCTGT AAACTCACTCAAAGATCATCCAACAATACAA C	NA	NA
Ca-II-SNP172	187.38	Ca- <i>desi</i> -LG(Chr)1	8477054	TCGCCACACAATAAGCGAAATCTTACCATCGGA TTTGATGTACTCATAGTTGATATCAATGCCATCTAT TATGTTAAAGCTCCAAGGATCCTTGACTT	T	C	CGGTTGGTGTGATGATAAACATCCATTCCATCC TGCTTCAAAGTAGATTGGGCTGACAATGCTGT AAACTCACTCAAAGATCATCCAACAATACAA C	NA	NA
Ca-II-SNP173	188.90	Ca- <i>desi</i> -LG(Chr)1	8501184	GGCATCGGGAGTCTGTTTTAAATATATATAAAGAC TTATTTACGCTTTAAACCCCTCATTAACTATTCTT GTGTGTGACACTATACGTTTCCGAAAT	A	G	CGAATCACATGACATTCTCGTCACTTGATTAGT AGTGATGCATTGCTAGATAATGTTGTTTTTTAT AATATTAATAGATGATATAATATTATTATCAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP174	189.66	Ca-desi-LG(Chr)1	8543377	AATGAAGTATATGCTCCAGTAGCTCGATGGGACA CAATTCGGATCTTGTGGCTGTGGCAACTCAAAA GGGATGGAATGTGTATCAGCTTGTATGTAAAA	T	G	TTTGTGCAGCCTATATACCTTGTCTTCTCTCC CTGCTTTATGAAGCCCTCAGGTTGATCTACATA CACTTCTTCTCAGTTCTCCATATAAGAAGGC A	NA	NA
Ca-II-SNP175	191.18	Ca-desi-LG(Chr)1	8653369	TATAATTTTCGTCGCTCGATGCGACGTTTTTTTGT TTTAATATGGCATTTTATTTTTCTGTCTGTGGTG CGGAGTGTTCCGTTTTGATTCAGCTATGCA	A	G	TATGATAAAATTTAAATTCATAATATATATGTT TTCAGATTTATAACGTTAACGACGTCAAAGTTAT TGATTGAAATCTATAATAGATTAAAACACT	NA	NA
Ca-II-SNP176	191.94	Ca-desi-LG(Chr)1	8896611	ATGACTTCTCAATTGATGACCATATTAATTTTTAAT TTTTTTTTTTTTGCATATTATAGACTTGGGATGG CCCAATCGGTCATGTCAAACAACAAACT	A	T	TTGACTACACTTTTATGCTTCTTTATGAATTG TACTACACTTATATCATTACAATTGAAGCGCAT GTAAATTATAAACCATAAAGTTTACAAATGATGAT	NA	NA
Ca-II-SNP177	192.70	Ca-desi-LG(Chr)1	8987902	CTTTTCTATCTGTTTCCCATTAACACAACCTTTTCT TTTTTTCAACAATGGCTCCAAGAGACAGACCCACC GCAC TACCCGGGCCAGCCATCAGCCCA	C	A	AAGTACCAAGCCAAACTCGTGTTTTTTGGCCGG GGTCACGGATCTCAGCGGCGTAACGACCCAC GGACGTTTTCTAACGCCTCTAAAACGAATCTCT TT	NA	NA
Ca-II-SNP178	193.46	Ca-desi-LG(Chr)1	8988178	ATTTTCCAACACCGTCGGAGATGCTTAATCTTAAC ATTAGTAACAACAGCACAGCAGCCCAAGTCAGA GTAGCACCCTTGAATCACCGTCACCGCCGCC	G	A	GTCAAACGCGTCGAAAAATAAACAGGACGG GATACCGGAAAAGCCAAAGAAACAGCACCGAC GCCGGTGCGGAAAAATGGTGTGAGATTAGAT CAAG	NA	NA
Ca-II-SNP179	194.22	Ca-desi-LG(Chr)1	9116083	TCAGAAATGAGTGAATGAGTACTCTTTGGAAAGCT TATGGTGTCTACTTTATAGATAAAATTTATTTTAT TTTTATTTAATCCAATCTTGCAATTTA	C	T	AGTCGTGATGATTGATCGAGTATTGATGTTGAA AAATGGGTTACAAGCTGGACCAGAGTTGCTGT TACTGTTTTGTTTTATGTCATTTGTGTTTATGTT A	NA	NA
Ca-II-SNP180	194.98	Ca-desi-LG(Chr)1	9161984	ACCGGAGAGAAAGTCTCTTTATAATCAATCCCTTC CTTTTGAGTATAACCCTTAGCTACAAGACGTGCCT TATATCTCTCCACATTACCATTGGAATCCC	T	G	TGAGGAGTACAAGTCTATGCAAGACAATTCAGT TTGGAACTTATCCCATTACCCGAAGGAGTGAA ACCCATTGGTTGCAAATGGATTTTTAAAACCAA G	NA	NA
Ca-II-SNP181	195.74	Ca-desi-LG(Chr)1	9182446	TGTTGTGTAATGTTTTGGATTTATAATTGGAGAA ACTTTTCCGCTGCTTGAATTTATAATGACTCAATT ATTTATCCAATGCATTTTCTGATTTAAA	A	C	TGCCATTACAGTGTCTACTTCTATCAATCAATC AATGCTATTCTACATAAAAGTTTACAACAGGAT GTTAACAAGCAAAGAAAACAAAAACAAACTGTG TAACCTGCTAACTTAATTATGCTCCTCTATAATC CCAATATCCGGCCAG	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR55	196.50	Ca- <i>desi</i> -LG(Chr)1	9870501	GGACCAAAACGGCAATTA	(TAT)15	(TAT)19	TAGGCATGTCTGGCATTTTG	59.81	144.00
Ca-II-SNP182	197.26	Ca- <i>desi</i> -LG(Chr)1	9983100	TAACATTATAATGTTTTGTAAATGAAAAATTATAT TTGACATGTTGGCACATTCATTTATTTAGCTTC CCTATATGCGCTCACTCTCTTGTTC	T	A	CAGATGTCCAATTGAGAGTTGCCCTGTTGACTG TATTCATTGGACATCTGCTGCACAATCATCATT ACTCGAAGATGAAATGCACCGTATAGAAAGAGT CAACGTTGCTCTAATGCTTTGAGGAATGGGATC AGCTTCATTTGATGTTTTGAGAAATGGCGAGTTC GCGATGGGAAAAGAGACAGTCAAAAGTCTTGA GGATGAAGTTAAAGAAAGAGCAAAAGAGCTG CTGCGCGCCGACACCATCAACCAATCACTCA	NA	NA
Ca-II-SNP183	198.78	Ca- <i>desi</i> -LG(Chr)1	9986169	GCACTGGCCCCATCTTCTCCCAATGCACTGGT ATCGAATAGGTCTCAGCACACTTCAATAGTTTTG GTAGTCCCTTTGCCAACCATCGTCAAGGTT	A	C	GAAAAAGGTGAGTCATCACTCAAAAACGAA GCTCAGAAAAGGAAAAAGTACCTCTAGGAGTTT GTGCGAGCTCGAGTTTAAAGAGCTAAAAGGTT TTATGGATTTAGGATTTGTTTTGCTGAGGAAG ACAAGGATTCAAGATTGTTTTCTTGATACCAG G	NA	NA
Ca-II-SNP184	201.06	Ca- <i>desi</i> -LG(Chr)1	10562402	TCTATCAGTCACAATAACTTTAGAAATTAAGTCTC AGATTTGAACAACCTTTCGTACCTTTCAAATGCC AGATGAAGTTATCTTGTCGCTCTTGT	G	C	GGCGGTTGGGGTGCATTAGAAGAAGAGGA AGAAGAAGAAGGTTGGGAAGATTGTAACCTGA AAACGACGTCATCTCGTTAGTTGAGGGGC GTGGAATTAACGAGAGGCGACGCGCGTGGG GTTGGATGCCGAGGTAACGCTCCGCT	NA	NA
Ca-II-SNP185	201.82	Ca- <i>desi</i> -LG(Chr)1	10739203	TTGATTTGGGAAACATCGAGTTGATCTCACGAG GTTGCTTCTCTCACTCTAGAGGAGCTGAGGAG GAGAAGAGCTCGGGAAAGTGGACTACTAGTTT	C	T	TCTCAATACAAATAGTCTCTCCATTATTTT TTTGAATAGATACAACCAACCCCTCATATACA TAAAGAAAACATACATATATATGTCTTTAAT AATCACCATAAACCACCAACCTTACTTTCAT GTGGCCTTGCCTAAGATAGTGAAGGAACCTACC ATCCCTTTAATGAAATCGTACCTACGAAACAA ATGTGCCACAATCAATGATGCGGTGAAGGTTAC ATCTCTCTCCGCGACATTCATTATACAGAG GTACAAGATGCACAGATTGATGAAGATCTCAA GATCTTAAAAACTCAAATAGGCAGATCTTGCTG GAGATAATAGCCAGCTGCTATGGGTGTGATTT CCACATTTTGTGTTGCTCTTCTCATTCTTCT TCATTATTTCTTCAATTTGATTTTTCAGTCTAA ATGAGTGAGCAAAAGCTTCTAGTCTTTT	NA	NA
Ca-II-SNP186	202.58	Ca- <i>desi</i> -LG(Chr)1	10785548	TTATACCACCAGTCCAGATCAACCTTGATTTGTTA CAATCTTCACTTTCAACCTAGAAAGGATTTTAC AATCACCTTTGAGCTTGAATGATTTGTTA	A	G	GTACAAGATGCACAGATTGATGAAGATCTCAA GATCTTAAAAACTCAAATAGGCAGATCTTGCTG GAGATAATAGCCAGCTGCTATGGGTGTGATTT CCACATTTTGTGTTGCTCTTCTCATTCTTCT TCATTATTTCTTCAATTTGATTTTTCAGTCTAA ATGAGTGAGCAAAAGCTTCTAGTCTTTT	NA	NA
Ca-II-SNP187	203.34	Ca- <i>desi</i> -LG(Chr)1	11291737	AAATTTTGGTTATTTTCTCTGTGGAGAGATATG TATTTTATAGTCGCACCCTTTAATTAATTTCTTAA TCCACAAGGTACATTTGGATCACCATG	C	T	TTTGCACCCCAACAAATGATTGGTATTTCA AATACAGAATATCAAATACAGAATATCAAATCA GGAAGGATTACAAAGAATAAATAAATAAAGG TTGCCAATTGCCATTACAGCACCAATCAGAA AACACCTACTAGCCTCGTGGGAAAAAATAACA TCCTGCTACTTGTGATTTATCTCATTCAACACA AGCTCATCAATGCGTTGATTTGCGTGCTTTTT CAGAAATAAGCAACGCAAAATCACTTTCAGCT CAGCAACTTTGCAAGCAATCATTTGTTTTGTTG AAAATGGGGTGACCGTGTCAAATGGTGAGG GCTGGAAGCATCAGGTGTTTTTCTCGTGAAA GGACCAATTTACTTAGTCTGCATCAGCTGCACC GAAGAGCCTTATGAGTCTTACGGAGGCAATTA GATCTCATTATGGCCAGATGATTGTCATACTG ACAAAATCAGTAACAGATG	NA	NA
Ca-II-SNP188	204.10	Ca- <i>desi</i> -LG(Chr)1	11899768	AGATAAGTCCCTAATGCAACTAGAAGTTGGAAG GAGCCCTTACCTCAACGTTAGCTTTAACGTGCGTT TCCGGTACCAGGATTAATCCGGTAAAAATC	T	C	CAGCAACTTTGCAAGCAATCATTTGTTTTGTTG AAAATGGGGTGACCGTGTCAAATGGTGAGG GCTGGAAGCATCAGGTGTTTTTCTCGTGAAA GGACCAATTTACTTAGTCTGCATCAGCTGCACC GAAGAGCCTTATGAGTCTTACGGAGGCAATTA GATCTCATTATGGCCAGATGATTGTCATACTG ACAAAATCAGTAACAGATG	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR56	204.86	Ca- <i>desi</i> -LG(Chr)1	12228747	CGTCCAATCCTACCAAGTATTC	(AT)6	(AT)7	TGAAGACAAGAAAATGGCCC	58.94	169.00
Ca-II-SSR57	206.38	Ca- <i>desi</i> -LG(Chr)1	13530166	TCATCTTCTATGGCTACTACTTCAA	(TAT)5	(TAT)6	TTCAAACATTCTCTTTACTAAGTGCA	57.88	210.00
Ca-II-SNP189	207.14	Ca- <i>desi</i> -LG(Chr)1	13591156	TTATACCACCAGTCCAGATCAACCTTGATTTGTTA CAATCTTCACCTTTCAACCTAGAAAAGGATTTTAC AATCACCTTTCAGCCTTGAATGATTGTTA	G	C	CCATTTTCAATGATTCATTTATAGGTGAACTTT TTAAATTAAGTTGAAGCTCAACCATTTGAATAAC CATGATCTGATTCTCGATCCTACGCATTTCGTIA AGGTTTTGAGATGGCATGGTTAATGCGAAAAA TGCATGGGGAACTTCCCTGATTTGGCGGGAG CCGTGAATAAGCTTCAGGAGAGTGTGAAGAGT ATTGAGAAGAATTTTGATACTGCTCTTGATTT CAAGAAAACCCCAATCTACTAATCAAGCTTCA	NA	NA
Ca-II-SNP190	208.66	Ca- <i>desi</i> -LG(Chr)1	13721651	TAACATTATAATGTTTTGTAATAAATAATATAT TTGACATGTTGGCACATTCATCTTTTTAGCTTC CCTATATGCGCTCACTCTCTCTTGTTC	A	G	TTAGGAAATTTCTAATGAGCAATCATCATCA GCTCTTCAAAGTTCTCAAGGTGATATAGATCTG CAATGTAAGATAATGTGACCTCTCAAAGTAGA AATCTTGAGATTGTTGGACAAAAAGACAATCTT CCTGCTGATCAACTCCTACTGCTGATGGAACC CAAGGATTAGCATTCTTGTCTCAGGTCAGAGAA AAACTCAGTCTGCAGAATATATAGACTTTGTG CCTTATATCAAAACCCCTCAACACCAAAACATTC	NA	NA
Ca-II-SNP191	209.42	Ca- <i>desi</i> -LG(Chr)1	14029689	GCACTGGCCCCATCTTCTCCCAAATGCACTGGT ATCGAATAGGTCTCAGCACACTTCAATAGTTTTG GTAGTCCCTTTGCCAACCATCGTCAAGGTT	C	G	TGATAATTCAGTCTCCTAAGAAGATCTCGAACG ATAAAGGAAAAACGTGCTCGTCTTCGTGTA GAGATGCAAAAAGTTGAGGAGGGGCAAGTGAT CTGTTACATTGAACAGCTTGGTGGGAGCTGC CAATTGAGTGTGATGTGTCCGGGGAGGTTATC AAGATTCTAAGAAAGGACGGGGATCCGGTTGG TTATGGTGACGCACTTGTAGCAGTATTGCCGTC ATTCGCTCAATAAAGACCTTCAATAGATCTTT	NA	NA
Ca-II-SNP192	210.80	Ca- <i>desi</i> -LG(Chr)1	14135090	ACCATTTGAACACAGCAACTTCACTATCAGAT CTACTATTGCTCTTCTCTCTGCATTTGAATGCTTT GCTCGATGACTCCAGTTTGTGGGTAATA	G	A	GCCGGACCCAAAAGTTTTAGAGCTTTGATAAA GAATTTTCAATCTATAAATTTGAAGGTTTTTCAA ATATCAATCTTAAAGAACCAATTTCTACTAAAGC TTATATTATAAGCATATTAATAGCTTCAAATGG TAATGATATTTATTCACAGCCTATCGGGAGAAG AAAGAGGAGGACACACGAGCATCCTTCCAACA CCCATAAATTCAGCAGCAAATTTCTCGTCATTTT TTCCAGCATATCTCTTCAACTCATTCAATATT	NA	NA
Ca-II-SNP193	1.08	Ca- <i>desi</i> -LG(Chr)2	75212	TTTGTGTATAAATGGTATTTTACTGAGATAATT TGTATAGTGCTTTGGCTGAGATGATTTGACTGTG TTTTGCAAAGATAATTTTGTATTTTTC	C	T	GCAACATGTTGACTGACACAAGCAAAAACAGT GTTTCACCTCAGTAGAAGGTAACAGCATGGCA TGACATAAAGTAAAACGTTTAAATCAATATGGT	NA	NA
Ca-II-SNP194	2.09	Ca- <i>desi</i> -LG(Chr)2	89296	AAACCAGCTCTCGCTTCTGCATAAGCCTTTCCA TAAGCAGTGATGTGGTCGGTGAGATGCAACAGG TGAATTACCCTTTGTGCGGCCGAAAGAGCG	A	G	AAAAAACTCTTCAGCCACTGGTTTTAGGTAAAT TGTTATTGATTATGGCTACTTATGAAGATTTT TTCGGTGGGAAGAGTATTTTCAGAAGTCAAGTT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP195	3.10	Ca-desi-LG(Chr)2	123972	AGGAACATTAACACTTTACCCAGAATGTCCTTGC AACTAGCTTTGTTGCCCTCTTGATTTCCGAACTT GGTTCGATATTCTCCTAAAATACATGTAGG	G	A	ACTTTAATATTTTTAATATTATATTTATCACTT TAATATTACACTTTAATATTTTTAATATTGTATT TTAATAATGATATTGAACTTATCTTTTTAA	NA	NA
Ca-II-SNP196	4.11	Ca-desi-LG(Chr)2	208901	GTATCGTACTTACGTTTACTAGACTTAATATTGCTT ATGTTGTTTCATATTGTCGGTCAAAAATAATATTGAT TTCAAGTACAAAAGATTCTACTTGTTTT	G	C	ATATCATAATATCCTACAATGTTGTTTGTGGTCT TGGAACTGCGCACTTAATAAACATTAGTGTCT AAAATTGTTTCCACAAAAGTATTTTATTATCAT	NA	NA
Ca-II-SNP197	6.13	Ca-desi-LG(Chr)2	232256	ACATGTCGTCCAAAGTAATCGTCATTTCCACCAATA GGGAGATGAAAGCTACTGGTGTCCAGATGCCACC TCTCTACGAATGCAGAAATGATCCCTTTGTCT	A	G	GGAAAAATTAAGAAGCTGTTATTGAAGACG AAGAGGTTGAGCAACTAGTTAAAAGCTCGGGA TTGTATTCTGTTACTAAAATGCAGCTATGAAATG AT	NA	NA
Ca-II-SNP198	7.14	Ca-desi-LG(Chr)2	249953	GTAGGGATTTTTAGAGTTTTGTTGTTACTTTG TTTTAGTGAAGTGCCTGAAATTTGGTGAGAAATCAA CATGACATATGTAGAGTATTTCCGCCATAT	C	G	GAGTCTGAATTTGGTTCTGGTGTCTTCATGAAA AATGTAGCTATGGATCTTGGCTTTCAATTTCCAC TTGGTTTGACTCCAATTGGACATCTATAACTCC A	NA	NA
Ca-II-SNP199	8.15	Ca-desi-LG(Chr)2	315499	AAATTTTATTGAGTCTTGGTATTTAGTTACTTCAA GTCTTAGAGGCTTAACTTGTATTTCCCTTGACTT TTGTTGGTATTTACATCTATCTGAAGAC	G	T	TTCCCCCTTGATAGCTAGCTTTTAAAGGAGGGT TCCCAAGTCTTAAATACTTATCACAAAGTTCA TGAAATATTCATAATTAGCATTAAGCCACA	NA	NA
Ca-II-SNP200	9.16	Ca-desi-LG(Chr)2	325842	AAGTCCAAGGGTACCTCATGAGTGGCTTACAATC ATCCATCAATAGCCGAGTGAGGACATTACACTCTA AGCTCTCGGCTTTAGTTCATACAGCTAGTC	A	G	CTCACTTCGAACAATTTGTTCCCTTCCCTTTTCAT TTCCAAAAACGACTATGTATTGTCTCACCTCCT ACTTCTTATCATTATCTCCTCTTTATATCTC	NA	NA
Ca-II-SNP201	10.17	Ca-desi-LG(Chr)2	354586	CCTAATGAAGCTGGTGCATGGACCTATGTTATG GACTTAAATCCTTAATTATATGTATGAAAACAATTG AACTATTCTGGCTTTGACCTATTGGTTATG	G	T	TCGACCCAACCTTTAAATACGTCAAACCTAAATTG GATTAACCTACATTTTTTAGATGCAAATTTATT TAGTTTAAAAAAAATGCGTAAAAGAGTGACTC	NA	NA
Ca-II-SNP202	14.21	Ca-desi-LG(Chr)2	371023	GACATGATTAATGATGTTCCCGAAGTATATCCCT AGCATCTAAGAAATGAGCAGTGAAAAAGATGCTCT GTGTAGTTGTGTTGAACTGCATGCATT	C	G	AACTATATAAATGTTAATCCATTTTAAAAATTA AGCAGCAACTAGTAGCCTATAGTAGTGAAGTAC ATTACTACTGTAATATTATTTAATAGTGATAAT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP203	15.22	Ca-desi-LG(Chr)2	392964	GCCTTACTGTTTGTATACCAATTGACATGATGGGT AATGTGACATTATGTAGCTCACTGTCATTTTAGGT ACACTATTTGGGCTGGCACTCAGAACAAAA	A	C	TGTCTGGAGGACCCATAATTGTCGCTTGCCAAT GAAACATATCTTCAGCAACAGGACCTGTAAAGT TTTGAACAAAGACAAAACAAGATATCAGCACA A	NA	NA
Ca-II-SNP204	16.23	Ca-desi-LG(Chr)2	413593	GTGTGTGAATATATTAATCAAGTTTATGTGAAATG GTGAAGGGTTGAGTCACCTCTTGACGGCGGTGAT TGCGGTCGTTACCACCTTGGTGGGTCGTGTGA	G	A	CCGACTCACTAACAATCTAACTAACCATGCTCC TATAAAGTTTAATTAACATATTTATATATTTTG GAAGAAGAAAAATTGAGACCTCGATTATCGAA	NA	NA
Ca-II-SNP205	17.24	Ca-desi-LG(Chr)2	420492	TTATTTAGTTTATTAGTAGTTAATGTAAGACTTTAA CCACTCACATTTGAACTTAACAATCTCTCCCTCAA GTGTGAGTCTTTCGCATCATATTTTGTGA	C	T	GGTCTTATTGTCGTAACGTTTCCGTTTGTGGA GGAGCGGAAATGGATCATGATATTGGATCCTT GTATCAAATACTTCTTGTGAGTGTGTAACAA CG	NA	NA
Ca-II-SNP206	18.22	Ca-desi-LG(Chr)2	429417	CATTACCTTTTGGTTGCCATAAACTTCAGGTGAA GCAAGGCAGCTGGCTTCATGTACATCTCCAACAA AAGCAAGAGCTTCTTCAATGACTTTATATTT	C	T	CCATTGAGACTCAGCAGCGCTTGAGAGAGAT GCTGCAATTGCACGTTTGGAACAGAGTAGAATT GTTCTTGAATGAGACTGGCAGAACCCTGG AAA	NA	NA
Ca-II-SNP207	19.20	Ca-desi-LG(Chr)2	436660	AGTTAATCGGAATAATGCATACCCTCGACCATC CGGCCATATGATTGTTCTCCCGTCAGGTGCAACA CCATGACTAGAATTGGAGCATCATGAGCCTT	G	T	ACTGCTACAAAAAACTTTTATGATTTGTTAAC TGCTACAAAAAACCTTATATGAGGGGGCTTC TGATTCAAGGTTATCGTACTGGTAATAAGACT	NA	NA
Ca-II-SNP208	20.18	Ca-desi-LG(Chr)2	441416	TTGAGCTGAATCTAGTGCTTCTAGGACTTCTAAT GCCATTTTGAAAAATTAAGACTCTCAATTTGATTT ATGGAATTGGTTAGTTATTTATGTGTTT	G	C	AGCTAGCAAATCCCAATTTTCTTGTTCACATCT CCTAAGATAACTTAGGATTAACGTCATTACA ACATCAACATAGTTATAATAAGATATATAAGAG	NA	NA
Ca-II-SNP209	21.16	Ca-desi-LG(Chr)2	451398	CTTAATGTTCCACCTTTAGTCCAATATCTTCTACAA GATTTGCAGAAATATCTTGGTTGAGAAAGACTGTA ATTGTTGTAGTAACAGAATTTGGTGTGG	A	T	CGAATCATTGGAGAATATGTTGGCTTGTTCGAA AGCACAAACAAGACAAAAACCAAAACCTCAGCC AGAACAAGCTCTAAAATGTCCAAGATGCGACTC A	NA	NA
Ca-II-SNP210	22.14	Ca-desi-LG(Chr)2	493799	ACACAAGAGTTGATACACTCCTACAATGGTATAAA CCACTTAATTTGTGCTCTCCAAAATGGTATTTCA ATTGGCTCAATGCTTTGTCTCTGTTCATCA	G	A	GGAGCTGTCAAGTGCCTCCGTTTGAACAGT TTACGGCAGACCCTGCCATCATTAAACAAGGTTT GTACCTAGGGAAGCTTAGAAGCAGTGGTACAA GAC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP211	23.12	Ca- <i>desi</i> -LG(Chr)2	519934	TCTTATTGGATTGTAGGATCTAGTTTATAGTGAG ATAGAAGGCACAATGCCTTTTCTTGGTTCAATCT ATTTTTCAAATAAAAAATTCTCTAAACCTC	C	T	ATAAAAAATAAAAAATAAAAAATTTACCCTTAG ATGATTATGAGCCGATGAATTGAAAAGTGAAGT AAGAAATCAAATTGAATTGAATTTGAAAGAAAT	NA	NA
Ca-II-SNP212	24.10	Ca- <i>desi</i> -LG(Chr)2	539372	CGATATATGTCATCAAGTGTATTGGTGTGTTAGTC ACGGGATTTAGTTGCATTATATGTCAGTAACGACC GACGCAGTGGTCCCATTATTGATGTATGTG	G	A	TTTTACATGGGTAATATATTTTAATAATTATAT CAGAATCTTTAGACGCACATCTGAATGCTATC TATTTTAGATTTCTCCTTTACAATCTGGTCCA	NA	NA
Ca-II-SNP213	25.08	Ca- <i>desi</i> -LG(Chr)2	604529	AAAGCTTCTAAAGATTTGCAGGATCCTCTTCTAA AGTATAGGTCCGATATTTTGATCCATAATTTT CAACTCTGACTCTTACTTCTTCAAGTTT	C	A	TGACTTCTATGAAAATAAATTCCTTTCAAATGG AGAAATAGTGGGGGAGCGAATCAAGTCACGT TCCTATATCTATAAGCACCAACAAGGCGAATC A	NA	NA
Ca-II-SNP214	26.06	Ca- <i>desi</i> -LG(Chr)2	616399	TATGTTATATGAATATTTTTTTAAAGCCTTTTAC AACGCTTTTTCAAATAAGCACTCTCAAAGGCCTCC TTATTTATTTTTAAAGGGTCTTTTACA	A	G	CTGAACTGAATATAAATTAGTAATTTACATGAAT TGAAAAGAGCCTTAAATATAAAAATAAAACAAT GAGGTTTTTACAGCGCTTATTTGAAAAGGG	NA	NA
Ca-II-SNP215	27.04	Ca- <i>desi</i> -LG(Chr)2	642761	TTCTGATAGTGCAATTAACATTGATGGTGATCTC CTAAATATAGTATTATTAGCAGAAGCTGAACCTGT GTCGCTAGAGGAAGCACTGGCTCACCCCTCA	T	C	ACTTCACTCTATAGCCTTCTTATTTCTTGCAA GCTTACCATTCCAGGTTTTGTTCTTGGAAT TGATCTCAATTCCTCATCCATAGCATCCTTCCA	NA	NA
Ca-II-SNP216	28.02	Ca- <i>desi</i> -LG(Chr)2	651196	TTTAAACAAGCGACTACATCACCGCGATTAATCCG GTAAAATTTCCGCTTTGACGCTCGCTTCCGAAGTT GGCTCACTAGCACCGTAGCAGGGAGATGAG	A	C	AAGAAAAACGGTATTAGGGTTTTTAAACCGT CAAACACAAACCTCCACTTTTCTTCCGACGTTCCG AGCTTCGTTTCGAGAAGTGATAGAAGGGAAAG TT	NA	NA
Ca-II-SNP217	29.00	Ca- <i>desi</i> -LG(Chr)2	741960	ATTCTCATTTTATTTATTCTATTTTGACAGATTTT TTTATTTTCCCTTCAGATTTTGTGCAAAATTA TAAATAAATTTAATTTTATGATGT	C	T	AAAATCTAGTAAAAGAATTTAAACTCGTGTTTA ATCGAATATTTAATTGAAGTTCATTAATAATTTG AATCAAATATTTAATTAATAAATAAGAG	NA	NA
Ca-II-SNP218	29.98	Ca- <i>desi</i> -LG(Chr)2	794468	TGCAACCTCTAATGTTGCACTGACATTGATTATTA ACAATGTGATTTGCCAAAGCCACTAATTTCTAAG TCATGCAATTCTGCCTTCGACTTATATTAT	C	T	GGTTAAATCTGTTCATAATTAATTTTTTCAA TCAAAGCTTTTACTTTCCATTAGAGTCATTGAC TTTCTCGTTTGAGTGAGATGTTGTGTTTTTGG	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP219	30.96	Ca- <i>desi</i> -LG(Chr)2	824124	GAGTTTGAGGAAGGAGATCATGTTTTTTGAGAGT TACCCCCACCATTGGCATTGGAAGAGTGCTAAAG GTCAAGAAGTTAAACCTCGTTTTGTGGAC	C	T	CTTAACTGGGAGACGTGAAAAACATTGTGTAG ATTGGACAGTTTGGGTGGCAAGGCTATTCTGTA TGCAGAGGGACCAATCCTCTGCAATATTTGAAA G	NA	NA
Ca-II-SNP220	31.94	Ca- <i>desi</i> -LG(Chr)2	851921	CTATTA AACGGGCTACCAACCCATATAAGGTCG GTCCTAATGGGTTGCACGCTTCTTAGGATCATGC CAAAAAACCTGTTTTAATATGGGCTGATAA	A	T	AAGAAATTAATAATAACGAGTCAAAAAAAT ATTGTAATAATGTGCAGGTTACCCGCTCAATT TGAAACTCGCCTAGGACCAGACAGATTAGTAT	NA	NA
Ca-II-SNP221	32.92	Ca- <i>desi</i> -LG(Chr)2	865647	CAAGACACTAGCTTTTATCAAGATTCGTAATCTTAT GCTCACAAATAATTTTTTTTTTTCAGTTTTAGAGA CTTCAATTTTTATTGTTTGGTTCCTT	G	A	AAAGAAAAACAAGTAGTGAATTTGTTGTTATTTT GACTACCAACAAATTCCTTAAGTAAATGTCATAACT TATAAATTTTTTATATACAAAAATAAGATTG	NA	NA
Ca-II-SNP222	33.90	Ca- <i>desi</i> -LG(Chr)2	874315	TAGTCAATATATGAATTACTTGTAAATTTGTTTG AAGAATGAGTTGAATTCATAACTTTGCTGTCACAA GACTTGAGATAGATTAGTCTTTGAGTTG	T	C	GAGAGACCTGACTATTAATAATTTGTTTCA TTAACATATCAGATTGAAGAAATTTTTAGTTG AATTTTTTAGTGTAAGTTGGGTATTTTCATAC	NA	NA
Ca-II-SNP223	34.88	Ca- <i>desi</i> -LG(Chr)2	886887	AACAAAAACCGTAGAGCTTGACAATGTTACGATGT TGAATTTCTATCAGAGTTTTGATCTCATTTGTGAAA GCTTTCATAGTAGACATTTCTTCATTTGG	C	T	TTGATGACAAATATCTCATTGGAGTTGGAGGGA ATGGAAGTGTTCACAAAGCAGACTTACCCACGG GTCAAGTTGTTGCTGTCAAAAAAATGCATTGAG T	NA	NA
Ca-II-SNP224	35.73	Ca- <i>desi</i> -LG(Chr)2	909741	GTATCATTGAATGGTTTTTCTTCACATAAATAAAC ACGGTACTTGTGAGGTCGACGCGTCTGTTTTT GTGTTAAATTTGTTGATTGTATACAAACA	A	G	AAATTAAGGACCTCTTATACTAAAACATTTCAA ACAAATATACAAGCACTTATGTCATAATACGAG TTCAAATGAGCTATGAATAAGCTCTTAAAAAG	NA	NA
Ca-II-SNP225	36.58	Ca- <i>desi</i> -LG(Chr)2	922816	GGAGTCTATAATACGTGTGAAAGTCATGTGTTGA GTCGTGGTTATGGGTTATTATGTATGGGTGTCATG TAAGCATCTGTGATTAATTATTAATAAAT	G	A	GAATTTGATGCATTA AACGATAAGAACAGAAC ACAAGATATTTGAAATATCTCAGTGAACCTTA GGCTTACCAAACAAGTTTACGCACATATTTAA A	NA	NA
Ca-II-SNP226	37.43	Ca- <i>desi</i> -LG(Chr)2	1081581	AAAGTTACCTCTCTGTGACTCAGCTGACACACC CTGTCTTGTGTAGAAACTGAGACCAGTCTGTAA CCCATACCATACTGCAGGGGCGCTGCGGG	T	C	CTCATTGACCGGTTCCACTCACATGATCTTGG ATCATTGAAAAATGGATTCATTGGTGGAACTGA AGACAAGTTGCTTGTCTCCACAGACCTCATTCAA G	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP227	38.28	Ca-desi-LG(Chr)2	1100915	CCTCTTGACTCATTATAAGCAAATTAGCTACTTT CACACTTATTAATGATGATAGCCAAGTGCAATTTAG GGTTTTTTGGATTAACCTATTTGAGCTT	A	T	GGATAGCTTATGAAAATTAGCTGAAAACACCTT ATTGACATGCCATAAGCTGTTTCCATAAGTTTC CCCAAACAGTTTCGCAAGTGTATGTTGGTAG A	NA	NA
Ca-II-SNP228	39.13	Ca-desi-LG(Chr)2	1122632	TGAGGGAACAAATGGGTTTGTGTAGATGTTGAT GCTAATGTTGGTATGGTGAAGTTTGTCTGCTGCTG CTATGGGGTCCGTGTTTTGGCGTTTGAGCCT	A	G	ACTTCATCACCAACAACAACAACACTACCAACA TTAGCACCAACATCCCAACTCTATTAAGTAA ATTCTTTCACAAATCTTCTGCAAATTCAAAAA	NA	NA
Ca-II-SNP229	39.98	Ca-desi-LG(Chr)2	1156903	CTTTTGATGATATCAGCCTTTATACTGGTCACATT CGATTATGCAGCACTGTAGTAAATATCTACCAGA GAGGTGTTTGAGACAATTCGGATATATCA	A	G	ACTTGTGAAATAGCTCTGTCACTGGCATCACAT ATCCCAACCATTCCACATCTACATCAAATAATCT AGCATGATCTGGAAGTGGCGGTGAAGGAATAT A	NA	NA
Ca-II-SNP230	40.83	Ca-desi-LG(Chr)2	1181100	CATATTTTTAATATTTTATAATAATATTTTTT TGATTTTTTTAATATTTATAAGTACAATATTT GTATTGTGTTTTTATGTATTAGTGA	A	T	ATTAATAATATGATTAGTAAATATCTATAATTG ATGCATGAAAAGCGCATTGACAAATATTCAATAA TAATAATATAAAAAATTACGAGACAAATATTT	NA	NA
Ca-II-SNP231	41.68	Ca-desi-LG(Chr)2	1245390	CGACGACGACGGCGCTGCGGTGCTGATGGC GGCGTGCAAGAAAGTGAGAGTCGATAGAGAAGAG GGACAGCGGCTGATATGTTGTCAGAGAACAATC	G	C	AAACTTTTAAAACAAATTTGAAGTGGGCTGGGC CACACACGTGCTACAATGGGAAGCAAGGCTGT AAGGCGGAGCGAATCCGGAAGATTGCCTCAG TTC	NA	NA
Ca-II-SNP232	42.53	Ca-desi-LG(Chr)2	1272206	TCTACTTCATAGTGTGGTACCATTATAACTCTAAA GTACTTGGTTAGGAAGTGTGATACTATGTCACCAT CCCGGTGAACAGACAATTCAAATGTCCAT	G	A	GGAGGTGCAATCCAATGTCGGGAGCTATCA TGCAACACACGTCTACCTCGATTGTCGCGTATA TGTGTCTCGGTTGAGTTAAGGAGATCTATGA GGA	NA	NA
Ca-II-SNP233	43.38	Ca-desi-LG(Chr)2	1288366	ACAGTGAAAGGGTGGGATGGGATGTTTCTGCTA TTGAAATGGTTAGTATTCTTGTCTGCATTATTGT TCAAGAACCCTAAGACTGAAGGAGCTTCATG	C	T	GGATAAATTGGTCTTTTTTTGTTTCCAATTCA AAATAATAAAATTTGAATTTTTCATTAGTTCCATC TCATTTTCATTGACTACTAGATATCCAATACA	NA	NA
Ca-II-SNP234	44.23	Ca-desi-LG(Chr)2	1424536	TCGGTTATCGATAATTGTCCAAAAAATATTCTCC ATTTTCTTCAAATTTTCAGTATGTTGTTCACTCAT TTAATTATCAATTAACACACTTTCACG	A	G	ACTCAAATTAGACTTACGATGAAGAATAACGGT GTGCAATAACGAATTCATAAACTTATAAGTTG AGTATTTTATAGAAAATTGAGATTGTTTAAAAAT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP235	45.08	Ca-desi-LG(Chr)2	1432725	TATGTTTATGGAACAAGAATTGTTGCCCTCCT CCCGCTTCCATAAAAATTTAAATTTTTTCTCTTT GGTTAGTTTACAATAACTCATGAGTTT	G	C	AAAGTATTATGTAAGTTCAAAAACAAAACAAA AACAAACAACAATCGTTTATTTATTTTATAA TTCAATTATTACATATAAATGAGTCTTTTT	NA	NA
Ca-II-SNP236	45.93	Ca-desi-LG(Chr)2	1450638	GTTACATTGTGGTATTAGAGCACTATTTCTCGAC CTTGGTGGGATGGGACGCTTCGTATGTCCGAT GTTTTCTTGTGATATGTTATTCATGTTAAT	T	C	TGTAATTCTTAAAAATTCAAATTCAGAAGGTTA CATAATTAATGACATATAATGGACATTTAAATAA TTAGTAAATCTCAATAATAGAAAATTATAC	NA	NA
Ca-II-SNP237	46.78	Ca-desi-LG(Chr)2	1506588	TTTTAAAAGTTTGATGTGTGAGAAAGATTTAATATT GGGAATTTCTGTTGTGGTTGGATTAGTTTTATTGTG AACAAATGTTATAAATATTTATGTTTTAT	A	G	CCATAAATCACCACAACAACATTAATATATCAGA GTTCTCCCCATCTAACTCGGTGCTAATGGTC TCGATTCTTTTTCGAGACTCAATGAGCTAACTA	NA	NA
Ca-II-SNP238	47.63	Ca-desi-LG(Chr)2	1649749	GAAGAGGCGTCATCAATTGCATTCCTTCTTCTT GCATAGCTTCGTAGACATCCTATAGATAGAAAGTGA AACGTTGCTCCTTTGCAACCATTAGAGGTC	C	A	ATGTTCTTGATATTCGTCTCAAGTTGATTTTATT GAAAGCTTTGGATATTAAAGGTTATCAACTTAC TTTGGTAGTGGTGTATATGAAAATCACTAAA	NA	NA
Ca-II-SNP239	48.48	Ca-desi-LG(Chr)2	1673041	CGACGACGACGGCGCTGCGGTCGTGGTGATGGC GGCGTGCAAGAAAGTGAGAGTCGATAGAGAAGAG GGACAGCGGCTGATATGTTGTCAGAGAACAATC	T	C	GTAGATAAGGTAGAATAGTTGCAACGGTTGTTG TGTGTTGTGTTTGTGATAATGGCTTCTCCACA TCAATTCATTGCTCTGTTTCACTTCTTCACTTC CCAAACTCACC AATTTCAAACCAATAATTTCTT CTCTTCAATCCAACAACCCTAACTCCATTCT CTCATCATCCCTCTCCACCGTCAGATCCTCCGC TTCTTCTCTTTCTCCTCAACAGCATTGGAAGA TAGTCTATGACCATTCATTAAGTTACCCCTT	NA	NA
Ca-II-SNP240	49.33	Ca-desi-LG(Chr)2	1781378	GATTATCTCATTTGTTGAGTTTTATTGTAATATA TTTGTGTTGAGTTTTGTTGTAATATATAATTGACC CCCACAATGGTAAATATTTCTCTAAATTT	C	A	TTGTATATTTACTTTATATTCTACTTTACAAAA TATTGATTTTTAGTCTAAAAACAAAGATTTTTTT TGCTTATAGTGTATTTTTCTCTTCAAAATTA	NA	NA
Ca-II-SNP241	50.18	Ca-desi-LG(Chr)2	1801000	CTGGACTATCACCTTCTTTTCTCAATCAAGTATGT AAACTTGTAAATCTCTTTATGGCTGAAGCAGGT TAGTAGACACTGGCATGCAAAACTTTTATA	T	G	CATCAACATATATGGCCAAGGCATTAACGACT TGCTAGTATGTTTAAATCAATAATAAATGGTCTG GTGTGGCTTGCTTATAACCAATAATTAATGAAA C	NA	NA
Ca-II-SNP242	51.03	Ca-desi-LG(Chr)2	1818420	TCAAGTCATTTAAAGTTTTTTTTCTCGATTAGTTTT GGTAAGTTATATTAGTTTACATTTTATTTTTTGT CTCACTTTCACCGAGGATTAATGCATTT	G	A	TGTAGATTGTTTATAATGTTAATGAATGTTTTT TGAATAATTAATTTGAGGAACATATTGTTGCAG CCTTTGACAGAGTTTCTAATAACCACATGCTTT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP243	51.88	Ca- <i>desi</i> -LG(Chr)2	1854096	TAAGCCTGCATTCTGTAATATATGTATGTATTGT GTATTATGTTTTATTACTCCCTAGTTAACTCGACAG CTTAACACGAATAACGCGGAGCTTTCTC	A	G	AAATGAGGTATTTTTCTTTGGGAAGCGAAGCG ACCTAGTCGAGCTATTGTCAAGTTAAGCAGTTCT CTCTTGTCGAGCTAGACTCTACTCGCACTATAG T	NA	NA
Ca-II-SNP244	52.73	Ca- <i>desi</i> -LG(Chr)2	1918740	TCATGGATCTCATGGAAGAATGTTGGAAAAGTT GGATCAAACGAATAGCGTTTTTCGCGTTTTGTTTTG TTGGAAGAGAAGAATTTGTGTTTGAAATTTG	T	C	CTTCCTCTTTTCGCGCCTCTGCAACCACTGTAGA ACCAACTAGAGATGAATACACTTGTCCGAGAAG AAAACGCCGACGGCGAAGCCAGCACAAGAAGA ATCCAAGTCCGTTTCATTACTAAGTTATCCGAA CCTTTCAAAGTCCATCCTCAGCCATCGCCATC CCCGCTGATCTCACCAGATTCGGCCTCTCATCT CTCGTTAACGCCCTTCTCCAATCCAAATATGAT CATTATCAAACCTCAACCTTTTCATTTTTGATC GCTTTCTTATGTGACAAACTTTATTGAATAAGC ACTTATTTAAATTGTTTTATTCAAGTACACCTCAT ATCACACCGCACACAACACGAGAATTTCTATCAC ATGGATTGAATCCAAATCAGTGATTAGCCTAA TCTACTCCCAAATCCATTTTTATTATGATCAG ATTCAATCTTTAGATTCATCATCTTCTTTCCATT CTACTATTGCCAAAGTATGGCGGCCGCCACAA CCAAACCACTTTCCCTATCCAAAGTCCCGCCCGC TAATTAATTGGTTAAACATTAGGATAAAATAAGT GTAGCAGAGTTGCGAATGTTGTATTGGATGTGT GGAAAGACTAGACAAGATAGGATTAAGAATGAC	NA	NA
Ca-II-SNP245	53.58	Ca- <i>desi</i> -LG(Chr)2	2170610	TGCTGATCTATGAGAGATTGCACCTTGGTAACTAG TGTTGGTCTGTGAGAGGCTGCACCTAGAAAATC GTGTTGATTTGTGAGCGATTGCACGCTAGTA	T	C	GCTTTCTTATGTGACAAACTTTATTGAATAAGC ACTTATTTAAATTGTTTTATTCAAGTACACCTCAT ATCACACCGCACACAACACGAGAATTTCTATCAC ATGGATTGAATCCAAATCAGTGATTAGCCTAA TCTACTCCCAAATCCATTTTTATTATGATCAG ATTCAATCTTTAGATTCATCATCTTCTTTCCATT CTACTATTGCCAAAGTATGGCGGCCGCCACAA CCAAACCACTTTCCCTATCCAAAGTCCCGCCCGC TAATTAATTGGTTAAACATTAGGATAAAATAAGT GTAGCAGAGTTGCGAATGTTGTATTGGATGTGT GGAAAGACTAGACAAGATAGGATTAAGAATGAC	NA	NA
Ca-II-SNP246	54.43	Ca- <i>desi</i> -LG(Chr)2	2325857	GCAGAACTACAGGTCTCCTCCCGACATGCCAG ACCACTTAAGCTGAGTTTCTACCATCTTTTCTACT ATAGGTGCTACCTCAACTCTCTCTAATGT	T	A	TAATTAATTGGTTAAACATTAGGATAAAATAAGT GTAGCAGAGTTGCGAATGTTGTATTGGATGTGT GGAAAGACTAGACAAGATAGGATTAAGAATGAC	NA	NA
Ca-II-SNP247	55.28	Ca- <i>desi</i> -LG(Chr)2	2366447	CGAGATTTTTACAATTTTACAATGACGTGAACTC AGTTCAAGTATGTTTACGTGAACTCAGTTCAAGTA TGTTTACGTGAACTCAGTCCACGTACACCA	A	T	TGTAATATTACGTGAATTGAATTCACGTATATTG TAAAATTGTAATAATCACAGGTAGTACGTGATT TAAGATTGCGTAATTAATGGAGTTTGAGACTTA	NA	NA
Ca-II-SNP248	56.13	Ca- <i>desi</i> -LG(Chr)2	2470350	TTCCAATCGATTGTTTCTGATGAGTTTGGTTCTGT GAATCACAAAATCGATTACTCAATGATGTGCAAA TCGATTGTTCCAATTGATTTGTTAAACACA	T	G	ATCGATTGAACAATCGATTGCCAGACTCACAGA ATGAAGTTTTCACTAAGTTAATCGATTGGGAAA TCGATTACTTAAAGTTTTATCAAACCTATGTT	NA	NA
Ca-II-SNP249	56.98	Ca- <i>desi</i> -LG(Chr)2	2502854	TTTGCTCGAACCGACCTATCAGCTCAAGCTTCCGT TCAGATTTTTTCTGGGCTTTCCCCACATACCACT GCTTTTTGTCAAATTTCTTTCCATTCAATG	C	T	CATTACTAGTGTGTTTTGATGAGAGATGCAGA CGGTAGGTCAAAGTGTGTTTTGGTTTTGTCAATTT CGAAAATCCAGACAATGCTGCTAATGCTGTGGA G	NA	NA
Ca-II-SNP250	57.83	Ca- <i>desi</i> -LG(Chr)2	2576058	TGTTGGCATCCATTTAAATCTTATCCAAATATGCC TTTAATTTGTGAGGATTTTTGTTGGAGATTAACA CTTGACATTACTTAATCTGTGTCTTCTTTG	T	C	TTCTGTATAATTAAGAATGCCAAATTTAGTTATT AACATCTATAAACACATACTAATATGAAACCACA TTTGACAGAAACACATGCTCAAAAACAGAAGG	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP251	58.68	Ca- <i>desi</i> -LG(Chr)2	2705575	GCCACTTTTTCCCACAGCCACATTCTTTTCTTCTA TGTGCCGTACCTTGTGGAGGTTTCATACAGCCAA GCCTTTACATTGATTTCTCTTTCAACCCAT	G	T	CAAACAAGACAACCTCTGTTCAAGAATTTCTCAC AAAATTTGAGAAATATGCAGGATCTTTCAAGGG GATTGATGAACATTATTTGATAGAGATCTTTATA	NA	NA
Ca-II-SNP252	59.53	Ca- <i>desi</i> -LG(Chr)2	2765925	TCATGGATCTCATGGAAGAATGTTTGAAAAGTT GGATCAAACGAATAGCGTTTTTCGCGTTTTGTTTTG TTGGAAGAGAAGAATTTGTGTTTGAAATTGT	C	A	GTCCGGTCCGTCGGATTAACATTTCCGGCGG TTCATCCCTGCGTGAACATTGCTCCTTCCACTC TTCTCTTCCCTCATCACTCTCTCCGACAGAA TT	NA	NA
Ca-II-SNP253	60.38	Ca- <i>desi</i> -LG(Chr)2	2803005	TGCTGATCTATGAGAGATTGCACCTTGGTAACTAG TGTTGGTCTGTGAGAGGCTGCACCTAGAAAATC GTGTTGATTTGTGAGCGATTGCACGCTAGTA	T	A	ACTAGCGTGCAATTGCTCACAGATCAGCACATT CTAGAGTGCAGCCTCTCATAGACCAACACTAAT TACCAAGGTGCAATCTCTCACATATCAGCACGA T	NA	NA
Ca-II-SNP254	61.23	Ca- <i>desi</i> -LG(Chr)2	2848860	ATTTGATCTTATCTATTGGCATAAATACTTGTGGG ACTGTTTTGAAGAGTTTGTGAAAATAACTTATGAC ATTTCCATAAACTGCTTACAACCTTATTTTC	A	T	CTTATGTATAAGTTATTCCTATTAGTAAAGATAA AAATTATAGTCAATATTTTTTCATATAAACTAAA AGTTGTTTTCATAAAGCTATTCTAGAGAGCTTA	NA	NA
Ca-II-SNP255	62.08	Ca- <i>desi</i> -LG(Chr)2	2883759	TTAAGCTGGTTTCAATGGTGGGAGAGGTGCAATC CAAATCCTTCATGGGATGCTTTCAAGGTGGCTGT CATAAGGAGATTTCAACCATCAATGATTCAAA	G	A	TTGATCAATTTCTCTTAGAGCGCCAACATACTT CTCAAAATCCTCCACATACTTCCACTGTACC AACCTGTTTCAAAGATAGCAACAATTCAAAAGG A	NA	NA
Ca-II-SSR58	62.93	Ca- <i>desi</i> -LG(Chr)2	2952192	CAATGTGCTAGATTCGCAGTG	(AT)8	(AT)6	AGGGAAGTTGGATTCCATGC	59.50	116.00
Ca-II-SNP256	64.63	Ca- <i>desi</i> -LG(Chr)2	3195855	TTGGTAACCTTCCCCTTTCTGTTAGTCTTTTTAAT CGAATAAAATAAATAAATGTATACTTGGTGTGTC ATGTTTTGCATTGTATTACATTTTTAG	T	A	TCATTCTATGTTTCAATCCTTTCTACTGTATAGA AATCTTCCAATAAATTAACCTAGTTTCTACATAA TCAAAAATATAACAAGATAGTTCTCCACTACTAC	NA	NA
Ca-II-SNP257	65.48	Ca- <i>desi</i> -LG(Chr)2	3220112	CGCTTACTGATCTACGTGTATCAGGACAGGATGC CCAGTCTGAGTCAGAAAAGCCCTTCAGTTGGAGG GCAGAATTTGCAGACAGAAAATGCCTAATGT	A	C	ATCAGTTTTTTGTAGAACAACCTCAGCCAACATA TGAATTCCTCTTCAATCACTCACTACGAGGCAG CTATAAGAGTATTGAAATATCTCAAATCTTCTCC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP258	66.33	Ca- <i>desi</i> -LG(Chr)2	3229500	AAGCCACATCTACAGCCTCACATCGTTGCCGCCG TCACTATCACCGTCTTCACCATCGTCGTCTCACCC TACCCTTCACCATCGCCGCGCTTGCCCAT	C	T	CTTTGAAGAGTTAATATGTTTTTTGAGCCGTTTT TCATAAATAAATAAAGTTTTCTAATGGATCAAATC CAAATACAAAAGAGTAACTTCGACGAGACCCA	NA	NA
Ca-II-SNP259	67.18	Ca- <i>desi</i> -LG(Chr)2	3268614	TAGACTCAAATCACTCTCGTAATTTTTTCATATTTT TTTGTCTCTATTATTTCTCTTCTACTCTCTTTCCAT TATACGAATAAGATTATATATTTTTTTTC	A	G	ATTATTTAAAATTATCTTTGTAATAATTTCTTAAAA ATATCATTTTGACATGTGTTAAGAGTAAAAACAT AACTACATATTTTTATAGAAATGAGGAGAAA	NA	NA
Ca-II-SNP260	68.03	Ca- <i>desi</i> -LG(Chr)2	3293949	ACCTATTATAGAAGATTCATTGATCACTTCCTTTAC CATACTAGAATCAGTCCATATTGTAGTTTTTAGCT CAACAGTTGAGCCAGTTCATGCAAGCTC	C	A	TAGAACAAAAGACTAAGGCCAAGGATAGAGAAT GTCTGTACTAGTGCAGATTTGATATACTTCAA CACACGAGTAGCTGCAGAAAATTCGTCTTCGGT G	NA	NA
Ca-II-SNP261	68.88	Ca- <i>desi</i> -LG(Chr)2	3356963	AAGATTATAACATTTTATGGTGGGTGGTGACACCT GATAGGCTCCAACCACTGTGAGAGGCTCAATGGT GGAAAACCTGTTATTTGACTATTTATTTTCAG	G	A	CCAAAATATTTTTATATTATACCATAACCTTTAA AAATTTACATTGATACCCTTAATTTTGATATTA AATACCTTAAAATTTTATTTGATCTTATA	NA	NA
Ca-II-SNP262	69.73	Ca- <i>desi</i> -LG(Chr)2	3404662	AATTTGGCGATTTTTCTTCTTTCTTTTCTTTCT TAGTTTTCTTCTTCTCTTTTCTTCTTCTTCTTT TATACTATTTCTTTTCTTTTCTTCTTCTTCC	T	C	ACGGTAATTTAACAAATATCTAGATATTTGGAG ATATTTGTTAAGTTATATTTATCTATATATGT TTGGTTGGAGGAAAAAGAAAGGAAAAC TAGA	NA	NA
Ca-II-SNP263	70.61	Ca- <i>desi</i> -LG(Chr)2	3423711	GACAAGTTTATATTTATTTTTATAGAAGTAACCA GTCATTTTGTGCTTATTTTGCTAAGTTCTCTTATTT ATTTCTTTCACATTTTATCGGAGCAATT	C	A	ATAAAAGGAAAGAAGAGATTAGAAGGAAACTCA TATGAGATATTTTTATTTTGAATATAATTGGAGG TTGAACTACATCCAAAACACATAAGAGAATGCA	NA	NA
Ca-II-SNP264	71.49	Ca- <i>desi</i> -LG(Chr)2	3435770	AATATGGCCGCAACTCGGATCTATCGAGTTATATG TCACATTTGAGGATGGTAATCCATTATACGATATT GGTCAACCATCATCCTCAACCACACCTCAC	C	T	TTGGCCTGATCAAAGTATGGTTCGGGTTGGTAT GGGTCGGGCTGTAAGATTATAATTTTGAAAA GAATAAGTATTTTGTGTTTCAAATGGTATTTAG	NA	NA
Ca-II-SNP265	72.37	Ca- <i>desi</i> -LG(Chr)2	3524491	AGTTTGTCTCTTCTGCAATGTGATATGATCCTAA TAGTCATAGTTCACCTTAAAGATCGTTCTAGGTCG GAAACTTACAAATTTGAGTGAAAATCGCGT	A	T	TTCAAAGCCTAACTTGCCTTTCAGAACGTCAT CTTTCACCTCGATTTGGAATCGGCCGAATCGG AGTTTTCGAGTGCCGTTTATCACGTTCTCCAGC CA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP266	73.25	Ca- <i>desi</i> -LG(Chr)2	3559005	ACTGAAGGTTTATATGTCTGTCATTGACGAAATGT AATGCGGAGTCGGTATTATGCAGGTGTATGTAC ATGTTATGGTGGTGGATCATAATATAGAATG	T	C	TCCTCATGTTCACTCAACCCCTAATCAACCTCA CAAGAACAACCATGCACCAACGACATAATCG TCTTCATAATCGCCTCACCTACATATTGAACCG T	NA	NA
Ca-II-SSR59	74.13	Ca- <i>desi</i> -LG(Chr)2	3592267	TGTGTCCCCAATAGACATTTTG	(CT)6	(CT)7	TCAAAAGCTGTGCAGTGGAG	59.72	179.00
Ca-II-SNP267	75.89	Ca- <i>desi</i> -LG(Chr)2	3610564	TGATAATACACAGTTTGAATCATCCTCGGGTTGA GGATCGATCTGTTTGAAAGTTAGTAAATCTCACA AGGGTGTGAGGACTGGACGTAGCCATCTTT	A	G	CTCGCTGAGGATGAAATTTTTCAAATCGTTAGA TCTAAGTTGAGCAAAAGAGTAGGAGCAGAATAT GAGAGACAGACACAATTTTATACTGGTTCAC C	NA	NA
Ca-II-SNP268	76.77	Ca- <i>desi</i> -LG(Chr)2	3641530	TTATTCATATGTTTCATACACTTTTTTTTTGCTTTA GTATATTTATTTATCATTTTTTTCATGAATACTTAA GGTACATTAATTAATTTAAATGCGT	C	T	TTAAATGATTTTTAATCTATTTGTATACAATTTT ATAAAAGTGATTTTTAAATTACAAAATTACCATA AAAGCATGACTTTTTAATTATTATTTTAA	NA	NA
Ca-II-SSR60	79.41	Ca- <i>desi</i> -LG(Chr)2	3785925	TTGATGAGTTAAGGAAATCTCAAAAT	(AT)9	(AT)10	ATGTTTTAAGGAATAGATGATGTTTTT	58.73	148.00
Ca-II-SNP269	81.17	Ca- <i>desi</i> -LG(Chr)2	3799571	TGCTTTGCATTTCACTTCAATTTAAATTAACAATTAC AATTGCAATTTCTCTCATTTAGCGCACCTTTTG ATCTATTTAAAGCTTGCTTCGCAACATGA	C	A	TTTTTTTTTGTCTAAATTTAGTAAAGCTTGA TTAACTCAATTTTATTTAGGTGTTTTAAATGTA TAGAAAAATGTAACCATATCCAATACATGTTT GTCCTCAAAAAGCTATCGGCAGAACCAAGTAG TCTCCTTATCACTTGCTCTTCTTTGGTTCTTTTG TATATTGAGCTATCAGAGCTTCGACGTCCTTCC AGAGGAGGCCCTCAACTAAGACTCCATCCTTA CTAAAGCACTCACTAAGACTTTCTCTAAGATCT	NA	NA
Ca-II-SSR61	84.69	Ca- <i>desi</i> -LG(Chr)2	3978441	CGATTCACACCTTGTGTTCA	(TC)10	(TC)11	AGGCTCTGAAATGAATGATGC	58.08	146.00
Ca-II-SNP270	85.57	Ca- <i>desi</i> -LG(Chr)2	3999295	GATGATTGACTCTCCTTTCTATTTAACTGCCTTTAA ACCTTATATTATGTTTACTATGTATGTCAAGATTT CAGTTTGACCATAAAGAATCTACTTTAA	T	C	CAGCATCACAGAAACCTACTAACCTGACTCAA GGATGACTTATAACACATGTCCAAATTAGTAGT TTGTCTTAGATATCTAAAGATCCTTTTAAACAATA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP271	87.33	Ca-desi-LG(Chr)2	4012391	CTCCCTCTATTTATAGACACATGTTTCATGTTTATC TCATTTCGATGTGGGATTCTTTAACACACCTATGAC TGAACATTTGGAATGTGATTTCGAGGATCT	C	T	AGATAAAGTCTGAACATATGTTATAAGTAAGAA TAATCTTTACTTTAAAAGTCAATTTTGTAAAGGAT AAATTAACCTCAACTCAAATCTAAGATAGTAT	NA	NA
Ca-II-SNP272	88.21	Ca-desi-LG(Chr)2	4031210	TGATCAATCCCCCTTCCCATTCTTAAAAAATCT GGAAACTAATGAAGCAGGGCTATCTTCTGGTTATT TTTCTGTTGTGGAGCAATCTTAAATACATA	T	A	AAATCAATATAGCTTTACCTGTGATTGCCATGT ACCACTAAAGTCATGTATAACATAGAATAAATGT ATGTTGGCACATCAACGTAGGCATATTAGTTTA	NA	NA
Ca-II-SNP273	89.09	Ca-desi-LG(Chr)2	4040689	TATGACAAAACTTATTTAATCATTAGAGTATTCGG TATATTATATGGTATTTGTTCTACAATACTACTAT TTTGTATTGATCCTCTTTCTATGTTTC	A	G	GAAGAGATTGAGAAAAAGAGAGAACTGACAGT GCCGCCGCGGCCTCCGAGGGTGATATTGTTGA AGAGATGACCGTCAGTCATTATTCAAAACTGC AAA	NA	NA
Ca-II-SNP274	90.85	Ca-desi-LG(Chr)2	4055778	TGCTTTGCATTTCACTTCAATTTAAATTACAATTAC AATTGCAATTTCTCTCTCATTAGCGCACCTTTTG ATCTATTTAAAGCTTGCTTCGCAACATGA	A	G	CGAAGTGAGAACCAGAGAAGATTCCAGAAGCA AAGCAAAGAAGAGAGAGAAAAACGGTTACGG AGAGAGAATGAAATGAATTGAAACGGTTTTGGG GTT	NA	NA
Ca-II-SNP275	91.73	Ca-desi-LG(Chr)2	4073623	CACATTCGTCTTTTTTTTTGTTACCAGAAGGAATT CATTAAATAGTAAGTAGTAAAAATTTGTTGGTATAC ACGTACTTATCATATCACCTTACACTTT	A	C	ATACACAATTTACAAGAAAAATTTATGTCATAGCC TAACTACCTCTTTGAACTAATATCCCACTAT TAATAATCTAATCATAATTATAAGCTTTTCCT	NA	NA
Ca-II-SNP276	92.61	Ca-desi-LG(Chr)2	4094950	TATTAATAATTCTACTTTTTTAACTTTTAAAGAGGT CGCATCTCTACCTACGATTATCTGAAAGATGATT TTGTTTTTATCGTATGAGGTGCGCATCAT	G	A	GTGACCACGGATAATTTTTTTTATTTATAAATTT TAATTTTTTATTTAACACCTCCGAAATGTTAAG ATTAACCTGAAGCTTATAGATGATCGCATTTTC	NA	NA
Ca-II-SNP277	93.49	Ca-desi-LG(Chr)2	4106081	CCATATTCATTTCGAGAAGTGGAAATGTCTTAATGG ATTAAGATTTTGTGATTTTGTGACATAAGTATTT CTAACTCTTGTGTTTGCACATTTATAT	A	G	TTAAATTTAATATTGTTAAAATTAATAAAGATTA ATCTGCGATTCCGCGAACAATTTTCGTAACATTT AAATTAATAGCATATATAAACAGAAAGAATA	NA	NA
Ca-II-SNP278	95.28	Ca-desi-LG(Chr)2	4120640	AATTTTTGTTGTTAATTGTGGCGGTTTGTAAATG TTTTACTTAATTATAAAATTATAAAATGGATAAGG AGCTTCTAGCATATCGATCTTAAATTGTA	G	T	AATAAATAAATAAATAACAGAAGATATCTTTACC CAATATAAGCAGGTTTTGCAATAATTGATTGTA TATAAACATATTAACAATATCTTACTTAATGT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR62	96.19	Ca- <i>desi</i> -LG(Chr)2	4129489	CGAAACCAAGGTAACGTGAAA	(ATA)5	(ATA)11	TGCTATGAGCTATGAATGGGAA	60.02	181.00
Ca-II-SNP279	97.10	Ca- <i>desi</i> -LG(Chr)2	4131868	G TTCACGCGCTATGTTGTTTTGTGAGATTACGCG GCCTTGTTTAGGTATTTTTTCTTCTCTTTTTGT GGTTGTGTATATTGTTATATTAGATTTAGA	C	T	AAAATCAAACACAAAAGCAAGAGTTTACAATTT GAGAATTCAAACTATATAGTAACAATTCAGTAC ATAAACAGAGTTTCTTCACAAGAACAACACA	NA	NA
Ca-II-SNP280	98.01	Ca- <i>desi</i> -LG(Chr)2	4139873	TTCTTTTAGTGTGTTCCCTTAGTGTGCAAGAGGCT TCCTAACACTTTCTTATTTACTCATAATGTAATTA GTGGTTCCTTTTGAGTTGCAATTAAGT	T	G	GGAACATGGCTATGAACCTCTTCAATATGAAAC CAGGAACCTGCTCTTTCTACTTATTGTTGCAT AAAAGTGACAAGTGCAAAAGCACAAAAGAAAT A	NA	NA
Ca-II-SNP281	98.92	Ca- <i>desi</i> -LG(Chr)2	4158262	GATTATTCAAGACATCCTTCATTGTCAAGTTATCC TTAGTTGGGAGTCGATTGTTCAAGAGACGCCTCA CAAAGAGTGACACTTTCAGAAGAATCATTTT	G	A	GTCATGCTTTTAAATAGCAATACTCAGTAAAAT GTGTGTATCACTATTTGGTAGAGGATGATAACA TAGTTGAATCTCCATCGCGTGACTTCTTTTTGA A	NA	NA
Ca-II-SNP282	101.65	Ca- <i>desi</i> -LG(Chr)2	4173568	AATTTTCTACATTTTATGATTGAAATTTTACCCC ATATCCCCTGATTATACCTATACCTCAAATATGC AAGAAAATGACGTTTTTGTCCCTCGTTTA	A	T	ACTTGGATTCAAGTTCTCCGTAAGTTTAGAAAA AAAAACTCACTTTTGATTTTCGAAAAGTTGAA AGGAGAAATGGTAATTTTTTGGAGTTTATTAT	NA	NA
Ca-II-SNP283	102.56	Ca- <i>desi</i> -LG(Chr)2	4221811	TCATAACTATTCAATTTCAAACATCACTTATCACTT ATTTTGTCTTCATACTTTCTCAAAGAAAACGACCA TGCACTTTTTGTACCCTTTCTTTTTCC	T	A	GTAGTTATCTCTTGGAGTCTCGAAAAGAAATAA AAAACATTGACATCAAGTTAGCGATGGGAGAG GTTGTGAAATATTTATGTTGTTGTGTGAAATTT T	NA	NA
Ca-II-SNP284	103.47	Ca- <i>desi</i> -LG(Chr)2	4234380	CACTTTAAGTCTTAGGTTAATGTATGTTTAGATTCA TGACTTATGGAGTTGGAACTTGATTTATGTCTC CTTGTAATCATAACATGAATTAATTGTA	A	G	ACCATCAATGGCAAAGAAGTTGTAAAAATAG GAAGAAAGAATTTTTCTGAATGTGCTTGAGTGT TAAAGCACTCAGCAACTTTGATATTATATACA	NA	NA
Ca-II-SNP285	106.20	Ca- <i>desi</i> -LG(Chr)2	4291559	TAGACACACGACGTTCCACTTCTGTTTTCTGTTTT TATCTTGGCTCCTCTTAGTCTCTTGAAAAGCAA GAAACAGCCCACGTTTTCAGCTCTTCCCTC	C	T	TCTGCACAGGTGCTGAATGAGAGATCTGAAA TCAGCTAACAAATATAACAACCATTGAGCTTCG CGTGTGGCGTGAGCAAGAGCACGATACTCCAC TTC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP286	107.11	Ca-desi-LG(Chr)2	4305455	AAAGGAGAATTTCCCTTTTTCCCTCATTTTTATTC TTCCAAGAAAATACTAATTCATTATCTCATTTTT CCCTTCTCCTTCATATAACCAGACTGAA	G	A	ATTTGGGGGACTTCAGTAACTTCTAGTCTTGG AAGATTTGGAGAGAAGAAAAATGGACGATTT GGAAGATAAGGTGAACATGAACAATGGAGTTAT C	NA	NA
Ca-II-SNP287	110.75	Ca-desi-LG(Chr)2	4444895	AACCCATTTTAGGTGAAGTAGTATAAATTTGTGTG TGTCTTTTATATGTTTTATTCTGTACAAAC GTTTCATCCTCATAAAATTTGATTTTCATC	C	A	CGTGTGAAGTAACTGAAATCACTAGAAGAGG GTTGAATAGAGATATTGTAGTTTTAAATTTTCT AGTGAGCTTTTTAAAAATGTGTCTCTACGAGA	NA	NA
Ca-II-SNP288	111.66	Ca-desi-LG(Chr)2	4468063	TTCTTCCCACACAACCACAGATAAGTCCCTAATG CAAACAGAAAGTTTGGAAAGGAGCCCTACCTTAAAC GTTAGCTTCAACGTGTTCTCCGGTACCGC	A	G	TCGCGAAGAGTTAGAAGGAAAGTTGCTCACT ACCACGCCACGGTGTAGGTGACCAATTTGGA GGCGACGTTGCGAGCGAATTTTACCGTTTT ACT	NA	NA
Ca-II-SNP289	112.57	Ca-desi-LG(Chr)2	4492319	CTTGAGTTGCAAGCTTTTGTCCAAGTGTATGGTG TCTGCTTGTTCGCCTGAAATGTTTCTCAATCAAAT CATTAGATCAATCAAATACTTCATATGTA	T	C	CTCAAGTTAAACTGTGTGTTTGTCAATTAATC AAAAAGGGGGAGTTTGTAAAGTCATGAGCTTCC CTAATCATGTTTTGATTTAATCCCAAACATAC A	NA	NA
Ca-II-SNP290	113.48	Ca-desi-LG(Chr)2	4503024	TCGTGAAGTGGTATTCACGTGTGAAAGCTTCGAA CTGGTATTTACGATTTTCATACAATTTGATAATAG TCGGTCATATTTACGATTTTGAAAAGTTA	C	T	CATTTCTTATTACTTTCAATTTATGTCAATCAAT TATATGAGTAATATTTACGTTACCAATCCTCCT TTCACCTTCATACACAATTACATCCCTTCGCG	NA	NA
Ca-II-SNP291	114.39	Ca-desi-LG(Chr)2	4522978	TTGAATATTTAACCTTACCCTTGGGGAATTTCTT GCAAGAATAACATTACCCTTAATCCTATTTGGT GTCTCTTGTCTAGTAATACCTCCAGAA	T	G	TTAAATCCATTGGGAATAACCTTGACCCAATT GGGATGGAATAGCCTAAAGATATCAATAATAAG AGGAATGATACATGCGATTTTGTCTCCATACA T	NA	NA
Ca-II-SNP292	115.30	Ca-desi-LG(Chr)2	4600246	TCCAACAAGATATCTAAATATGCGTTTTACTGCTG TTAAATGGGATTCCTTTGGTGCTGATTGAAATCGG GCACATAATCCTACTGCAACACGATATCT	G	A	CCATCCACTTCTTTAGAAAAGATGAAAATGGA AAATATGTTTCTGAAAAGAGATATCGAGGAATG ATTGGTTCTCTGCTGTATCTAACTGCTAGTAGA C	NA	NA
Ca-II-SNP293	116.21	Ca-desi-LG(Chr)2	4642315	TGAAAATACCTATTTAGTTTTATCATGAGCTATG GGTTCGAATTTAAGCAAAATCTTGAGAACGTTTG CTTCTGAAATTTCTTGTCTTTTCTCAAT	T	G	TTTTTAATTCGTACATAAAGATTCAGGAAATA CAAGCAAATATCGACAAAATCTCAAATGACA TTTTCTTTTACCCTATATTTTCCCTCCTTTT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP294	117.12	Ca-desi-LG(Chr)2	4662459	TCTTCTAGTAAATAATTCATATCTTCTTGATGATAAA TCTTGATCACATCTTCTTGTAATAAATCTTATCTT CTTGATGATAAATCTTGATCAAATCTTC	C	T	TAATTGAAGAAAATCTTTGACCAAGTTGAAAAG AAGATATGGTCAAGATTTGAAGAAGATATGATC AAGATTTATCACAAATAAGATATGAATTATTACA	NA	NA
Ca-II-SNP295	118.03	Ca-desi-LG(Chr)2	4699467	CTCTCTTATATCCCTTGCCCTTGATACTTCATGGA AATTAATTCTGAAGCAAAGAATTGTTCCAGCCTTA TCACTTTTTCAAAGCGTTTTTCCATCTCA	A	G	CGCTCAAATCGCATAAGTCTTATGATCATAAAG CATGGCATTCTGAGGTCTTTAGAGGTGCTGT CTCGGATGAGATAGTTACAGCTAAAAATTTCT TG	NA	NA
Ca-II-SNP296	118.94	Ca-desi-LG(Chr)2	4713211	TAACCATAACATTATTCATTTCTCAGGTTTGATCTT GCTTCTTTCAAATGATCTTGCTTCTGATTTATAGCA TAATGTGATCATTGATTGTTGTATGAAT	C	G	AATGAAATAATCTTAAAAGGAATGTATCATATAT TAATCATTCAAGAGAATGATTATTACATCTTCAA GATAACATCTTCATGAAGAAGATGATCAAATA	NA	NA
Ca-II-SNP297	119.85	Ca-desi-LG(Chr)2	4758614	TCGCGTAAACCATTTATCGCGCAACTCAACATCGT TCAAGGTTTTCGTTCAATGTTTGAGGATTCTGTCTC CGGTAACCATTTATTCGACTGTGTTTTT	A	G	GTGGATTATAACACTAATTCGTAGCAAATTA AACTAATAGCAGAGCAAATAGGATTCGAAAAA TTAGGGTTTTAGAGCAAAGATACAAAATACATA C	NA	NA
Ca-II-SNP298	120.76	Ca-desi-LG(Chr)2	4904211	TGAATAGCAGTTATATAATAGTTATATAGTCAATTA CGTAGCAGTTAATGGCTTCTCTTCTGTTTTGTTT AAGTTGTTGATGTGGCTTACATTCAGTT	A	T	AGTTGAGAGAAAACCTCAGAGAGAAAACAATAAT CTTATTCATCTTATTTGAGGCTATTCATCACCA CCATTATATAGGTGCATGAAATAACAAAAATCA	NA	NA
Ca-II-SNP299	121.67	Ca-desi-LG(Chr)2	5015705	ATCCTCTTTATGATGTTTTGCATGACCAGATTGCA TCCACAAATCCATGTTGAATACATTTGGGGACATA ACCTGGTGATTTCAAGCAAGTTGACTAAG	C	T	TGGACTTCATTCGAAATCAATACAGGGATAGGG GCTATCAAGAGGTAAAGTTTCACTATAGAAGTT TCTTGATATTACTAAAAACAATCTTTTTCCAAGT	NA	NA
Ca-II-SNP300	122.58	Ca-desi-LG(Chr)2	5036904	TTTTAAAAAGCGCTGTAATAGGTGCATATATAGC ACGCGTGTATACTAGTTTTACCGCGCTTCTTTCA AAAAACGTTGTAATAAAGGCTTTTTTTTTAT	G	A	TTCAGAACTTCAAAGACTTTAATAGCACATCT CAACCAAAAACCGTAAAATATTAGGTATATGAA TCACCTTTTTTATATATCCAATATTTAATTCATT	NA	NA
Ca-II-SNP301	123.49	Ca-desi-LG(Chr)2	5097670	ATGATGTTGTTGTGATTGTGTTATAAGTGCTAAGT GTTATGTTTTGTTGGAATTGTGTATAGCATGTT TGATTGCAAACTATTTGCAAGCTCATGAT	A	G	TTTCCCTGAATTTTTTCTAAAAATACATAAAT AACTCAATCACATTCACACACAATCCAACACA TAACACTTAGCACTTATAACACAATCACTACAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP302	124.40	Ca- <i>desi</i> -LG(Chr)2	5166682	ATGTTTGCTTCTTCTAAAGGATGATGATCATATG GTTGATTCTATTTGATCTACCCTTTATAAGCATTGT TGGATTTTGTCTACATTTAATGAAGGAT	G	A	CACAAGTTATCGGTGATGTTTTGTAAAGCAAAA CAACAAAGGTTAAATGACAACAAGTTGAAGTTC TGCAACATAACATGGATTGGAGGAGACTCAA G	NA	NA
Ca-II-SNP303	125.27	Ca- <i>desi</i> -LG(Chr)2	5229329	AGTACTCTTAAAGCTACATAAAAAGGTATGTTTGT TGGTCTGGTTTTGAATCCAATTTTTTCTTCTAA ATCTGGGGATGTTACGTGAACCTCAGTTCA	C	T	AAACAACGTACGTTTACGTTAATTAAGATTGCG TACTTTCTGAAATTTTTATTTTTTAAACATAC GTGAATTCAGTTCACGTAACAACAATGTTAC	NA	NA
Ca-II-SNP304	126.14	Ca- <i>desi</i> -LG(Chr)2	5240432	TTCATTTTAAACACTTAGTGGAAAATCTCACAGTG TGAGGACTAGACGTAACCCACGTTGGGTGAACCA GGATAAATCTTTGTGTGGTATTCTCTTTCT	T	A	TTCTGGTTTATGTTATAAAACAGAGAACGTTCT TAAATTAGCAGAAAATCAGTTTCTATTTATCTT AAATGATTAAATGCAGTATAATAAAGAAGGAGA	NA	NA
Ca-II-SNP305	127.01	Ca- <i>desi</i> -LG(Chr)2	5275879	TAGTTTTTGCATTGAAGATCTGGAGGCATTTTA TATGGATGCACGTTACAGTGTTCAAGTACCAAAA AAGTTTGAATATTTGTTTATCAGAAGGA	G	A	TCAACGCATCAGCCACTACATTGGCCTTCCAG GCTGGTACTACAGTGTGAAATCAAATCCTTGA GAGTCTCCATCCATCATCTCTGACGCATGTTCA A	NA	NA
Ca-II-SSR63	127.88	Ca- <i>desi</i> -LG(Chr)2	5381402	TTTTCGAAGTATATGTGCACGG	(AG)10	(AG)9	TTTCTATGCTCAACCAAAGTAA	60.02	126.00
Ca-II-SNP306	128.75	Ca- <i>desi</i> -LG(Chr)2	5398410	ATATTTTTAGGGAGACTTAAAGTACTTGTCTTTCT AGTTTGGGCCTTAAAGCCGGCGCCCTGCCTATCT TCTGTCAACCTATTCTACATGTGAGGGACT	A	C	ACCTCCCTTAAAGCTAGCTATTAAGGGGAA GAACCGAGTGTCCCATACTGCTCTCAATGTGG GAGTTAGGCACCCATAATAACCAAGCCCTAT CA	NA	NA
Ca-II-SNP307	130.49	Ca- <i>desi</i> -LG(Chr)2	5472382	TTTTGCCATCTTCTCGGCGTGAGACTCGCGAAT ATATATCATTGTAGGTGTGCGTCTGGCAAGGAATA ACACTAATTAGAAGCAATGTATTAAGATGAA	G	T	TGAGTTTGTTCGTTGATGTTTTTCTTAGTTATT TATCTTTAGTAATTTTGTAAATATTGGAGGATTG CTAATCCTCACAACTCTTTGTAATTATCAT	NA	NA
Ca-II-SNP308	131.36	Ca- <i>desi</i> -LG(Chr)2	5495838	TTACGACTTCACTCCAGTCACTAGCCCTACCTTCG GCATCCCCCTCCTTGGGTTAAGGTAACGACTTG GGCATGGCCAGTCCCATAGTGTGACGGGCG	A	G	CCTGTCTCAGTTCGGATTGTAGGCTGCAACT CGCTACATGAAGCCGGAATCGCTGGTCAGCC ATACGGCGGTGAATTCGTTCCAGGCCCTTGA CACA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP309	132.23	Ca- <i>desi</i> -LG(Chr)2	5510517	TTCCACCGCCCTATGTCTCAAAGCCTCCAAAAT ACACCTCCGGATTAGCCAATGTGGATGTGTTTTT GTCAATATACACCTTCGGATTGGCCAATCC	G	A	GGACTTCATTACTCTTATTAATTTTAGGAGCTT AGATTTAAGTATTTTACTATTGCTAAATTGTTTT GAGAGTTTCTTCTCCACCCCAATGCTCTC	NA	NA
Ca-II-SNP310	133.97	Ca- <i>desi</i> -LG(Chr)2	5547268	CTCAACCTGTAGTTCAGGAGAAGTTCCTCATCTTG AAGAGCCCTAGTTGCTACCAAAACAACAGTTTTCA GAGTAGGAACATGTGATTCACTATTTCTTG	G	A	GATTGAAAACAACATGAGAGCTTACATTCCTAA TATATTATATGGAATGCAGAAGTAAATATGAA GAAATTTGGCAGTTTTTGGTTCAAATCTAGAGT T	NA	NA
Ca-II-SNP311	134.84	Ca- <i>desi</i> -LG(Chr)2	5561407	TATATTATGATGTGACAGCCTTTAAAATTCGTCAT GTTGCCACTCTTCTCTAAGACTACATTACATTCAT TCTTCCATTAACCTATATTTCCCTTTTTATT	A	C	ATAAATGGGAGTTACCAATTTATTATATGATAT AATTATGTAATAATGAGTTGGGAGAGAGTTGGT TTTGGTTATAAAATGGTGCAAGAACAAATAAA	NA	NA
Ca-II-SNP312	136.58	Ca- <i>desi</i> -LG(Chr)2	5581383	CTTAGCGTAGTGTCTAGCTTTATAATTTAAAGA AATCAAGATTCCTTAACCTTGAATTTCTCTATCTTT AGTGACTTTGTTCTGTCTTCCACTTAAC	C	T	AATCACTTAATTTTAGTATTTGGTAACTTTAGTA TATTTTAGAGAGAAATTTATTGATTAATTAATTT AATAAAATTTATTAGATGAGAGGAAATTTT	NA	NA
Ca-II-SNP313	138.32	Ca- <i>desi</i> -LG(Chr)2	5602332	AGTTGTTTAGTGAATCAATGCTAGTACATCTTATC TTTTTTTTATAAAATTTAATGTAGCATTTATGAGT TTAACTTTTATATACTTTCAGTGTAAATC	A	G	GGTTAATTACAACATTTGGTCATATGAAATATTT GACTTTTTATTTGATCATCTCTAAAGTCACAAAT ATGATTAGTTGTAATAGACCGATAGTGTATAA	NA	NA
Ca-II-SNP314	139.19	Ca- <i>desi</i> -LG(Chr)2	5616669	TTGCTCATTTTGTAGGGATATTTTTTAAATTATAT TCTTTTTCAAATCTTTTCCATATATTTATTTTGA ATTTTTTATATGTTATATTTTTTTTTA	C	G	TATTTTTATTTAATATATTTTTCTATTTAATTTT TTATTTAATATTTTAGTTTTTTAATTATTTTTT ATATTTTATTTATTTACAAACTTTTAAAG	NA	NA
Ca-II-SNP315	140.06	Ca- <i>desi</i> -LG(Chr)2	5627315	AATTTTCCAATCGATTGTGCTGATCAAAGTGACTC AGACATTTACGTCGAATCGATTTGCCAATCGATTGT GCTTGTTACAGAACCTCAGCTATTTTGTCA	G	A	AGATTTCTTAAACTACAAGTTTGTGGCAATCGA TTAGGCAATCGATTGCAGTTAATCATTATCAG AACCCTTTGAATAAATCGATTGGCACATTGAT T	NA	NA
Ca-II-SNP316	140.93	Ca- <i>desi</i> -LG(Chr)2	5645696	TATATTATGATGTGACAGCCTTTAAAATTCGTCAT GTTGCCACTCTTCTCTAAGACTACATTACATTCAT TCTTCCATTAACCTATATTTCCCTTTTTATT	A	C	CTTCCAAGTTCCTTATATAAACAACATCTATTCC AAAGTTTGAACACTTCAACTCGGGAATTTCTCT TGGTGAAGCTAAGCTTTTGAACCATGGCTCT AACTACCAACCTTTCATCCCTCCTTTGTGTTTC CCTCATCGCCATTGCTCTACTTTGCTGATTC ACAATCCTTCATCGGAGTAACTACGGCCAAGT CGCCGACAACCTTCGGTCAACCGACGCCACGG CCCCCTACTTAAATCCACCACTTCCCAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP317	141.80	Ca-desi-LG(Chr)2	5657560	TTTACACACACCTATCTATGGGGCCGTTTAATTCC AATCACGATAACACAAACTCAGGCTGCTTGAATCA ACATATCTTGACTTGATTGAACTAGCCGCT	T	A	GGTTGTCTTTTGGACTTGATGGTGCAAAAGATG TTGCAATGAAACTGGCTGTCAGATCCGATGATG AAACTGTCAGCGATGCCATCCATGAGATTGTAG C	NA	NA
Ca-II-SNP318	142.67	Ca-desi-LG(Chr)2	5685363	TTTCTTTATAGTTTGTTAAAGATTGCTTCCTATCAA GGTTAGATAGGTGTTGTAATTGCTTTCTGGGTGG AAAGTAATTAAGAAAGAAATAGATCAAGGT	C	T	TCACCAACGTGGGTTACGTCCAGTCCTCACA CTGTGAGATTTTCCACTAAGTGTTTAAATGAA GAGCCTTCTTAATCTTACAACACCTAGAATAGA TC	NA	NA
Ca-II-SNP319	144.41	Ca-desi-LG(Chr)2	5717662	TATATTGGTATCTTTTTGCGTTAAAATTTTATGTAA TATTTTGTTGTTTCAGACAAAGGGATGAAGAGTTG GATGCTGTTATGCTTTCTGCTCAGGCACT	A	G	CAGATACAAAGAGTGCTAGTAGTGATGCTGTCT GCAATTTATCAACTTCACCCCGACTCCAGGGCG TGTTCAAACCATTTAATTGCTTCAAATTAGAGAC	NA	NA
Ca-II-SNP320	145.28	Ca-desi-LG(Chr)2	5753868	TAATTTTCTTTCCCTTCTTTTCTTTCTTTGTTTT CCTTCCCTTTCTATTTCCCTTTCTTTATATAACC TTTTCTTTTCTTTTCCCTTCTCTAA	A	T	TATTTTGACACAGTTTAGAATTACTCGTCGATAA ATAAATTTAAATTAAGTGCGGTAATCCATTACG GAGAATTTAATGCGTTACGGGTGAATGGTAA	NA	NA
Ca-II-SNP321	147.02	Ca-desi-LG(Chr)2	5783837	TGTACTTACATATCTAATATATTGTTTTGGGAT ATTTGTCCTTTGATGGAGTGCCTTGCTAGTTTTGG ATTTTTTGTTGCTGTTTCAGCAAGATT	C	G	AACAGAACAAAAAATGACAAACCACTTAT CCTTAATCCACATCCTCGGTGAGGAAAAAG GTACACTCTAGAATCTTGATGCTTCAACACTC TA	NA	NA
Ca-II-SNP322	147.89	Ca-desi-LG(Chr)2	5834516	TATGGTAGCATCTTCAAGCACAAAGCTCTCATGGA ATAACTTGAGGTGTTGTCCATTTACTTTGAACACT TTATCGGTGTTTCACTTTTTATTCCACT	G	A	AAAGTTTACTGTCAACTCCCGTCTAAAAATTA TGGATGGGAAACCTTGATCCAAGTGATTGGC CCTTTTGCTGTTACTAACACTTTTACTCATGGT G	NA	NA
Ca-II-SNP323	148.76	Ca-desi-LG(Chr)2	5857541	TTCAGTAAGAGTTCTATTTCTTTTTCAGCTTTACC ATTCATTTCAGGTGAATATGGTGCAGTTGTTTCAT GTACAATTCCTTGGGTTTTATAAACTCA	A	T	CATGTTCAAATATTTGTGACTGAAATAGAAAAT CAATTTAACAAAAGATTAGAGGTTTTCGTAGT GATAGAGGAACAGAGTATGATTCAAACCTTTTA	NA	NA
Ca-II-SNP324	149.63	Ca-desi-LG(Chr)2	5874928	AAACTGTCTTGGGCAAGGCCTTGGTAAAAATGT CAGCCAAGTATCAGTTGTATTGACATATCCAGC CTAATCTTGCCTGTTGGTATTGGTCTCTAA	G	T	TACAGTGCCCATATGTGTGATAATACTAGTGC TATTAATATCACTAAGAACCCTGTCATGCATTCT AGGACTAAGCACATAGAGATTAGGCATCACTTC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP325	150.50	Ca-desi-LG(Chr)2	5898120	ACCTCAGAAGGC AAAATGGCTGATCAATGCATG GACTACCCAATAACATTGCAAGTGCTCTTTCCAAA GATGTTGTACTTTGTCCATTGAAGGTCTAT	T	C	AGCTGCAATTTTGGATCCAACCTTTGAGCCACC TCATGATGTTGAAGCATTGAAAAGGATAGCTAA TGTAGCTTGTAAATGTGTGAGAATGAGAGGGA AA	NA	NA
Ca-II-SNP326	151.37	Ca-desi-LG(Chr)2	5914388	TGCCCCACAATCATTGGCAGCACCATCCTCTTCT CTTCTCTTCTCTTCTCTTCTCTTCTCCCGAA TCCTATCAATGAAGTCAGTCTAGAAATTA	G	A	TACATACCCAAAAAACAACCCCTTGTCTAAA ACCAAGGAAAATGAAAGAAAAAACAACAAT ACTTCTGTTTATAGTGGTAGTGTGACCCCTATT CCTGACCATTAGTATCACATTACATTAATGTAAA ACCAAGTGATAATCTAACCTGACTTAGATTAC CATGTTGAGTAGATCTAAGTTGTTGAATAGAGA TTGAATGACTCATCTCATCTCAAAGTGCCCAAT TTTTATCATCCCTTCACATAATTCACTCAATAC	NA	NA
Ca-II-SNP327	152.24	Ca-desi-LG(Chr)2	5923861	TGTAGGAGCATATCCGCTCTTGTGTACTCTTTCT TTGGAGTAATCTCTCTCTATTATTCTTATCATTTT TCTAAATATTAGTGCCCTTCTCTAAATC	C	T	ACTTCTTGGCCCAACCTTACATTTCCATGA AAATTGGCACTCCCTCGAGATCCGGCAGGTGCG AACCAATTGTTAGGAACCAATAATTTGATTCC AA	NA	NA
Ca-II-SNP328	153.11	Ca-desi-LG(Chr)2	5933735	CTGGGAGTGATAAAATGATGATGCTTCTGCTCTC TCCTTGTGGCACCACAATTTGAAGTTGCTCCTTGT CACTCTTGGTGAATGGTCCAGATACTA	T	C	TACTACTGTACCATACATAAGCTAAGATTGAAA AACTATGAAGCTTAATAAGAAATAGGAATAATA AGTAAAATTGAAGATTAGGCCTTTTACCTTGGT	NA	NA
Ca-II-SNP329	153.98	Ca-desi-LG(Chr)2	5957298	AGTTGTAGGCAATTATACTGCTACAACCTCAACTAC CTAGCAGTTTGGAGTCTGACACTAGAGCTATTATT CCTGCTAAGGTTTTTGTCTAGGAGGGATAA	C	G	ATTGACTCTTCAGCAGAGTTCCCTTTTCCAGG TAGCATCTCCAACATCCATGCCTTCCATTGAA TCAACCATCTCGCTTATGCTGCCACCATCCA A	NA	NA
Ca-II-SNP330	154.85	Ca-desi-LG(Chr)2	6012474	TGTAACCACCACCACACTCAATATCCTGCTCAAAT TTAATAGAATACTGAACCACCAGGGTCTGTTCTT ATTGGTCAACTCTGGTATCTTTGCAGATAT	G	T	GTAATTAGTGATTTTAGTTATGGTGTTATAGGC TTGATTATCACTAGTGTCTACAATCTTGCAG GTATTGAGACATATAATGATGCCAAGCATTTTT C	NA	NA
Ca-II-SNP331	155.72	Ca-desi-LG(Chr)2	6034855	AAAATTTGAAATAATTTTGATAACAATTAATTGTTT TAAGGCTTAATTTAGTTTTGGTCCCCTATTTTA GTTGAATCGGAAAGTAGTCCCTCCATTT	G	T	AAATCTATGATCATAAATGGTGTAGTACGATTTT AAAAATAAAATTTTCACTCAAATTTTGGATCAAAA TTCTGTTTGGGGACCAAACTGGGGAGAAAC	NA	NA
Ca-II-SSR64	156.59	Ca-desi-LG(Chr)2	6056181	AATCAGAAGATGCCCCACAA	(TCCTCT)9	(TCCTCT)6	GCATTGAGAATGCTCTAGTGGAA	60.46	118.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP332	157.46	Ca-desi-LG(Chr)2	6056256	TGCCCCACAATCATTGGCAGCACCCTCTTCTCCTTCTCCTCTTCTCCTCTTCTCCCGAA TCCTATCAATGAAGTCAGTCTAGAAATTA	C	T	CTTAAATTGAATTCAGTCTGCTTGGGGATACAA TTGTTTTACTTTTCGTTTCATGTGAGATATGAT GTCAGTTGCATTGAGAATGCTCTAGTGGAAAT	NA	NA
Ca-II-SNP333	158.34	Ca-desi-LG(Chr)2	6067444	ATCATTGATGAATGACTTATGCTTTCAGTGGCT AATATCTGATTGTATAAATAGATACCTTCCATCTC ATCACACGCCTTTGGGACACATATCTGGC	T	C	AAATATATTATTTAGTGAAGAGGCCAGAGTAA GCTAGCTCACCGTTAGAAGGAACTGGCAAT ATATACACTAAGAAGTCTGGTAAGGCATCTCCT TC	NA	NA
Ca-II-SNP334	160.10	Ca-desi-LG(Chr)2	6105613	ACATACTTTTTCGAATTCATTTCCCTTTATCTGTTA TTAATTTGCAAGAGTGCATTGATGTGCAGCCTACT TTGCATATCCCATAAATTAGACAAGCGTT	A	G	TTTTACCAACCATGATCTTATAATTCATAATAA AATTCGAGTCACAATTCATAAGAAAACCTGTTCC AATTCCTTAGTTTTGAATCACAAATTCGTAACAT	NA	NA
Ca-II-SNP335	160.98	Ca-desi-LG(Chr)2	6133438	GGCTTTGGAACGTCGTTTAGCTTCAACTTCTCGAA ATCCTGAGACTCCTCATGAAGCTTGGTTCCAAGG AGAGTATAAAGACCAACTGAAATCAGCTATT	G	T	GATTTCTCTGGTAAGAAGCCAAGGATGCAGC AATACCATCAAAAGGCCCGCCATACATCCCTAG AGCTGAAGAAGATGGTGGAGGAGTCTTGAAG ATA	NA	NA
Ca-II-SNP336	162.74	Ca-desi-LG(Chr)2	6220860	AGTGTTTAAAATCTGGCGCGGAACCCGAATCAAA GTTATAAATTTAGGGAAGAATGCTATTATGGTCT CGCGGTCTCGATTTCATTTGGTCTTTTCGG	A	G	ATAACTATGTTTCATGTTTCGCGCCAGATTTCA AACACTAGCCATCGTTTGGTCCAAAAATACAGA TGTTGGTCCATGTTTGTGCGAGGGGTACGAAAA CG	NA	NA
Ca-II-SNP337	163.62	Ca-desi-LG(Chr)2	6246652	GTCCATATGTTGTGTTTTAGTGTATTTCAAAGT GTCTTGTCTATAAGTCCCACAAATCATATATCGCT CATGAGAACAAGGACGAAGCTCTAGCTTC	T	G	AATGACAAATATTTTGAACAGTTTGTTTTTTCT TTTTAATTGATATTTATTCTGAGATAGAGGAAAT GTCAACGGTGGTAGATGTCACATAATTAACACT	NA	NA
Ca-II-SNP338	165.38	Ca-desi-LG(Chr)2	6328392	CCTTTCTTTCACGGAAGGAAGAACCTCCCTGTTT TCTGTAAGATAGCACTGTTAGACTCTAGCTATCTT CACTATGAGAACACGGTCATCGGGACTGTC	C	T	ACTTGGACTTTTAGCCGTGTTGGCAAGGTA TCGTTAAGACTTACGTTGTAATTTAGGAAGATA GTGAGAAGTACGCTTCTGCATGTAGTGAAGT CA	NA	NA
Ca-II-SNP339	166.26	Ca-desi-LG(Chr)2	6414438	CAATACAACCTTTTAGAACCAAGAGCGGCTTTAT CTCATTGATAGCCCTCCTCCTAAGGGTGGCCT TTCCCTTAGGGGCGGCTCCATCTAACGGATG	A	G	CCTTACGAGAGAGGTCATCCGTAGGAGGAGAG GGCTATCAACGAGATGTAAGCTCCCTAATTGAT ATGTGCTGTTGCGTTGCGGAATTGAGGGGAGA GGG	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP340	168.02	Ca-desi-LG(Chr)2	6423896	TTGTTTCATAGCCTTAGTGTATAACACTCAATCCTTT TACCCTTATCTTATATTTGTGTTATGCTTTTTAAAT AATCAATAGTAAATCTTTTTGTTGTTT	T	C	TTTATCTTAAAACCATTGAAAAATTGAAAGTGG GACAATGACATCAAACAATTATAAGATATATATT TTTTAAAGGAATTATAAAATATATTGAAGAGAA	NA	NA
Ca-II-SNP341	168.90	Ca-desi-LG(Chr)2	6434776	GTTGGACTGACATTAATTGGTTTTGTCCATTAAA GACTAGCATTGGCTACTATGTAGGATTGCAATCGT TAGGAACAAGAGAATCATCCTTAATTGGTT	C	T	TAATTTTGATCCTTTAGTAAGAAATGTTTCATCT TGAATGCTTCTGGTGTGGATTATCACTTTGCAT CACTATTCTGCTACTGCTACCAATCTTTATGGA	NA	NA
Ca-II-SNP342	169.78	Ca-desi-LG(Chr)2	6445277	TGTGGTAGCCGATCTTCAAATTTATCAAACGTGGT ATTTCCCTTTGTAGGAATCATTCCAAATTTATCAA CTATTGACTTGTAGATATGATTCCCTCAA	G	A	GGAGTGGTTGGACCTATCAAGGAACCAAGTTGA CAGGAGAGATTCCCTCGGCTTTGACAAATTTGA ATTTCTTGTCTTTCTTGAACCTTTCACAAAACCA G	NA	NA
Ca-II-SNP343	170.66	Ca-desi-LG(Chr)2	6455481	ATAATCATTATTTTTATTTTTACTTTTTATCT TGAGTACTATAATTTCTATATTCTTTTTACTTAAA CTAATATTTCTATATTTTATGTTTC	A	G	CCAAAAAGATAATTAATCAAATATTTGTGAA AAAAACTGGTGGCATAATATCTCTAATAAGAA TTAGTTATCGGAAGTTAAGTGAAATGAAACA	NA	NA
Ca-II-SNP344	171.54	Ca-desi-LG(Chr)2	6478674	CATCGATTCAAATAACATGTGCAATTACTTTGT CGGTTTCTGTTCACTAAGCAGGAGTTTGGGTTAG CATTACTCATGAATTTTATAATCTCAACA	G	C	GTCAAATTTAAGGATGTTTGCATACGAGAATTA AGAATGTAGCTTTTGAACAGAGATACTTCAAT GGTCAATTCACCGAAGTACGGCTACAAAGAAA A	NA	NA
Ca-II-SNP345	175.94	Ca-desi-LG(Chr)2	6488476	CTATCTGAACAATGGATTTTGCACCAAAAAACCT GTTGAGAAATCAAATATCTCTTGTGTGTAAGG GTTGGATCCTGTAGGCACTTTTCGTTTTGC	T	A	GGATCAAATTTCTCAAGTCTTCTACTTCAAATC ATCACCAAAAATTTTCATATTCCATTTGTTAATTC TCCGGTAAGAAGCAACGGTAGAGAATTCAAATC	NA	NA
Ca-II-SNP346	176.82	Ca-desi-LG(Chr)2	6501665	AACATTAATGACTCTTCAACAGGGTTAATGTTCC ATTCCCTTGTGATTGCCTCAATGGAGATTTCTTG CTTACACTTTTCAGCATAAGCTTCAGTTGA	C	G	TTCAGGAAGATTACTTGGTGAATAAACATTGAC TCTCTATCCATTCCCTCAGTGGTCAAATGCT AAAAATAAAATCAGCAATTGAGCCATAAGTTTC A	NA	NA
Ca-II-SNP347	177.70	Ca-desi-LG(Chr)2	6513092	TTTGTATGTAACGTCATATTCTTATTCATAAGAATT CTTCTCTCATCTCTACTACCGATTTTTTAAAT TCTTTTTGCTAATGGTGATGTTTAAATC	C	T	CAACTGCAACCACAATTTAAATCATAGACCTC ACCCTCTATAAATCTTAACTTTTTAAATGTTT AATCATTATCCTCAATAGTTGAATCTATATAT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP348	178.58	Ca-desi-LG(Chr)2	6524433	GAGCTTCATTTGGAAGATGTGAATATGTCTTCCAT AAGAGAGAGTTCTTTGTTGCTTCTAAAGAACTTGT CGTCCTCTTTGGTCTCTCTTAATCTAGCAT	T	C	TTGACCGCCAAGTTTATTATCATAAGATGATGA CAAATCTAGTAATTTTAGATTAGGTAAGAGAA GAGATCACTAGACAAATTTCTTGCAACTCAGT G	NA	NA
Ca-II-SNP349	179.46	Ca-desi-LG(Chr)2	6539044	TAACCCITTCATTTTCTTTTCTTCAAATTATG TGTTCCAAGTGTGCTTTTCCATTCCAGCTGTGTG ATACTATTCTAGTGCAACCCACCACCACA	G	A	AAATTGGTGCCAAATGTGTACCGTATTCGCC GGAGTTTGGCAGCGCAAAATACAAAAA TGTCTATTGTGTTTGTGCGAGGATTGCGCGACG GT	NA	NA
Ca-II-SNP350	181.22	Ca-desi-LG(Chr)2	6625748	ATGATTTATGATTGGCTATTAGGGGTCATTTGATC CATGCCAGTAGGAAAAGGCATTGGTTATTGTAAT TTATTACTCGAGTAGTGCTAGCAACTCT	T	C	TACATGTGGATCCACCACCTTTATATGAGACTC ATTTCCCAAATGGTGGGACCTACATGATTTCA TCCAATAAAGAATGAATGTTGAAAGAGAGAC A	NA	NA
Ca-II-SNP351	182.10	Ca-desi-LG(Chr)2	6765331	TCTCCAGAAAGTTCAAATGTCAAACCAGATTGA TAATCAATCTTCGTTTCTGCCGAATTCAGTTTTGA TCTCCTTACTTCTGCAGAGAATTATAATC	A	G	GTTTGCCTTCGAGTTTAAAAAGCTTTGAAGCTT CTCATTTAATCATTGATGATACAACCTTGTCTG GAGCCTTGAATATGTCCAAAACAGTTTGAAGAA	NA	NA
Ca-II-SNP352	183.05	Ca-desi-LG(Chr)2	6775211	CCAATCGATTGTGTTTAAAGACAGTGACTTAGCTAT TTTCAAGTTAATCGAAGTGCCAAATCGATTGGTAG TATTTGCCTGAAAAGTTCTTACCAGATGTT	T	C	ATAACTTGACCTGTGACAAACACAATCGATTGG ACAATCTATTGTGAAAATTTCAATCATGTTAAGT TTGGTTTTAATCGATTGGGAAATCGATTGAACT	NA	NA
Ca-II-SNP353	184.00	Ca-desi-LG(Chr)2	6797334	TGCGTTTGAATTACAATATGAAGGATCTCCTGTAT ACACTAAGGCTTTGTTGGCAAGGCCGAAGCTGCT AGCTTATAGTGATAAGCTCGTATAATCAAAA	G	A	AAAAAGCTAAAAATAATTTATAAGCTCAAACGC TACTTGAGGTAGCATATCAAAAAACACTAAG CTCGTGAGAGAAAACCGTTACCAAAACTCTA	NA	NA
Ca-II-SNP354	185.90	Ca-desi-LG(Chr)2	6847648	TTTTATCCTGGTTCAACCAACGTGGGTTACGTCCA GTCCTCACACTGTGAGATTTCCACTATGTGTTTA AAAACAAAGAACCTTCTTGATCTTACAACA	C	T	TGTTTAAAGATTATTTCTATCAAGGTTAGATAGG TGTTGTTATTGCTTTCTAGGTGGAAAGTAATAG AGATTGAAATAGATCAAGGTTGATCTAGACTAG	NA	NA
Ca-II-SNP355	186.85	Ca-desi-LG(Chr)2	6862520	GTGTTCTTCTTACTTATATTACTATTAACATGAT TTCAAAACCTCACCTCCTCGTTGTTTGTGTTTGAC TGGCTTGACCCTTCATTTGCGAAATCGCA	A	G	AGTAAAAGTAAAAACAATTTACAATTTCTTATTC CCGGTATCACCTATCAGAGCGGTGTTTCTCCC AAGTTGAACTTCAAGACTAATTAACCTGTAATAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP356	187.80	Ca- <i>desi</i> -LG(Chr)2	6904261	AAGGAATGCCCCATCTGTTTGTCTGAGAGGCTC ACCACAAAACCAGAATACCGAGGTTCCACTTTGG GGTCATGATGGTCCGGTACTTCACTTGCTTT	C	A	CCCAGTCACTATGCCTCAGCACCACCACATACATT TCATCGAGTGTGATCCACACACGAAACAGTC GTATCCCAAGAGCCACTGTAATCCTCGTCAAA TC	NA	NA
Ca-II-SNP357	188.75	Ca- <i>desi</i> -LG(Chr)2	6923340	GTTGTTTGTAGTTTGTATGTCAACTATAAGTTCTC CCTCCGTTTCATATTGAATTATCTTTAAGGTTA TGCACACTTCTTAAGAAAATCATCGAGTG	T	C	AGACCATTATTTATTGAATCTCAACTCACCTAAC TACTCCACTAAATACTATTAATAGTGTACTTTAG TAAGTGAAACTTATTTTATCATAGAAATTAGT	NA	NA
Ca-II-SNP358	189.70	Ca- <i>desi</i> -LG(Chr)2	6939183	ATCAAAGAATAAGACTTCACCATCCTCCGCACGTT GTGGAGGATTTTCTTCAACTGCATCCTCAACTGAA GGAGCGGCAGTATGTGTTGATGGATTGTTA	T	C	ACTGCCTCAAAGAACATAAGTCTGCCTCTCCA CTATCTCATTCTCGCACCCCTCATTAACTCC GCTGGCTCAACACTTCTCAATCTCCACATGTC A	NA	NA
Ca-II-SNP359	190.65	Ca- <i>desi</i> -LG(Chr)2	7044437	TAGGTTGTGAACTTTTTACTTTTGAGGAGTTTG CAATCATTGTTAGGTTTTTCAAGGATTTTTAAGCA CTGATTCGTGGTGAACCATATGTTGTGTTG	G	A	TAAGTATAGCTTAATATCCAACTGAAGAC AAAATAATTATAAAAAATAATAATCAACTC TAATAATTATAATAGGCGAGTGATTCGGTGGA	NA	NA
Ca-II-SNP360	191.60	Ca- <i>desi</i> -LG(Chr)2	7089449	TTGGAGACTGTTTAATTGTCCATAGTCATTAATTT GATTTACAAAAGTGCATTCAACTATCCTTGAATA CATATGCTTAGGAGGATGAGTTTGCAGT	C	T	CAAGAAAAAGCAAGACTCTACAGTTCTTGAAAA AGGAAAAAGTCAAAGCACAAGTCATGCTCTAA TTTATGGAAAACCAATCCTCATTTCGATGAT G	NA	NA
Ca-II-SNP361	192.55	Ca- <i>desi</i> -LG(Chr)2	7100347	GTCAACAGGAATTGCATGCAAGTCGCAATAATGG CCTTGATTGAGTGTGTGAAATTTGCCGACGTCTAT TTGATATTATATTGAATGCAATAATGTCCTC	G	A	TTTTCATGAACATGTGCACTTATTGACATTCC AAAGTCCAAACAGCATATCACAAAACCTCGGTTG AGAGGACGTTATTGAATGCAATGCCCACTCAAT	NA	NA
Ca-II-SNP362	193.50	Ca- <i>desi</i> -LG(Chr)2	7124069	CAAGATCAACAAAATCCAGTGACTTCTTCGAGTGA ATACAGGTTACCTCTTGTCTGGATTGACTTGAAAA TGACTGGTAAGCATGTAGAGTGTGTTATTT	T	C	TCCAATATTCTATCCACTTCAATATTCAAACCTG CAAACACACAAAAAAAAGTTTAAACGGGAGG TTCAATGTAAGTATCGAGAGCTTTGCACTCTC	NA	NA
Ca-II-SNP363	194.45	Ca- <i>desi</i> -LG(Chr)2	7267988	TGGTGGCCCGCTGGCAAGACGTTCTTCTTCTT AGCAGCAGGTACCAAGTACTCTTGACATGAGTA GGCAATCAAAACCTCTACTTTTACAACAAGT	T	C	GTGGTTAACTGGTTCAGGTACAAGTAGTGGT GGAGGAACAACAAGTGTCAAGATTGTGGAAA CCAAGCGAAGAAAGATTGTAATAATAGAAGATG TAG	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP364	195.40	Ca-desi-LG(Chr)2	7520753	TTTCCATAGCTAACTCGTGCACATAATGTTGTGC GTGTTCAATGATAAAGTTAGAGATTTGTTATGTT GTGCAACCAATCACATCAAAGTATATGGA	C	A	ATTGAAGACCTTCAATCAATTAGTCCCTCCTTC ATCTAACAGGGTCAATAATGTTGAGTTGGCAA AACATTTAGGGCATGCTTAGTTTTGAAAAATT GTTTAAGCTTTTGTGATCTCTATTCGCAATTC AAATTCATCACAA	NA	NA
Ca-II-SNP365	196.35	Ca-desi-LG(Chr)2	7527128	AAATGTTCTACTTATCTTTTGAACCTTCCCTCTAGA CATTCTATGTATCCTCTAAACCTTCCCTTTGGACG TTCTATGTATCGCATGAACATTCCTTCTA	G	T	GTCCAAAGGGAATATTTAGAGGATAAGCAGAAC GTCAAGAGGAAAGGTTTATAGGAGAGTAGAAC AATCAAAGGGAAGGTCCAAATGATGCGTTGAA CGT	NA	NA
Ca-II-SNP366	197.30	Ca-desi-LG(Chr)2	7585433	ATATACTCTATGTCTCATTATAAGTGCCTTCTTT CAAATATTTGTCTCAAATATTTGTTACTTTAGAAT AACCATGCAATATTTATTAACCTTTTCC	T	A	TTTTAGTGAATTACGTGTTAAGAATAAAATACC ACATTAATTTGGAGTGGTCGAAAGTAAGAGTAGA GACTTAGTTATTTAAATAAAATGAGTGATTTTT	NA	NA
Ca-II-SNP367	199.20	Ca-desi-LG(Chr)2	7701830	CCACTTTGGATTCTCTAGAGATAGAATTCCTTTT CTTTATTTAGGGGTTCCAATTTTAGAGGAAACC AAAAGCTAACCATTTAATACCCATTGTTGA	C	T	CAACATAAAATTCGAATACAAGTATCTAAAGA ATTAAGAATGTTAGTCCATGATCGAAAGCATGG ACCCTTTCTAAGAGGAAAACCTGTTTTGATGC G	NA	NA
Ca-II-SNP368	200.15	Ca-desi-LG(Chr)2	7726596	TCAAGGGTAATGTCAAGTTTCTATTTATCTTAATT ACTCTCATGCTGCTTTTTATTTGTTTTGTTTTGTTA TACTTAGTAAATTACCTTTTCTTATCTA	C	G	GGCACCAATGACTCCAAGACTAGCAAGCCTCA AAAACCTCATATGGTGCTGACATGTTGTGGTTC GAAGGATCGGATACAAATAGAGAGGTATATAAG CT	NA	NA
Ca-II-SNP369	201.10	Ca-desi-LG(Chr)2	7736715	TTTCCATAGCTAACTCGTGCACATAATGTTGTGC GTGTTCAATGATAAAGTTAGAGATTTGTTATGTT GTGCAACCAATCACATCAAAGTATATGGA	C	A	CCACCTTATACTGTTTACGTTGGTTGTCACGGC AGAAACCAAATCCAACAAAATAAAATCACAAAG AGAGAGGTGACTTTCAGCATTTTTTCATTTGTTA C	NA	NA
Ca-II-SNP370	203.00	Ca-desi-LG(Chr)2	7757375	AAGAAGAAGGGGTTAGGGCTCATAACGATTTCTGG GTATGAAGGGGTTAGGGAAGAGGCGATTTCTGG GTTTACCTTGACAATTTCTGGGTATAATCTG	A	G	TATAAAAAATTTCTGTTAATTTTTAAAAAAGG TCCCAAATAGAACTAAATTAATTTTATTAATTT TAGTAGTGTTAACATAGGCTGCCTTCCAAAAC	NA	NA
Ca-II-SNP371	203.95	Ca-desi-LG(Chr)2	7839853	TAGGACATGACTTGTACTTTTACTTTTTCTTTTC CAAGAGTTGTAGTGTCTTGCCTTCTGTCAAGTA CAACACTTTTTTCTATTATGGTACTTTTG	A	G	AACAGTAAAAGGATAAAACAAATCAAGAGGATTC AAGACAGAGGATGAATAAATGAAAGGATGAAC TCTGGTGTATTATCCTCTTACATAGGGAATG T	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP372	204.97	Ca- <i>desi</i> -LG(Chr)2	7865097	CTTTCAGTTTTTTGGTTCTTTATTTTTGAATGCGGC CCAATTA AAAATCTTTCACCTGAAATTAATGCGGC CCAAGTTTTGAAACATATACTAAAGCCCA	A	G	TTGATGTCATGTGTTTGTCTTTTTTCGAATAA TTTAATTTAATGTCATGTGAAATTAGTATATGTT TCAATTTCACTGGAAGTTTTGGGTGGGCTTTA	NA	NA
Ca-II-SNP373	205.99	Ca- <i>desi</i> -LG(Chr)2	7884187	GATATTTTCTTGAAAAGCCATGAACGGCTCCTTTT TCCTCTTTTGATTGGCCAACCTCTTTATGTTGATT TTCAATACTTCAGATATTTTATCCAAACT	C	A	TTCAAGACTTTCAGTTGGCCCTGACATTAGAGG AATTTGAACGAATATTGGGTACCCTTAGAGA AAGGAAATCCTTATCGATATACTGGGCAACCAC C	NA	NA
Ca-II-SNP374	207.01	Ca- <i>desi</i> -LG(Chr)2	7916698	ACGATATCAAATACATTGTAAGTTCACCTACTTCGC ACAATATCGCCAAATTTTTTTCTTTTTTTTTTTTTTA GATTCAGAATCCTTTTTATATTTGTGAA	C	T	AATTGCTATTTGCCTGGGTCGAAAAAGTCTTTC TCATCAGCTAAACCTACTAACACTCTCTATAGC GTGCGATTTAAAAAAGGGCAAAATACT C	NA	NA
Ca-II-SNP375	208.03	Ca- <i>desi</i> -LG(Chr)2	7936003	CTCGTTGATGGATCATCGGAACTCTAAGGTATGCT CTTGAAAGTGCAAACACGAGAATGGAGTTGAATT GTGTTTGACTAAGTTGATATATTTTTCATTA	T	G	AAGCAGGATAAATTACTTATGTCACTTTATTCTT GCACTCCTTGGTTTTGTTATTGCTTCTACTCCA AGTAAATCATCAAGTCTGAAGTATTTAATCAA	NA	NA
Ca-II-SNP376	209.05	Ca- <i>desi</i> -LG(Chr)2	7949370	TCCAGGATGAGTTGTCAAGCATAAAGAAACAACCT GCACAGGGGTTTTCTCCTGATGATGCATATCCACT GGGACCTCCATTGTTTATGGAGACACCAAG	A	G	TGAAACAGAGTTTTCAAAGCCACTTAAATGCCG ATACAGTTATAAAGGATTTACCTCATCAAATC TGAAACTCAATCTGAGCAAGTGGAGAACATG G	NA	NA
Ca-II-SNP377	210.07	Ca- <i>desi</i> -LG(Chr)2	7962223	TTGCTGCTGGTTTTATGTAACACTTATTGATTAT GGCTACTTATGAAGATTTTCTTCGGTGGAGAGAGT ATTGTCAGAACTCGAGTTCGGCTGTTTCC	A	G	AGAGTCTTATTACCAGTAATGTGATCAGATGCA CTAGAATCGAGAATCCATGGGCTATGAGAAAGT GAGATGCAAACAGGTGAATTACCCTTTGTGCG G	NA	NA
Ca-II-SSR65	211.09	Ca- <i>desi</i> -LG(Chr)2	8238017	TTATAATAAGCATGTGTGCATGTG	(AT)13	(AT)17	TGAAAAGGAGAGATGATCTACATTG	57.79	138.00
Ca-II-SSR66	212.11	Ca- <i>desi</i> -LG(Chr)2	8278851	CAACAAAACAGACACGCACG	(AT)10	(AT)11	CATTTGAGTGACCAATGTTTGAA	61.35	123.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR67	213.13	Ca- <i>desi</i> -LG(Chr)2	9991894	CATAATTGAATTGTTTCCGCTG	(AT)7	(AT)8	TGTGTGAGGTTGAGTGAATGC	59.49	130.00
Ca-II-SSR68	214.15	Ca- <i>desi</i> -LG(Chr)2	10069811	TGGAAAGGAAGAGAGCAACAA	(TCA)29	(TCA)21	GAAAGCATCAGCACTTGCAT	59.98	205.00
Ca-II-SNP378	215.17	Ca- <i>desi</i> -LG(Chr)2	10438749	TTTTATCCTGGTTCACCCAACGTGGGTTACGTCCA GTCCCTCACACTGTGAGATTTTCCACTATGTGTTTA AAAACAAGAACCCTTCTTGATCTTACAACA	G	A	GTCATATCATATCAATCCTATATATATTTTTCTT TTTATGCAAAATCGTTGGTAGTTAAATTAACATT TTTACACCTTACCTGGGTTTGAACCTGGTCTT TCGACTCCTGCCTCTTCAACCCTCGGCTCAA AGTAGTTGAGCTACCCAATCCCCATATCAATC CTATATGGTTTGCCTAGGG	NA	NA
Ca-II-SNP379	216.19	Ca- <i>desi</i> -LG(Chr)2	11268840	GTGTTCTTCTACTTATATTACTATTAACATGAT TTCAAACCTCACCTCCTTCGTTGTTTGTGTTTGC TGGCTTGACCCTTCATTTGCGAAATCGCA	G	C	AAAGACATTAGGATACTCGGCGGAAAGGCTG TCATACTATTGCTTCCATAGATAGGGCCTGCAA CAATGTAGATTGTTGTAGTTGAAGGTATCCCA TGGCCTTGAGAAAAATGGCTGCTTCTTTGGTG ACATAGGCGATCCTCCTTGAATCGCCTTTCGA CGCTATCGATCTCTTTTCTTTCCAATGCTTGA CTCCATACCTCATAACCCTTAGTTCCTCAGCTT CTCAACACTAAGATTATCGCTAAA	NA	NA
Ca-II-SNP380	217.21	Ca- <i>desi</i> -LG(Chr)2	12031041	AAGGAATGCCCCATCTGTTTATCTGAGAGGCTC ACCACAAAACAGAATACCGAGGTTTCGACTTTGG GGTCATGATGGTCCGGTTACTTCACTTGCTTT	T	C	CGCGCAGACAAAAGCCGAACTCGGTTACTTTA GTTTGTGATTATCTGCATGTGCTAGAATAGGA GCTTTGACATGTGGAAAAGAGATTGATGCTCAT GCATTGAGAATTGGAGTGAGTTATGATGTTTT GTACCTAATGCAATCTTGGACATGTATGTAAGG TGTGGAAGAATGGAATACGCATGGAACAATTT TTCTCAACTGATCA	NA	NA
Ca-II-SNP381	218.23	Ca- <i>desi</i> -LG(Chr)2	12357547	GTTGTTTGTAGTTTGTATGTCAACTATAAGTTCTC CCTCCGCTTCATATTTAATTTATCTTTAAGGTTA TGCACACTTCTTAAGAAAATCATCGAGTG	G	A	TTTAGACTTTGAAACAACAAATGCAGTGTCTC TGATCTCATTCTTTGTTTCTCACCCCTTTTCTC TGCCGACCCATTTTCACTTACTCAACTCAACGT CACGTGCCTCCACATGCTTCTTATTCTTTCTC AGATCAAGTAATTTTGGGTTTTCTGTACCATG GATGGCATTGTTGGGGGAGATTCTCGGATGCA GATAAGCGACGGACAGCATCCTGTACATGTGC CTTATCAACTATCCATTCCAGCATATCAACA	NA	NA
Ca-II-SSR69	219.25	Ca- <i>desi</i> -LG(Chr)2	13422213	ACCTGCAAAATGCACATAAAA	(AAT)10	(AAT)12	AGCATGGGGAACAAAAACA	57.53	175.00
Ca-II-SNP382	221.29	Ca- <i>desi</i> -LG(Chr)2	13759775	ATCAAAGAATAAGACTTACCATCCTCCGCACGTT GTGGAGGATTTTCTCAACTGCATCCTCAACTGAA GGAGCGGCAGTATGTGTTGATGGATTGTTA	T	C	CTCATATGAATAATGTTATAAAGTGACAGAAAA CCTATAAAAAAATTCTTTGAAGATTTAAACCAT TCAATATTAATTACAATGGACCTAAAGTACTACA AAAGTCAGGCCACTCAAGATTCATGAAAATTT GGTTTAGGCACAGGACCACTGCTTTGATGTGA AGGACTGAGCTTTTGAATCCAATGGTGAAGCC CCTTTTATGATCTTGGCAAAAAGGGTTTGGCA CCACCGAAATTTCTTCTCATCAGCAACCGAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR70	222.31	Ca- <i>desi</i> -LG(Chr)2	14142854	TTCTTTGTACCGTTAGCAATCAT	(ATT)22	(ATT)28	GAGCGATAAATATCCCCAAA	57.91	238.00
Ca-II-SNP383	223.33	Ca- <i>desi</i> -LG(Chr)2	14207756	CAATACAACCTTTTAGAACCAAGAGCGGCTTTAT CTCATTGATAGCCCTCCTCCTAAGGGTGGCCT TTCCCTTAGGGGCGGCTCCATCTAACGGATG	G	A	CAGATGGTTGCTCTTCTTCCACATTTCTCTGC TTGATTTTATTCATTCAACATTGTTGCTT TCAAGGACCAACAATGGATGAAAGCCACTGCA ACTTATGCTAAAGACACAGAAGGATCACTAATT ACAGAAGGAGCTTGTGGTTATGGAGATCTCCA CAAAGCAAGCTATGGAAAACACAGTGTGGATT AAGCACTATTTGTTCAATAGAGGGAGTACATG TCCAGCTTCTTTTACATAACATCTCTTCAACA GTCTCTCCACCGCCGCCACAACAAACACAATC GGCGTCAACTACGGCACCGTCGCCGACAACCT CCACCGCCATCCACAGTAGCCACCTTCTCA AATCCCAAACCCATCAACCACATCAACTCT ACGACGCCAACCCAGACATTCTCCGCGCCTTC GCCAACACCGGTA	NA	NA
Ca-II-SNP384	225.37	Ca- <i>desi</i> -LG(Chr)2	14348649	TTGTTTCATAGCCTTAGTGTATAACACTCAATCCTTT TACCCTTATCTTATATTTGTGTTATGCTTTTAAAT AATCAATAGTTAAATCTTTTTGTTGTTT	G	A	GTCTCTCCACCGCCGCCACAACAAACACAATC GGCGTCAACTACGGCACCGTCGCCGACAACCT CCACCGCCATCCACAGTAGCCACCTTCTCA AATCCCAAACCCATCAACCACATCAACTCT ACGACGCCAACCCAGACATTCTCCGCGCCTTC GCCAACACCGGTA	NA	NA
Ca-II-SSR71	226.39	Ca- <i>desi</i> -LG(Chr)2	15249055	TTCTAAGTTTGGGGTTGCTCA	(ACA)9	(ACA)10	CCAAAGTGCACAAACTGATT	59.73	114.00
Ca-II-SSR72	227.41	Ca- <i>desi</i> -LG(Chr)2	15754194	TGGATTTGGATTGCATGTTG	(TAA)23	(TAA)22	GTCTCGCACTTAAGCGGTTT	60.32	178.00
Ca-II-SNP385	0.00	Ca- <i>desi</i> -LG(Chr)3	4709	AAGAGTGGCTTGTACGAAACTTATTTCTCGACTTT TTTTCCCTTCGATGAATTTCTTTATAATCCGTTT TCGTTAACATTCAAGATTTTTATTGTTT	A	C	CAGTGGATTAGAGAGTTATCTGCAACAAAATAT TATAAATACAGTAGATTATTATATTACGTA CGTACATAGGAAACCCGTTAAACACATGCATT	NA	NA
Ca-II-SSR117	1.15	Ca- <i>desi</i> -LG(Chr)3	41679	CGAGTACGTTTGGCAACAGA	(GT)6	(GT)7	CCAGGTAAGCAAGTTCAGC	59.90	163.00
Ca-II-SNP386	2.27	Ca- <i>desi</i> -LG(Chr)3	45404	GTGTAGAGACCCGGGCTTTCAAATATAACTGAA GAACAGATACTCTGGTTCATACTTTTGGAGCTAGA TTTTATTTGGATGCATTATTTCCAATTAATG	G	A	GTGATCTTAGAAGATCAATTGTTAACTAGTAT TGTCATGAAGTAGTAAATGTTTAAAGCATTCTCA TTACTAAAAGACAATGCACCTTTATGCTACGTGA ACTGAAGGAAGGTTCAATTGTTGTGGCGTACAA TGTTAAATTTT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR118	3.39	Ca- <i>desi</i> -LG(Chr)3	70241	TGTTGTGTGGTTTCCTCTCTTT	(AT)11	(AT)12	TGAGAGGCAAGAAGAGAAATG	58.74	115.00
Ca-II-SNP387	4.51	Ca- <i>desi</i> -LG(Chr)3	145155	GATTTGGTTGAGTATATGAGTTACAGGGAGACATT AGCCCATTCCCAATCGATTATGTTTGTAAACATG AATCGACTGAGTAATCGATTATTTGATCTT	A	T	TTTGCTAATCGATGTTTTAATGCATAAATCAGA AATTTGATGCTCAGTTCATCTCAGAGTCGATTG AGTAATCGATTATATTTGTTTTGTTCAAAGTG	NA	NA
Ca-II-SNP388	7.87	Ca- <i>desi</i> -LG(Chr)3	276679	ACTCCTCTCCTCTCTCATACCCCTTTTCTCTCTGTT CACCGAACCCAGAAAGAGAGTCTACTCACCGAAT CTAGAGAGACTCTTCTTTTCTTTCTCCTC	C	G	CTTATAATTAAGAAGTAAATAAGCAAGAAGAAA AAACCCCTAATAATCGGTGTAATGAAGTAGAAT GAGAGAGAGAAATGAAAATACCGTAAAAATGG AT	NA	NA
Ca-II-SNP389	8.99	Ca- <i>desi</i> -LG(Chr)3	339706	CCTCTTCTACTACAGCTGCTGCCACTCAAGTTGT TGAAGGGCTTCTTGAACATTTCTTGGAAATATATGT GTTATCAAGTCTGCTACAAATGCCCTGTA	T	G	TCAACTAACAAAGACGTTTCTATTTCACTAAGAA AAGGGAAAGAGAACTTTTACTCAACCAATTGA AATATTTGTGCTGATGAAAAATTATCACAAAA	NA	NA
Ca-II-SNP390	12.35	Ca- <i>desi</i> -LG(Chr)3	628033	GTAACGAATACAATCCGAGCTTTTAACCAGTTGC TCAACCTCTTCGCTTCAATAACAGCTCTTTTAAT TTTTTCCATTGCTGAACACCCTAATTC	G	T	GGATGGCGAGGTAATTTTCTCAATCAAATTAAG TTAAATTATATTTTTAACATTTATGTTTAACATA TATTTTTGCTTAAATAATTCAGGATCGGGG	NA	NA
Ca-II-SSR119	13.47	Ca- <i>desi</i> -LG(Chr)3	748034	GTTCACTCGTATCCGAAGCC	(TCT)12	(TCT)11	TTGCTGTAGGAATGGAATTGG	59.70	155.00
Ca-II-SNP391	14.59	Ca- <i>desi</i> -LG(Chr)3	776626	TTAATCATTCCATCGATGTTTACACTTTTCATTCAA GCACGCGTAAAATATAGTTGCCGTTTCATCAGCT GAACGAGTCTGAATTTCCATATAAGCAGCT	G	T	AGAGATATTGAGTAACTATGTAATCTTTGGTAT ATTTTTATTGTTTCCATTTTCCCTTTCTTTTC TGTAGTACCATGCCAAATTGCCGTCATGATA	NA	NA
Ca-II-SNP392	15.71	Ca- <i>desi</i> -LG(Chr)3	811886	GTGTAGAGACCCGGGCTTTCAAATATAACTGAA GAACAGATACTCTGGTTCATACTTTTGAGCTAGA TTTTATTTTGGATGCATTATTTCCAATTAATG	T	C	GCTTATTTGGAGATTTATTTCTTGTTAATTTAGT GATGGTCGTGAATGATTATGAAGCATAATCATG TATTAGAGAGATTAACAGGGTAGTTGTGAAAG AGTCATCCCATGGATTACCCCTCCAATCATCTA GAAAAGGCATATCACGACAAGCCTTCAAACAA CACTATTACACTTAAAACCTGACCCGAATGCAA TTTGCCACACCCTATCTCCTTTTGAAACTCTAC CTTACTCTCTCTAAGCAACTCATACCAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP393	17.95	Ca-desi-LG(Chr)3	839950	TTAGATCAGTATGGCGGCTATAGCCGGTTTTATATGCTTTGTAATGTTTCTAATTGGGTCATCATGAGATCTCAATTTGGTATGTGTCATCAAAGTAT	A	C	GATTTATTTTCTTCATTCTGCTGAGGCGTGCGATTACACAACCAACAAGATGTGTGAATTTATTCAATAAGAATAAATTAATGTCAAATGTTATACACT	NA	NA
Ca-II-SNP394	19.07	Ca-desi-LG(Chr)3	859723	TGGCCAGAGGTGTCACACGGGTTGGTGGAGGCGTGTGGGTCTCACGCCAAATAAGGAGGTGGCGCGTCCGTATGAGTTTGGCAGCGCAAAAATGTCA	A	C	CTGCCATATATTTGTGTGCTCATTTTAGTCTCCGCCATAATTGTTTCTCACTTCTTTCAAAGCTTCAACATTTCCCAACAAGCAACACCATGGCTAACCCACCCCGGTTTCGTCCATGGTCCCGTTAACCTCCATTGCCCCGCACCTGCTCCTGCTCTGACACCTGCACCTGCACCAGCTCCAGCTCCAGGCCACGACCAAGTTGATTCTACCTACATCTACACTCTCTCAGCAACCACTCAGCTCATAAT	NA	NA
Ca-II-SNP395	21.31	Ca-desi-LG(Chr)3	955191	CACACAAGAGTGTGGAGTGCCTAGAATGTTCTTCTCAATAATCTGATATCCAACTCTATCTTTGTTACGTGGATGGCAAATACTTGAGCTATAAA	C	T	ATGATGTTTCATCCTCAGAAGAGAAAGAGACTATGGGGTTAAATGTTTCCCATCACATTACTCCCAAGTTTGTCCCTTCCCTATTAGGTATGCTTGTGA	NA	NA
Ca-II-SNP396	22.43	Ca-desi-LG(Chr)3	1088367	GTGTAAAAGTGTGTCACACTAAGTGTGATGCTCTCATTTTTCTCATAGAAATTCATGTTGGCCATACCCAAATCAGTTGTTTGCCTTAGTGTTTGTTTT	C	T	TGGGAGAATCTCCAGTAGTTGGATCAACAAGATCCCCAGGTCTAGTGATGCACCTTCATTATACATTAGAGACTGAAAAATGATAAAATGTAAGACA	NA	NA
Ca-II-SNP397	23.55	Ca-desi-LG(Chr)3	1201004	GGTTTCCTGTCTCTGTAACCTTGGCACTAGCTCTCTTGATTACCCATGGATGCAACAAGATTCACATCAGTCAAGTCCACCTCAACAAGTGGAAATTC	A	G	ATGAGCACGGGTGCAACAGAAAATCCAGAATAATGCTGCAATGGATAAATACCTGAGCTTCACCAGTGGAACTAGAAGGGGACTGGGCAGATGCAGATC	NA	NA
Ca-II-SNP398	24.67	Ca-desi-LG(Chr)3	1219565	AAGAGTGGCTGTGACGAAACTATTTCTCGACTTTTTTTCCCTTCGATGAATTTCTTTATAATCCGTTTTCGTTAACATTCGAAGTTTTTATTTGTTT	C	T	CTTAAATCCCAAAAGTTTCTTCGGCCACAGCTCTTCAGTGAAAGGTGTCTGGACCGACGGATCTTGGGTGTTTTCGACTGGACTTGATCAGCGGGTCAGATGCTGGTATCTTACCAAAGTAAACTATTGAACGAGCACACCTAATAGTTAGTGTCCGGAGCCAGAAGCGTTATCTGCTAGGGCTGTAGCAGGAACCATTATCAGATTGCTGTTGCTGGAAGCCGATCCAAATACTCCACTTCTCCGATCCT	NA	NA
Ca-II-SNP399	25.79	Ca-desi-LG(Chr)3	1356024	ATAAAAAAGCACATTTAATAAAGGGGTGCACCGACCTTGAAAGGGGCTGTTTTAACGGCTTCTGACCGTACTTTCTCCATCTGTACCCATCTTCCA	G	A	TGTGGTTGGTATATTTAAAGGTTGAAAGTTAAAGAACAAATGAGAAGAGACAGAGAGAAGCTAGAATAGCTTTCATGACGAAAAGCGAGGTGGATCAT	NA	NA
Ca-II-SNP400	26.76	Ca-desi-LG(Chr)3	1416213	GATAGTTTCTTTTTCTTTTCATCATGTGACACTTAATAGGAATTTGCATTGATTTATCCAGGTCCTTGGAAATAAATGTCTTTGGATTGGGACAC	T	C	ATATGTTGGTGCCTTGAATCTCTGTGTATTACACACGGCTGTGAGTCTTCGTGCAGGTACGAAAGTCTCTTGCAGCATCAAGAGCAATCTTATTCT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP401	27.73	Ca-desi-LG(Chr)3	1447555	CGTATAGGCAAATATGTGTGGCTTTTGTCTCCTGT TAAGTGTTAACTGCCATTGCTTTTTTATTTGGATG ACTATTGCTGCTTTATTCTGATTCATCC	T	G	CCCAAATCCATCCATTACTTGGAGAGTCATCA AATGATGCTGTTGGAACTTGTCCATCAAGATA AATCAGTTGAAAAAGCAAATCCAGGTGGAGAGA ATTGTATCCATTCATGAAAAATTCAGAGGAAC CAGAAGAAGCTACAATGTCATATTTTCAGGAATA ATGTCAGCGGTATCAACCAGGGGCTCTTCACA GATGGAGGAAAAAAGACACTTTCAATGCTTTTC TTCAACAATGCACCATCCTTTATGTAATTCCA TTTAAAAATATGTAACATAATTATCGGGTCGAC GGATTCAAATGTTAAACCCATTATCCGAACCA AATATAAGCGGATTTCCACCGGTTGAGTTGAGT	NA	NA
Ca-II-SNP402	28.70	Ca-desi-LG(Chr)3	1525532	TTTTTCATATTCGTAAATAGGGGTGTACATGGATG CAGGTCGACCCGTCAATCTGATCACCAAATTTGAT TTTTATCCGTATTCGATCACTTTTGGGTCC	A	G	TTTAAAAATATGTAACATAATTATCGGGTCGAC GGATTCAAATGTTAAACCCATTATCCGAACCA AATATAAGCGGATTTCCACCGGTTGAGTTGAGT	NA	NA
Ca-II-SSR120	29.67	Ca-desi-LG(Chr)3	1602316	TGAGCAGCACACACTTAGGC	(GGC)7	(GGC)5	CCCAAGCCCATTTTCATTTAC	60.21	100.00
Ca-II-SNP403	30.64	Ca-desi-LG(Chr)3	1618294	TTCTTGGTGCAATCTTCTAACCCTTAACCTCTTT GATTTACTATATTGCTATATTTGTATATGTTAA AACTAGATGCATGTTAAACATATTCTGT	C	T	CATGAGATCTTAACCAGATGTTTATGTTTGT GATTTAGTCATTTTTCAGTACTAGTTCATATAAA ACCCTTTTGTGAGCAGTTGATAATTGTCTGTC GTTTGATTCTATTTTGATTTGATTTGATTTAAT TCTTGCCCTGAAAATAAATTAGATGCAAAAAGA AGAAGATGGTCTTCTGGGATGTGTTTCTTGTA CACAAGTGGAAATGTAATAATAATAAGAATTTG CTCCAGATTATCTTTGATTTCAAAACCATCAA TTTTAGATCATGGACTCAAAAAGACA	NA	NA
Ca-II-SSR121	31.61	Ca-desi-LG(Chr)3	1632339	TTCTCGAGGATCCCTAATCC	(AG)6	(AG)7	TTTTAGATCATGGACTCAAAAAGACA	58.13	103.00
Ca-II-SNP404	32.58	Ca-desi-LG(Chr)3	1639432	AAACGTGATGAGTTGCGAGTTGACGAAACAACG AATCGCGAATAGAAGGATGATAGCGACATTTTCT CTGATAGGTTCTTAGTTTTTCAATTCCTTC	T	C	ATTATTTTTCAAATAAGAAGTTGTATTATTG TTTTAAAAAACTAACTATTTTTTCATTTCAAAAAC AAAAAGTAGACTCAAGTCAAATAAAAAGAG	NA	NA
Ca-II-SNP405	35.49	Ca-desi-LG(Chr)3	1705484	AGTCGGTTAGTCGGAGAAAGCTTCTACAGGCTGA TGTTGGTGATGATGTTGTGGTGAGTAATATTGTGA CAGTTAGTCAAGATGGAAGTGAAACTTTAC	G	A	TAACTACTCTTCATAAACACCAGCCGTAAACAT AAATCAAAAAGTATCCATCACTAGAAAAGAGATT TATTCGGAGCAGCAGCAATAGCATCATTAAATCG T	NA	NA
Ca-II-SNP406	37.43	Ca-desi-LG(Chr)3	1803646	CGAATATACAATTTTTCCATAAATCCATTACTTCT TCTTGCTATCCTTTTTACATATTGTTGCATCTT GCCCAACATTTTTTCAATATGAAAAC	A	G	ATATGAGACTTTAATTTCTAAAGTTATTGTGACT GATAGAGATCTTGCCATGATGAATGCCATTAGT GTTGTGTTTCTACTTCAATACATTTGCTATGT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP407	39.37	Ca- <i>desi</i> -LG(Chr)3	1893159	GTAGATGAATAAGGAATGGTCTGAATTTGCTGTGAT GGAAGCCTATGGTGGAGACATAGTCAGCAAACCT CTGGTACCACGCTCGAGGAGCCTGTTTGAGG	T	C	CACGGCAATCTTCGTGAGACCATCTATATGCAT CAGCCCATGTGTTTCGGCGATCCTGTTTCATCCA GACTATGTCTGTCTTCTGCACAAATCATTATAC G	NA	NA
Ca-II-SSR122	40.34	Ca- <i>desi</i> -LG(Chr)3	1900350	GAGCAGACTGTGAAGATTCTTTGA	(AAT)16	(AAT)19	TGAAAAACCATAAAGAAATTGAA	60.06	176.00
Ca-II-SNP408	43.25	Ca- <i>desi</i> -LG(Chr)3	2647451	TCCAGAAGAAGCTACTACAATGTTAGATCGAATTC TTTCTCTTCTTACCTCCTCAACTGTTCTGTGCTTC AAGATCAACAAAACTTGGATCCTATACAC	C	T	ACCAGGCATCTAAAAATATTTATCATTAGTTAA TGCTAACAAAGGAGCTAGTGAAGACCATCAGA ATTAGGAGCAAAGATCTAGCAGCAGGAGCCA T	NA	NA
Ca-II-SSR123	44.22	Ca- <i>desi</i> -LG(Chr)3	2668158	CAAAGCCTGGTTCTTCATCA	(AAT)12	(AAT)11	CCGAGTCATAGCTACAGCGG	58.85	176.00
Ca-II-SNP409	45.19	Ca- <i>desi</i> -LG(Chr)3	2746674	TCGTGACGTGATCCATTGTGATTGTCATGGCATAT GAAACGAGTCAGTCTCTCTATGTCACATTTCTACA AATGTAGATATGAGACCAATATCAACTATC	A	G	GGCTTACAGCGGAAGAAGTTTGTGACGTACTT GTATCAAATGTTGTACAACATTGGATTCAATAAT TTGGGCTGATACATTTGTCTTCAGTTTATTTGA	NA	NA
Ca-II-SNP410	47.13	Ca- <i>desi</i> -LG(Chr)3	2757852	AAGCAAAGATTCTGATGTTTCTAECTCTACTGGG ATGCAGATACTTCAAAAAATGATTTGCTTGAGCG AAATGAGTCTGTTTTGTCTCTGGATGGAAG	C	T	CCTCCAGCTCTTTATACAAAGCACTCATAAGTT TCCTGTCATGATCAACTTGCTTTTAAAGCTTGT CAACCAGACTTCTCCTTCAATTTGCTGACAA T	NA	NA
Ca-II-SNP411	48.10	Ca- <i>desi</i> -LG(Chr)3	2921225	AAATTTTACGTGAAAAACAACCTTCTTTGTTTGT TTCATATATAAGTTTTTATTTCACTTGCAATATTA CATATATTCTTAGCACCTCTCACCTGCC	A	G	AGAAACAAAATGGGGGACTACTTGTGCGATT CAGCTAAAATAGGAGACTAAAAGTCAATTA ACCAAATAAAAAAGAAATACAAGGACCGATGTT AA	NA	NA
Ca-II-SNP412	50.04	Ca- <i>desi</i> -LG(Chr)3	3074678	ATTTTCTTATCATGATTGACAATGTTTATTTGTTT TCAAGGAAATATTGATTGTGTTTGTATTTTATG AAATTCATATCTTCTAAGTTATTTTTT	C	T	CCATCCATCTATATGTTCCAGTTTCTGCAGTCA TCACTCCTCCCTGATTTAGGAACCGGCAACTC CAAAATCTGCCACTTTAACACCTAATTGAAAA C	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP413	51.01	Ca- <i>desi</i> -LG(Chr)3	3200806	CAAATTATTTAAACATACTGGTTGTGACTTTTGTG GGGGAGCACATAAAAATGGAGATTGTGAAGTACC GGATGATGATGCTTGTCTTGTCCAATTAGG	A	G	CCCTAATGGACTAGAATAAACCTAGAAAGGAC GAAAATGACCTAAATGTTAATCCAATGACACAA ATGAACCTATTGGATGCACAAGATTGGTTAAAA A	NA	NA
Ca-II-SNP414	51.98	Ca- <i>desi</i> -LG(Chr)3	3240315	TCTTCAGAAGATACATGTATTCACCTTTGAGATGT TGTGCAACTCCCGCTAATCTTTTCATTTTCATGCG TGGGACTAATTTACAAGAATTTGACTTTCA	C	T	GTTGTATTGAGTTGGCGTGTGGGGCAACAG GAACAAAACCCCTGCCACCAAAAAGTGGACGC ATAAATGCATCATCAAATTTACGCCATAAGTGA TGAAACAGTGTGTGTTGGAGTAGTTAGTAAATCA CGAATGCTGCTTGGACCTTGTGAATCATTGACA TCAGTTTCAACTTCTGAATCTTGGTTATCTCCAA GGAATGGCG	NA	NA
Ca-II-SNP415	52.95	Ca- <i>desi</i> -LG(Chr)3	3325103	TGAACACAATTTAAACACAATACATGTGACCTC CACATAATCTCTATTTCATTTAAATTTCTTTTTCTTT TATATTTCTTTTATTTATTTATCTTTTT	A	C	CGTAATAATAATTTCTTTCAAAATGGTAGTATATG ATAGATGGTGCATAAAGGTTTAGGTAAACAACT TGTCCATTTATTTATGATATACAAAATGGGTT TGGTTGAACCTGCACAACAGTTGCTATAAATT CAACCTCATTGAAGGAAGTAAACAGTTGCGG	NA	NA
Ca-II-SNP416	53.92	Ca- <i>desi</i> -LG(Chr)3	3495973	TGGCCAGAGGTGTACACGGGGTTGGTGGAGGC GTGTGGGTCTCAGCCCAAATAAGGAGTGGCG CGTCCGATGAGTTTGGCAGCGCAAAAATGTCA	T	C	CACTGCAACGCAAACCTTTAATATGGAGTCCTT TCAAACCTGAAAGGCATGAAAAGTAGCAGAAAGT CATCACTCTTCCATCTCGGCCTTCCATCCAAA TGCAATGATCTTTGTTTTCTAAAACAATGACATA TACTTGTAGTGTGGAAATTAATGATTACTGA CGAGGGAACGAAATCTGTGTTGAGG	NA	NA
Ca-II-SNP417	54.89	Ca- <i>desi</i> -LG(Chr)3	3654605	TCGCATTTTCGCTACGTTCTTCATCGATGCAAGAGC CTAGATATCCGTTGCCGAGAGTCATTCTATATTT ATGTGTCAAAACACAACCCGCACGAAAAAC	T	C	CCCAATTGTGTTCTCCTCTGCGCCAAAACCTCAA ACCCCGACGCTGAATGCGTCAAGGAATTAATA CTTTGTGATGTGCGCACCTGCATGGAACCGGA GAC	NA	NA
Ca-II-SNP418	55.86	Ca- <i>desi</i> -LG(Chr)3	3765014	AAAATTTCTTTATATAGAGGATTCTACTCGATT ATAAATTAACACTAAAACACTAAATAAATTCGAGTT TTCTCTTTCTCCCTTTTTGCTTTGTC	C	T	ATTATGGCGATTAAAGTACTCGTCGTAATATA GCACTATGACCGCTCGAAAATTTGAATGGACAG TTTTTTTTCAATAAGGAACAAAAAGAAAATTTG	NA	NA
Ca-II-SNP419	56.83	Ca- <i>desi</i> -LG(Chr)3	3879405	CGTGTGTGTTATTTGTCTAAGTCTTTTCATCAAAAA ATTCCCCTCTACTCATTTAATTCTCAAATATATTT TAGTATCGAAAAGTTGCTTAGCATTAGG	G	A	AAAAAGGTCAGGTCAGACTAAAAAAAAGTCTA TGATAGACTGAAGCCTAAAAAATAAATCGTAA GACTCAGACATTTCAAAGTCTGGCCTATTCCCA C	NA	NA
Ca-II-SNP420	57.86	Ca- <i>desi</i> -LG(Chr)3	3943513	ATTAAGAATTTGAAATTGAATTGGAATTAGAATG GAATCCTCCCTCTTTTTGTGGTTTTATTTTTAT TTATTTTTAATGGTAATTATGATGTGAT	C	A	GTAAGGCAGCACACAGTATGTTGTTAAGGGAT CACAGAAAGAGTTCCACAAGAGCTTCTTGAGG AGTTGAAAATCATCTGTAAAGGATAACATATCAC TTGATTATGACGAGAGATATATCCATGAAAAC CACAAAACAGTTTTACAAGGCTGTTAATATCC CAGATGTGATTGTTTATCCAAGATCTGAAGAGG AGGTCTCCAAGATTGTCAAAGTATGCAACAGTT ATACCATTCTATTCTACCTTATCTCCACCTA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP421	58.89	Ca- <i>desi</i> -LG(Chr)3	4071550	GCGGGATAGGAGAGGGAGCAGGAATGACACGAG AAGTTAGTATAGTGTGGTGTGCCCACTGTAAGT TTTGTCTCTGCATCAACTACAACACTCAA	T	C	CAGGAGCCATTACACAACGAAATGGCGGTGAA ACTTGGTTTGAAGTTGGACGATCAAAGACATAT ACCCATCAGCTGATGACATTGGTCATGCCTT AA	NA	NA
Ca-II-SNP422	59.92	Ca- <i>desi</i> -LG(Chr)3	4112099	CCAAAAGCTATTAACCATGTCAATTTTTGGCC TAATGATGTGATTTGTGATGAATCATTATTTGCAG TGTTAGTGTGTTTGGTGTCTCAGCAGAATC	A	T	TGTTACTACCTTAGGCCTTCTTGAGTATA ATCTCTCTGCATTAGTAGCAGAATTGTGGGA CGCTGTTTCCCTTTGAATCATACGAACATTGCA T	NA	NA
Ca-II-SNP423	60.95	Ca- <i>desi</i> -LG(Chr)3	4198788	TTCGATTTACAGCTGTGGTATATGTAGTTACTC CTAGTTTTGAATTTACTGGAACTGTTTCTGTTAA ATAATGGTCTGTATGTTGTGACAGAAACG	G	T	CATTGTAGACGCCAATAATGCTACCAATCATCT CAGGCACAATAATCATGTTGCGGAGGTGAGTC CTCAGTGGTCTGGCTTCTCACCAGCTGGGCG CTC	NA	NA
Ca-II-SNP424	61.98	Ca- <i>desi</i> -LG(Chr)3	4227862	ATAGAGCATTAAAGTTTACTTAATTTTTGGTGAATG ATTTGAAGATTTTGTAGCAATATGAGGCTTCACA AGCTCCTGTTTCATAGAAACATGATCTTT	C	T	GAGCAATTTCTCCTAGAGATAACTATGCATCAG TAAGAAGAGAGAACAGAGAGCTGAAACTTGAA GTTGCAAGAATGAGAATGAGATTGAATGATTTG GA	NA	NA
Ca-II-SNP425	63.01	Ca- <i>desi</i> -LG(Chr)3	4416213	AACTTGTGCTGGATCATGGACTATTCAAGGACC ACAACCTTTGTGGCCCAACATTGTATACGGATACAA AGATATTTGTACCATGTACCCCACTATT	G	C	ATAATATGTTGAATATATTGGTTTTACGCGCAA AAAGTCACGGCAATGTGAAAGCTACAGCTAGAA GCTTCACTATCATCGTACATTTAGAATGGGTG CTCCAATCAATTTACCAAACACATACTTAATCC TGATCCCAAAGTCATGCACGCTTTATAATAAC CAAGTATCCAG	NA	NA
Ca-II-SNP426	64.04	Ca- <i>desi</i> -LG(Chr)3	4441610	TCTATTACGCTTCTATATTCATACAGATCTATTGTA TATCTTCAACAAATTTACTCTCACATATCTCTTC TGTGCGAGAATTTGTCATGCGGTTTTT	G	T	ATCAGAAAAATAAATACCTTTTCTCTCCCCCAA AATCAAAACCCTAACCTTCGAAGCTCTCACGGA AAGGCCACCGATCCCATTTCTCACCATCCA AGAAAAAATGAGTAGACATTCGAGCAGAAGT TCTATGTTGGGAATCTACCTGGCGATATCCGTG AAAGAGAAGTTGAAGATTTGTTATGAAGTATG GACACATTACTCATATTGACCTAAAGGTGCCAC CAACAGCTGCTGCTATCAATTTCTACACTTC	NA	NA
Ca-II-SNP427	65.07	Ca- <i>desi</i> -LG(Chr)3	4469690	GTCATTGTTCAAACAACCGTTATCTCTCCTGTTTT GGACGCATTTTCTTACTTTGATGATCATGGCTTCA TTTCGTTAGAGTTGCGCTGCTTCTCTTTG	G	A	AATTCATATGTGGAAAAGAGACACCACCAGAA TGATCGTGGTGGGAATAAAAGCCACTGTTGG AATCTATTAGTAAAGACTAAATTCATGACAAAC A	NA	NA
Ca-II-SNP428	66.10	Ca- <i>desi</i> -LG(Chr)3	4548319	TAAAACCATTTGTTTTTCAGCAATTATCTTGAAC TTTTAAGTATTTCAAGCACTTCATTCTTCTCTTGA TTAGATATACCAAATTTTCCCTGTAAA	G	A	GATCTTAAAGATGATGGAGATAATCTACTCTG ATGTTTGGTCCTTTTGAAGAAGTATCAATAG GAGGTAATCATTACTTTGTATCATTATTGATGA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP429	67.13	Ca-desi-LG(Chr)3	4631479	CAAACCTTTGATGCCCTTTAACATGCATGTGTTGT GTATAGCCAAGTCCAGTTTTAACATTTAGATTTCTT TGATTTCTAAGAAGTCTATCTAAGTTGTT	T	C	AGATTAATGTGAAGCATGAGTCTCTTAGAGACA TAAATGAAGAATTGAAAAAGAAGCATGTGCAT TGAAATGTGATGTAGCTAAGTTTAAATTGGGTA A	NA	NA
Ca-II-SSR124	68.16	Ca-desi-LG(Chr)3	4650196	AATCCCTTCACACACACAAAA	(TA)12	(AT)14	TGATTCCGTGTTTCTTTTCG	57.97	114.00
Ca-II-SNP430	69.19	Ca-desi-LG(Chr)3	4673307	GATTGAGTCAAATTCATGATACTCTTTAGTTCTTT GTAAAATACAATCTTTGTAAGTGAAGGTTTAGAA AATCCAGTTTGAAAAGTGGTGGCTATCTT	T	C	CTCTCTATGCTATTCGGCGACCACTGTATCC CAGAGTTCTCTACAAACTCTTCCAAGATCACA GTAAAACCTCTTCTTGATGAGTCTCTCAACAA C	NA	NA
Ca-II-SNP431	70.22	Ca-desi-LG(Chr)3	4785882	CCAAAGAAGCTCTTTCATATGCCTCCAGGATACT TTTTTTTCCAATCCCATACAAGTGTAAACACATA ATCGGTGTTCCACATGGGCCTCAATGTTG	A	T	CAGGGATCAAATCAACATGAAAGAAAGCCGTAT ATTGTCTACATGGGAGAACTACCAACTGCAACT GCAACAACATATACTACGGAACAACACCACCAC AACATGTTGGAGACTGCGATTGGAGACAAGCA GTTAGCAAGAGAGTCCAAAATACATAGCTATG	NA	NA
Ca-II-SNP432	71.25	Ca-desi-LG(Chr)3	4832402	TAGAGTTCCAAATAAAATTAGGGTTTCAATGAATA CCGGCGGTGACGAATCGGCATTGTACTGCATAC GCTTGTGAGCACGGCCACGTGGCTTCTTCTT	G	C	GTTTGCACGGCTTATTTAAGACTTGAGGTC TTCTCTAGTTCGGTGGTATCATAGCAGGATTA GAGGATAAAACTGTAAGTGTGCTGGAATTAGT GGAGTAACATCAACAGTCAAGTCAATTCGCCG ACCAAAGAGCACTTCTCCAATAACTGAAAGAAA CCGGTTGCCTGATATTCAAAAGAAAAGCTGCT TTTAATATTGTAAGAAGGAAAGGACTGGCTG ACAAATCAACAGCATCTTCAATAAAGACTTT GCCAAGGGAGAAATGAGTGGTACTTGGACTC AAGTTGTTGACACATATGACGGGAAGAAATGA TTGGTTGCGTGAATATCAATCAAGCCACGTGAAG TA	NA	NA
Ca-II-SNP433	74.34	Ca-desi-LG(Chr)3	5774493	CAACACATCTTTGATCAAGGAATGACCACCATCCC TTCTTATGATCAAAACATCCCGATACCGTCCGGCC GCTAATGTCGTGTCATCCGCGAATTTCACT	A	C	GCCAAGGGAGAAATGAGTGGTACTTGGACTC AAGTTGTTGACACATATGACGGGAAGAAATGA TTGGTTGCGTGAATATCAATCAAGCCACGTGAAG TA	NA	NA
Ca-II-SNP434	75.37	Ca-desi-LG(Chr)3	5913806	GTCTCTCGTTAATTTTAGGGAGCATCTCCAGCAG AAATGATGATGATTATGATTGGGCATACCTCTA CTCGACGTGCATATCAACTATCTAAAACATA	A	G	CCCTTTTCAACGCGTTTTTCTTTTATCCATTCTT CGCTTCTTCATCGCCTTCATCACAAATCATCTAT TATGGATTAATTCTCATTATAGATTATCTATTCC TATTCTTCTTTATAGATCTATTTCCGATGTTT TTCGATCTCGATCGTTACGATCGAACAGAGA GTTTTCGATTTTTGTTCTTTTAAACAATTAGGG TTTTCGACGACACAAAATGATGCCTACCGTGC CGCTTCCACTCTTCATTTTACCAATTTACTTC GCGTTGAGACTTACAAGATTTACATCTTTAAGG TCTTGAAGCAGGTTCCACCCTGATATCGGGATCT CCAGCAAGGCTATGGGAATCATGAACAGTTTCA T	NA	NA
Ca-II-SNP435	76.40	Ca-desi-LG(Chr)3	5916065	ATCTAACAGCGTTTTGGATCTCCCGAGAAGTAATT GTAGGTTTTTTGTTATACCTAGCCAAACGGGAAGA TTCTTGAGCGAGTTTCTCGAATATATCGTT	G	A	GCGTTGAGACTTACAAGATTTACATCTTTAAGG TCTTGAAGCAGGTTCCACCCTGATATCGGGATCT CCAGCAAGGCTATGGGAATCATGAACAGTTTCA T	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP436	77.43	Ca-desi-LG(Chr)3	6090281	TTTTAGTTTTGGCAGTTATGATCTATAATGGGCAT GCGGTGTCCCAGTGTCTATGACGTGGCTGTCCT CTTGTGGTTAGGTACACACAGACAGGCACA	T	G	TTGAATATAACTAATGGAAGTAAATTAAGGGA TAAAAAATGAAGAGACTAAAACACAAGAGCAC ATGTGATATATAAAAGCCAAGGAGTGTAAGCA C	NA	NA
Ca-II-SNP437	78.46	Ca-desi-LG(Chr)3	6159447	CTATTTCAAGTTTCTTGCTGGAAGAAAATTCTACT TCGTA CTCTTCGTTGCTTGTATTACTCCTTCACA CCACTCCTCAATCAGCTCCTCCAGGTAGTA	G	A	AGCTGCAGTCTGCATTGATGCTACATATAAGAA AATGGTCAGAATAATTGCTTCAGTTATGAAC AGTAGTGTATGGTTATAGGTACAAACCCAATG A	NA	NA
Ca-II-SNP438	79.49	Ca-desi-LG(Chr)3	6259404	ACAGTTGTTCAAATCTGAGACTTTAATTCTAAAAT TATTGTGACTGATAGAGATCTTGCCATGATGAATG CGATTAGTGTGTTTCTACTTCAATA	G	A	CAACACAAGAGTCACTGAGTGAGTGAAGCGTT ACACCCAAAAAATAAAACCTTCCATTTCCCTA ACCTTCAAATCAAATTCGTAATATCAAATTA CACTCTTCGATTTCTCACATCTTAAACAATCT CTTCTCGATTCAAACCTAATCAAATAAAACCTC AAACACCTGTAGATCTGTACAAAACACCTCTC ATCCTCCTCAAATTTCTCCTCAAATTTTCTG TCAAAATCCCAACCTACCAATTTTTCGGC	NA	NA
Ca-II-SNP439	80.52	Ca-desi-LG(Chr)3	6298304	TCCTACTCTGAAACAATATTCTCTGAATGCCCTAC TTTTTCGTTCCCTCAGGAAGTCGTTCCCTGGGGAA GCGACCTCTTGAAGAGGAAATTTTTAATG	C	T	TAAATTAATAATTCTAATAATAAACTAACTTTGA AATATAACAAAAAATAAAACCAAACTAGTGG GAGGTGCTTCCCGGAAACGACCCCATGTT A	NA	NA
Ca-II-SNP440	81.55	Ca-desi-LG(Chr)3	6427132	CTCATGTGTTTGCAAAAGTTTATTTTTAAAGTGC GAACGTTATGCATGCAGGTATCTTATTGTTTCAT AATCACCTGTCTCAAGCAAGGAGGGTCCC	T	G	ATGAAACACAAGCATAAAATAAAAATCAAACA TTAAAAAATCAAAGCCTTAAGAAATACTCCGTA GCGGGACAAAGAGGCCCTCAAATATGAAAAG	NA	NA
Ca-II-SNP441	82.45	Ca-desi-LG(Chr)3	6541733	TGGTTTGTCCATCAGACCAATGAGTTATGCTATGT GTTTGTGTTGTTCTGCCTAATTTGTTATTGCGTGT GCAATTGCTTGACATTGTGTGAAATTGTCT	A	G	ATTGAAACAACAATAAGAAAATGACTCACAAA GTTTTAAACAATTCATATAGTTTTATAACAATTT CACACGACTACGTGATATATAACACACAAACAT	NA	NA
Ca-II-SSR125	83.35	Ca-desi-LG(Chr)3	6739764	GGTGAACAACCTCAAACCTTGG	(AG)6	(AG)7	TCCATCAAACCTACTGTCCA	58.65	142.00
Ca-II-SNP442	84.25	Ca-desi-LG(Chr)3	6811546	TACTCTTGTCCTGTTTGTGCCAAATACAAGAA CCCAAATGCACCAACTATAGCCCGAGTTTCCCT GCTGCTGATGATATCCATGACAAGTAGATC	G	T	AGGATTTGTTGCATTGTATTCATTGACCTTCTT CTTTGCAAAATTTGGCCAAATGCTACCACGTT TGTTGTGCCCGCAGAGATTTTCTGCTAGATT T	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP443	85.15	Ca-desi-LG(Chr)3	6830375	TTCCCGATTTTGTAAATCAGTCTCACAAAACATCGATTGCGCATTCAATTAAGCGTTGGATCGGGCTGATTTTTGGACAGAAGGTTGCAAAATTCAGG	C	T	ATCACCGAGACAAAATAAATTAGGGATAATCTGTGCTGTGCGAGCCCGATTTCCTCCTACAGACGTCGTTTCGCCGATCCGACCGTTGAAGACGAAG	NA	NA
Ca-II-SNP444	86.05	Ca-desi-LG(Chr)3	6859122	GGAATTAGCATATAATTTAATTGCCTTAACCTAAATTTCCGGAATGATATTGCACCTACTAGTTGTGGAGCGATTAAGTTCATGATTGACCCGAA	C	T	TATGATTAATAATATTAATTTAAATCTACGACATTTGATTTTGATCAAATGGCTACTAATATCTCGACTTTAAGAATGCAAAAATCCCTGCTATAGGA	NA	NA
Ca-II-SNP445	86.95	Ca-desi-LG(Chr)3	6877359	AACACGAAGTAACATATCTTGTTCACCTTGCTGCAAGGACCACCCCGAAAGGCTTCATTGTCTTTCTATGCAACTAACTTCTGATTACTTTGCCCTGAG	A	G	CAACCACCGCACATGCCAGAACATTGTCAGAGAAGACAGCATAATGATGAAGTTCCGTATCATGATCTTATTTTCATTTGGCAGCTTCTATCCTCGGG	NA	NA
Ca-II-SNP446	87.85	Ca-desi-LG(Chr)3	6921110	TAATGTATTGGACAGGTGAATATTCAGAAAGGGAAAGGTACAATGGATCTGAATATGCTCCTACTATTGAGGACAAGGATGGTATTGGATGCTTGTGG	C	A	ACTAATTAATTTACTGATTTAATTAAGAAGAGCTGATTTAATTTATATATGATGATGAGGGGAGAAATCAATTAAGAAGTACTTCCATGGAACATC	NA	NA
Ca-II-SNP447	89.65	Ca-desi-LG(Chr)3	6978618	CCCCTAAAGTTGACACTAAATCTGGGTGCACTCAAAGTATTATTGACCTTTACCTACAGTTATAACTTTAGTGACACATTTTGCATGTCACGATAC	A	G	TTCGGAAAACCTATGGTTTTAAATTTTTCAGTAAATGGTTGTGTTTCGAAAATGTTGAATTTATTTTATTTTTATTATAGTTCACTACAAAAAATTGA	NA	NA
Ca-II-SNP448	90.55	Ca-desi-LG(Chr)3	7029469	TGACTTACTCGTACAAGAAGGATTTGATTTGTTAAATCAGGAGGTAGATAGAGCATATCTTGTCTCCAATGCTTCTTCTCTTACAAGTGTGTTCTC	C	T	CTCAGAAATTTCAACTCTCTATTTATTATAATATAAATAAATCGCATGATTGATAATTATTATTATAGAAAACATAATCATGTGGATCAAAAAGAAG	NA	NA
Ca-II-SNP449	92.35	Ca-desi-LG(Chr)3	7114370	GTATATAGACCAATTGATGCAGACTCAACCTAAACCTATGTGGCAACTCCTTTTATTTCAACATATTTCTAGTCGTGCTAGGATGGTCTATTCT	T	C	AATATACATCACATGAGTTTGAAGAAATTTGTATCAAAAATGGGATTGAACATCAAGTACTGCCTCATATACACCTCAACATAATGGATTGGTTGAAAG	NA	NA
Ca-II-SNP450	93.25	Ca-desi-LG(Chr)3	7207094	ACAGTTGTTCAAATCTGAGACTTAAATTTCTAAAATATTGTGACTGATAGATCTTGCCATGATGAATGCGATTAGTGTGTTTCTACTTCAATA	G	C	TAATAATTGTCTGTTAAAATGACGACGGTTCCTGTATTAGCGGTGCCAATTTCTGTCCTTCCGACGACCTTGTCTCCTCTTCTATGTCTAACAACTCAGTCTCACAAACCATCATTTCTGCAATCCCATTTCTCAAATTCGTCAAACAAGAAAATAACCGTAGTAGTGTGGTGTGAATCCCAGTAACTCAAGACAAGAAAATCCTCTCTTCTGGACGAAAACATACCTCTCCATCAGATCCATCTTACCTCAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP451	94.15	Ca- <i>desi</i> -LG(Chr)3	8442587	CTATTTTGGAACTTTTGCTAGGAAGGAATCTTGTA TATTGGAACAAAAGGCTTTGTGATTATTTTATATTT TGAAATATTTGCTCACAAATATATATTTTG	C	T	ATATACTTGAGAAAATTGTTATGCTACTAAATAA ATATATATTATAAATGAGCTAAAAATATATATT ATTAATAAGCAAAAACGTATATTATTAATGA	NA	NA
Ca-II-SNP452	95.05	Ca- <i>desi</i> -LG(Chr)3	8518037	AGGGGCAAGCATAAACTCATACTGAACTGAGTT CACGTTCAACAACCTACGTGAACTGTGTTACGTA CTTGAACCTCATCACCTACGTGAATTGAGTT	C	T	AACTCAATTAACGTAGTCTGATGGAGTTCACGT ACGTGAACTCAGATCACGTAGGTGGACGTGAA CTCAGTTAACGTAGGCTGATGGAGTTCACGTA CAC	NA	NA
Ca-II-SNP453	95.95	Ca- <i>desi</i> -LG(Chr)3	8807727	CATTTCTCTTTGGATGGCTTCTTTCCAAAAGGAAG AGTCTTGAGACTTTATTGTCTCTCATATGTGTTT GGGTCACTCTCTAAATTGTAGCAAATGGT	T	C	GAACCCAAAAGAAGTAAAAGAGGCAGAAAAGA AAAAGATTATGGCTAGACTTCTTTATGTTCTCT GTAGAAGGTACAAATGATTCCAGTAACAGTTAT G	NA	NA
Ca-II-SNP454	96.85	Ca- <i>desi</i> -LG(Chr)3	8974312	ACCATTGCCACGAGTTTCTTGTGTTCTGTTTCATCT TTACTTATTGTAGCTATTAAGTGGCCACCATAGTC TCCCTTCAAGAAACATGCATCCAACCCAAT	G	A	CTATAAAGGCTGAAATTAATGTGGCTACAATGT TGATTATGAATCCTATTCCCATCTTTGTATGCA TGTGATCCAGAAGGATTGTTGTGAATCTACG AGTGAACGGGACGAAAAGGCGTTTCGTATAGAA TAACTCCTATCATTGTAGTTATGACACTGAAAAT TGACATGTTGGCTGGTGAAT	NA	NA
Ca-II-SNP455	97.75	Ca- <i>desi</i> -LG(Chr)3	8989700	GTTTCGTATAGAATAACTCCTATCATTGTAGTTATG ACACTGAAAATTGACATGTTGGCTGGTGAATTTG GAATGAGTGAGAGAGGTGACGATCCATTGT	T	A	AACTAAAATCAATCATAAGAATCCTTCCAATTTT ATCATCAGGAATATTACTCATAGCTGCTTCAGC ACACCTACCTAGTTTCGTCTATTGAACAAGCTCG	NA	NA
Ca-II-SNP456	98.65	Ca- <i>desi</i> -LG(Chr)3	10086662	TTGGAACTATTTCTCCATCCTCGGAGTCTGATCC TTGAGGGATCAAGAATTGGCAATTTTAGTCGAAT CATTTTTATCATTAGCCTTGCTGCTCCCAT	T	C	TTCAACACACGTCAAAGGATGCAAGTAATAAAA GTACAAAATATCAAGATGAAGGAAGATCCACC AATATGGTAGATGCAAATTTGTATGTTCTAAAG GAGAAGATAGAGATGGTGAAGGTGAAGGAAAAG ATTGGAAGGTGTTGCAAATGTCAACATGTTG GAATTATGTCCTACTTTCTATTAAATGATTACAA AAAACCAAAAGAAAACAAGAATTGAACAACCTTC	NA	NA
Ca-II-SNP457	99.55	Ca- <i>desi</i> -LG(Chr)3	10106267	AATCCATGTATGGCCTCAGACAAGCATCGCGACA ATGGTTTTGCAAGTTCTCCACCACCTTGCTTGCTC ATGGTTTTGCTCAGTCTAGAAAACGATTATTC	C	G	GAGTCTCAACAATTTTGTGGAATCTGGGCCTG TCAACACAATATCATCTACGTAAACAAGTAGAA TGATCAGGGAGGGATCTGAACCAAGTAATAA AA	NA	NA
Ca-II-SNP458	100.45	Ca- <i>desi</i> -LG(Chr)3	10384363	ACAAGTTACATAGTTTTTTACAATTAAGTGCTATGT GAATTTGTTGTGCTTTGCTGATTGCAATGTGAA TTATGCTTTTTCTTAACTCTCTGATTTT	C	G	TGTTTCGAAAGAATCTGAATTTAAATATTGGTC GGAATAATTTTTGTGACTATTTACCTCTCGA TCAAATTTCTGATTGTGAGAACCCCAACTCT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR126	101.35	Ca- <i>desi</i> -LG(Chr)3	10464064	TTCCCCACAAATTGAAACTACA	(TATT)5	(TTTA)5	CTCTCTCTGCACATCTCCC	59.36	201.00
Ca-II-SNP459	102.30	Ca- <i>desi</i> -LG(Chr)3	10490580	CTCCCCAGAATGTTTTAGGCAGCCCTACACTCAA GATCATACTCTGACCATTCCAAGATTGTTATGT TCATCCTTTCAGCAATACCATTTTGTCAAGG	A	G	AATGTTTAAAGACTGACAATGGCCTGAAGTATC TTTCAGAGCAGTTTAATAAGTATTGTAAGGACT TAGGTATTCAAAGACATAGAACAGTTGCAGGTA C	NA	NA
Ca-II-SNP460	104.20	Ca- <i>desi</i> -LG(Chr)3	10590044	GGAGGGAGAACGCAAGCTAATTGATCACCACACA CGCGCGCGCCCGTCCATCCGGCCTGGCCTGG CTTGGCTTTTGCTTTGTGGTGTATTATTTTT	T	G	ATATGACTAGGTGGAAGGCAGTTACGTAATTA CGTTTCAATTAGAGATGGAACGCAAGTAAATCAG ATAATTAATTAATAATTGATTAATTAATTTTCAGG	NA	NA
Ca-II-SNP461	106.10	Ca- <i>desi</i> -LG(Chr)3	10664843	ATATTGATGAATTAGGTTATTCCTCTGACTTATG GTCAAGTCATACATATACCGTGTATGTTTGGTTTC ACCGTGAGAATGGCAAAATCCCGGCGACTC	A	G	GGGGGTTTCTTAACAGTATGATGCCAATTAATG TTATATTTGCCTGTAACAAAAGGAGTATATGC TTAGTTAGTTTCACGGTGGGATTACAAATCATG G	NA	NA
Ca-II-SSR127	107.05	Ca- <i>desi</i> -LG(Chr)3	10687153	GAAGATGTGGGGACTACGA	(AAT)19	(AAT)15	GGAGGAGAAGAAGAACAAGAAGAA	59.93	232.00
Ca-II-SNP462	108.00	Ca- <i>desi</i> -LG(Chr)3	10723365	TGTTCCAAAATATTTTTGGGAAGAGTTGTCCTCA CATCAACATATCTTATTAATCAATAACCTTCTAGAG TCTTGGGGTCCAAGAGTCTATGGATGTT	A	T	GAAAATGATAATGGACATGAATTTGATGATGAA AAAAGGGAAATTGCTCAGAAAAAGTTTGAGCAA TCTCATGTCAATCAAAAATGTGACACAACGTAA TGGTGGTTTTATGGTACATGATTATGAATTCTC TTGTAGTAATAGCCCAAATCCTGTTTTTTTCAAC ATGCCAAAAGGAAGCACCATTTC	NA	NA
Ca-II-SSR128	108.95	Ca- <i>desi</i> -LG(Chr)3	10755951	AAAATAGAGTCGTTGGATTCAAAA	(AT)11	(TA)11	TTATGTTATCAAAATCCGTCAAAA	58.33	142.00
Ca-II-SNP463	109.90	Ca- <i>desi</i> -LG(Chr)3	10776247	TACATAGATTGACTAGAATTGTCTGTAACATTTGG ACAATATTTTTAGTATGACTATTTAACCGACATAG TCCGCATTTTTTGCACATTTTTTCTCTAA	C	T	AGAATGATATTGTCCTTTGAAACAGTGTATCA CAACTACTGAAATGCGAATAATTAACAAGTCCG TCCAAAATTGTATTGATTAGAACTGAAATGGA C	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP464	111.80	Ca-desi-LG(Chr)3	10809526	GATTTAAAGGCTTTAACATTTATATGCAGATAG AGATATAGCTTTAACATTTAGATTCTTGTGATGTG CTCTCTTCTCTCACTGGTCATTACATTA	C	G	GTGTGTGTGTGTGACAGTGAAATGATAAAATAT GAGTTTTAGAAGTGGAAGAAAATGTTTTCTAAA TATTGCTTTTGGAGGTTAAAAAGGGAAAAAAGG T	NA	NA
Ca-II-SNP465	115.60	Ca-desi-LG(Chr)3	11051176	CTGTTGGTGTGGCAGCTTTGCCATCTGGAGATCC TGTTTCGGAACGAAGAGGAAGTTGGAATATCTT GAAATGCAAGAGGAGCTAATCAAGGTTAATTT	G	T	CAATCACTTTAAAAATATAATAATAGAAAATGG AAATCACCACACTCATGCCTCTTCGCAAAACAT AACTATCTCAGATGATGGCAAATGTGATGCATA	NA	NA
Ca-II-SNP466	116.55	Ca-desi-LG(Chr)3	11138620	TTGTTCAATTTTTAGATTGGCCAGCAAAGATGAC AAGGGTGGACATTGATATTATTTGTATTGATTTTG TATAAGGACATTGGTCATTTAGTTTAAGAT	T	C	ACTCCACCAATTTATAATTGAAATGCAAATATAT TTATAATTTTAAACCATTAAAATGTAACCTAATAT ACATTGTACATTGATTTATAAAATCTAAA	NA	NA
Ca-II-SNP467	117.50	Ca-desi-LG(Chr)3	11161639	TGTTTTGTGTATACACTTGTCTGATTTTGAAGAA CTTGATTATGTTAAACTGATTTGGTTAATATTGAGT TTGAAGGAGAACAATTTATGTTTGGATAT	C	G	ACATTATGGCATAAGATATGGTATATAACATTAT GGCATCATTTGGTTCATGTAGCCGAATCAACTT AGTGGGATAAGGCTCAGTTGTTGTTGATGATA	NA	NA
Ca-II-SNP468	118.45	Ca-desi-LG(Chr)3	11201949	TGGTTTGCCATCAGACCAATGAGTTATGCTATGT GTTTGTGTTGTTCTGCCTAATTTGTTATTCGTGT GCAATTGCTTGACATTGTGTGAAATTTGCT	A	G	TTAGCATTATGCTTTCCAGTCTGTTGAAAAC TCAAATTTGGCCTTTGGCATACAATTAGCATCA ATTTTTTTGATAATAACGTGTTCCGGGATGGAA TTCTAGATTGAGCTGCTAATTTGGGTTACTCG GCTAGGGTTTTTTGAGTCTCCTATGTGTTCCGG CTCCTTTTGGCCTATCTTGCCTGGGACCCTCAG ACTTTGGTCAGAGCAATCGGGCTACAGTGAAT CTCAAAAGCCGACCTAATGACCCCTCTTCC	NA	NA
Ca-II-SNP469	119.40	Ca-desi-LG(Chr)3	11267039	CACATTTAAAACTTTTTCTATTAATGGTAGGGGC GTACAAGACCCGGTTCGTCCCGCAATCCGACCT GACCATAAGCAACGGGTTGTGTCTGACCCG	A	G	TGATTTTGGGATGGGACAAGTAACCCGGAGG ATGACTCAAACCCGATCATTTTTTTACCTTGCT ATGTCCTGTCTTTTTTTGTCCTTGTTTTTTTTA	NA	NA
Ca-II-SNP470	120.35	Ca-desi-LG(Chr)3	11294090	GGTAATTCCTTTTCTCTGTTTTATGTCTTTCTT TTGTTTGGTTTAACTGTTTACTATTTAACGGTCAA TATTATTGGTCCCTGTTCAAAGTTTAC	A	G	TTAAGTAGCATTAAAGAATTTTTATAATTCATT CATGAAATTCACATTAACCATCATATGGCTATC AAGACAAGAAGATGTTTTATATCCAACCTGTC	NA	NA
Ca-II-SNP471	121.30	Ca-desi-LG(Chr)3	11306404	AAATATTAATTTTTGTCTTTTCTTTGTCCGTAAT TGGATGGTACGTACACTTGCATGTGTCTGTATG TTTAAACGGCAAATTTTACTCAAAATAA	T	C	GTTGCAACAAATATGTGGGAAGTGACGTTGACT TTATCTTAATTCATTGTTGGAAGGAAAACTCA TAAGTTGATAAACTCATTGCAATGATTTGCC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP472	122.25	Ca-desi-LG(Chr)3	11324258	ATACATTTCTAAGGCATCATCCTTCATAATCACCT GAAATCCTTTCTGAATTAGTTGTCATATGCTCAAC AAATTGTTTTCTATTCTTGGCACATACAAC	A	G	AGCAAGGTCAAGTTTGCTGATGACAGAACCTTG AAAGCTGAGGAAGTTGACAACATAGTGATCAAG AGAAGAAATGGCAAACACGGGTGATTGAAAT G	NA	NA
Ca-II-SNP473	123.20	Ca-desi-LG(Chr)3	11391242	TGGCCAGAGGTGTCACACGGGGTTGGTGGAGGC GTGTGGGTCTCACGCCAAATAAGGAGGTGGCG CGTCCGTATGAGTTTGGCAGCGCAAAAATGTCA	C	T	CCCTTCCTTTCTTTTTTTTTTTTTTTCTTCTCA AAATTCTGTGTTCCAGCTGTGCCACCCACCACC ACAGACCACCGCGCAATCTACGGCGAGCACC	NA	NA
Ca-II-SNP474	124.15	Ca-desi-LG(Chr)3	11437128	GTGTAGAGGACCCGGGCTTTCAAATATAACTGAA GAACAGATACTCTGGTTCATACTTTTGAGCTAGA TTTTATTTTGGATGCATTATTCAAATTAATG	T	A	CTTTAAAGATGAAGCTGAGGAATATGCATATT TCATCAAGGCAAAGGAATGAAAACACTCATCAT GGAGTTGACTATTCAAGCAAAATGTTCAAGTCAG C	NA	NA
Ca-II-SNP475	127.95	Ca-desi-LG(Chr)3	11485180	GTCTCTTCGTTAATTTTAGGGAGCATCTCCAGCAG AAATGATGATGATATTATGATTGGGCATACCTCTA CTCGACGTGCATATCAACTATCTAAAACCTA	T	C	TTATTTTTTGGGTCTGATTGTAATATGCGGTCT TCTTAGCAGATATGGTTGTTTGGGATTTTTTT GTATAAATATACTGTAGTTGCAATTTAATTTTA	NA	NA
Ca-II-SNP476	128.90	Ca-desi-LG(Chr)3	11517067	ACAGTTGTTCAAATCTGAGACTTTAATTTCTAAAAT TATTGTGACTGATAGAGATCTTGCCATGATGAATG CGATTAGTGTGTTTCTACTTCAATA	G	C	TTTTCCATAAATTCATTGCTTCTTGTCTAT CCTTTTTCACATATTGTTGCATTTGCCCAAC ATTTTTTCAATATGAAAACGCATAGCAAAT	NA	NA
Ca-II-SNP477	129.85	Ca-desi-LG(Chr)3	11540671	ATTAAGAATTTGAAATGAATTGGAATTGAAATG GAATCCTCCCTCTTTTTTGTGGTTTTATTTTTAT TTATTTTTAATGTAATTATGTATGTGAT	T	A	TTTTATCTTTTGTACAGAATCCTTAATACATA AGCACTTACATAATTAGTGCTTATTATAAGCCCT TAATCAAGTTGTTCAATTCACAGTTACCACC	NA	NA
Ca-II-SNP478	130.80	Ca-desi-LG(Chr)3	11719694	AAGTTGGAAGTTGAGAAGATTTGACTTGTAGGTCA ATGTGTTGTAGTACCTCAACGGTTTGTAGATTCA GAATGGAAGTTGAGAAGACTGACTTGTAGG	A	G	TAGTTCACCTACCAATGTGGCAGCTACGTCTAAT CCTTCACATAATCCCCTCACATAGAAGGATTT ATCCACTAATCAAACCTAAATTACAACACCTGA	NA	NA
Ca-II-SNP479	131.75	Ca-desi-LG(Chr)3	11802421	TTGGAATCACCAGTTAAGAATGCAGTCATTACTGT ACCAGCTTATTTCAATTATCTCAGAGAAAAGCCA CCATAGATGCTGGTGCTATTGCTGGCCTTA	T	A	GTCAAAGACAAAATATTTGTTCTCCCATGCA GTTAGGTCTTTGTCAAGTCCATAAGCAATAGC TGCAGCTGTAGGCTCACTCATTATCCGCATAAC A	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP480	132.70	Ca-desi-LG(Chr)3	11810843	ATACATTTCTAAGGCATCATCCTTCATAATCACCT GAAATCCTTTCTGAATTAGTTGTCATATGCTCAAC AAATTGTTTTCTATTCTTGGCACATACAAC	A	T	TGCACCATAACCTATTGGAAGCAGATAATCTTA TGTTTTAGACCTAACTCAGCCTCACAATACCAA CACCTCTTGGGTTAGGGTCTACTGGGTTTG GTGTGTGGACATTTGTTGGCCAAATAACGATT CTAGTATATAGACTTTTTGTACC	NA	NA
Ca-II-SNP481	133.65	Ca-desi-LG(Chr)3	11828812	AAATTCTCTCCGGAATTGGGAGGGGCTGCAGCAA GCCCATCGGTGACGATGCAACGTACTTTTGTGCT TGCCACACATCACAACTTCTAACAAATCTTG	C	T	AAGAATTCATTCTCTCAAAACGGTAGTCATT CCAGTTTCTATGAACATATCGAAGAATAGCAA GTAATCTTTATTGGATAGGTATGACAAAAACGG C	NA	NA
Ca-II-SNP482	134.60	Ca-desi-LG(Chr)3	11858356	ACACTATTTCTCTGTAGTTAAATTTGATGTGAAAA GTTGATAGTTTTCTTAGCATAAATTTATAGGGTA GATGCTACAGTTGCTTTATTGGTGGGGC	A	G	AATATTTGTGTTCAATTTGTAATTGAAACAACCT TTAGGCCATTAGTTAACTTTTAAACACTAATCTA TAATAAACCGCTTAGAAAGATTGTCCACGACA	NA	NA
Ca-II-SNP483	137.45	Ca-desi-LG(Chr)3	11925952	AACTTTTGATAAATATCAAAGTTTCGAAATGCTATT TTTCTGGATCCTCTGAAACTTTTCAAACCTTTCAT GAATTTGAAAGTTCTGAAGTGTGATTTTC	T	A	ATTTTTGAAATTGAATTACTTCGGAATTTGAA ATTTTCGAGCATTACGTTTCAGAAGTTTCAAATT CATCAAAATTTTCGAAAGTTTGTAAATTTCT	NA	NA
Ca-II-SNP484	138.40	Ca-desi-LG(Chr)3	11974306	CTTTGACGATCAGCAGTTGTTTTGATTGACTATT GACAGTTCTAATCCCATTGCAGCATGGTTCTGGTA CAGATGGACCTGGGCTCCTTAGATAACCAA	C	T	TACATGCATGGCTATGATATGTTTTGTTATGGG AAGTAGTATTATGAAGCCAATGGTGAATACC ATGTGGTCAAGTGCAACTATATGTAGCATCATG C	NA	NA
Ca-II-SNP485	139.35	Ca-desi-LG(Chr)3	11993781	GTTAGTAGTCCCACAAAACAATCCCAAAGCTATA CACATCAACCTTGTGTTATAGTGCTTTTCTCTC CCTGGCGCAATGTTACGGTACTGTACAAC	G	A	TCTTTTTGGAGCGTGATTTTATTGTTTTACCGA CAACTATCCAAAAAGTGCACCAAGTGAAGTCAAGT GTGTTTTATCGACTGAATAGAGCTTTGTTTTTA	NA	NA
Ca-II-SNP486	140.30	Ca-desi-LG(Chr)3	12104449	TGGAGTTCTTAAGCCGTCATGACTTTTGTCCATCT TTGAACCTTTTAAATTTGAGATCAAATAGCCTTTT TGAGCTTGGATGAATCCTACTTGTTCCTT	T	G	CAGCCTCAAAAAGTTCATCACACATGTTGTTT AAAGTTTTATCTACATCATTAAACAAGAATCTGTC CTGAAATTTGTTTATCTAATCAATCAGTACATGG	NA	NA
Ca-II-SNP487	141.25	Ca-desi-LG(Chr)3	12119959	CGGAGGCTCCGACCCGAATCGACGAGTTGAGT CCAGCTCCGAACACGTTCCAGTGCTTCTTCTCA ATCGCATTTTCGCTCCATTTTCTTCTTCTCGTT	A	T	ATAAAGAAAGAGAATGTTTTGAGCTTCAGCAA TGGAGATTGTGGCATGAATCGAAATAGAATGG AATCGAACGCTTACAGATTTCGGTGACGACGGC GA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP488	142.20	Ca-desi-LG(Chr)3	12234970	AAACTTTATATTTTGTGGTACATGTATGTATCAT TACACATTAATATTTTGAATTTTTTTTTAAGTTTT CCGGTATATAAACTGAAGGTGATCAAA	C	T	TTTGATCCTTTAAAAATTTAAGTCACCTGCACT TGAATTAGTTTAAGAATTCAAAAACAATAAAAT TTAGACAAACACAATTCAACTTTTCTCTCGT	NA	NA
Ca-II-SNP489	143.15	Ca-desi-LG(Chr)3	12256632	CGCTCACTCTAATGTGTCGAATGGGTGCCTTTTC GCGTTGCATGATTCTCTCAGCTATTGTTATGTT ATCTCACATGCATAGTTTGTATTTATCTTTA	T	A	CTCATAAATATTAATTTTTAGCTGCACCATCTTA ATATTTTTTAATAATTTATTAATAACGTCTA TATAACTTGCATTAGAATTGAAATTGACA	NA	NA
Ca-II-SNP490	144.10	Ca-desi-LG(Chr)3	12310829	TGAACATAATTGGGTTTCAATTGATTAGTTCGGAT TATACCTGAACCTGAATGAGTTGGGTCAAATGCG AGTTAGATTGGATTGGTGACCGGTTGCGG	A	G	CCAAAAAATGTTTGTTCCTTAACTTCTATCAAC ACCTTGTGCTCTTTTCATCATATTTCAATAAGCTA TTAGTTAGGGGTTCATGTGTACGGTTAAAC	NA	NA
Ca-II-SNP491	145.05	Ca-desi-LG(Chr)3	12367109	CAGGGCGACACTTGATTTTTACGTCTTATGTTGTT CATTTATTCATAATGATGATTAACCTTAACTCAAT ATAGACACATTCAACTTCTCAGCATCTT	C	G	ACTCTCAACATTTAAATTAATAGTATAAAAAAT AAAATATCTATAAATTTGATAAAATTAAGTGAT ATGAATATATGTCTCTAGATTTTCAATGTT	NA	NA
Ca-II-SNP492	146.00	Ca-desi-LG(Chr)3	12551743	AGAACAACTACTATGGTGTAAAGGAAACAACCTGA GTCATTTCTCCCTTCTCCATTTATCCAATTCTCC CAAGATTGTTAATGTTTCTCCCAAGCAG	G	A	CAAAGATTAAGTTGACAACGCTTTCAATTTTCAG TAACTAAATTAGAGAGTAGTTAAAAGTTTTGTT TTGGCTCGTACTCTGTTTGTACCTTTAATAAC	NA	NA
Ca-II-SNP493	146.95	Ca-desi-LG(Chr)3	12599684	CGAATACAGACATGCTGTTTTGCTGCTGACTTAT GTGTAGTCGAATACAAAAGGCTGTATTGCAATACA GACATGTTGTTTTGCTGCTGACTGCTGAA	G	A	ATATGTTAAACATGCATAATCAAATTTGAAAAAT GAAGTTTTTCACAAAACCTGCACTGTTGTATTG AATACACATCTCTGTATTGCAATACAAGGCTG	NA	NA
Ca-II-SNP494	147.90	Ca-desi-LG(Chr)3	12640565	GATGGCTCAGGCCGCCACAAAATCCCTCCTTTGT GAGGGCTTAGGCCGCCACAAATGACCTCCAGATT AAAAAAAATCTTTTGTGAGGGCTTAGGCCGC	T	C	TACAATTTAAATTTATATTAATTTATTATATATAA AATTATAATACATAAGTAATTTGAAATTTAAAAA AATTAATTTTTAATATGCGTAATATTTTGT	NA	NA
Ca-II-SSR129	148.85	Ca-desi-LG(Chr)3	12686141	CTTGATCGACGCACAAGCTA	(AT)9	(AT)8	AACTGAATTGAGAATTTAACATGGA	60.16	189.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP495	149.80	Ca-desi-LG(Chr)3	12697957	GATTAGAAAATCTGCAATTTAGGCCAGTAAAGTT TGCCATTAGACTTTTATTCCAACACAAAAGTTGTA GCTCTGATTTTTATCTTTCCAACGCTTGCT	T	C	ATTGCTCTTTGATAGTTTGCCCCAGCATTTTTTC AATCCAAGTGACTCTTGCTCGCTCTGTAGGCCA TAACTTGAGCTCTAGATATCCGATTGGTGCCTA C	NA	NA
Ca-II-SNP496	150.75	Ca-desi-LG(Chr)3	12752594	TCTGAGACTTTAATTTCTAAAGTTATTGTGACTGAT AGAGATCTTGTATGATGAATGCGATTAGTGTGGT GTTTCTACTTCAATACATTTGCTATGTC	A	G	GAATATACAATTTTTTTCCATAAATCCATTACT TCTTCTTGTCTAACTTTTTTACATATTGTTTGC ATTTTGCCCCAACATTTTTTCAATATGAAAA	NA	NA
Ca-II-SNP497	151.70	Ca-desi-LG(Chr)3	12781161	TATTTATTGTAATTTTTTTAAGTCAACTTATTTT TTTAGTGCAACTTATTTTTTAAAGTAACTTATTT ATTAATAATCGTTGTTCCGTGCGACGC	C	A	TTAACATATATTATATAAGAAACATTACGGGT TTGTTGTTGGGAGTTCAGGAGGAGTCTCGAT AGAAATTGCTTTAAATGTAAGTACTGTCTGAACCC G	NA	NA
Ca-II-SSR130	152.65	Ca-desi-LG(Chr)3	12784679	TTGACCATATAACCATATAGGAATGA	(AT)8	(AT)7	TCAAAGAGATAGACGTCAACACA	57.92	103.00
Ca-II-SNP498	154.57	Ca-desi-LG(Chr)3	12991606	TTTGTAATTTTTGTTCTTTGAGTTGATAAAATGTT TTGTGTTTTTATTTGTTGATTAAGTAGGAATTTGT CGTAATTTACATTGCGTTTTGTTTTAG	C	T	TTTTCACTTTGTTGACCCCAATTGAACATCTAC AACTCCAGATATGGCTGAAATACTCTACATATG TCATGTTGATTTCTACCAAAATTCAGCACTGC	NA	NA
Ca-II-SNP499	155.53	Ca-desi-LG(Chr)3	13021945	TATTGTTGTTGGAGCGAGTAATTGATGATGAACAA CCATCTTGTTTAACTATAAACTAGAACTATTTGG GTGATGGTTTACAATCTCCCTTTGAAGCT	T	C	TCATACACAAAAACAATTAGTTATGTGTGATTC CTTTGGAAGTGTTCCTCATGTGTGCCGATGAT TCTTCTTAGCTTCTTTGACATGGCCTCTGATCA	NA	NA
Ca-II-SNP500	156.49	Ca-desi-LG(Chr)3	13047533	CTTGAACCATTTTGATGCAAAGTATCCAACTTC GCAAATGAACCAAGAAATGTAAGGCTTGGTTTATG TTCTGATGGCTTACGCCATACATTCAGGC	C	A	TGAGACAGGTCAAAAACATGAATGGTTTAGTCA TGACATTTTCGGGCGGGAGATTATACGGGGTC ACAACAACAGGCCAACAAGAATATGGGGTTGA AGA	NA	NA
Ca-II-SNP501	157.45	Ca-desi-LG(Chr)3	13165372	AATGTTTTATTGTTTTATGTATCAATCCATGGTTT TATTGAAAAATTAATTAATCTTATTGGTTTGA AATTGACTTTATATTGGCTTGAGAATTG	T	G	TTTTGAATTAATCAAATGATATTTATAATTATT ATTAAGAGATTTGAAATCAGTACTTCGAAATTA CAAAATTAACCTTAACAAATGATCTGTAC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP502	158.41	Ca- <i>desi</i> -LG(Chr)3	13193734	TTTTTGTGCATCAATAGATTAATTACCCTGTTTTGAA GTTCAAACATCTTTTGAATTGTTTTATAACATGCC ACTCACTTTTGTGATTTAAAGGTTTTT	T	G	CTTTAGTACCTAACTTAAACCAAGAAAAACA TTTTTCGAGCCTGATGATCTAGTTTGGATCTTT GACGAAGTAAGGTAGAGGCAAAAGATAAACAA C	NA	NA
Ca-II-SSR131	159.37	Ca- <i>desi</i> -LG(Chr)3	13219360	ACACCGACTCATTGACACCA	(AT)9	(AT)8	TGTTGGGTTGCCATTAGAT	60.01	149.00
Ca-II-SNP503	160.33	Ca- <i>desi</i> -LG(Chr)3	13220353	AAATATTAATTTTTGCTCTTTTCTTTGTCGGTAAAT TGGATGGTACGTACACTTGCATGTGTCTGTATG TTTAAACGGCAAATTTTACTCAAAATAA	C	G	AAAAATGAATTTGACTTACTTTTCATTCATTTCA ATCTCTCAAAGTTCTTTTGGTTTTTGTGTT ATAACATTGTTTCTGAGCTTGTAGTGACATA ACAAGGCACTATACATTTAATATTGAGTACTTG AATGTCACAAGATTGTCCACACAAGAACATT CTTAGTGAAATGGAAATCCAGGACCTCGT TTAGTGGCAAGGGAAGGTGATAGATTTTGGT CAAACTGCTTAATCATATCTCAAAACAATCTAAC	NA	NA
Ca-II-SNP504	161.29	Ca- <i>desi</i> -LG(Chr)3	13265079	GATTGAAATAGCTAATTGATTGCTTGAATTTGG ACTGTCCCAATTTCAATTTCCCTTAAATCCTACAC ATTGCTTCATTGGGAGCTTTTGTGAATTG	A	G	AATTTAATTGTTAAAATTAAGTTAAAAGAAAATG AAAAACATAAGCAGCAATGAGAATTTATGATTCA ACAAAAGCTTGAGCTCTAACTAAAAAACAGCC	NA	NA
Ca-II-SNP505	163.21	Ca- <i>desi</i> -LG(Chr)3	13318452	TTAGTATGAAGTTCAGAGTCAGATGCTTGTGTTGA GTTGCTTTATTGGAGGCAATTCATTAGAACATGTT ACACTTGACTTCATAGTCTCATCTTTAGAG	G	A	AACACGCACCTCTAAAGCAGATGCCTCTAAG GATATGCCCTACCTCTAAGTAACCGAGTCTAA GAATTTGAATCTGATGATCTCCCTCCAAGTTTT TT	NA	NA
Ca-II-SSR132	164.17	Ca- <i>desi</i> -LG(Chr)3	13319724	AATCAATTAACAAGGCTCGCA	(TA)16	(TA)10	GGAAAAGATTGGCCAAGGTAA	59.73	108.00
Ca-II-SNP506	165.13	Ca- <i>desi</i> -LG(Chr)3	13345747	ATACAAAATGTGAAGTTTTAATGACATACCTATTAG TCGTAGTATTTCTAGATGCAATACTCGATTGGTC CATGCTTCAACAAATCTTTCTTATGCGG	C	A	GTTCTGAAGAGAAGGAGTACGAGGAACTTTTG CAAATTTTTGAGCAAGCATGTGTCGATAATATT ATTTTCTTTGACTACGTACAGACACATGGTTG AA	NA	NA
Ca-II-SSR133	166.09	Ca- <i>desi</i> -LG(Chr)3	13372497	TGGATCCACAACACGACAAT	(TA)19	(TA)15	TCCTTTAAGCGCAGAAAAC	59.81	179.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP507	167.05	Ca- <i>desi</i> -LG(Chr)3	13385275	TGTAGATGGATCTTAGCTTTCATTAGCACTTGG AGTGACACTAATTGGACATCTAGAACTCCAGATAT GGCTGAAATACTCCACATGTATCATGTTGA	C	T	TAATAAAATGATTTTTGTTTTATTTTCGTTGATT AAGTAGGAATTTGTCGTAATTTTACATTGCGTTT TGTTTTAGTGCAGTGCTGAATTTTGGTGAAAA	NA	NA
Ca-II-SNP508	169.93	Ca- <i>desi</i> -LG(Chr)3	13478676	TTTATCTAATGCTAACAGACTTAATTGGGTGAAGA GGTATGCCATTGCTTTAGGAACAGCTAGAGTGTTA GCTTATTTACATGAAGAATGTTTGAATGG	A	G	TTGTTTCTATTTATTAAGTAAAGACCAAAAT CAGCTAACTGGGATGCAAGTTAGAATCAAGAA GTATATTTTGTGGCTTAATATCACAAATGCAAAA	NA	NA
Ca-II-SNP509	171.85	Ca- <i>desi</i> -LG(Chr)3	13503033	GATTATCTATTGGTTCGGAATCTTGAAGGGTGC GAGAATGGGTCCTTCATTTCTCTGTTTGTGGTTTC TTATTTCAAAGACATTTCCCTTCCAATAGG	C	G	ATGATCAAATCTTGATCCCAATAATAATGAAG GGCCACTTGAATGCCACAACATAATGACTCAT ATATAGAGACACAAAGCAGGTTTATTACAATTG A	NA	NA
Ca-II-SNP510	172.81	Ca- <i>desi</i> -LG(Chr)3	13520714	TTGGACAATTATTTTTGTTGTTATATCCACGGTC CAACCCAACGTATATCATTGTTGATTGACCATATAC AAATACGGCTAAGTTTTGGATGATTCTTGA	G	A	TCAAATATAAGCCAAAACAATTATTAATCAAAT TTACTTATCTTTAAATTAAGTAAATTTAAATTTAAA TTTTCACTCTCCTAAGACAGTGAACAAAGTT	NA	NA
Ca-II-SNP511	173.77	Ca- <i>desi</i> -LG(Chr)3	13570118	CATCTATTTTTAACTTTCTTGCTCTTGGACCTTTAT AGAGTACAAGTGTACCATTCAATTGGAGAACAG GAGCAATGCTCTCCCGCTGGACTTGTGGA	A	G	TTCCATGGATAGGCTCCCTGTTGGACTTATTCT CTCCCTCCATGTCCAGAATGAAAAATCTACAG GAAATATCAATTCATTAAGTGAACAGTACATC	NA	NA
Ca-II-SNP512	174.73	Ca- <i>desi</i> -LG(Chr)3	13635021	TTCTTTCCTTACAATTGGCAAGAAAATGTTGAAATA CGTCTTCATGCTTATTAGAGTTACATGTCGAATTT TCAATTGATGTTGAAGTATGATTACTTTT	C	T	AATAAATCAATGTTTTAAAGAATCAAAGTGTGA AGTAAAAATAGAAAATGCAACTCTGAGAACTGA TATTGTTGAAGTAAAGTTGAAAATCTAACTCC	NA	NA
Ca-II-SNP513	175.69	Ca- <i>desi</i> -LG(Chr)3	13739225	CGTGTAACACTTTTTCTCTCAACAACTCAACATCG TTCAACCCTTTGAGTATTTTTGCATCTTGAGAGACT TCCACCGTATTTTTGGTATGATTTTGTAT	C	A	ATAACAACCCAGTTTGATTATTAGAACCAACTT CTTTTTAATGGTATGAGTTTTATCACCCCTTTTA ATGTAGGAAAAATAAATCTAATAGCAGAGCAAA	NA	NA
Ca-II-SNP514	176.65	Ca- <i>desi</i> -LG(Chr)3	13794278	AAACTGGGTTTCCACTGTGACTTATCCAATCGATT TCCCAATCGATTTATTTCAATCAGGTTTACTTTGTG AATTGTATAATCGATTTGTCAATCGATTA	A	C	AAGGAACACAAGTGTGTTGTTGGTATAATCG ATTGGCAATCGACTGACTGAATTAGAAATGA AAATGCATAAGTCAAGTGGCACCCAGTTTTGAG G	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP515	177.61	Ca-desi-LG(Chr)3	13874492	CTTTCTCTCAATGTGCGATTACGATTTCTTGAA GCTTCAGGAAGAAAACGGGATTCAGGAAGATTCA GATCATTAAATTTACGATTTACGGAGATTCA	C	G	TTCTGTCTTCTTATCTCATCTCCACTAATTTCC CTCTTCTCATCTCCATCGTTTTCTCTGCGTCT TCCGTGAAATGCTATCGTCTTCGCGTTTTCTTC	NA	NA
Ca-II-SNP516	178.57	Ca-desi-LG(Chr)3	13914902	CAGATTCACGCCCGAGGATGAAGAAAACGGCGAG CGGCGACAATGGCGGGCAGGGACCACGGCGAGC AGTGACGACAGCGAGCAGTGACGACGGCAAACG	A	G	ATTAAAACTTGAACCTGCGCTTGAAGTTATCC TGGTCGTCGTCGTTGTCATTGCTCGTCTGGT CGCTTGCTCTCCGGGTGCTGCTCGCCGTG GTGG	NA	NA
Ca-II-SNP517	179.53	Ca-desi-LG(Chr)3	13936315	TACATCTAGTCTTTAAATTTATCTCAATTTCCGTT TAGGTCATTTAAGTTTACTTTTTCTTAATTTGGTCT TTAACGTTACATTTGTTGTATTATTA	A	G	GTCACTACGATGTTTAGTTTGAATTTAACATTT AATGACACTAATCCGTTAAAAATGCAAAATATTA AAGACTATATATAATTTAATATATCTAAAAG	NA	NA
Ca-II-SNP518	180.49	Ca-desi-LG(Chr)3	13949576	CCTTTAGTGATTTTGACTATTTAATGTGATTTTTTC TTGATGGAATGTTTGTAAATGATACGGTTCTATT ATGATTGTTTTGAAGACATGTGCTTCCC	C	T	TCAGAACTCTTTGCCATTGCTATGTGAAGAAT GAAACCGTGTGTTGAGGAAAGCATAAAAAAGACC TAGCTGGGAGAAACCTGTTATGATGCTAAATGT GCAAGTGCATGGGAAATTGAAAATGTATTCTT TTTAGGTTCCGCATGTTATGCATCACAGTTCTT CACTCACAACATGTCTTAATATCACAAAAGAA GAAAAGATATCTACTAAGC	NA	NA
Ca-II-SNP519	181.45	Ca-desi-LG(Chr)3	14004716	GGTGATTTTTCTATTGCAAAAATGCGACTTG AAGTGATAGTAGTCTTTAATGTTTCAATGTCTG CCCTTTGGCATTATAGGTTTGGACATGCCT	A	C	GCCTGTTGCCACTCAATAAAAAATGTCAATCT ACAAATCAAATATTTATTACAACAATAATAGGA AAGTATTTGTGAAGCATATCTAACTTTGTAGAA	NA	NA
Ca-II-SNP520	182.41	Ca-desi-LG(Chr)3	14069380	AATTCCTTATTGAATTATTACCAAATCTCTTTAT TATTCTTGCCCTAATGTCTTAGTGACATAACCTTTA TTTCTAAAGTAACCCATAAATTCCTTAGT	A	G	AGGGATAGATGCGGGTCATGAAACCAATTA GTTGTTGCAAAAGGCAATAGTTTTAAAAGAGAAA TCTTGAACTGTAACACAAATTTAACTTAAAT T	NA	NA
Ca-II-SSR134	183.37	Ca-desi-LG(Chr)3	14096792	TCTGTTTTGGTTGGTGGTGA	(AT)8	(AT)7	CAGGCCGACCTACTTCTTT	59.98	128.00
Ca-II-SNP521	184.33	Ca-desi-LG(Chr)3	14141483	TGTGGTAAGAAAAAGTTGTTAAACCACGTGTTGT TAATGACCCATCTCATGCCGATCCGACGATT GGTACTAGTGGTGGAGCTATTCCTCTATATC	A	C	ATACCCATCTCCTTCTGGAATGATGACAATGCG GTTGTAGCAATCAACACATCCGGTTCCATTAC TTCGTCTATGGTATAAGGCTCTATAGGGACCTC A	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP522	187.21	Ca- <i>desi</i> -LG(Chr)3	14208354	TTTAAAGGCATATATTTCAAACCTTTATTGGAATCC ATGTGATGTTATTAGACTTTTGTTCGACATTGTA GCACCTCTTTGAGCTCGAAAACTTGTA	A	G	ATGTTTCGACGCGTAAGTAATATTCATTTATTTCT TACATATATATAAATAATGTGTTTGTAAATGC TATAATAATCACATTTATTTATTCGATAGTGC	NA	NA
Ca-II-SNP523	188.17	Ca- <i>desi</i> -LG(Chr)3	14405537	AGTTTGGAAGGAGCCCTTACCTTAACGTTAGCTCT AACGTGCGATTACGGCACCGTGAGTAAATCCGGT AAATTTCCGCTCGCAACGCCGCTTCCAAAA	T	C	TCAAACACAAACCTCCCTGTTACACCTAGATCT AAACGTGCTTTCAAGAAGTGATAGAAGGGAAG GTTGCTCACCTCCGTGCTACGGTGCTAGTGGA TCA	NA	NA
Ca-II-SNP524	189.18	Ca- <i>desi</i> -LG(Chr)3	14513401	ATTTGCGTCACATCGTTTATATTCTTATGTTGGCAC CCTTCATATGTTCTATTATTCATCTCACATTTTCT ATTCTCAATTTAGTCTCTGCATCTCACA	C	T	AAGAATTGGATGAGCCGCAAAAGTTGATTGAAG TGAGAAGATGATAGAATTTATTTATGATGAGC TTTTTTGAAAGGTTTTTAACCTTATGTATATGAT	NA	NA
Ca-II-SNP525	190.19	Ca- <i>desi</i> -LG(Chr)3	14615636	AAGAGTGGCTTGACGAACTTATTTCTCGACTTT TTTTTCCCTTCGATGAATTTCTTTATAATCCGTTT TCGTTAACATTGGAAGTTTTTATTTGTTT	T	C	AAACCAATAATCTTTGGTCATCTTCAATACAGAA ACCGATCAATTTAACGAGATTCGAGTGGACAAT ATCACCAGAAGATGCTAACTCAGCCTGGAAAGG	NA	NA
Ca-II-SNP526	191.20	Ca- <i>desi</i> -LG(Chr)3	14739635	ACCATTGCCACGAGTTTCTGTTTCTGTTTCTCT TTACTTATTGTAGCTATTAACGGCCACCATAGTC TCCCTTCAAGAAACATGCATCCAACCCAAT	T	C	ATATTAAGTGTGGTATGTCTTGTGTTGGACTAG TTTTTGAGAGAATATATGTATGTTGGAGACTT GTAAGGTTGCATTTGCTAATACATGTAGACCTT T	NA	NA
Ca-II-SNP527	192.21	Ca- <i>desi</i> -LG(Chr)3	14776422	CCTTTAGTGATTTTACTATTTAATGTGATATTTTC TTGATGGAATGTTGTTTAAATGATACGGTCTATT ATGATTGTTTTGTAAGACATGTGCTTCCC	G	T	GTTTGATTATTTTCTGAAATGTTTCTCAATTCA AACCATTAGATCAATCAAATAATTCATATGATT GTATGTTGGGAATTAATCAAACATGATC	NA	NA
Ca-II-SSR135	193.22	Ca- <i>desi</i> -LG(Chr)3	14825740	GCTCAACATTGGTTGCCTTT	(CT)8	(CT)9	CCATTGGAGACCAAATGACA	60.12	183.00
Ca-II-SNP528	196.25	Ca- <i>desi</i> -LG(Chr)3	14949792	ATACATTTCTAAGGCATCATCCTTCATAATCACCT GAAATCCTTTCTGAATTAGTTGCATATGCTCAAC AAATTGTTTTCTATTCTTGGCACATACAAC	A	T	AAAAATGGGTGAAGAAGTTCATATTCAAAATCA ACAACAACAAGAACAAGAATCCTTTTTCATCCC AAATTCCTCAATCTCTCACAAACAAAACAATCC ATTATTATCCAGCTTCATCAATGCTTGATCTTG ATCATATTGTAATCATAATCATCATCATCA ACAAGAACAATCAATTAACAACAATAACAACGA TTTTTCATCAATGCTGCATCTCAACAGCACAA TTCAACCTCAACTCCGACCTCAACCAACTC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP529	197.26	Ca- <i>desi</i> -LG(Chr)3	15061743	TAGAGTTCCAAATAAAATTAGGGTTTCAATGAATA CCGGCGGTGACGAATCGGCGATTGTAATGCATAC GCTTGTGAGCACGGCCACGTGGCTTCTTCTT	C	T	TAATCAACAATGGAATCTATTTGTAGGTAAGG TTCACGGTTCACCTTGTCTGTGCCGAAAAGTG AGAGGCCAAACACCAAAAGTGGCCAAGCAGGA CAA	NA	NA
Ca-II-SNP530	198.27	Ca- <i>desi</i> -LG(Chr)3	15111898	TTGGAACATTTCTCCATCCTCGGAGTCCTGATCC TTGAGGGATCAAAGAATTGGCAATTTAGTCGAAT CATTTTTATCATTAGCCTTGCTGCTCCCAT	G	C	GAGGACTGGTCTTCAAAAAGAAGGATCAAGAG TGATTTTTGGAATTCCTAAACCTGGGAAGAAAA GGAAGTTTATGGAAGTAAGCAAGCATTATGATG CA	NA	NA
Ca-II-SNP531	199.28	Ca- <i>desi</i> -LG(Chr)3	15124677	CTATTTCCAGTTTCTTGCTGGAAGAAAATTCTACT TCGTAATCTCGTTGCTTTGTATTACTCCTCACA CCACTCCTCAATCAGCTCCTCCAGGTAGTA	T	C	AGAGAGGGAAGGAATTGATTATATCTACTTGT AACTTCTCTCTTGATATCATGTGTTTCACTAAAG CAACTAGCCTACTTACAAAATGACTTTATTGT GGGATCGGAGAGGCAATTCCTGAAACAACCTT CATCAATAATGCAAACTTTTGAAGCATCTTAA GTGAAATCACACGGAAATAGTAGAAAATAGTT ATACATGAAAAGAAAACAATGGGTTTGGAA ACCATATCTTTCCCTTTTCCGACATCCATCT GCTACTCTCTCAACCCCT	NA	NA
Ca-II-SSR136	200.29	Ca- <i>desi</i> -LG(Chr)3	15207234	GGATTGAAAAACCTGGAAA	(AG)8	(AG)9		58.86	102.00
Ca-II-SNP532	202.31	Ca- <i>desi</i> -LG(Chr)3	15327978	TCTTCAGAAGATACATGTATTCACCTTTGAGATGT TGTGCAACTCCCGCTAATCTTTCAATTTTCATGCG TGGGACTAATTACAAGAATTTGACTTTCA	A	T	TGAAAAAAGGAATTATTAATTATAGTGAAT GATTTAGTTTTACAATGTGATCAATTAATCATA AGCTATTTTTTCATCATCTTTAAATTAGATATA	NA	NA
Ca-II-SNP533	204.33	Ca- <i>desi</i> -LG(Chr)3	15465535	TTTGTGTTGACTTTCTTACAGGTAATCAACAAGAA AAAAATGTTACAGTTATGACATTTGGACAACCTCG TATTGGGAATGCTGTTTTGCATCTCTCT	A	G	TTGGTATGCTTTTTCGGTAATAGTAATAGTA TGAGGCAAAATGAGGAACAATATCATGCTCATG TGTGACTCGGATTGATTTGGAAC TAGTTTGTCT G	NA	NA
Ca-II-SNP534	205.34	Ca- <i>desi</i> -LG(Chr)3	15837875	AACTTGTGCTGGATCATGGACTTATTCAAGGACC ACAACCTTTGTGGCCCAACATTGTATACGGATACAA AGATATTTGTACCATGTACCCACCTATT	C	T	TTCGAATGGGGCGTGTGGAATGGAGTGGTAA ATTTTTTTTTTTTCATAAAAAGGTAAAAAGGACA ATATAGTCTTTCCATTGAAATGGGGGTGGGA G	NA	NA
Ca-II-SSR137	206.35	Ca- <i>desi</i> -LG(Chr)3	15914984	TGCACACAACAAGTGTGCTT	(AT)12	(AT)13	TCTACAAAATGTTTAAGATACGCACT	58.92	179.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP535	207.36	Ca-desi-LG(Chr)3	15992284	TGTTCCAAAATATTTTTGGGAAGAGGTTGCCTCA CATCAACATATCTTATTAATCAATAACCTTCTAGAG TCTTGGGGTCCAAGAGTCTATGGATGTT	G	C	TTTCCCCAATCATGACCATGAACATGGACAAAT GAGACACACCCCAAAGATTTGGTGGGAAGATTA ATGGTAGTGGACAAGTTCAGATAGAATGAAGAA A	NA	NA
Ca-II-SNP536	209.38	Ca-desi-LG(Chr)3	16125396	CGTATAGGCAAATATGTGTGGCTTTTGTCTCCTGT TAAGTGTTAACTGCCATTGCTTTTTTATTTGGATG ACTATTGCTGCTTTATTCTGATTCAATCC	G	A	AACAACCCAGGGTTCACATTACCATTTACACT CTTTGATGTCAATGCATTCTTCAAGATTTC CAGACCTATAACATCAACAACAAAAGTTCAACA	NA	NA
Ca-II-SNP537	210.39	Ca-desi-LG(Chr)3	16211241	TTCCCGCGTTACCTTCCTCATACTTATAACAGA AAATCCCTTAAATCATGGAAGACTCTAACCGACT ATTATCCCTCGCTTTCTAGAAACTGTTAG	A	G	TGTATCATTTTCTTTGCAGAGATTCTCTCCATT ATTTCTATATTTTTTCAAATATTAGTGTCTTTC CTCTAAATCCTTGGAAATCAAATCTTGGGTT	NA	NA
Ca-II-SNP538	211.40	Ca-desi-LG(Chr)3	16234484	AATGCATCCAAAACAGGAGAGACAGTGGTTGTTT CGGAAAACTTTTCTAGCAGCGACGGCAGGCAGCA GCAGCAAACGGCGCGCGGCAGTAGCAGACG	T	G	ATTAAGTCTAGCTTCTTTTGTGTATCTTTGGAG CCACTTTACAAAGAGATTGGACAAAGTCAATT TGGGCTGTTATGACTGTTGTGGTTGTGCTTGA GTTCACTGCTGGGGCAACTTTATGCAAAGGGC TCAACAGAGGATTAGGGACACTGATAGCTGGA TTACTAGCATTCTTTGTTGGCTATATAGCAAAT GCGTCATCTGATAGAGTCTCTCAAGCAGTTATC ATTCCCGCCC	NA	NA
Ca-II-SNP539	212.41	Ca-desi-LG(Chr)3	16346213	CTGAAAAAAGCTCTCACAAAAGACTTCAAATTTAGTT GGATTTTGTGGTTGCCCTAGCCCTCACAAAATCAC AACGTTGTTATTTTGTGAGGGCTTAGGCC	A	G	CGGATCAATGCTTTTGTGGCGCCTTTACCGT CACAAATGGTTGATTTTGTGGCTGAAAAGCCC TCACAAAGGACTTAAATTTTAGCTGGATTTTGT GG	NA	NA
Ca-II-SNP540	213.42	Ca-desi-LG(Chr)3	16443044	AAATCTCATTGTGTCCCTTAGGTTTGTGGATT GAGACTTAATTAAGCCTTAGGCTAGGTTTGGATTG ATGGTATGAGATGGAATAAGTTTATGTTCC	A	T	AATTGGAGGGGAACAAAAGTGAAGGTAAGTGA TGGAATAGGATGGAAAGTATCCATTATATCC ACTTCATTTTCTCTTTTTGACAATCCAACA A	NA	NA
Ca-II-SNP541	214.43	Ca-desi-LG(Chr)3	16522022	TGATTTTACTTAGATGATGCTTTTCCAAAATAATT GTTATGATTGATGAGTAAGAATGTGAACACCCCG GCCATTACCGTTACCGACGGTGCCACCTC	A	G	GGAGGCGGTATTATCCCCTAGGTACCGGGCTC GAATCCCACGGAAGGCAAAAAGCTCGTCAGATTT CCATTGGGGGCGAAAGAGGGGACGAGAAG GTCG	NA	NA
Ca-II-SNP542	215.44	Ca-desi-LG(Chr)3	16545023	TACTCTTGCTTGTGTTTGTGCCAAATACAAGAA CCCAAATGCACCAACTATAGCCCGAGTTTCCCT GCTGCTGATGATATCCATGACAAGTAGATC	T	G	GCGCAAGAGTGGAAAGGGAGGGAAGAGGA GGAGGTGTGAAGAAGAAGAAGGAAGGTG AATTTGGATGCAACGAAGCCTTAGAAGATCTT TCTTTCTTCTATCTCTCTACAGAGGAATCGT AGATCTGATTTCTTTCTTTCTTTTCGATCA ATTTCTTTGTTAATCAGAATTTACTTCAAGAAAA ACAATGGGATTGTGGGAAGCTTTTCTGAATTGG CTCCCAAGCTTTTCTCAACAGCAATGAC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP543	216.45	Ca-desi-LG(Chr)3	16680965	ACTTTGAAAAGGTTAAAAATGTTAACTCTTCCCATA TGATGTATCCTCAATTCCTTCATGGTTTTTGTGG CTCCAAAATCACACTAGTTGGTTCTTAA	T	G	CAACCACCAATATCAAATATTATTGGTCAGAA ATATTATGAATGTACAGGACATAAAACCAATAT GGCTATGGCCAGTCTCTGACATTTGATTCAGG G	NA	NA
Ca-II-SNP544	217.46	Ca-desi-LG(Chr)3	16719937	ACTCTGCTGTATAAGACCACCAACTGCGTGACAC CGTGTACACCTAGTATCGGGACCAGCATCATGAC TAGGACCAGCATCAGGACCAGGACCAGGACCA	G	A	GAGTGTGTTGAGGGATACATTCAGTGGTATTAT AAGATATCTCATCCTCGGATGATCCCTTATGTT GCTGCATATGCTTGTCTTGTATGATGCTGAT G	NA	NA
Ca-II-SNP545	218.47	Ca-desi-LG(Chr)3	16978563	GTAATTTTATCGTACTCTAAATATTTTGTACTCT TTGTTGAGAAATTTCTGATACTAACATTAATTA GGAATTGTTGTTATCTTCTAAATTGATG	T	A	ACCGATACTAAAACAAGAGACTTCTGAATTTGG ATTCCAATTCGAATTCAGTGCATATCATCGTA TTAGAATTACAAAATTCCAATTTAAAAGCTAA	NA	NA
Ca-II-SNP546	219.48	Ca-desi-LG(Chr)3	17008520	AATTGGTCATTCCATTTCTCATGTAATAGAAGTTT ATTTTTGTCTTAAAAAATCTTTTATTTTTAATTTA TTTTCTTATTTTTAATTGGCCATTA	G	A	ACGATCTTTGTCCACGATACAATTTAATGGTCA ATTAAAAAATTTAAAAATAAATACAAATACACCAC GACTTACAGTTTTTTCATGTATCCGTTGAGAAG	NA	NA
Ca-II-SNP547	220.49	Ca-desi-LG(Chr)3	17116615	CACATTTAAAACCTTTTTCTATTAATGGTAGGGGC GTACAAGACCCGGTTCGCCGCGAATCCGACCT GACCCATAAGCAACGGGTTGTCTGACCCCG	T	C	TTTTTTTTTATGCAGACACTACCTCTCATTCTG AAAATAGACAATTTCAAAAATCTGCATTACAAAT ATGAAAGTTAATCATTATCATACTTAAAAATAA AGTTAAACTCTGAAAGAAATAGTTTCAAAAAGTT CAGGTCGCCAATCCCGCTGCCACAAAAGCTG CTTAACGATTCCGCTTAGCAACTCTCTCAATTT CATCTTTTTCTTATTGATGCATAGCTGTTGGATG AAGCTTTCTCTCAATTAATACTTCATACCAAA GTGCCAATTCAGTCCTTGT	NA	NA
Ca-II-SSR138	221.50	Ca-desi-LG(Chr)3	17212326	TTGGCATCATCAAACCATGT	(AT)9	(AT)11	GTGCCAATTCAGTCCTTGT	59.78	114.00
Ca-II-SNP548	222.51	Ca-desi-LG(Chr)3	17288468	TAAAGCCTACTATCCAAAAATGTTCTACCTTTACC TAATCCCCATTACAACCCGAAAGTCTCCAAAAGT GTATGTGTTTGTGCATTGTGATTGCTAAC	T	A	ATCTCACAAAATTTCTCTCAATTGTTTAGCAAA GGTTATGAATTTTACTCAATCCTAAAAACATG CATCACACTACCATTGCCATAAAAAAATTCT	NA	NA
Ca-II-SNP549	223.52	Ca-desi-LG(Chr)3	17313806	AATCTCACGGTTGTGAGGATTAGATGTAACCCGG GTTAGATGAACCAGAATATATCTGTGTGATATC TTTTCCCTTATCTCTATTTATTTCTAGTCTT	A	T	TTTAACTCAAGATTAATCTTGATTATGAAAATAG AAAACGGAGAACGTTATTGGTTAGTAAAAACAC ACAAATTAACCTTATCTATTTAATTTGATAATCA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP550	224.53	Ca- <i>desi</i> -LG(Chr)3	17346792	GGATTAATCTAATAGCTCCAAAGTGAAGTTGTG TATCCTTCATTTTTCCAATGATTTATAAGATTCTGT GAAATCTCTAAATCAACATACTGCTCTTG	G	A	TCACCAGATCTATCAGAAACCTAATCACAAC GCCGTCCTCACATGAAAGAATATGTACAATCTT CACGACTTGATCAGTGCAAGCCTCAGAGCGACA AA	NA	NA
Ca-II-SNP551	226.55	Ca- <i>desi</i> -LG(Chr)3	17415276	TTATAGGTTGTTATTGTTGATTGATTCCTTATT GTTATTATGAAGACTCTCGGTGTACCCATTAATTA TTATAGTGGAAGTTTTACTGGACTAGGTC	C	T	ACAATTCGAAGCAATAATAATTGGCAGAAAA TTAAATATGAGACAAACACAATTTAACGTGGA AAACTTCCCTCAAATTGAGAGAATAAAAAACCAC G	NA	NA
Ca-II-SSR139	227.56	Ca- <i>desi</i> -LG(Chr)3	17637329	TCATCAGCAAAATTAACACATTAATA	(TA)9	(TA)10	GGAGGGAAGAAAAATAAACAAACA	59.09	142.00
Ca-II-SNP552	228.57	Ca- <i>desi</i> -LG(Chr)3	17645419	TTTGTGGTACTTTCTTACAGGTAATCAACAAGAA AAAAATGTTCAAGTTATGACATTTGGACAACCTCG TATTGGGAATGCTGTTTTGCATCTCTCT	G	C	GACAGATTGGTTCGGAGCGAATTATACAGGCT CGAGTGGACTACCCTCCGCTTCGGGTCCAAC CAACTGGTCCGATTCCACATCAGCAGTGTAC ACCCACGAACCACCAATTTGATCTCCTTGCTCG AAAACCACCACGCGATGTCCTTCTCTCGGAG CTCGCGCGCCG	NA	NA
Ca-II-SNP553	229.58	Ca- <i>desi</i> -LG(Chr)3	17729360	AGATTTGTCAGTCATCCTATTTGTTAGGATTTTT GGGAGTTCACCAGCAATAATAAGTCAATTGTTCA AGATCTATAATAGACTTTGACACCACATCT	T	C	AATTGTCAAATTTCAAGTGTGAGTGTTAGTCT CATCTCAACAATGAACAGATATATAAATATGTA ACTTATATATTAATGCCTTAAGATTTGGATG	NA	NA
Ca-II-SNP554	231.60	Ca- <i>desi</i> -LG(Chr)3	17860954	AAATATTAATTTTTGTCTTTTCTTTGTCGGTAAT TGGATGGTACGTACACTTGCATGTGTCTGTATG TTTAACGCAAAATTTTACTCAAAATAA	G	A	CCAGGAAGCATTTCGAGGAATTTAGGTGAGA CTACTAGAGACTGGAACAACCTCATAAGAGGA TGCATCAGTCTATTTGCCTTGAATTAACCTCT CCTTCAACAAGGTATGTGCTCTGTAGTTGATCA GAAGAAGATTAAGTGGATTGGTTGAGGTCTGCA GGCCAAAAGGGATACACTAACAAATGTTGCTAG TTGTAGAAAATGATAGATGGAACGTAAG	NA	NA
Ca-II-SNP555	232.61	Ca- <i>desi</i> -LG(Chr)3	17992109	CCAAAGAAGCTCTTTCATATGTCCTCCAGGATACT TTTTTTTCCAATTCCCATACAAGTGTAAACACATA ATCGGTGTTCCACATGGGCCTCAATGTTG	C	G	TGCGTGTGAAGTCTATGATGAATAATATGTTT TTAAGCAATCTGTTTTAAGCAATTTGTTTGTA ATATTCTGTTTCAGGAATTTGTTACCAGCCATTG	NA	NA
Ca-II-SNP556	233.62	Ca- <i>desi</i> -LG(Chr)3	18039669	TGAACACAATTTAAACACAATACATGTGACCTC CACATAATCTCTATTCAATTAATTTCTTTTTCTTT TATATTTCTTTTATTTATTTATCTTTTT	G	T	AATTATTTCTGTCCAAAGGAAGAAGAAAGGAGA AATTATGGAAGAAAGAAAAGATGAATGTGTGAG GTTTTTTTTGTAGAGGAAGACAAAAAAAAGT G	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR140	234.63	Ca- <i>desi</i> -LG(Chr)3	18078319	GTAGTGGGGGCACAAAACAT	(TAA)9	(TAA)8	TGGGTGGGATCCATTTCTA	59.72	167.00
Ca-II-SNP557	235.64	Ca- <i>desi</i> -LG(Chr)3	18086914	TATTAATAATTTACAGTTTAACTTTTTGTATTATATG CATGTATGGTTGTGTAGCTCAATCCCTTTTGTGC TTCTATTTTTCATAGTGTGTCAAATAGC	C	T	AATTTCTTCAATTGAGGAAGCTAATAAGCTAGC CTTATATATGGCTCAAGATCAATGTGGAGGAGA TATATCAAATTCAAAGGGAAGCTTATCAGAGTC TGTTTCACCACAGGGTCTTTAACTCCTCTTCT CATTGGAGGATCTGTT	NA	NA
Ca-II-SNP558	236.65	Ca- <i>desi</i> -LG(Chr)3	18170249	TCTATTACGCTTCTATATTCATACAGATCTATTGTA TATCTTCAACAAATTTACTCTCACATATCTCTTC TGTGCGAGAATTTGTCATGCGGTTTTT	T	G	AAGTCAACAAAACATTTTTTAAACAGAAAAATAA TTTATAATTTATATAAAAATAAAAAATAAAGAT TCTCCACAAAATTTAAACAGCTTCAATTTT	NA	NA
Ca-II-SNP559	238.67	Ca- <i>desi</i> -LG(Chr)3	18207408	GGGTACATTTGGGTTGTACACTCTTCTGTCTT TTATTTGTCCCTATTCCTGCATAAAAGGACTGTATAT ATGACTTATGAGTTGTCAAGCCAATAATT	T	C	ATAATAAGAATTCAAAACATATACATCACTTC GTTTCGTTCAACATTCAGTACTTGCATATTGAG GAGCAACGTAGCTGCCAAAATAAGAATAAGTAT	NA	NA
Ca-II-SNP560	239.68	Ca- <i>desi</i> -LG(Chr)3	18262067	TATTAATAATTTACAGTTTAACTTTTTGTATTATATG CATGTATGGTTGTGTAGCTCAATCCCTTTTGTGC TTCTATTTTTCATAGTGTGTCAAATAGC	G	C	ATTGAAATAGTGGCCGCTATTGTCTAAAATCG AAACTAGGATGGCGTACGGTTTTTCATAGTGG ATTCATCAAAATCCGCTATGCTATAGCGCTATC GC	NA	NA
Ca-II-SNP561	240.69	Ca- <i>desi</i> -LG(Chr)3	18313268	TTCTTGGTGCAATCTTCTCTAACCTTAACTCCTTT GATTTACTATATTGCTATATTTGTATATGTGATTA AACTAGATGCATGTTAAACATATTCTGT	G	A	TTAAATTATGGCATAAAGATTAGCAAGTTTTAT TAGATTGATATGAGATTAACCAAGATGCATACA AGTCAAATTAACAGATTAACAATATTACTTAT	NA	NA
Ca-II-SNP562	241.70	Ca- <i>desi</i> -LG(Chr)3	18363296	ATTAAGAATTTGAAATTGAATTGGAATTAGAATG GAATCCTCCCTCTTTTTTGTGGTTTTATTTTTAT TTATTTTTAATGGTAATTATGTATGTAT	G	T	CGCGCATCAACACTCTCTCACACACCACCAC ACCTACCTTCTCTTCTCTCTTTTCTGAAAAAT CGCAGAAAGCACTAACACCTGAAAAGTGATTGT GAGGTGTGTGGAATCGCAGTCTCAGAAGCACG TACTTGCTGAGTTAAATCAATGGAGATGGTTC AGGTAGGTGTCAGGACACGAGCTCAAGCGGCA TTAGCCATGGAAGCTTCTAGTTCAAGTGCACGA ACTAGAAAGCAGCAAGCAAAATTCAGACACACA	NA	NA
Ca-II-SNP563	242.71	Ca- <i>desi</i> -LG(Chr)3	18445099	AATGCATCCAAACAGGAGAGACAGTGGTTGTTT CGGAAAACTTTTCTAGCAGCGACGGCAGGCAGCA GCAGCAAACGGCGGCGGGCAGTAGCAGACG	G	A	TTCCCAACAGTTTTGGGAATATAATCCTAGTTTC TCTTTTCTAGCATGATCATTCTTTTTCTGATGA CTATCACTTCCGTCCACAATCGTCTGCTGCTGCC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP564	243.72	Ca- <i>desi</i> -LG(Chr)3	18525106	TGAGTTTTAACTACAATTAGAAAATCGATTGTTCA TCCTTCTGTTTTCTTAAATCACTTCTGATTCTTTCA TCAACTCAATGATTTCTTCTCACCT	A	C	ATCCCCATATGTTTTACCTGTCTTTCAGGAATA AAACGTGTACAGTCATTCTTAAGGAAGCTTACT GCGATGAAGCAGCTATCGAAAACATCCTCTAT T	NA	NA
Ca-II-SNP565	244.73	Ca- <i>desi</i> -LG(Chr)3	18630974	CTGACTCTCAGTGTTTTTTTTCTTCTGTGAGAT GGCTATTTTTACTTCTTTTCATGTTGGCCGCGTC TGTCTTTTTCTGCATTCCITCTCTTTCAG	A	C	ATAAGTGATCAGGATTTGGTCAAGGAAGTTACT AAAACTAACCTAATTTAATAAATGAAAAGCAA GGCAAAATCGTACCCTAAAACAAACATAAGCGCC	NA	NA
Ca-II-SNP566	245.74	Ca- <i>desi</i> -LG(Chr)3	18732969	GGAACATATTCTCAAACCTCTGGTATATAACTTGA GAAATAACTTGATTTATCTTTGCCCTTTAGTTGA TTCGACCAATCCATATCGAGGTTAAATG	C	T	ACTGTCCTGGTTAAATTGGCAAATTTTCCCAG AGCAGAAACTGCATTGTCATATGCCATTACATT ATCTGAATGAAGTGCATAAGGATGTTGGATCAC A	NA	NA
Ca-II-SNP567	246.75	Ca- <i>desi</i> -LG(Chr)3	18804984	CTAGTTAGGACTTAGGACTACTGAATTATTAGT TATTTTGAATTTGGGATTTAGGGCTGTAGGCAATAT ACACTTTCAAATTTCTATTTAGGGCTGTAG	A	G	AAAAAGGCTCATATTAATCAAAGCAAAAAAC CTCACATTAATCAAAGCAAAAAACCTCAATAA TTCAAACAACATAATAAAGATGTTGCATCCTA	NA	NA
Ca-II-SNP568	247.76	Ca- <i>desi</i> -LG(Chr)3	18996239	AAGCTGCGAACGACACTAATGAAAATAGGCACTCT AATGCTAGTTACTTCGTCGACGACACATCTGAGAT CGTCGTTTCGATGTCGCGCATGTCATGTAA	A	C	ATTATTAGTATTATTGTAACCCCTAATTATTG AAAAATAAATAAATTAAGTAAATAGAAACCTTT TTGCCATAAAAAAAGTAGAGAGTATCTATGC	NA	NA
Ca-II-SNP569	248.77	Ca- <i>desi</i> -LG(Chr)3	19078905	GGTAATTCCTTTTCTCTGTTTTATGTCCTTCCCT TTGTTGGTTAACTGTTTACTATTTAACGGTCAA TATTATTGGTCCCTGGTTCAAAGTTTAC	T	A	CTTCCCTTCTCGTCGTCCTGCCCATCCCTT CCTCTATTTCCCTCTCTTAATCATGTACACCT CAACACGCTTTTCTATCTCTCTCTCTTTCAT TCAAATGTGAATGATAATTTCTCTTATATCCA AATTTTTCCCTTGCTATTGATCCACCATTTTATT ATTTTATTTATTTAATTAATCCCAATCATGGG TATATGTTTCTTCAACAAAGTTGTTAGCGG CTTAACACTAACCAACAAACAGCCACAGC	NA	NA
Ca-II-SNP570	249.78	Ca- <i>desi</i> -LG(Chr)3	19594047	AGATTTGTCAGTCATCCTATTTGTTAGGGATTTTT GGGAGTTCACCAGCAATAAAGTCAATGTTTCA AGATCTATAATAGACTTTGACACCACATCT	C	T	GTTGCTTTAGCCTTATTAGTAACATTTGTTAGA ACAAAACCCTAGTTCAAAGAGTATAGATACAA AAAACGCAAAAAACAGCTAGATTTGACCGCG GAGTTTTGTGTCCTGATGCTTATCAATAAAC TAGAGTCTTATATCCAAAAAAA	NA	NA
Ca-II-SNP571	250.79	Ca- <i>desi</i> -LG(Chr)3	19929129	TCCTACTCTGAACAATATTCTGAATGCCCTAC TTTTTCGTTCTTTCAGGAAGTCGTTCCCTGGGGAA GCGACCTCTGAAGAGGAAATTTTTAATG	G	A	AAACAATGGCGGGACCTGACCCCTCTCCTTCT CCAAAGATCCTTAGCAAAGCCAGCACTCGTC ACCGGAGGTACAGTCGCGGTAATTCAGTCG TGGCGGCGCCGCGAAGAAGATTCTTCCGAGC TCCGTTCCCGTCTTCTTCCGTCCGATCCCTCA ACCTTCTCTCCGATTCTGGGATTTCCACTTGG ATCGCTTCTCCCTTTTTGACTGAGAATACTG ACTCACTCTCATTCCACTGATTCACCAACC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR141	251.73	Ca- <i>desi</i> -LG(Chr)3	20233763	TCITTTTCTCTTATAAATTGTTGACCT	(AT)12	(AT)11	CTTTCTCAAATAAAGAGATCTCACA	57.42	118.00
Ca-II-SSR142	253.61	Ca- <i>desi</i> -LG(Chr)3	21486044	TCGTTTCGAGTTCGATTTTCC	(AG)7	(AG)9	CCTTGC GTTGGTTCAATTTT	60.19	128.00
Ca-II-SNP572	254.55	Ca- <i>desi</i> -LG(Chr)3	21603729	GGGTACATTTGGGTTTGACTACTCTTCTGTCTTT TTATTTGTCCTATTCTGCATAAAAGGACTGTATAT ATGACTTATGAGTTGTCAAGCCAATAATT	G	C	TAGCACTTATTTGGTGTAGTGCTATGATTTT GGTTGAATCTCCATGTAATGTATTATTATAAATTG GAGCAGATGACATTCTTGCCCATCTGCGCCAA TAAGGAAGTCATGTATAGTTCGAGCGGGAATTA AAATGTAATAGTTCAATTAATAGACTCAGTTCC TGTTTACTTTCAGGAAAAAGTTCAAGTTCTTA GTTAAAATAGCATGTTTGTAGTAATAGTGGTTTAC ATGCTTCTCTACATCAAT	NA	NA
Ca-II-SSR143	255.49	Ca- <i>desi</i> -LG(Chr)3	21727270	GGGTTGAGAAATTACGGGTG	(TG)14	(TG)12	GGGAGGAAACATTTTCGTTTT	59.29	174.00
Ca-II-SNP573	257.37	Ca- <i>desi</i> -LG(Chr)3	23020307	TTTTAGTTTTGGCAGTTATGATCTATAATGGGCAT GCGGTGTCACACTGTCTATGTACGTGGCTGTCTC CTTGTTGGTTTAGGTACACACAGACAGGCACA	A	G	GCAAAAATGGTAATATTACAATATTAGCCCAA AACCTGAGGGGAATATGATATGAACTACATTAA GTGATAATATATACAGCTTCTCATGGATGGGAA TGTGGTTCTTATTTTCAGCTGTGTACATAAAAG TTGGAAGACTAAGCCTTCAAACAATACTAGT TAAACTCGCTGATAAATAAATTTCTCTAGGA GCAACTACAATCTTACTTTACATTCATCCATCAGTA GCTTTTCCACATGATTTTCCAGCCTCCATGCA	NA	NA
Ca-II-SNP574	259.25	Ca- <i>desi</i> -LG(Chr)3	23034508	TTCCCGATTTTGTAAATCAGTCTCACAAAAACAT CGATTGCGCATTCAATTAAGCGTTGGATCGGGCTG ATTTTTGGACAGAAGGTTTCGAAAAATTCAGG	G	T	TTAAACAACAATGTGGCTCCTGTTATTGAATTAT AAATAATATTGCTCCTGCTAAGAATGCCATCAT CTCATCTCATACATACATCTCTCACACATGACT ACTACAATACTACTATACTATTATCAAGCACT CTTACCAAGAACATCATGGACAAACCCCTCATG AATAGGATTAGTGGTAATGCTTTTATTAACCATA TGCAAATCTCAAATAATAAGACACTGACTGAAC TATAAATAGACATACATGATCTTACCAATCT	NA	NA
Ca-II-SNP575	260.19	Ca- <i>desi</i> -LG(Chr)3	23165300	CTCATGTGTTTGCAAAGTTTATTTTTTAAAGTGC GAACGTTATGCATGCAGGTATCTTCTATTGTTTCA AATCACCTGTCTCAAGCAAGGAGGGTCCC	A	G	ATGAAGTCAATAAGCATACATGAAAGAAAAAAC CCTAGCTCTCACCTAATAATAATAATAATAAT AATAATAAACAGCTCTCCACATAGCAACATTTT GTACAGTCATCGCGTCAACTTATAAACTACTAG CTCATATCACCACCGTTTCATGAAAACTTTAC ATTCTTAAAAACCAACCTTGCTTCTTGATTAG TCATTTTTATCTTCCACTGCAGGGGACCTCACC TCACTTAAATTTCTATCTATAAAGTACACAACTCA	NA	NA
Ca-II-SNP576	261.13	Ca- <i>desi</i> -LG(Chr)3	23338444	GTCTCTCGTTAATTTTAGGGAGCATCTCCAGCAG AAATGATGATGATTATGATTGGGCATACCTCTA CTCGACGTGCATATCAACTATCTAAAACATA	A	G	CTAAACTTCTGAGAATCTGTAACATATTTCCAA GAAATACCAACCAACCAAAAGCTTATTCAAAG AAATCTATCCCAATACAACAGAAAGTTGTACA GACAGAGAGACCTGAATCAGGAATCATGAGTTT CTCGACTAATGATTGCAGGCAGATACATCATTT TATAACCATCCACTGAGCAAAAAACAACTATGC CGTGGATTACCTTCTTCCCTTGCATCAATTC CATCTACTACACCCCATCTCCAGCCCTCTC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP577	0.91	Ca- <i>desi</i> -LG(Chr)4	86182	CTCGTCGCGATCTCTATTTGCGCTCCCTTTCTATC TGTTGAGGTTTGGATTGATAGAAAGAATACGGTGT TATTCCTTGACGAAAGTAGAAAGAAGACTGG	C	G	TTATTGATACATTTATTATATTAATATATTACTCT TGCTATGTGTTTTTCACTAAAAGTGTGAGTCCC TACTCACACTTTTATTTGTAATATAATAAAA		NA
Ca-II-SNP578	2.12	Ca- <i>desi</i> -LG(Chr)4	107312	TACAATAAATATTTATCGGTAGAATAATCTTATTC GCCAGAACATTATAGCCTTGTCTGCTGCTTGTCTA TTATTCTATAAGTAGCGTGTTTATGTGT	G	A	ATGGAGCACGAACATAGGTTGGCATGCATACG TGGATAAAGGAAACATCGCGATATAGAGGAAAA TCAGACCAAACGTGAAGGCCACGTACACTCA GTT		NA
Ca-II-SNP579	3.33	Ca- <i>desi</i> -LG(Chr)4	115020	AATTTTATCTATATTGCAAAAGTTTTGCTCTCAT AAATTTTGACTCGGTCAAGTTGCTTTAGATATGTT TTTATGATTTAATAGACTCATTTTTAAAA	T	C	ATAAAGGTGTATAAAGAGTTACAATAATATAAA CTTTTTAATGCATTTTTGGCTCCCTATTTCAATTT TATATTTAAAAAAGATGAGTTGTCAATTGTT		NA
Ca-II-SNP580	4.54	Ca- <i>desi</i> -LG(Chr)4	130269	AATTTAGTGTTCATTTTCATAGTTTGGTATACA AGTATATGATTTTTATCGAATCACAATTTCTATTCTA TCCTTTTTATTTCAATTAGCAGTTATA	T	A	TGACACAAATTTGCAATACCATGATGAAAGATA TCTATCTATGTGTTTACATATCACAAATTTATTC GGATTTGATTCTTTAAAGAGGATAAAGTGAAT		NA
Ca-II-SNP581	5.75	Ca- <i>desi</i> -LG(Chr)4	152022	ATGCTGATTGTTGTCTTCTTGTGTTGTTGTGAT TTCTTTGCATGTGTGGTGAAGGTGAATTGCTTCC AGCAGATAGAGGATTAGCAAGCCTCCTTT	A	G	CTAGACAAGCAACTAGTGTAGAATTATCAAAGA GAAAATCTTTAAAGATTGAGCCTCAGGAAAGC CTCCTCTAAGCACACATCAGGGTGTCTGTTGAG AA		NA
Ca-II-SNP582	6.96	Ca- <i>desi</i> -LG(Chr)4	173850	GGTTTAGGGATAGAGCTGTGATAAAAATGTCTA CAGTTTGTGGGAATAAGACTGCCACAAATATCTC TTTGTGAGGGCTTAGACCGCACAAATGAT	G	T	ATATAATATTTAATTTAATTTAATTTTCAAATTAT ATAAATATTAATTTTTATATATAATATTAATTTT GAAGTTTATAAAATTATTATTTATTTATTA		NA
Ca-II-SNP583	8.17	Ca- <i>desi</i> -LG(Chr)4	197709	AACCTGCATATATGATCATGCCCAAGGATGTTTCA TTTTCTTTATTTAAATGGATTTTATGTGGAATGACA ATATTTGCTGATTGTCAATATAGTAATTC	A	C	CTGTGCAGAGATCATTGAACAAGACTAGATAAAA AAGAAATCACTTGTCTTTTCTTTTGTGTTGTTAA CATTAAATCATTCTAGAGTTGAACAACAAAAGTT		NA
Ca-II-SNP584	9.38	Ca- <i>desi</i> -LG(Chr)4	212618	TTTTATCTTAAGTCTTTGTGAACCTGCTCTAAGTA TGATGTTCAACACATTGTATTCATTTTTTTCAATTT TAATAAATTAGGTATATTTAGTACATTT	C	A	GTAAAGATCTAAAAAATGGTTAGATTAATAATTT ATGATGGATTATAGTTAATATATATAATCTGTTT CTTACTGTTATTACATAAAGAAAGTTGGAAA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR191	10.59	Ca- <i>desi</i> -LG(Chr)4	217545	TCCAAACAAGTGGAGATGC	(AT)6	(AT)8	TTTATAAGTGTAGGCAATGACCTG		58.70
Ca-II-SNP585	13.01	Ca- <i>desi</i> -LG(Chr)4	246041	GGTTTCTGGAAATTGCCTGATGATTGGAGTTTGG CTCAGAAATTGATCTTGAAGGGTGTGAGCCTTTA CCTAGAAGAAGGTGTTTGTCTAAAACCTGTT	C	T	TCAAAACCTCTACAATTTAAACCACTCCAATTA CACTCTTATTATTATTACCAACACTTTTCCAAAG AGAAATAGGAAAAGGAAAAAGACCAACCTTTG		NA
Ca-II-SNP586	14.22	Ca- <i>desi</i> -LG(Chr)4	258002	AATGTGCATACTGTCAGCTGAAAGTACCGACGAA GGCAGCGTTGTCTGTTGACGTTAGCACGCCTTA CACCAACTCGCAATTGCGATTTCTCATCCCTT	A	G	ATAGGTAGAATAACTTCCGATCGGTAACCTTATT ATTTTAAAATTTGACAAGTATCTTTACGCAATTT ACTTCAAACATAAAGTGTGATGTGCAATTGTTA		NA
Ca-II-SNP587	15.43	Ca- <i>desi</i> -LG(Chr)4	282233	TCTTACTTATATATTGTTCAACATTCGCTTTTCAA TCAATGCGAAACTTTTTACTCACACTTGATACCAA TAAATCTTTGTGAGTACATCCATTCATAT	G	C	AATGGAGTTCGGACAACGTGCTTGTGATGCA GCTTACGATGGTGAAGTGAATGAAGATGGAC AAAAAAAAAATCTTTATTTAAGGGAGAGCCTA CC		NA
Ca-II-SNP588	16.64	Ca- <i>desi</i> -LG(Chr)4	307143	CTATCAATTCGACAACCTATTTATTTCCATGTTA TCAATTTACGCTGTTATTTAGCTTTTTTTCAGTGG TATACATAAAAGTGGTCAAGGACAACAA	G	A	TTTATTTTTAAATAAAAACTATTAATGTTATTTT TTGAGAAAACTATAATTTTGTGTTCCACTACAGT TATTTAATTTAAACATTAACCTGAGTTTTTTA		NA
Ca-II-SNP589	20.27	Ca- <i>desi</i> -LG(Chr)4	337765	ATAGTGAAGGGGACATCTTGAACAGAGTGGGC AACAAAAAGTTCACGTCCCTGTAGTTTCTCATGTT CATAGAAATAGGATGTTTGATTGCTTGCTCT	G	C	CATCATCTCCTTACTTGTGCTTCTGACGCT TGATCTTTCCACTTGTGCTGAAGAGAGATTA AATAACAGTTAAAAACACAAGCAAGAACTACT T		NA
Ca-II-SNP590	21.48	Ca- <i>desi</i> -LG(Chr)4	365713	ATTTCTTCACTTCTCATCTTCGTTTTCTTTTTCTT TCTGTGTTAATGTTAGTTTCTCTTTGGTTTTGCGA TTTGTAATCAAATCAAACGGTCTCAGGG	C	A	TAATAGAAGCAAAAAATGAAGAAATCGAGGAAG GAACTAGGGCGAAGCATGATGAATGTCAAAGA TCAAACCTCAAATTTGTAACGATAACAACATCTAA T		NA
Ca-II-SNP591	22.69	Ca- <i>desi</i> -LG(Chr)4	376968	GAGGCCTTATCAATAATCTCTATGAAAAGTGTGT CCAGCAGCAAGTATCGTCGAGGTTTAAATCTTTG GGCTAACATCAAATCTCAAACCTTATGTTTCG	C	G	TTTCCTTTATTGTTGATGTCATCCATAATGTAC TCAAGTTTTGGTATCAATCTCACATTGTTATGCT GGAAATTACTCTCGTCAAAGCCTTGACAAAT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP592	23.90	Ca-desi-LG(Chr)4	405477	GTTTCGAGTTGTGTAAGTTCGAAAAGAACTCCACACT TTGATCCTTCTTTGTAACATTCATGAAGCTTAGATT CTTTGAAAACCTCTGCTTTGGTACTTCC	G	A	CAATAATTAAGTGTGCAGATTTCTGAACCTGTT ACTACTCATAAAAGATCAGAGAAAAGGTGTGCA ACTCATGTTTACATCAGTCATACATCCAGACT T		NA
Ca-II-SNP593	25.11	Ca-desi-LG(Chr)4	440093	AGTCAATGCCAGCTTGTGTATGTATCCTTTTGGG ACAAGCCGACTTTATATTTGTCTAAGCTGCCATT AGCCCTATATTTAGTCTTGTATATCCATCT	G	A	AGAAACGGCGAAAGGCTATGGCAGAAGAGTTG ACAACCTTAGAAGTCAATCAAACCTTGGAGCATA GTGCCTCTACCTAAAGGAAAAAGGTTATGGGA TG		NA
Ca-II-SNP594	26.32	Ca-desi-LG(Chr)4	496502	TTAGATAGTCAATCGCGATGGTTACATCGCAATC GAGGTGGAGTGTGGCGATAAGGGCATGGCCACG ACGATGCAATGCAGCGCGGGAGGAGACAGGT	C	G	CGCGAGCATAGACCATAGTTTTTCTTACATCT CTCTCTTTTTCTCTCTCTCCCCCAAAAAGG GTACTATCTTGTGATCATAAGGGGTTGCTTG GTTAATCAAATGATTTGAAAAGGAGAGTCAA ATCATAACCAAGTTCTTCAATCTATCTCATGTT TTTTTATCTATTCAATCAGTTGAAGTGAAA TTGAAGAGCTTATTCTCTTTGCAAGTTGAAGA CACTCATACATTCGAAACATACATACAT		NA
Ca-II-SNP595	27.53	Ca-desi-LG(Chr)4	520748	TGCTTGGCATGCGAGTCATGCTTGTATACTATGA TGATTGTATATACATACTCAGTTGTTGTTGTTATC GTGCCGTAATTGCTTTGAGGTGTGAATTTG	A	G	ATTAACACCAAAATTAATCTCCGCAAATTCACAC CTCAATCACACATCAAACATTCATAACATCAATT ATGAACACATAATTACATCGAACTTAATCAAC		NA
Ca-II-SNP596	28.74	Ca-desi-LG(Chr)4	533777	ATTACTGGCCATCTTACTGAATTTAATATTTCTGTT GAGGGTGTTTTTCGATGTTTAGTTTATTATAAAGT TGTTATAATATATAGTATGGAGAAACTAT	G	A	GAATGGATGAAATTAAGTTCCACAGTATTTCA TTTGTCCAATCTCACTCCAATAATGAAAGATC CTGTTACTGCCATAACAGGCATAACATACGATC GAGATAGCATTGAACATTGGTTATTCACAAACA AAAACACTACTTATTGTCTGTCAAAAACAAC CTCTCCATTAGATTCTGATTTAACACCAAAACCA TACACTTCGTCGTTTGATTCAATCTTGGTGCAC		NA
Ca-II-SNP597	29.95	Ca-desi-LG(Chr)4	592505	AATAATGGTCCCTCAAATATTTACATTTAGAATTT TGGTGTTTCTTTTAAAGTCAACTCATGCGTATCAT TTGAGTTTTTGAATGATTTTTTACAATTA	T	A	TGAATTTTTAAGCACAAAAGTTAAAACCTTCAT ATTTAATTAATCCCTTATTAATAATTTCCAATTT TTATAGGGAAGATTCTTAAATATGCTCTGAAT		NA
Ca-II-SNP598	31.16	Ca-desi-LG(Chr)4	646933	GAGCAAGGTCTTCAGGGTGTCTTGTGAGGAAGA TCACCAACCCATTGGCTCTATCATCATCATCCCA GGATTTCAATCAATGGCAATCCACACAGGTAC	G	T	AGACAATAACCGAATTTTCATCATGAATTAACAT GGTAGGCTCTGATACCACTTGTAACTATCCAT GCCAATTACATGATGAATAACCAAGGCGGAA G		NA
Ca-II-SNP599	34.79	Ca-desi-LG(Chr)4	678912	TAGTTTTTTTTAATCTTCGTTTTGTTCTTGTAAAGT TTGCACCTTAACCTTACAACCTATCTAATATTAGACA TTAATCGTTAATGATTATAAATTATGCAA	T	C	TCTTTTATAAATATTTGTTTTGATTATTTATCTT TTTTAAGTTCATTTATTTTTATAAATAATTAAT GTTAGTCTTTTATCATAACCAATTTCAAATT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP600	36.00	Ca-desi-LG(Chr)4	706953	GAGCAACCATCAAAGTTTGCTTAGCGGGAGC CTTCCACCATGGTTTGTGCGCTATACAGGTCCCTT TATAGTCTTAAATAGTCTTCTAGAGCTTG	A	G	AGATAAATGCATCTTTGGCTGAGTGACGATAAA ATACAGAGTGATCGGCTTCACTACGAATTATAT TAAATCTTGTACTACTGTGCTGAATCTGCCAA A		NA
Ca-II-SNP601	37.21	Ca-desi-LG(Chr)4	745785	TTAATCTTCTACAGTCTGGATCTCACCCATCATGA TCCGGTTACTCACAACTTAAATCCCAAACTAAA GGGCTAACCTTTTCCCCTTCTTGCCCTTC	T	C	AACGGACTTGGTGTGCTGCTGGTGGCATGGC ATCAGCTAAAGCTGCAGATATACAGGATGTGGA CCAAACTGAAGGATCCTCAAAGGAGGTGGAA AGA		NA
Ca-II-SNP602	38.42	Ca-desi-LG(Chr)4	754303	CTGCTGGAATTATGTACTCCTGCCTATCCAACG CTTTTGCAGCATGTTATCCTGCATAACTGCAACCT CTGAACCTTGTGTACTTTATAGGTTGCTGC	T	A	TGACTTGACAATGAATTCATTACGGTAAATCA CAATATCTCATCATGACGAAATGTCAAAGCAAC TAAATTTAGAGAACAAAATTGGTTAAGTTTGATC TAAATGCTGCTACAGTCTGTGTAGGAAATAAT ATCCTAAATCGAACAACAAAGCATTTACAATGTGC GACCAAAATGTATGTACATCTACCGCAACAACC TCATGCATAAAATTTAATTGTAATCTTATCTTAA TCTTCTACACTCTGCATCTCAGCCATCATCATC CAAAGTCCCACATTC AATATGGCAATCTTGGT TTCTTGCTCCTCATTTCTTCTACACTTCTGTCC CTCTTTCTTGCACTTCAACCTTGCAAAATCTGAA CCATTCTCGGCGTGAACATGGACAAGTCGC CGACAATCTTCCACCACCGTCAGCCACCGCGA AACTACTACAATCACTTCAATAGAAAAAGTCC GATTATACGGAACCGATCCAGCCATAATCAAAG CAGTACCAACAGCCCAATCCCAATGCTAATC GATTAACCTACATGTTCTAATCTAGACAAAATTT CCTAGGCTATGAACTTTGTAATCATGATGAA AGCATGCATAACACCAAAAGAAGGAAAATGAA		NA
Ca-II-SNP603	39.63	Ca-desi-LG(Chr)4	769894	TTATCATAATTTAAGCATCAATTTATGCTAGTTAT TTGACTTTTGAAGGAAGGCACCTTGAATTTAGGAA GAAATCCCCTGCCTACCCATCTTTATCC	G	C	CAAAGTCCCACATTC AATATGGCAATCTTGGT TTCTTGCTCCTCATTTCTTCTACACTTCTGTCC CTCTTTCTTGCACTTCAACCTTGCAAAATCTGAA CCATTCTCGGCGTGAACATGGACAAGTCGC CGACAATCTTCCACCACCGTCAGCCACCGCGA AACTACTACAATCACTTCAATAGAAAAAGTCC GATTATACGGAACCGATCCAGCCATAATCAAAG CAGTACCAACAGCCCAATCCCAATGCTAATC GATTAACCTACATGTTCTAATCTAGACAAAATTT CCTAGGCTATGAACTTTGTAATCATGATGAA AGCATGCATAACACCAAAAGAAGGAAAATGAA		NA
Ca-II-SNP604	40.84	Ca-desi-LG(Chr)4	846652	AGCGGGGCCAAACTTAAATACCTCTAATTTGCGG TTGGTTCGGTTGCTGTTGCGGATAATCATGTGTTG TGTTAATACATGTTTTTTCGTATATTTCT	T	A	GATTAACTACATGTTCTAATCTAGACAAAATTT CCTAGGCTATGAACTTTGTAATCATGATGAA AGCATGCATAACACCAAAAGAAGGAAAATGAA		NA
Ca-II-SNP605	42.05	Ca-desi-LG(Chr)4	909120	ATTGCAACCTCCAAGGAGTAGGACAAGTTGTTTT TGAGGGGGGGGGGGTGTATTGCTAGGATACAT ATTAAGAGAGTTAGTTTCTAGTAGTTAGTTGG	C	T	GAACTCTACTCAATTC AACAATGTTTACAATC TTCAATGATATCCAATCCAACACAAAACCTCCCT ATTTATACACAATAATCTTAAACAAAGCACATA		NA
Ca-II-SNP606	43.26	Ca-desi-LG(Chr)4	937976	GACTTTGTAAAGATTGCTCTATCTCCAACAAGCC ATCACTGCTTCCATTGCATGGACTCTGACATGTTG TTGTAGTTGTTCTTTGAAGGAACACAGCAA	T	C	ATATGTATCTGCGAACAAGTTCACAGCATCCAA ATTATTTAAATACGATTGAATTTGCAATTTTGATGT TTGCGGTTTGTGCTGCAGTCGCACTATGTTTT		NA
Ca-II-SNP607	44.47	Ca-desi-LG(Chr)4	984185	GGAACAAGCTGAGTTAAGTCAGCTACAATCAACT GCAGTTGCTTCACTACCTAATGTTGTTCCAGC GATTCTCCGTGAAGTCTATTATGCCCATC	A	G	ATTAGAGTGAGACAAGGAACCTGATATGCTCTT AAAAATAACTTTTTAAAGACTGGAAAACAGAAAT AATAAGTTCACTGCAAAGGATTAAAAAATGT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP608	45.68	Ca- <i>desi</i> -LG(Chr)4	1018306	CTGCTGGAATTATGTATACTCCTGCCTATCCAACG CTTTTGCAGCATGTTATCCTGCATAACTGCAACCT CTGAACTTTGTGACTTTATAGGTTGCTGC	T	A	TTCTCCAAGCTCAACAGGTACAAGAGGGATG AGGGAGTGTAGAACATCTGCAATCAGGGGGCG GTAAATGGCTCTGGTTGCACACATAACACAGC CAC		NA
Ca-II-SNP609	46.89	Ca- <i>desi</i> -LG(Chr)4	1147249	CCAAGGCTTAACAGATTGTTCTTCATGTTGGCAC ATACAACACATCACATATGAATGATTGTTGTCAT CTCTCCTTTGAATCATCACITTTCTACTC	C	A	TTCAAATCACACGACTGACCATAAATATTGGTT TGTGAGCATTGATGAGAAGGTGAAAAGGGAGA TCAGATTTGCAGATAATAGTTCAATAACTACAG AA		NA
Ca-II-SSR192	48.10	Ca- <i>desi</i> -LG(Chr)4	1213958	TGGTCGTGCTGCTGTTAAT	(TA)16	(TA)14	TTCAGCTGTTTTCTCCACG		59.35
Ca-II-SNP610	51.73	Ca- <i>desi</i> -LG(Chr)4	1346021	TTTTTTGTGATTTGTTGCTGAGCGCGACGTTT TTATTTTTTATTTTTTGTATAGTCCGATGCTTT TGGGTTTAGATTGACGAAGTAGTTTTAGT	T	C	AAAGGCACTCCTCCAACTCTTAACATGTCCT TGTAATACTTATGTCTCGGATTTGTAATGTTG ATGACGTCGAAGTCATTGATTGAAATTTGTAAT		NA
Ca-II-SNP611	52.94	Ca- <i>desi</i> -LG(Chr)4	1749663	GATGATGTCGCTGAGCCTGCACAGATGGAGGAG GATGTCCCTGAACCTACACAGATGGAGCAGACTG AGGAGCAGTATGTTGAGCCTGCACATGATGATG	T	C	ATTGTGTCAACACAGATATACCACCGATCCTC CGGGGAATCCGGGTTACTGATTGTGCTTAGGC TCAACATCATCAGCAACATCATCTCAACAT CA		NA
Ca-II-SNP612	54.15	Ca- <i>desi</i> -LG(Chr)4	1785296	GGATGAGGACGGGTTATAATTATCGTGAGCTTGG GCATTTTGGATTGACTAGGGGATCCGGATGAGTG TTGATGGTGACAGTAATGAACCTACTCAGCGT	A	T	ACTCCTTCAGCTACTCCATTACACTTCACTTCAT CACCCCTCGTGTAAACCGTGTTCCTTACCATCAA CTCCTCTTTTAAAGTTGTTTTCCCATCTTGCA		NA
Ca-II-SNP613	55.36	Ca- <i>desi</i> -LG(Chr)4	1850658	CGATTTTTATGTAGGAGTAATGGTTTTCAAACCT CAACACCACTGATTTAACAATTTGTTCCACCACG ATTTGACGAGTTTTGTAAGTGTGTAAT	A	G	TCATTAATTTTTCATTTCTTTGAAATTTACATGAT ATTTAATAAATAATTTAGAATGTAATGTATAA TAGATTAATAAAAATAGTAGTTTTAAAAAAT		NA
Ca-II-SNP614	56.57	Ca- <i>desi</i> -LG(Chr)4	1895597	CTCCATTCAAACGAGTTTTAGATATGCCAAAATTT ACAAATTTCTGGTCTTTATTGCTGAGTTGGCTA GTAGGTGGGATGGACGTAGTGGGGGATTTA	A	G	TTCTCATTTTCATATTCTTTCAAAGACTCACCT ACTATTGGTAGTCCTATAGCTAAACATACGTCA CTTGAGTAAAATTAACATCCTACCTCTAATC		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP615	57.78	Ca-desi-LG(Chr)4	1931418	AATAAATACTTTAAGTTTGTATCTTACTTAGTTTAAA TATTTGCTTTTGAAGAGAGTGGTTACTGGGGT GTTTGGTGCTATTTTTCCCAATAGTATACT	C	T	CATGTAATTCGGTTAAATACATTATTCTCAAACA CACAAAGATTTCATACACCAAGATGGCGTGACTG CTTCAAATGCGTGGAGGCTGCAATTCTAAGAGA TCTGTTGATCCCCTTCTCAAGAATCTTGCTTTC TTACACAATGGCATCGGTAGCAGTCACCAAGAT ATATCCAGAAAACAAGGAATATCTTTTGCCATT CA		NA
Ca-II-SNP616	58.99	Ca-desi-LG(Chr)4	1983063	TGCGGCGGTGGAGGCTTCGTCGGCAGACAATGT GCCGTAGCGTTTGAAGAGACTGAGGGAGTGGAA AATGTTTGGATCAAGCGGTTTATGACGGCATCC	C	T	CAATACTCCATAACCGTTCCACCACCATCAACG GAGGCTCCACCCTGCAACCAACCTTACCGC CTCCTTCAGTATATGGCTCCACACAGCGCA CTC		NA
Ca-II-SNP617	62.62	Ca-desi-LG(Chr)4	1995574	CCTGGGGCGGTTTTAATCAACCGCGTCGTCGTT TAGGGCATAAACGTTTATTTTCCAGATTTTG TAAGTTCATTCTCACTCTCTTTTCGTTTA	G	C	TCTTCGATTTGTTTTCTTCAGAAGTTTTAGGG TTGACAGATTTGGGGTTTTCAGAAATTTTAGG GTTGTGAAAGGATGTGTACGGGATAACAAAG CA		NA
Ca-II-SNP618	63.83	Ca-desi-LG(Chr)4	2083734	AATCGCTCGTAGGAAAATTTACCACGGACAA GCTGTGGGACACACTTACCTAGGGATTGTCGCTG GGTAATATGACCCACTGAGTATCTGTGGGTAA	T	C	AAATAGTAGACTTGTCAAGGATGATCCGTGGG TAACGTAACCTACGACTTTTCCGTCGATAACTA TCTACTATTTTATCTACGGCAAATCTATGGGCA AC		NA
Ca-II-SNP619	65.04	Ca-desi-LG(Chr)4	2111259	CACACATATCCCTCTCTTTCTGTGAAATTCTA AGCTTTCGTTTCTCATCTTTATGAGATTTTTGAG GGCTATATAGTGTACGTGGAAGGAAAAAC	A	G	CATTTTTCTTTAAGACATCCAGACATCATATCA ATATCTTACGAACCGCTAATTTAATATCTAGCCT AACTCTGCATGAGGTAAGTCTTACCTTGAA		NA
Ca-II-SNP620	66.25	Ca-desi-LG(Chr)4	2192586	ATTATTTGCATAAATATGAGAGACAAGTGCAG ATGAGACTTCTACTTTTGGTGGAGTCCAAAGTTAG TGAAGATGAGACTTCTACTTTTTGATGCAG	G	T	AAACTCATAAATCTATTCCAATAAATCTCATTGA TATTTTAACAAAGTGTCCAATTTAAGCTTCCATG TTTCCCTCCTTTTGAATCTTCACCAACTTTAC		NA
Ca-II-SNP621	67.46	Ca-desi-LG(Chr)4	2220409	TTTGGAACATGAGCAAAAGCTTTGAGTAAATCAA TGCCATATGTGTGAGTAAATCCTTAGCAACCAAGC GTGCCTTGTATCTTCAACGGTGTAAACAT	A	G	GATGAGAGCTCTTGAGAAGCATCAAACCTTGG GAAGCATGACGTTACCTACATGAAAGAATATTG TTGGCTATAAATGGATATTACTATGAAATATAA T		NA
Ca-II-SNP622	68.67	Ca-desi-LG(Chr)4	2259951	GCTCAGCCACATGCGAAGCTCAATGGTTGTAT ATTTGTTAGCTGATTTCCAGATCTCTCATTGAGTA CCTGTGCAGATTTTTGTGATAAATAAATCAG	T	C	ATGAATGACCCCAACTTGCATTTTGTGCGGAAC AATTTGGCAATCCATCTCAATATGTTTGGTGGC CTCGTGAATACCGGATTGGAAGCAATATACAT G		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP623	69.88	Ca- <i>desi</i> -LG(Chr)4	2295325	AAACTTTTTGTTTTAGTTCCTATAAACGTTTTACT TTGTTTTAGTCCTTCCCCACITTTTTGATTTGGACT TTGTTTTGTTTTAGTTCGTGAAATATTT	A	G	GTTGGAATTGATCCTTGTAAATTCATTTTAGTC CTTATGTAGCTCATATTGGAGGGACTAAAATCA AATGTTCTACATGGGGATCAATCCACACAAA		NA
Ca-II-SNP624	71.09	Ca- <i>desi</i> -LG(Chr)4	2301546	GATAATTTGTTTATTTGTTTTACTAATCTTTCATTTT AAAAACAATTTTTTTTTTCAAATCTGGTGCCGA CTTGTTGGGTGTGGTGGGCTCAATA	T	C	CGTGTTATGAAAGAGTTCTAACGAACAAGAAA GCCACCCGGTCCAATCCTTCCAACATTGGTG GGCCCATATGGCCCGCATCAAGCAACCTGAA CGT		NA
Ca-II-SNP625	72.30	Ca- <i>desi</i> -LG(Chr)4	2432885	TTCTACGGTTATTGATCTTGACTCCCTTTTTTTC GTCTTTTTAAAATTCAGCCTGATTACAGTGATTTAC ATACTTTTGGATGTGTGTTTTGTTCCAC	T	C	GTTGTCAAATGTTTGGATTTTGAAGATTTATG TAAATTTATTTGAAGGGTGGTAACTGATAGATAG AATTTATCTGTCATGCTGTGCTATTTTCTTTGA GAGCAAGATAGAGATGAATGGTGTGTGAAAG CACGTTGAAGTGCCAAGT		NA
Ca-II-SNP626	73.51	Ca- <i>desi</i> -LG(Chr)4	2510477	CCCAGATCTATCCTCACTTCTCTTCAACATTTTT GTTCACTTCTCTTTTTCTGATCTGTCTTACCTC TTCAGCATTTAATTTATTCTCACTCCCC	G	A	GAGATAGAAAAAAGATAAGCAATGGTGTATT GATGGGGAAAATGGAGGGCTAGTTGCTTCTCG AGATATAGAAATTAAGTCGAAAAAGAGATACGA AG		NA
Ca-II-SNP627	74.72	Ca- <i>desi</i> -LG(Chr)4	2618893	CAATCCGCTCCGTCGACCGTCTGGATGTCGCCG TGATGATCGTTATCTCTTAAGGTAAGTCACTGAAT CGACTAATTTCTAATATCTTTTCATTTTCT	A	G	TGACTTCATTGATGATGACTCCATTGAGTAA ATGGTTAGGGTTTTCAATACAAATGGGGCTTT TTCAGTAAGACTCGATTTCCGTAATAAATGATT T		NA
Ca-II-SNP628	75.93	Ca- <i>desi</i> -LG(Chr)4	2673525	CTATTTACATAATGTAAGTAAATTTGTTTTTA CCATTTTCTCATTTTTAGAGCAGTAAACAATATTT CAGTAGGTAAGAGTTTTCCGGTAACCTC	T	C	GATTTTTAAGTTTTTCGGAATTCATTCTGTAC CGGAGAACTTAAGAAAAGTTTTTCGGAAGTATG CTGTGTACCGGAAATCTTGTTTTTGAGTTTTCC		NA
Ca-II-SNP629	77.14	Ca- <i>desi</i> -LG(Chr)4	2761588	TAATAGGTATTTTTCTGTTTTAATGTTAAATTTG AAATACCCACTACCTGCACTAGTCCCATTTGGCCT AGTTTCAGGTTGCAGCTGGTGGTGAAGT	T	C	CCAAGTTGACATCTAAGGGAGAATTAATAAAG TGGTAGATTGTAGCATTTTGTTTTTCTTGGGA TTAAATATTTGTCATTTGTCTGTACCATGAC		NA
Ca-II-SNP630	78.35	Ca- <i>desi</i> -LG(Chr)4	2774441	TTTCCAGAACTGCTTCAAGATCAATCTTGGTTTT CAGAACTGCTTTCTTGTGATGATTTGTGATGTTT GATACCTATCTGTTTTAACATACTCAAAA	G	A	TGTTGAGACAAAATCTCAATTTAATGTTTTGATG AAAACAACAAAAGTTAATTAAGAATTCATTA ATGATTTCAAGTGTGTTTTGATTTAACATGTTG		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP631	79.56	Ca- <i>desi</i> -LG(Chr)4	2792460	TAGTGGAATCTAATGGTTGTGAGGACTGGACTA GCCCAAATTGGGTGAACCAAGTATACCTTTTTGTG TCATTTTCTATCCTTATCTTTAATTATTG	T	C	CGATTATGGAAGTGTTCATGGTTGAAGAAGGT GGAAGAGGTTGACAAAATATGGAACAATAGAG CAGCAAACGAGAGAGAAAAGCAGAAAGGTAA GACTAAGAAGAACAAGAACGTCACTCTCCTAGT GCATATCTTTGTTTCTT		NA
Ca-II-SSR193	80.77	Ca- <i>desi</i> -LG(Chr)4	2828033	CGATTCTTTTGTCCATTTCCA	(AATA)6	(AATA)8	CCCATTTTGTGCAGATGTTG		59.92
Ca-II-SNP632	83.19	Ca- <i>desi</i> -LG(Chr)4	2851816	ACGGATTTCCGGTCCATTTTGTGAGTTGTACAAA AATCGCTCGAAAAGCCAGATGATAGCATTCTTCT CCAAAATTTATAACTCTGTTTCGGGTTTCG	T	C	TTTCATCTGGGCTTTTCGGTTCGATTTTCAGACC ACCAAGACTAATATGATCCGAAATTCGTATTTTC CGAAAAGACAATTGTTAATGTTTAAATCTAGT		NA
Ca-II-SNP633	84.40	Ca- <i>desi</i> -LG(Chr)4	2879232	TTGTGTTATTTGCACCATTTGCCCTTGAGAGCCA ACTTGTCCTTGAACGGGAAATCTATGAAGGGAAT GTTCAACTCCTGACAGATGACCGTCTGAAT	A	C	TCTCTCTCTCTCTTTAATCTAGTCTTTAACA TAGTTATTTTCTATTAAGGCATGGGATGGGAG GTGGCAAGCTATTGTTGATGATAAGGATCTGAA		NA
Ca-II-SNP634	88.03	Ca- <i>desi</i> -LG(Chr)4	2919277	GTGGTGCCAGATTCACAGGTAGAACGGCAGGTA ATGTTTTCGTTTGTGCGGATTTACATGTGACTAT ATATCCGAGCAAACATTCACAATTTCTCTGA	T	G	ACTATTTTATTGGTATGACAATTCGCAAGAAAAT CCGAGGAAATACCTGCGGAATTCGCTGTGA ATATTTACAGCGGGAAACATTCGAGATAAAAT C		NA
Ca-II-SSR194	90.45	Ca- <i>desi</i> -LG(Chr)4	2986218	AAAACACGAATGCTCGCAC	(CA)8	(CA)9	TTCTGAATTGCATGTGAATGG		59.86
Ca-II-SSR195	92.87	Ca- <i>desi</i> -LG(Chr)4	2993847	TCACTGACTAAGTGCATGTCCA	(TAA)5	(TAA)6	TATTTCAACCTTGAAGGGGC		59.37
Ca-II-SNP635	95.29	Ca- <i>desi</i> -LG(Chr)4	3050876	GAATCATAATTAACCTTTCTTAATTAACATTTGTTA TTTTCTCAAACCTTACATATGGAGTTTGTCTCAA CACTCTCCCTTTTGTGATGATGACAAA	T	C	TTTAAATCTGTCAATTTAAAACTGCATAAAT GAGGGGAACTTTAAGCTCTTTAATACTTGA TATTAGAATCAGAATTAATCTAAATTAATAT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP636	100.13	Ca- <i>desi</i> -LG(Chr)4	3089120	AATGGTTTAGGAGGTTTGTGATGAGGGTGTTCGGA GCACAGAGGTCCTAGTGATGACACACTGTGAATA CCATGTCTCAGATAGGCAGTGGGCTCCTTCAT	T	C	TTCAAAGGATCTAAAGGCATGACAAATTCAG TATGGTACTGAAAGGGTTCATATGGAATTA TCCACCACCTTTATGTCAAATACTTGATACGT		NA
Ca-II-SNP637	103.76	Ca- <i>desi</i> -LG(Chr)4	3142206	ATATTAATGACATACCTATTAGTCGTAGTATTCCT AGATGCAATACTCGATTGGTCCATGCTTCAACAAA TTTTTCCTTATGAGGATTCAACCATGTGT	T	C	GAAAATTGTTTATTGTTCTGAAGAGAAGGAGTA CGAGGAACCTTTTGCATATATTTGAGCAAGCATG TGTCGATAATATTTTCTTTGACTACGTCAGA		NA
Ca-II-SNP638	104.97	Ca- <i>desi</i> -LG(Chr)4	3202194	AACCAACCTCCGGCCTTGATGCTAGAGCAGCTGC AATTGTAATGAGAACAGTAAGGAACACCGTGGAC ACCGGACGTACCGTGGTGTGCACGATCCATCA	G	A	ATATTGAAGCAATAAATCTTTAATATGTAGTAC TTAAACAAAATGATGAGACTGAGAGTTCCTTAC CTCATCAAAGGCGTCAAATATGTCAATACTTGG		NA
Ca-II-SNP639	106.18	Ca- <i>desi</i> -LG(Chr)4	3220236	TGCTTTCTCCTCTCCAGACCTCTTTCTCCGATC CGACCGTTGAATACGAAGACCTAAATGTTGGAAA CCTGCTGTCCAAAAATCAGCTCGATCCAACG	G	A	TAGGAAAGACAACCACAAAAGAGAAAAGATCA GAAGAGTAACCCTATTCCCAATTTGTTAAACC AGTCTCAGAAAAACATCGATTACGCATTGTTA A		NA
Ca-II-SNP640	107.39	Ca- <i>desi</i> -LG(Chr)4	3270115	GTGGTTGATTGTACCTTCAAACATATGTGAGTT TCAATAGTCCATTGACTCTACTCAATATTTCTTCTA ATGATAACTTATGGGCATATCATCTATTT	C	T	TATTGCATTGAACATACAAATGAGTTTACCTTGA AATACAGAGGAAAAAGTTTGTGGTTTGATCGTA GGTTCTTACCAGAAAAATCATGAGTTTAGAAATA		NA
Ca-II-SNP641	111.02	Ca- <i>desi</i> -LG(Chr)4	3301962	TACCATCCTTATGTTTTACATCTTTGCAACTCAAT GGGAAGGGAAGGAAACAACCTTTTTGTGTATACG TGATAGTGATGGTCAAGAACATTTTTGTAT	A	G	AAAAATGATAAAATTTGTTAAATACAAGAGTC ATAGAGTGGTGATATTGTGTGACTACTGATCAC AACTTTTTATAGAAATAGTTGCTTGTTCATAAT		NA
Ca-II-SNP642	112.23	Ca- <i>desi</i> -LG(Chr)4	3363537	ATCTCATTATTTCAAGCAAGGTTCTTTTCATCCTTT CAGCCATTCCATTTTCTGAGGTGTGTTTTTAAA ATCCTATGTCTATTCACACCATGAGTTTT	G	T	GATTGGACGTCTATAGTTGAGAATAAGACTGAA AAAGGATTAACCTTTAAGAACAGACAATGGTC TTGAATTTTGCAGTGAAGAGTTCAGTATTATT C		NA
Ca-II-SNP643	113.44	Ca- <i>desi</i> -LG(Chr)4	3390135	TACTATTCCTAACAGAATCATATTGGTTCTGGTTA GGTATTGTTTCATTGATTCAACTCAGCTTAGTCATA AATACCAGTGGTCTATCAAATAGGGATAG	A	C	AGGTAGCCTTGTGATAAAATTTATCATTAGAG AAGAGTGAAGAATCTAAAGAATATAATCAAAA CATGATTAACGTATTATTGATTGTCATCATAGT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP644	114.65	Ca-desi-LG(Chr)4	3450900	TGTGATGGTTCATAGTGTGGTGTGATGGTTCATAGTGT TTGTGATGGAGAATAAAGTCGAGTTGATAAAGGTA TGTTTGAGGCCGATGGTGGTCAATGTTTG	C	T	CGACGACAAAGATGTTGAGTTGATGTTTGTGATGT GTATGCACAATGGTCACAACCTCGGCACCATCTA GTTATATGTTACCTTTGAGTATGGTCCTCCATC A		NA
Ca-II-SNP645	115.86	Ca-desi-LG(Chr)4	3480006	CGATTTTATGTAGGAGTAATGGTTTTTCAAACCTT CAACACCACTGATTTAACAAATTTGTTCCACCACG ATTTGACGAGTTTTTGTAAAAGTGTGTAAT	G	A	AAACGCAACGCAATGATGTACAAAATCATCCA TGGCTGCTAAAGTTCATAAAAAACACAGCTCTT TCTCAACAGATGATCAGGTGTGCGTTTACTCAT TTCATAGACTCAGTGCGAATGGCAGAAAAAAC TCTCTATGATGCATCAGTGAAGATGCCAGATCC AAAGAGTTCTCCACCAGATTCTAACTCTAAAGA ATTTTCAAATGGTCAATGGATTTCTCTAGCTC CTGCTCAATCAT		NA
Ca-II-SNP646	117.07	Ca-desi-LG(Chr)4	3510460	CACCCGCAGCCCGGATTAACCGAGCAGCCCGTA GCCCAATTTCTATAACGGGCGGGTCAAAGCGGG TACACGGGTCTACGGATAAATAACATGGATT	C	T	TATAGTTAGATGATTTTTTTTCCATATAATTTGA ATCGGGCGGGTGCAGATATCCGCAGTCCAAAA ATCTTTAACCGAACCCGCCGTTATAAACCATG T		NA
Ca-II-SNP647	118.28	Ca-desi-LG(Chr)4	3524948	ACAAAGGCAGACGTTTGTGACGGCTTTTGCCTC ACAAAAGGCAACGTACTTTTCAAACCTTTGTGGCCG CCACAAATGTTTGTGACCACCGTATTTGTGG	C	T	GAGTCTTCACAACAAAAACAAGGATTTTGTG AGGGCCAAAAGCCCTCACAAAGGGGAAGAAGC AGCCACAAAGGGGAATTTGTGGCGCCTTAG ACA		NA
Ca-II-SNP648	119.49	Ca-desi-LG(Chr)4	3612793	ACGACATGTGTGCGTGTCCACCGACTTGTATC AGACATCAAACAGTTTTCAACTAGGTGTTACAT AGGTTAGGACTTCCACTAATAGACTAGTCAT	T	G	CTCATTCACCTGAATCCTAGAAGATTTCTTCAC ACAAAAATACTATTTTCATGTTACTTAACTTGTA AGGAGCATAAGCCCAAAAAAAGTGTCTACCCA		NA
Ca-II-SNP649	120.70	Ca-desi-LG(Chr)4	3645705	GTTTATGTCCAAACTCGATATGGTCATTAGGAATT AGTCAAGTTGATTTTCAAGTACTCGAAGAGGTACA ATAGATCTTGGTATCATATTTGATTGCGGT	T	C	TCATCTTGCAAGAGTAATACATATCTTGTGTA GATTTCTTATCATTATGTCACCAACATAGTATA ATCAACATATCATATAATTGAACGATCACCTT		NA
Ca-II-SNP650	121.91	Ca-desi-LG(Chr)4	3666024	TTGCTTCATATATTTGAATGAAAAGTGTGACTTTAT CTTTATTTTCGCTCTTTTCGACACACTCAAATGAAT CTTGGCACAACTTATACTTTGTCATATT	G	A	TTAGTTTTTGTGTTGGAACACACAATCATGATG GAGTGGATACTTTAGACGGTCAATTCATATTTGG GGCATTAAATTAATGATTGAAAATTTGTTAA		NA
Ca-II-SNP651	123.12	Ca-desi-LG(Chr)4	3702341	AATTGAGTCATTGGCCAATACTATTTTATATGTTA TTATCTTTTATCCATCTTTGTTTGTGAAATGAAA GACTTGAAGTCTATATCTGATAAATAAT	C	A	TTTATAAATATTTATCTAATCTTTTTTGTGTTT TCTAGTGTCTAACAGCCATTAATATATATTT ATACATAATGAATCAATCTTCTTAACGATA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR196	124.33	Ca- <i>desi</i> -LG(Chr)4	3728850	AATTTAACGGTTGTGATTAAGTAT	(AT)6	(AT)7	CCGACACAACGTTATTGAATG		57.34
Ca-II-SNP652	125.54	Ca- <i>desi</i> -LG(Chr)4	3735411	TTTAGTTTGACCGAATTTGGTTCAAACCGGTCTGA TATGATTTAGTCAAATTTGGTTCGAATCATCTAGT CCAATTTGGTTTATTAGTTCTGATTCAT	A	C	CTTCTCGTGTTCACCTTCAAACCAATCACAC TAAATCAGACCAAATCAAATCAAATGAATCATA TCATACCATGCCAAATCAAATCAGGTTGGGTCA		NA
Ca-II-SNP653	129.17	Ca- <i>desi</i> -LG(Chr)4	3789814	GAGCTGCCTGAAACCAGTTCATCACAACTATTGTG AGGGCCAAGCCAAAAGTGTATCCTAAAAATGCACT CTTGAAATATTGGGCTGTTTTCTCTAGA	A	T	CTTACATTTAATAATTTGGTTGGCACTCACTTGT ATTTATTTTATGATGGTAAGTGTTCCTTCAGGT ATCTTTGTAGCATTGGCCTTGCCTTTTGTATGT		NA
Ca-II-SNP654	134.01	Ca- <i>desi</i> -LG(Chr)4	3863231	TTCTACGGTTATTGATCTTGACTCCCTTTTTTTC GTCTTTTTAAAATTCAGCCTGATTACAGTGATTTAC ATACTTTGGATGTGTGTTTTGTTTAC	C	G	GAAACATCATAACACACAAAACCTTATGAGAG TGACTATATCCCATAAATGCGCATTGAGCAGAC TGCGCTCTAAGCTTATGTCTTTCAAATGGAGGT A		NA
Ca-II-SNP655	135.22	Ca- <i>desi</i> -LG(Chr)4	3932848	ATTACTGGCCATCTTACTGAATTTAATTTTCTGTT GAGGGTGTTCGATGTTTATTATAAAGT TGTTATAATATAGTATGGAGAACTAT	A	G	CGTATATAAAGAACATTAAGAGTTTCTTGG TGCATAAAGACATTAATGTTTGGGGTATTACT TTACCCTCACAATACATAAAACACTTGAAAAA		NA
Ca-II-SNP656	136.43	Ca- <i>desi</i> -LG(Chr)4	3954869	ACATGTATCTACCAGCTGCTACTGCAGCTAATGG GATCAAATTCCTCTTCTCAATCAAGGCTGGAG CAAACGCAGGAAATATGGCTCATATTGGAAT	T	C	ACTGAGACACAGCAAGATCTTCATTTCCCGTGG AGCTTCCAGTATTCAGTGTGCGACTAGGAGCG TATCCACAGGTGGAGTGATAAATGATCCAGAA GG		NA
Ca-II-SNP657	137.64	Ca- <i>desi</i> -LG(Chr)4	3975881	TATCTTCTATTTCCATTTACGATTTTCAAGTCTTGT TGTGTAGATTTTCAAGTTTTATTGTTATGTGAAAT GTGTTTTCTGTTGCACTTTGGAGATTGT	T	A	GCAGCAACCATATAAATTAACACTTACATAATAA TCTCCAAATAAGCCACTGTCACATACACAAATT AGAGGTGTATAAATTAATAACTACTTGACAT		NA
Ca-II-SNP658	138.85	Ca- <i>desi</i> -LG(Chr)4	3989112	CATGAGACACCTCCTTGATCTTCTTTTTCTTCT CCTCCTTTCTTTCTTCTACTTCTCAACTT TACCCTCCTTCTTCTTCTTCTCTC	A	G	GTCTTAAGGATTTGATCAAGAAGCATTCTGAAT TCATCAGTTATCCAATTTCTTTGGATTGAGAA AACCATTGAGAAGGAGATTTCTGATGATGAGGA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR197	140.06	Ca- <i>desi</i> -LG(Chr)4	3990820	GGGTTTCAACTTTTCTAGATCCTTC	(AAT)5	(AAT)8	CTCCCGAGGTAAGTGGACAG		59.91
Ca-II-SNP659	142.48	Ca- <i>desi</i> -LG(Chr)4	4003197	GTCTCTAAAATGTTTGAGATGACTCTGTCTTCCAC CGAACCGAACTATGACCGGAATACTACTTACTTAT TAGGAAGTTCGGAGGTGTAGGGTAACAACG	G	A	GGTAAATGTTGGATAAGAAAAGTACTCATATAC TTATTGTTTTAAGATTTTGGGTTGAAATGTTTTA CCAAAATCTTTGTGGATTATAGAACATTTGAT		NA
Ca-II-SNP660	143.69	Ca- <i>desi</i> -LG(Chr)4	4020449	TTTGTTCCTTCTAAACTCTTGATATCTGAACTAG CGTGATATTTAACTAATTTGAGTTGAAATTGATAG GCATTCTTAAGAGGGGAAAATCCTTCCA	T	A	AACTCCTTTTCTATGATGAACAAAGTATAGCAAT AAATGAAACCTATTGAATTTAATATAAATTTGTGA GAAAACAAATGAAATAAAATATATAAAAATG		NA
Ca-II-SNP661	144.90	Ca- <i>desi</i> -LG(Chr)4	4027639	ATTAGCTTTTGTGATTGATCACACACGCACAATAT TTGACATGTAGTTTATGTGTTTACTTATTGAAGCG TTGGTAGTGTCTCTGTTTGTAGCCACACGAA	T	C	GCAACAAATGCCACCCAAGAACAATATATGCC GATACTCAACCATTGGTTAGATCTGCTTTAGAT GGATAAATGCATGCATCTTTGCATATGGACAG ACTGGCTCAGGGAAGACCTACACCATGAGTGG ACCGGATCTGATGACTGAAGAGACATGGGGTG TCAACTACAGGGCTTTG		NA
Ca-II-SNP662	146.11	Ca- <i>desi</i> -LG(Chr)4	4030857	TTGAAATTAATCTATGCATATACATAATTAATCTAT AATTCATACCTGCTTCTCTGCTTTCCTGTGAGCC AATTCATGATCGTTGATTTCCCTCTGTTAC	G	A	ATACTAGTATGCCTCAGGAGAGTAGCTTACCAA ACTCAATTTTACATCTCCATCGAAGAGAATATT GAACTTGAAGGCTTCAGTTTTAATAACAGTGA		NA
Ca-II-SNP663	150.51	Ca- <i>desi</i> -LG(Chr)4	4085353	GATGTGGAGGAATTTGATGGAACCTCATCTTGTT CATTGGGGCTGGATCAGATCCTTATGAAGTTATAA CAAATGCTGTCAAGTGAGTTTACAATACC	T	A	TCACTTCAAAGATTAAAACATGAAGCCTAATC ATAGTAATTGAAAAAAGTCAAACTAACTTTTTA AGCAAGAACAAAGAAGATTGAAAAGGTAAGGC		NA
Ca-II-SNP664	151.50	Ca- <i>desi</i> -LG(Chr)4	4101088	CCAACAGTGGTTTTGTGAATAATTTCTACCAAATG AAACTGCCTCTATTGCCAGCTTTTCAGCTGAACGT GTTAAGGATATGTTTAGAACAACCTTATGT	A	G	CTGGAATATATAGTCAATGGCCAAAATCCAA AAGCTCCTAGCACTCCTAGAATTTGATTGAAGT AAGGAAACATGATTGCAATTCAGTTGTGAAA T		NA
Ca-II-SNP665	153.48	Ca- <i>desi</i> -LG(Chr)4	4131111	ATATAATTTAAAAGAGTTATGTTGCATACCACCGTT AGTCGTCGAGTTCTATCTGCCACCATCGAGAAACT TATCGAAGCTTCCCGTCCATGGAGGTTG	C	T	GGTTAAATCAGATTTATTGTAATTTGAGAATGA AAAGAAATGGATCTAATAATTAATAACAGAGA GGATGGTTGGTCGACCCGACGGCGGAGCTC TG		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP666	154.47	Ca- <i>desi</i> -LG(Chr)4	4176869	CACAAGAACCTGATTCAATATCTACATGCTTATGT AGACCTGATCGGGGAGATTCATTCTGGAAC CGAACCGGAGGGGCTGATCATTCTTCTGTTG	G	C	TTCTGACCACAATATAAAGGTTTGGACATCTTC TCATTGTGATCATAATAGATTTCCAACAAATAGA CAACGAGAAGAAGTCATTACCCAATCATGGCAA		NA
Ca-II-SNP667	155.46	Ca- <i>desi</i> -LG(Chr)4	4207427	GAGTAAAGAGATGTCTCATCTAGTTATTCCGTTTA AAAATATTTTTATTATTTTTGATTTTTATTGAGT TTTAAAGCCACCAAGTGGTACAACCTGT	A	G	CTCTCTATGTGATTTTGTTTAATTTAAAAA CATTTACAATAAATAATATTAGATTAATAAGAT GTGACATCTTTTTAATCTTTGAGTTGTAAAA		NA
Ca-II-SNP668	156.45	Ca- <i>desi</i> -LG(Chr)4	4299087	GGGTACCGTCATTTTCTCCATTTTGGAAATCAAG AGGTGGGTTTCCCTTTTTCTATCTTTCATTTCATGC ATGTAGGAAATAATGTGTTCCATAGGTTAG	A	G	ATTTACTCAATCTACACTAATCTATTTCAAAT CCCTAAATCCAACCAAGACTAAAATAAAAATCAT TTTCTTCATTTCAAACCTTAAACCCCAAATC		NA
Ca-II-SNP669	157.44	Ca- <i>desi</i> -LG(Chr)4	4379030	TTTAAAGATTACATTCTATCAAGGTTAGATAGGTGC TGGTATTGCTTTCTGGGTGGAAAGCAATAGAGGT TGAAATAGATCAAGGTTGACCTAGACTAGGT	A	G	AGAGTTTATCATGGTTCACCCAACGTGGGTTAC ATCTAGTCCTCACACAGTGAGATTTTCCACTAA GTGTTTAAAACAAAGGCTTCTTGATCTTACA A		NA
Ca-II-SNP670	158.43	Ca- <i>desi</i> -LG(Chr)4	4414547	TTTCTTTTTGTTTATGTATGATGATGCATTACATG GAAATTTGAAAAGATTAATAACTAATTCACATTTAAC ATTTCTTGAGAAAGTTGTCAGTGGGTTG	A	G	CATTCAAATAATATTTGACTGTATTTGAAAACAT AAAATAATGTTGATTTTGTGTTTGGAAATCTGCAA ATATGATCAATTGGTCCACACAATGACTTCTT		NA
Ca-II-SNP671	161.40	Ca- <i>desi</i> -LG(Chr)4	4442373	TTTCTCTTTCTCCTCTCTCTTTTCCAGCCTTCTCTC CCTCTCCCTCTCCCTCTTCTGCTTGCAAGTTACAGCC TTCTTTCTCCTTCTCCAGAATCAAAT	T	C	ACGACGAACGGCCACAGAGGCGGTGCGAGGC CCGCAGCGAGCAGAGGAGCGATCTGGACTGG AGGCAGAGTGAGGCGGTGCGACGTTTTTCATG ATCCGT		NA
Ca-II-SNP672	162.39	Ca- <i>desi</i> -LG(Chr)4	4466488	TTATTTATTCTGTTTTGTGCTTATATTTCAACTTAA GTTTTAGATATTACATATTTGATCGGTACATTATAG TGTATTTTGGCACCCCTGGGTATTCACGT	C	T	ACACAACTACGAACAATGGCAGAACTTGACTAA AAAGCTTTCCACCGAATTGGAGTACGGAATCAT CTCCAAAGATCTCGGTCAAAGCAGGCATATGC CA		NA
Ca-II-SNP673	163.38	Ca- <i>desi</i> -LG(Chr)4	4494394	GTATCAGTAAGGTACATTAGGCTTCCTATCATTG CTTGTAAGGGTAATGTCAACATCTGCTCCTCCTT CTTTCTTAGAGGGTTTCACTCTTGGTACTA	A	T	GATGCAGACAAAAGGGAAATTTACATGTGTCA ACGAAAGTTCACAAGAGACATTCTCAACATATT TAGTATAGATAACATCAATGGAGTAAGCAATCA C		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP674	164.37	Ca- <i>desi</i> -LG(Chr)4	4507431	TATGCAGCCTTTCATTTTTAGTTCCAATTCCTAATT TTATATGATATTATTATAAATTTCAATCATTCAAAC ATGAGGAGAGGGCTCTTCTTCATGGAC	A	G	AGCAAAAATATGAACACACTTTTCTTTGTTCGA CTCAATCAAAGCTACCAACTTTTTCCCTTAATT AACTTAATCTCGTTTAGCTTCTTAATTAGCTA		NA
Ca-II-SNP675	165.36	Ca- <i>desi</i> -LG(Chr)4	4514512	TTTTTTAGGCTCTATAAATAGAAGATCAACATTGTT TTCAATGTCAACATTTTTAATGCGAATTTATGGGC CATCATTGTCAAATGATGTTGATTCTT	C	A	ACGTTTCTAACACAGTTCAATTCTACGACAGGA TTGATTAACAAGGAGATTATGTGATCGACCAAC ACAAGCTAGAAATCACTTGTGAAGTATCTAGT G		NA
Ca-II-SNP676	166.35	Ca- <i>desi</i> -LG(Chr)4	4540552	AATAAGAAAGTTTCTTCTTTATCAACTGAACAAATG TTGGTTTGTAGTGTTTATCAATGGAGCAAATATTG TTTGTGCATTTCAATTTATACCTGTTAT	G	T	AGGGAATCATATATGGCTTGCTGTGACAATTTT AACACATAACACTACATATATCATATCAAACCTTA TTATAATAATTGTTGCATATTGATACAACATA		NA
Ca-II-SNP677	167.34	Ca- <i>desi</i> -LG(Chr)4	4563041	ATAGGTTATAAGTTATAAGCGTGTTTTTTTAAACAT TCCAAATAGATGCATTCAAGTAACTTATGAGCTTA TCATTTTTCTCCAATTTACTTTTATTA	T	A	AGTAAAAGATCAAATGAGAAAACAAAATATAAA TGACTAAAACCTTTAACTGAAATTAAGTTAAGGG ATCACAGATGCTATTTATCCATTTTTTTATTA		NA
Ca-II-SNP678	168.33	Ca- <i>desi</i> -LG(Chr)4	4580896	AAGAGCTCTGGTTCGACTTGGTGGGGTAGTGAGA GTAGATCCTGGTGTATTTGGTCTGTATCAAAG TTTTCTAGCAGTGTAGTTAGGAGTCTGGTC	A	C	CCTAGTCGATGTGGGATTAACCATCACATTTAA ACCCAATAGTCTCCCCCTCAAATGTGAGTCACC CATATTTTGTACTTGTACCACCATTATTACAAA		NA
Ca-II-SNP679	169.32	Ca- <i>desi</i> -LG(Chr)4	4590227	CAAAAAAAAAATCTTAATATATGAACGAGTCATGA AGAGGTTGTCTTGTATAATCTCTGTCACTTGGTC AAATGCTTAGCTCAGTTTTTTCTTCTC	T	C	AGTAGAAAGTAGAGAAGAGAGATTATGCACCT GATGCAACTAGAAATGAAGAACCAAAGCAATAT TCTTAGCTGGTAAAAATTGATTGAAATAGAATA T		NA
Ca-II-SNP680	170.31	Ca- <i>desi</i> -LG(Chr)4	4635664	GCTAGTGCGGGGGCAGTATTGGAGTTGCGGGTG CGGGGTTGGTAATGCTTAAACCGTCCATGCTCC GCCTCGTTGCCATCCCTAACTTGAATGTGTGT	T	C	TTTTTGTATTTCTTCCAGGAAATTTATTTGATAT TTGATTGATGAATATATGGTAAGCCAATTTCA ACAAAGGCTCCACTGAGTAACAAGAGAGTACT		NA
Ca-II-SNP681	171.30	Ca- <i>desi</i> -LG(Chr)4	4654094	TTCTTGTGCACGACCTAAATAGTTTGCCAAGTAC TTTCGCTTAGACAGAGGCAGAGGCTGGACCATGG TAGACCCAGCCCTGGTCATACCATCTTCGAC	G	A	CTTAAAGTTTGTCTTTGGCAAACCAATGTAGG GGGATCGCACTGATAAGAGAGATACTAGTGCC TTTAATACATGGAAAGATATCATCATTCCAGGT AA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP682	172.29	Ca- <i>desi</i> -LG(Chr)4	4663824	GACTTGTTGATTTTTGAGACAACAATCTGGTTTTG GTGCAAGGATAAATTGTTTGAATTTTTGTTTGTATTT GTATTTGTTTTGATAATTGCTCATTATATG	G	A	AAAATCGAACTTTGTCAAACCTTGCCAAACACA ATTC AACCATCCCCTTCTTGATTGCACATT CAATCCACAAC TATTATGATATTGATTTTAGTAC		NA
Ca-II-SNP683	173.28	Ca- <i>desi</i> -LG(Chr)4	4688141	AAACGCAGGTATATGTTGTTGTATAGTGCATACCC ATGCTACCTTTCAGGTATTTGCTGTACGTTTTGTC CCCGACCAGGGTCAGTGTCTTTGTCGTATT	G	C	ATTTGTGTAATTGTTGAGTTAAATGTATAAAAGA GCTCTGTGAATCATGTAAGAAATAAATGATGGT GAATAAATTATGACAGTAGCAATGAATGCTCTT		NA
Ca-II-SNP684	174.27	Ca- <i>desi</i> -LG(Chr)4	4698858	GAACTCTATTTCTCTCTTAATTTTTTAGGAAA GAACTAACCTCAAACCAATTTGGTTCTCAATTTA TATGCTACAATGATGAATCGTTGCGTCT	A	T	CACCAACTTTGCACTTCACCAAAAAATAGAAGT CTCATCTTCACTTGTCACTTCATAATTTAAACAA AACAAACAAAAATCGAAATTCATTTATCTCA		NA
Ca-II-SNP685	175.26	Ca- <i>desi</i> -LG(Chr)4	4702919	GGTTATGATTTTTATTTTTGTTGGTGCTTAGCT GTGAAAATAATGAATGTTGTGGGAGATATATGAG GAAATTGGATTAGTGATTACCCTTTTTGT	G	T	TAAAATCTTACAAATTTCCACCCTCTCACAAACCA ATCATATCAATATCAATATCAATAAATAAATAA AAACATAAAATGGCTTTTCTGTAATAATTCA		NA
Ca-II-SNP686	176.25	Ca- <i>desi</i> -LG(Chr)4	4710255	CACACTACTACTTTTAACTACATTCCTCATGGTTA TGGTCCCTTCAACTATTAATCTTAGATCGGTTTT CACTCGGAGTGAGTATTGTAATTTCTAAA	C	A	TGAACTTAAATATATCCAATCATTGCCAAAATAT TGAAACTAATAAAAACTGTACAATTACAATA TATCATTTTTACAGAGAAGAATAAATTCATA		NA
Ca-II-SNP687	177.24	Ca- <i>desi</i> -LG(Chr)4	4719601	TAGTGGAATCTAATGGTTGTGAGGACTGGACTA GCCCAAATGGGTGAACCAGTATACCTTTTTGTG TCATTTTCTATCCTTATCTTAAATTTTGTG	C	G	TAATTAGTAAGCTCTTAATTGATGAGAACATTAT GTACAATTTAAATGAAATCAAGAGGTTGTAAT AAAAACAATGATAATGAAGTGTGATATGTGTGT		NA
Ca-II-SNP688	180.21	Ca- <i>desi</i> -LG(Chr)4	4732975	ATTAGCTTTTGTCTTGTGATCACACACGCACAATAT TTGACATGTAGTTTATGTGTTTACTTATTGAAGCG TTGGTAGTGTCTCTGTTTAGTCCACACGAA	A	T	GAAAGAAACACTATATATGATACATTGTGTCTC GTCTTAACCTAACCATAGAATCACCTTAAGTGA TCGTAGCTAACACTGACACATTCGATACAAC C		NA
Ca-II-SNP689	181.20	Ca- <i>desi</i> -LG(Chr)4	4778314	CCTTATCTCCTTTTTATTTTTACCTGCACAACACT AATTATTTGTGAAGTTTTATTGTTACATTCTAAC AAAGAACATTATGTCTTTATTAATCAA	A	G	GTAATAGAAATGACAATGTTGATTACAAAAAT GGGGTTTTGAATTTGATTCCCTTTTAAAT AATTTATGTATTAATTTGTTAATTTAAATTTGAT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP690	182.19	Ca-desi-LG(Chr)4	4795454	AATAAATACTTTAAGTTTGTATCTTACTTAGTTTAAA TATTTGCTTTTGAAGAGAGTGGTTGACTGGGGT GTTTGGTGCTATTTTTCCCAATAGTATACT	G	T	TGGTTATTCCTTCCTCCAGCTGATTCATGTAA ATATCGTGTATGCTAAAAGGATTGAAGGAACAT CAAAGTTTTTATTAATATCCCTTTGGGTTTCAAG		NA
Ca-II-SNP691	183.24	Ca-desi-LG(Chr)4	4809998	TTATCATAATTTTAAGCATCAATTTATGCTAGTTAT TTGACTTTTGAGGGAAGGCACCTTGAATTTAGGAA GAAATTCCTGCTACCCATCTTTATCC	G	T	TCCATTTGTGAACCAACAAAACGCTTAAGCCCA CACAATAAATAACATAATAGAATATGTTATGATA TGACATCCAGCAATCAATCCATTATGAAGGCTG		NA
Ca-II-SNP692	186.39	Ca-desi-LG(Chr)4	4821489	TTAGATAGTCAATCGCGATGGTTCACATCGCAATC GAGGTGGAGTGTGGCGATAAGGGCATGGCCACG ACGATGCAATGCAGCGCGGGAGGAGACAGGT	C	A	AGGGTAAAATTGGTCTTTAAAAAAAAGAAAT CACATTTTTAGAGTTTTGAGAACCCAGGACCCG AAACACGATATGCGAACGCGTCCAATTGCAC GC		NA
Ca-II-SNP693	187.44	Ca-desi-LG(Chr)4	4831174	CTCGTCGCGATCTCTATTTGCGCTCCCTTCTATC TGTTGAGTTTTGGATTGATAGAAGAATACGGTGT TATTCCTTGACGAAAGTAGAAAAGACTGG	G	A	GATAATTTTTTATAAAGAGTAAATCATTAAATA AATAAAATAATCATTGTTTTTAAAGTAATTTGA GACGAAACGGATAACTTGAGAGGTAACCTAAA		NA
Ca-II-SNP694	188.49	Ca-desi-LG(Chr)4	4847066	CTCTTCCAATCTTTTGTAGAACTTCCAAGCTTGAT ACCAAAAAGAGTACGTACCTCTCTTTCTTTTTTGA AATTTGTTAGATATATAGGTGTTTGT	C	A	TTCCACTTGAGATCAACAAATGCACTATCTAC TAGAACATGTTCTTATGATTTAAGTAGTAATAA ACAAATAAAATTAAGTTCCTACTTTCACCTTA		NA
Ca-II-SNP695	189.54	Ca-desi-LG(Chr)4	4864461	GATGCACTTACC GTTATGAGTGTGTTATTAATGT TCTTACGCAGCGGTCTTGTCTCCAAAACATTACA CATTACAAATTAATTTACTACTCATTAG	T	C	GAGAATTGATATCTTTAAAAATATAGAGAAATG ACGTGTCTTAAAACCTTAAGCCAACACCAAACC TTGAATATGAATTAGAGATAGATGAGTTTTGAC		NA
Ca-II-SNP696	190.59	Ca-desi-LG(Chr)4	4880696	TACAAC TAGACTTATAGAGTGTGAGTTTGTAGGAC TAGACATATGGGAGTGGTCTAATGGATCTAAGAG CATCTCCAACGGTTGCAAAATGAGTTCGTCC	G	A	ATGAAAGTACCGTTCCTTCATGAGAGAACCCTG ATGACAGCTTGACACATCTCCAATAGTGAACCTC GCCAAAAACTGAATTTTACGTAACACACGCTG G		NA
Ca-II-SNP697	194.79	Ca-desi-LG(Chr)4	4971795	TTTTGTTGACTATTTCTCTTATATTTAAACTGAA GAATATTTATTTAGCTGAGTTCGTTCCCAATTC GACCTTTATCATAAATATCACTAGTTACT	G	T	TGTATATTTTTATATCAACAAGATTGTGTATAA ATGTGTGTATCTAGCATTGTTCTACCAAAAAC CAGTGTTTTTATTTTTATTATGATTGAATGA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP698	195.84	Ca- <i>desi</i> -LG(Chr)4	4981638	TTTTGTTAAAGAGGTGGAGAATGATTGGTCAATAT GCTGTGATGAACATTCTTGAAATGGAGATCATTCT TCTGTTTTATGCAGAAATGTTCTCATTGCT	A	G	TAATTAAGAACTTAATTATGATTCTAAAATGTT AAGTTAATTTAACTTGTTTGGAGTGAATTTA ATAAAGAACAAAATCAAGCAAAGCAGAAAAGA		NA
Ca-II-SNP699	196.89	Ca- <i>desi</i> -LG(Chr)4	5035097	AATATACCTATTGTTCTTTAAGTTTAGTCTAATTCT TCCTTAGGTCATTTAAGTTTATTGCTTCGAGTT GATTCTTTAAGTTACATGCATAACCTTAA	A	G	AGATTTAGTCGAAACATCGCAATAAATTGATTG TCCATTACTTTCAAATGAAACGAGTTAATGACA TTGATTATATGGATATATTTTATTACTATGTT		NA
Ca-II-SNP700	197.94	Ca- <i>desi</i> -LG(Chr)4	5089894	AATTTATGAATGTCTGTGCAGGGACTTGATTTTAT CAAAGATGATGAAAATGTGAACCTCCAACACTCTTA TGTGTTGGAGAGACCATTTCATTTTGTG	T	C	ACAGAACTCTTTATCATTCTACACATGTGTCT GCAGTAGCATATAAATATGTCCTTTAATTTTAC TTTTTCAACCTGTGATTAAATAAATTGCTTCT		NA
Ca-II-SNP701	198.99	Ca- <i>desi</i> -LG(Chr)4	5111270	CCCATTGATGCACCTTATGCCATCCGTAATGTATA CAACCGCCTCATCAAATGAACCTCATTGAGGCTC ACGGTTTTTGTGCATGCTAGAAAGAGTTG	G	A	ATAGATTGATGATGGTATGTATCAGAAAACTT GTATTAACGTTATCTATAATGTTGCTTTTAAACA TTGCAAAAGAAAAAACCATAAATAGGCTTATG		NA
Ca-II-SNP702	200.04	Ca- <i>desi</i> -LG(Chr)4	5128637	GTGTGGCGAAGACTTGACTTGTAGGGTCAAAGTA TTTGTGCTTAAAAAGTATGTAGGTGTTAGGTT GTTTTGAGAAGACTGACTTATAGGGTTAGGT	G	C	TCTAACATCTTTGTGCATGGTTTACCACCACTTT GTAGCTACGACTAGTCCACTCTCTCGGAAGAAT TTAATCCATTAATTCAAACCTGAATTACACAT		NA
Ca-II-SNP703	205.29	Ca- <i>desi</i> -LG(Chr)4	5144601	TCTAAATGTTTCCCTTCTCTATATTTGGACATTCT GATTTGATAAGTCCAAATTTGTTGCATCCATAGTA GATGATGCTTTTCTTGTGCGTTTATCAT	C	T	AGAGGAATTGGCTTTCATATGTTAAAAATTTA GAAGATGTGGCACAACAGAAAAATAAATTTCC CCAAAGATATTCCAAGCAATCCAATAGAGGAAA T		NA
Ca-II-SNP704	206.34	Ca- <i>desi</i> -LG(Chr)4	5164229	GAAGGGAGCGGAGCAACCTCTTGGTCAGTTTTAG CTCTCCAAAAGTGGGAAGTTTTAGGTGAGAATATT TGTTTAAAAATTTGAACCTTAAATATCCTTTTA	T	G	TGGTTCGACGAGGGGAGGGGAGGGAAGAGAT TTTAATAGATGAAAGGTATGAACTATGAATTTAC TTTTTCCACCCTTGAATATTTACTATCATATTA A		NA
Ca-II-SNP705	207.39	Ca- <i>desi</i> -LG(Chr)4	5228872	ATTGCAGAAAGTGATGTTGCCTCTGTTTTGCAGA ATTTCAAGCTTAAGTGAGATTGTATTTGGTT ACTTAGCACCTTGAATTTTTGCCTTCATAC	G	T	TTCTAAAATAATGTTTTAGTCAAAAAAGCATGG CCTCTCCAACAGCTATTTCTGACTTATCCAGTG CATTCTCAGCTTATAAATAGAGGGATTCAATCT		NA

NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP706	208.44	Ca-desi-LG(Chr)4	5405499	ATGTTTCTTTGTTTTATCATGTTTGTCTTCATATCA TCAAGTACAACCTTCTCTTCCTGAGACAACGACC TAAGAAAGTATGATCAATAAGTTATTTGG	T	C	TAGAAAATGTGAATGTCCATTAGATTGAGAGG AACACCATCAAGTGTGGTGATAGATGGTATCT ACATGTAATATGTGGTGTCCATAACCACAAATT G		NA	NA
Ca-II-SNP707	209.49	Ca-desi-LG(Chr)4	5451471	TGGATTATGGTTTCAAGGTGCTGAAATTGCAATG GCTTCTTATTGTTCTGAGTTGCAATATCTTGCTAA CCCTGTCACTACACATGTTCAAAGTGCTGA	A	G	CAATCAAGAAAGTTGAAGACATCAACTTTAAGA TCTCAATAGCCTCATTGTTTTCTAGATGAAAT CAAACCCAAAGAGTTAACATCTTGGTTATGTTG		NA	NA
Ca-II-SNP708	210.54	Ca-desi-LG(Chr)4	5483523	ACTTTATTCTCTAAAGTTAGTTGCTCATTITAGAGG AGTCAAATCCTAAATATTATACCAACATTTAGGC TTGTTGAATTGACTTATTTGAACTTAT	C	T	ACTTATGAAAATAAACTGAAAATAGCTTATGGT CATTTTCATTAGTTGTTTAGCTGTTTCATAAACTC TCCTGAATAGTCTCACAAAGTTTTATGTTAATA		NA	NA
Ca-II-SNP709	211.59	Ca-desi-LG(Chr)4	5528932	GGTCTGGAGGATTCACACGATCAGGTACAGTGAT TCCAATGCCAGCAAAGTATTCTTCTACTTTTTAAAC AGGGCCGTGATATGCCGTAAGGCCACCTTT	T	G	TGTTCTTCAAACATTCACACATAATTTAAATCT TACTTTTGATTTATTGTGATACAGCTATACTTTG TTCAGAAATGTTGATGATAAATTTCTAGC		NA	NA
Ca-II-SNP710	212.64	Ca-desi-LG(Chr)4	5544750	AATCAATTTGCTGACACCATATGGTTACTTAATGC TAACTGGTTTTACTTTTTGAATAGTGAAGTGTTT GGAAAGTCTTCATCATATATCACCTTCAA	T	C	AAACACTTTCATCGCAACCTTACCAGAATCACAC TGCATTTTCAAAAATGAAATAAAATAAGAAG CATAAAGTCATTGAAAATCAACACAGCATCTAA		NA	NA
Ca-II-SNP711	213.69	Ca-desi-LG(Chr)4	5611371	GGACACATGGAGCAGAACCAGAGCTTTGTCAA AATTTCCCTCACATTAGCCTCACTTTCTCAAACC ACATTGTGAGTAGCTCAGGACCTTTGATACT	A	G	GAATGTCACCTTCAAAGGGGTTCTGTTCTATG GTCTCCTGGTTGTGGTAAAACCCTTTTGCCA AAGCTATTGCCAATGAATGTCAAGCAAACCTCA T		NA	NA
Ca-II-SNP712	214.74	Ca-desi-LG(Chr)4	5678633	TGCGGCGGTGGAGGCTTCGTCGGCAGACAATGT GCCGTAGCGTTTTAGAAAGGACTGAGGGAGTGGAA AATGTTTGGATCAAGCGGTTTATGACGGCATCC	A	G	CGGCGATGGCGCTGCGTGATGTTTTGTTGAGG GGGATGAAGTTAGGGCGAAGGAAGCGGTGG AAATGGGATTGTGAACACGGCGCACGATAGT GAGGATGGGACAGTAGAGGCTGCAATGCGCAT GGGGGAGGAGTTAGCAAGGAAGAAGTGGGTG GGTGACGTTTATGGTGAATCAGGAAGAGATT GTATCCTCAAGTTTGTGGTGTGTTGGGTTAAC TCTCCAAC		NA	NA
Ca-II-SNP713	215.79	Ca-desi-LG(Chr)4	5726782	TTTTGAAACGCTTATCGACAACTGAGTTTCATTT GTAGCTTCATTTGGATGATGCACTCATCTTTATT AAAAACTATCTTGTATCCTTTGTCAAAAAG	C	T	AAATTTTAGGCATTGAAAAGTCCGTACAACAC CATCCCCCTCGATTGAAGATGTCTTATATGTCG AAGGTCTAAAACATAATCTCATAAGCATCAGCC A		NA	141

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP714	216.84	Ca-desi-LG(Chr)4	5767017	GTTGACCTGTTTCATTACTCCTTGTGTAATAGTCA TTTGGTGCCTGCTGAAAACGACCAGTGTGTTGAGT AAGGTTCCCTTTCTGTCCCTGATACTCTAA	G	A	GCGTTGGAACGCATCCTAATGCTTTTATGAGA AACATAATTGGAGACTAGATTCTGGAGAAAAGG TTAAGTACCCCAATGCATATAGTTTACCTAGGC C		NA	NA
Ca-II-SNP715	217.89	Ca-desi-LG(Chr)4	5817107	CACCTGAGGATACACCATACCACCTTATTCCAGAG CCAACCTCTCCATTGCGTAACTCTCCTGATACTAC TCCTTCTCATGCCTCACTTGTCCCTACAAC	C	A	CATCTTTCATATGTTGAGGAGAAGTTGATTTTG AGGCATCCTCAGGGATAGGATCGGCTTCACGA AGGGGAGTCAGTTTGTGGATTGGTGATAGACTG AGT		NA	NA
Ca-II-SNP716	218.94	Ca-desi-LG(Chr)4	5907659	GGTCGGTTACGGTTGCCGATGGATCCAATTTCTT CATCCGAACCCGACCACGGTAGACCGTGTATATC CATCGACGTTACCCGCGAGATCCGACAACCC	G	A	GTGTTAGTCATAATCAAAATTTTAGGGGTGGA CAGATTTTCCACACCCGCCATAATCGTCCAAC CCATACGACCCACAAGCAAACGGGTGTTTGG AT		NA	NA
Ca-II-SNP717	219.99	Ca-desi-LG(Chr)4	5934551	ATAAACCAGAATGTTCTTCTGATCAATCTGTCATC AATCTGGAGATCAATATGCATGTTTGTGTTTGC TTATGCCTTCAAATCTTGAATTTAATTGC	T	C	TTATTC AATTAAAGAACAATTGACAAAATGGATC TTTTTAGAATAGCAACATGTAGTAAATCAGCTG GCATTTGCGACATGGTCTTCCCAACATTTAATG		NA	NA
Ca-II-SNP718	221.04	Ca-desi-LG(Chr)4	5971039	CGTAGTCAATCAGCAGACTCACACAAAATCAAAGT ACGGCTCCTTCTTGATGAGGCCTCTACCCCAAGA AGATCGCCACCAGTTTCTAGTTGGATTTCTA	T	G	TAACCAGATTCGTGAGAAGACACATTGTTCAAG ATTGAAGACTTCTTTACTACTTCTTTTATTCTG TTTGAAATAAATCTTTGTAGAGAAAACGACTG		NA	NA
Ca-II-SNP719	222.09	Ca-desi-LG(Chr)4	6005969	GTATTCAAACCTGGAATGGAGAATCTATTACC AGCTTGAGGGGGAGTGTCAAATCTGTTTCTGTTT AATATCCCTCAAGTATTGGGATTCAGTTGA	C	A	CCTATTAGTACTGATATATAACTACATCCCTATT AGTACTCATATAAATAAATCCCTATTAGTACT CATATATAACTAAATCCCTATTAGTACTCCTA		NA	NA
Ca-II-SSR198	223.14	Ca-desi-LG(Chr)4	6006092	ATCAGTACTAATAGGATTTGGTTGTTT	(TA)7	(TA)6	CAACCCCTTAAACCTACACATTG		57.11	NA
Ca-II-SNP720	225.24	Ca-desi-LG(Chr)4	6031929	TTATCTTTAGTTAGAGGCAAATGATCATTGTAACG TTCTTTTCTTTGTAATCAGATGATCATTCTTGAC TTATATTTATTTTGTCTTTAATGCTTTGA	C	T	TTACCTAATAAACAACAATTATGTTTACTAATT ATTACAATAAGTCATGATATAGAAATAAGAAGC GTTGCAACAAGCATATGATAATCTATAGTTCGA		NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP721	227.34	Ca-desi-LG(Chr)4	6062333	TTGTTTGAGATTGGTTTGTGTTTTAAAAACAAT TTCTAGATTGATTTGTTTGCATTTGAAACTAGTTTA CAGATTGATTTGTTTGCATTTAAAACTA	T	G	AAACCAATTATCAACAAACCAATCTGAAAACCTA GTTTTAAATGCAAAACAATCAACTTCTTACTTTC AAACAAACCAATCTGGAACAACCAATTGTAA		NA	NA
Ca-II-SNP722	229.44	Ca-desi-LG(Chr)4	6098301	GCAATTTGTGGATCTCAGTTGTGTTGAGAAGACT TGACTTGTAAAGTTAATTGAGTAGTTTGCATCTAA CAATTTGTAGGTTTCAGGTTGTGTAGAGAA	G	A	GAACACAACCACCTTGACTCTACTAGCCAAGTC TTCTCCACACAATCTAACAGCCCCAGATTGTTG AAGGCATACAACACCTTGACCCTACAAGTCAAG T		NA	NA
Ca-II-SNP723	232.79	Ca-desi-LG(Chr)4	6134862	TTTCAATATACGTGACTTTAATTTGTTTCTCAATT TGTTTGAACCTAAATTCGAAGCCCTTTTTAATTT ATTGATTCTAAATTCGGTTAATATAGTC	T	C	TTTTGTGTTAAAAGATTGATCTATTGTCGCGC ATAAGTCAAATACAAGCAATAAACGTTGCATA GGGGCAACAACCTCGAGTCGTTTCGCAAGGACT TC		NA	NA
Ca-II-SNP724	233.94	Ca-desi-LG(Chr)4	6152405	GACTTAAATGTACCTCCGCTCATTGTTAAATCT GGTGGCACGTAACCGACTTAAATCTGCCGATTAA AAGCCCAATTTCTACTAGTGTGTTAGTGA	T	G	TATTTATACAATTGTTGCTAAGTTTTGGCTAAC ATGTTGAAAACATTATGCCCTATGTAATGGGT TCTTCTCATAGTGATTTTGTGCTATTAGAATC		NA	NA
Ca-II-SNP725	235.09	Ca-desi-LG(Chr)4	6204689	TGATAATGAGTAACCTAAGCTCTCTCTAAGGCTT TGGTGAATCTCGTGATTAAGATAACTTTTTACTAT GTCTTAGTTTTAAATCTAGTTTTATTTTA	G	T	GTATCCCAAACATTTAAATAAAACAATAGAATA ATGTAATTGAGATAAACAATCAAATCTAAAATA AAACTATAATTTAAAACCTAAGACAACCAAAT		NA	NA
Ca-II-SNP726	236.24	Ca-desi-LG(Chr)4	6230253	CTGGGCTTTGCCCTCAGATGAGAGTCAGGACGAT CCTACCGGTTTCGTACCTACGGACGGGAATGGAG ATAGGAACGCTTGACTGCAGCTACGTTAGGAG	G	C	AATACAAAAGAAAGACATCTGATCCCTCTATGC CAACCTAATCTGATCATTTTTACAACACAACATAA CACCTGAGTGATCTCCACGCGCCCCGTGAGA T		NA	NA
Ca-II-SNP727	237.39	Ca-desi-LG(Chr)4	6316674	TTGAATTATAATTTTATTATTGCAATTTAATTTTAT TATTTATATTTTGACTCTTTCTCGCTCTGTAGGTCA TAACCTGAGCTCTGGATATCGGATTGG	T	C	AAATTTGCAATTTGGCCTAGTAAAGTTTGGAA TTGGTCTTTCCCTTCCAACACAAGGTTATAGCT CAGAATTTTATCTTTCTAACGCCTACTCATATGT		NA	NA
Ca-II-SNP728	238.54	Ca-desi-LG(Chr)4	6331712	ATGTTATAATAGGTTAAGTTTGTGTTTTCTTAGTG ATTGGTTTATAAACATCAATTTATGTTCTTTTT TTTAGTATTTGTGTTGCAAAAACAATTTTA	G	A	AAATGTAGTTTGGTTTTTTTTTTGTTTTTTTTTT TTTTGTCTGTTTATGCAAAAATAAACTCATATGT TAAGCTTCAATTTTCTTAAGTTGTTTGTTC		NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP729	239.69	Ca- <i>desi</i> -LG(Chr)4	6341251	TTCTAACCCGAAAAATTTCAAACATCTGGTAGTTAA TTTTATTTTTATTTTTATAATTTTTTTTAAATGTTTTT GTTAATTTATTTTTTTTGAATAGAGAT	G	C	CGACCTCTCTTGCCCATGATATGACAGCTTCTC GTGAATCAAAAATTTGATCAGTTGTGAATGCCT CAGTTAAATCTATAAATACTGGTTGTGTCTTTTC		NA	NA
Ca-II-SNP730	240.84	Ca- <i>desi</i> -LG(Chr)4	6354569	AGACCAAACCTCATCTTGAGGTTGAAAGATCTC TGGTGATAAACTAACCCAGCACCTATGATCTTGTG AGCAAATGCAATACCTTTATGTGAGGGTTGT	T	G	TCTCGAAATGCCGGTAGTTCCTTTATAGTTCC CGAGCTTAACTTCGGCATAAGGATCGCAACTTC CGGTGACATCCTTTGAAGGTAATTCCTTAGCCT T		NA	NA
Ca-II-SSR199	241.99	Ca- <i>desi</i> -LG(Chr)4	6361616	TTGAGATCAGAGGGTGCAAA	(TAA)9	(TAA)7	CGGAGACCAAAATAAATAAAAGG		59.37	NA
Ca-II-SSR200	244.29	Ca- <i>desi</i> -LG(Chr)4	6388052	TAAAATGGGTGTGCGAGACA	(AT)8	(AT)9	CCCATGGATTATATACGTGGAA		60.11	NA
Ca-II-SNP731	245.44	Ca- <i>desi</i> -LG(Chr)4	6455248	TTTTCATTTGATTGATGATGTCTCTTAAACTTTTCA AATCAGGTTGCTTGAACCTTAAAGTAAAGTTTTT GTTTTTCCCAATTCATTGTCCACTTTAA	T	C	TTCATATCTCATGACATTGTTTCTTTTGAAAAAT GAAATGGCATTTCATCAATTTTCAAGATTGT GGGGAATCATAAGGACCTTAGTCACATGTTAA		NA	NA
Ca-II-SNP732	248.89	Ca- <i>desi</i> -LG(Chr)4	6499244	GTATTCTGCCTCAGCGCTGGATCTTGCAACACAT TTTGTTTCTTACTTTTCCAAGATATAAATTTCTC CAACAAGTACACAATACCCGGAAGTTGAT	T	C	AAAAGTGCACCTGGAAAAGGTCTCATTATGAA GATAGAGGACATACTCAAATAAATGGCTACTCA GATGCAGATTGGGCAGGCTCACCCATAGATAG AC		NA	NA
Ca-II-SNP733	251.19	Ca- <i>desi</i> -LG(Chr)4	6547630	TAATTTATCACTTTTGGAGATTAATCCTGCTATTTA TTCTTTATGCATTGCTTTGACTTTGTTGATTCTTTT GACGAATCTGTCTAAAAAATCATGAGT	A	G	AGAACAAAGCTTTCTTGAATTCTAGATCATTCTA GGCTACGAAAATGCATCAAGCTACATGGCAAAT CACCAGTATTTATTACAAAGGAACAAAATTGTA		NA	NA
Ca-II-SNP734	252.34	Ca- <i>desi</i> -LG(Chr)4	6576650	CGTGATAGTGGCACCTCGGTAAACAGTACGGAC CCGTGATAGGTAGTACGTTTACGACTTACGTTTCT GCGGGAATTGCGTTTGTCCGTGAGAGACTGC	G	A	TACCAAAACACACATAAGTAAACGAGACATTA GAGATTCCCCATTCTTAATCTCATCTAACTTAA ACCAGTGCGTAGTCTCTCACGGACAAACCCT G		NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP735	253.49	Ca-desi-LG(Chr)4	6652484	ACTGTGAAAAATCCAGTATGAAACTGGTGGCGATCTTCGTTGATGTAAAGATCATCAAGAAGGAGCTG GACTTGATCTTGTGTGAGCTGACGAGTGAC	A	T	AATAGAAGAATTGAGACTTGTTACAGATTGTCCAGTTTCCTCGAAACCTATCTATCTAACTCAATCTTTCTATTCTTAACCCCTTGATCCTTGC		NA	NA
Ca-II-SNP736	254.64	Ca-desi-LG(Chr)4	6685518	TAAACCATTTCCTTCTCCCTAAATTTCTAACGAAATATGCATATGTGTGAGAATATCATGTAATTGTTCTTAATCATTTCCCTCTCTTGTGAGCATAA	A	G	GTGCGGCAATGAGAAGAGGTGAGGAGTGAAAAGAAAAGGTACAAATGAAAGGGAAAAGAAAAGATGATCTAACTCTACTCATTATATTGTTTTAATTA A		NA	157
Ca-II-SNP737	255.79	Ca-desi-LG(Chr)4	6750199	CAACAAGTCCATACGTATCAATTGAAGTGATCTTAGGTTGATACAACATCTTGGGTTTGAAGGAAACCTTAGTTGCTTACTGATCATAGCATTGG	G	A	ATAATTCAAATTCGACCCAAAGTTTAGAAACAA GCTAAAAATATTATTCTAATCTATAAAGAGCTTT TAAAAACCAAACATAAAAGCTAGAAACATGTG		NA	NA
Ca-II-SNP738	259.24	Ca-desi-LG(Chr)4	6783507	ACCTTGTTGTTGACGGGGCTCAACATAATGGGGCATGGGATGGGGTTGTTTTAATATCTCCAAAA AAAAGGTTCCATACCTATCACAGCGCATTGT	A	G	ATCTCCATATACTTCTAGAACTTTTGCTTTCGAT TCCAAAGCCGCCAAACCTCCCATGGCACAAAGC TTCATATTCTGCCATATTATTGGTACAATCAAAA		NA	NA
Ca-II-SNP739	260.39	Ca-desi-LG(Chr)4	6805570	TTGGATTTTATTTGATATGGTTTTGATTTTTCACT TCAATTTAGCAATAGGACATTGTTGGAATTTTCA GAATTGTTATTTGCAATTGCAATTGTTAT	A	G	ACTAGCAGCTCTATTAAGTCTACGACGTAATAA AAATTTCTATCTATTTCAAGTTCAAAGGAATGA AGATTACAGAACTAGCCTTAGTCATGCATCAT		NA	NA
Ca-II-SNP740	261.54	Ca-desi-LG(Chr)4	6813661	GGTTGAGATGCTTGCTAGTAGAAATCCCTTTGTG GGAAAAACCTCTGCCAGCTGTGTGATCCACTGC GATAGTACCGCAACTATTGCAAAATGAGAA	T	C	TAATGGCAGATGATCCACTATAACAGCTCCTT CAGAAAGTAATTCTTAACAGTGTGTGCTTAC GACGTATTTGTCATCTCTTACCGTTGTAATAAT G		NA	NA
Ca-II-SNP741	262.69	Ca-desi-LG(Chr)4	6852383	TCGAGGACTTAATCCACTATTTAGTAATAGCATA CAAGTATTGTTTACTCTACCTCTCAGGCTTTTAG TATTCCTCTAGCCTCTCTAGATTGTCAC	T	C	TTATCCTGATAGTGGCAATAATCTTTTACCCTT AAGAGGTACAACAACACTTATGAACCTCAACAA CATGTTGTCAGAATGTTGAATAAAGGTTCTAAC		NA	NA
Ca-II-SNP742	263.84	Ca-desi-LG(Chr)4	6886332	GGCAAACCTGGCCAGTACTATTTCTATCATATCTG AACTTTTTGGTCTTAAATATTACTCAACATTGTACA ATGTTGGGTTAATAGCAAATCCTATTGGG	T	A	AACTCCTCCCTGGATTCTCTTTATCCCTAAT GTTCCATTTGCCTTATGGCTTCTTATCATAAA GATGACCAGCAACCTCACATTTAACAAGTATG		NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP743	264.99	Ca-desi-LG(Chr)4	7022171	TAAAAGTTGAACCTTTTAGTTCCTCATTGTAAAAG TTACTTTTTAGTTTCTCTATTAACATAATTATTAGAT TTTTTTTAGTCTCAACTATTTTTATG	A	G	ATAATAATAAAAATTAATTACAACAATAATAACA TAATAAGTATTTTTATCCAACCTACAAGTGCAAT TTAAGTACCATGTCATTAATGAGAATGTTACA		NA	NA
Ca-II-SNP744	266.14	Ca-desi-LG(Chr)4	7062809	CTTTCACCTTATCCTTTTACCTTCTTATGAGGCTC ATGTCTTAGTTTCATTTTTGTCCACTTCTTTTTCT TTTTATCAATCTCTGTTAGTGCAAAAAG	T	G	TAATTTCTACACTTAACAAATACAGTTAGTGGAT AGTTGTTCTTTATTTGTTTGTTTTTGTTATCATC AAAACATCAATTAGAGGATTGTAGCTAAAACC		NA	NA
Ca-II-SNP745	270.74	Ca-desi-LG(Chr)4	7112402	TTCGAAATGCCTGGAAAATGTTGGAAGTTGAGGG AAAGTTTCGAAGGTTCTGGGAAAGTTTCGAAACAT ACTTTCGAAAGTTTGGATCTGGGAAAGTTTC	A	G	ATATAAATAATATTTCCCATTTAGTTTCAAAAA TTATAAATAATATATAAAAGTATGTTTCGAAAT TTGGGTTTATCCAACCTTTCGAATGTATGTTT		NA	NA
Ca-II-SNP746	271.89	Ca-desi-LG(Chr)4	7235461	TTTAGTTTGACCGAATTTGGTTCAAACCGTCTGA TATGATTTAGTCAAATTTGGTTCGAATCATCTAGT CCAATTTGGTTTGATTAGTCTGATTCCAT	G	T	AAACGTTCCAGGGCTTGAATAGCACGCTCAATA GCCATCATAGTCACTTCCATTTTCTCCTCTGAA GTAGTTTCCCGGCCTCCATTTCCATGCAAACGC TTGTAATTTCAAACCCCTACATCATCCACCTTAA CTCACGGTATTGCCGATCTAATTGTGAAATTG AATACCCCTTTGAATGATCTGGTAGAAACATTG AAAGGACTTCGT		NA	NA
Ca-II-SNP747	273.04	Ca-desi-LG(Chr)4	7268764	AACTGATTGAGGACCTCTCAGAGACTTAGTGAAT ACATCTGCCAATTGATCATTGGAATTAACAAAAC AGTGGTATGTCACCTGATTGATCTTTTT	A	C	TGACATTAATATGTGATAATCAAGCAGCATTGC ACATTGCCTCTAATCCAGTTTTTCATGAGAGGA CCAAGCATATTGAGATAGATTGTCACTTTGTAA G		NA	NA
Ca-II-SNP748	274.19	Ca-desi-LG(Chr)4	7344673	TTTTTTTCTAATTTAATCTTCTAGTGTATGAG TCTGATGAAATCACGGTAGCACTGTGAATTTGTTG AAGTTTCAAAGTGTAGCTTTTGCCAGAAT	C	T	TACGTACCTACATGCATATACATTGAATAAA GATAATGCTACATGGTACATGTTTGGATTAACA GCGAGAGTTTTGCTGAATCACAGTTTGCCACCA T		NA	NA
Ca-II-SNP749	275.34	Ca-desi-LG(Chr)4	7395192	TTTTTTTGTGATTCGTTGTCTGAGCGCGACGTTT TTATTTTTTATTTTTTGTCTAGTGCCATGCTTT TGGGTTTAGATTGACGAAGTAGTTTTAGT	G	T	TTCCATTGTTATATAATTTATTTGGCTTCTAT AGTTATATCTAAAGTAGTATATATCTTAAATTTG AAACCCAAAAAAGTATAAATGTTGTGATTCTGG TTGCATACATATCTCAGTATACTGATTGTCAATA TACAAGACAGTCATCTAACCCCTGTAACCAGCT TGGCCCTCATGATAACTCGACTATCGCTGGAC GTTTTTTGGAACCTAGGATTTCTCTCTGTTTTTC ATCACCCTCATCTGTACCAGAACTACCTTTTTTC		NA	NA
Ca-II-SNP750	276.49	Ca-desi-LG(Chr)4	7578257	AAGCATTTGTAACCTCATGGAGGGGCGAGATTTG ATTATTTTTTTGTGAGGCTTTGCTCTAGAGTT CTTGAAAGAATTCATCTTGAACCTATCAAGG	C	T	AAAGGAAACTCAATATTTATTCAACAACGAAA CAAAAAACAAAATGGCCCAATCTAGGGATT GATAAGCCAAAAAGAACGCCACAAAAGATTAACA		NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP751	277.64	Ca-desi-LG(Chr)4	7632834	AATTTCTCAAACCTTATGTTCTAAAGATGCATTTCA CCAATAAGTATGTGAGTGCCTCAAGTGATCCACACC CCAAGTCTACTGTAGCCTCTTCTGCAAG	C	T	CCTTAAGTAAAAGGCGTTCTGCAAGTAGCTTCC CAATCTTTGAAGCTGCAGCTACATCCCGAGTAG TTTCCAAGTTTGATCTCAAGGCTTTCTCTTGTA A		NA	NA
Ca-II-SNP752	278.79	Ca-desi-LG(Chr)4	7672275	CCGAAGTAGGAGAACTAGAGTTCGGATGACTCTA AACCATCGGAGAAAATCTCATAGTTTGTCCGG GAGCCTTGTGGAGATGTTGAGTCTGAATAGT	T	G	GTGAGCATTGTCAACAGCTTGACACACTATTG ATCGTTGTTGGAAGTTGCATGGTAAGCCTTCGC CTTCAATAAATGCAACTCTGCTTGATCCTTCTG C		NA	NA
Ca-II-SNP753	279.94	Ca-desi-LG(Chr)4	7834534	TTGATCTCTAGTATCTATCACTGTTTATGAACCAA CAATACTATCATTTTCACTCAATCTCATTTTCTCC CTTGATCTGTCTTCTCTGAATTTCTATG	A	C	AGCCATACGCGATTTTCACTCAAATTTGTAAGT TTCCGACCTATAACGATCTTTAAAGTGAACAT GACTATTAGGATCATATCACATATACAATTAGAT		NA	NA
Ca-II-SNP754	281.09	Ca-desi-LG(Chr)4	7965918	TATACAATATGATTTGAATCTGTTATGAGGTTATT GAATTTGGATTATTTTGTCTATAAATAAAAAGC AGAAATTGATTTTGTGTGTGTGTTCTT	A	G	AGGACACCACAATCAAACAAAAGTTTACATCTA CAAATTTTACCTGAACAACATCCACATAAAAAAT TGTTCTCCAGTCATTGCCAACACTTAATGCAT		NA	NA
Ca-II-SNP755	282.24	Ca-desi-LG(Chr)4	8112704	TTGCTTCATATATTTGAATGAAAAGTGTGACTTTAT CTTTATTTGCTCTTTGACACACTCAAATGAAT CTTGGCACAAAATTATACTTTGTCATATT	A	C	GAGAGAGCGGCGCGATTTTCTGCGACGGCG GTGCATCGGAATCTGTGGCATCGACGTAACCG ACGGTGTAGAGTTGATCTAAAATTTGGTGCACA ATTGAGTGTGTTGTCGATTTCTCCATGCTCTCT CTCTGCTGTGATTTAGCAAAGCAGGACTCTCT		NA	NA
Ca-II-SSR201	283.39	Ca-desi-LG(Chr)4	8205928	TTTAGGCCGCGACATTTATT	(AT)7	(AT)6	TCACCGATAAATATAAGTAAAACACGA		59.59	NA
Ca-II-SNP756	285.69	Ca-desi-LG(Chr)4	8290399	CTCCATTCAAACGAGTTTTAGATATGCCAAAATTT ACAAAATTTCTGGTGCTTTATTGTCTGAGTTGGCTA GTAGGTGGGATGGACGTAGTGGGGGATTTA	T	A	GAAAAATGTTACACATTTGAATTTCAAGTGAACAT TACTCTATTATGTGGAAGACTTGAATGGTTTTT GTAGAGATCCTTGGCATAAATGAAGGCTACTC TTAGGCGTGATTATTGCAATAGTCTTTGGCAAA CTGCTGCTTCTGTTGCTGGAATTTACTACTTG TTCTCTTTTACTTCAATCAGTTTGTCTGTCTT GCAAGTTGTACAGCAATATAATGACTCCTCAGA TACTTACTTACTTCAATAATTTCTTCACTTCATAA AAGGGCTGTTGAGGTAGAATGCAATTTGTTGCC ATTGTAGGCTTTTCAATTTGGATCTTCTTGAACA CATAACAAGCCAATGTGGACGTACTTGATTACT TCTTCATGGGAATAAGTTCTTCTATATTAGGA TCCAATAGTTCAAGAGGCGTTTGTCTGCCCAT TTTATCCAAGCGTATCTTCGGATGTCATCAACG CACTCTGAGTCAGTAGAACAACCTTTCTCTTT CCACTCATAATCTCTACAAACATCATTTCAAAA		NA	NA
Ca-II-SNP757	289.01	Ca-desi-LG(Chr)4	9740035	GGATGAGGACGGGTTATAATTATCGTGAGCTTGG GCATTTTGGATGACTAGGGGTATCCGGATGAGTG TTGATGGTGACAGTAATGAACCTTACTCAGCGT	C	T			NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SSR202	290.03	Ca- <i>desi</i> -LG(Chr)4	10865571	TGACGATGGAATCATTAGTGG	(TA)15	(TA)14	ATTTCTCTTCATTATAATCCATT		59.82	226
Ca-II-SSR203	291.05	Ca- <i>desi</i> -LG(Chr)4	11096813	TGTCACACATCAATGCTCCA	(TTA)18	(TTA)19	TCAGCATCAACCATCCTTCT		59.66	NA
Ca-II-SNP758	293.09	Ca- <i>desi</i> -LG(Chr)4	11420245	GTTTATGTCCAAACTCGATATGGTCATTAGGAATT AGTCAAGTTGATTTTCAAGTACTCGAAGAGGTACA ATAGATCTTGGTATCATATTTGATTGCGGT	C	T	AGCATACACAGGTTAGCTGCAAATTGTTACAAC CACACAGTAGATGACTAGCGCTATCATCTTTGT CTGCACAGCAAGTTACCTGCTATATGCATTAAT TCGATCCAAGATGATTATGACATGAGAACTGCT CACAATTGTCATCTGGTGGAGGCTTGAAAACCT CAGAAAACAAGTGCACCGCATCAA		NA	NA
Ca-II-SNP759	294.11	Ca- <i>desi</i> -LG(Chr)4	11444487	CCTGGGGCGGTTTTAATCAACCGCGTCGTCGTT TAGGGCATAAACGTGTTTTATTTTCCAGATTTTG TAAGTTCATTCCCTACTCTCTTTTCGTTA	A	G	TCTGGTGAGGCAACATAGCAATTGTGTTATTGA ACAAAAGGCGTGGTATGTTCTTACTAATGTGAA ACAAAAGGGACCGTAATCCCTGGGAAGACA GAAAACTAACATAGTGATGAAATTGAAGCTGG AAATGTCTCTGTAAAACACTAGCAGGCAGCTG GACAATGTCATTCTCTCAAAATAAATGAAACA CAGTTATATTGCTAGTAGTTGCTGACTTCTATTT CCATCTCTTATATATGCTCACTTTTAA CAAGGAACACAAAAACATTACAAAAGGCATTTGT GATTGTGTGAGTACAATAGTTAAAGAAGAAGGA GCTCATGCTCTATTTAAGGGTATTGGGCCAAGA GTGTGTGGATAGGAATAGGTGGTTCAATATTT TTTGGTGTCTTGAGAAGACAAGAAAATTCTT GCTCAGAGGCAACCCCAACTGATGCTCAGAA		NA	NA
Ca-II-SNP760	295.13	Ca- <i>desi</i> -LG(Chr)4	11568614	AATTGAGTCATTGGCCAATACTATTTTATATGTTA TTATCTTTTATCCATCTTTTGTGTTGAATTGAAA GACTTGAAGTCTATATCTGATAATAAT	T	C	GAGGAGTGTATATGCTCACTTTTAA CAAGGAACACAAAAACATTACAAAAGGCATTTGT GATTGTGTGAGTACAATAGTTAAAGAAGAAGGA GCTCATGCTCTATTTAAGGGTATTGGGCCAAGA GTGTGTGGATAGGAATAGGTGGTTCAATATTT TTTGGTGTCTTGAGAAGACAAGAAAATTCTT GCTCAGAGGCAACCCCAACTGATGCTCAGAA		NA	127
Ca-II-SNP761	296.15	Ca- <i>desi</i> -LG(Chr)4	11777085	GAGCTGCCTGAAACCAGTTCATCACAACTATTGTG AGGGCCAAGCCAAAAGTGATCCTAAAAATGCACT CTTGAATATTGGGGCTGTTTTCTCTAGA	T	G	GAGGGTGCAGATGAAGCAGCTGAGCCTCCCCT TGATGATACTGATTCTGCAATGGCACATCATAA CAAAAGTTTAGCTGTAAGCCAATGGACACAAC TTACAATTAGCTATCTGTAGAATCTTGAGAAG CTGTTACAAATCC		NA	114
Ca-II-SNP762	297.17	Ca- <i>desi</i> -LG(Chr)4	12182021	AATCGCTCGTAGGAAAATTTACCACGGACAA GCTGTGGGACACACTTACCTAGGATTGTCCGTG GGTAATATGACCCACTGAGTATCTGTGGGTAA	T	C	GGCACAGTTGTTTTATTATGATGGGCAGATGAAT GATTCGCGGCTTAATGTTGGATTGGCTTGCACT GCTGCTTTAGCTGGTGCCTCAGTCTGAACCA TGCAAGAGTGGTATCCTTACTGAAGGATGATG CTGGAAAACGGATAATTGGAGCACGAATTCGA GACAATTTAACTGGTGAGGAGTTTGA		NA	NA
Ca-II-SSR204	298.19	Ca- <i>desi</i> -LG(Chr)4	12587450	TCACAAGAGACTCCCTGCATT	(TAAT)6	(TAAT)5	TCAGAAGTTTCAGAACCTTGTCAAT		59.86	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SSR205	300.23	Ca- <i>desi</i> -LG(Chr)4	12811509	AGCCCTTTAAGCAGCAACAA	(TAT)6	(TAT)5	GGATGTTGGGATCAAAGTGAA		60.02	NA
Ca-II-SNP763	301.25	Ca- <i>desi</i> -LG(Chr)4	12970386	CCTTATCTCCTTTTTATTTTTACCTGCACAACACT AATTATTTGTGAAGTTTTATTGTTACATTCTAAC AAAGAACATTATGTCCTTTATTAATCAA	T	C	CAATGTGTCAAATTCATCATCATCTGTACCTT AAGTCCAAACACCAAGGCTAGTTTTGACTCC ACAATCAACTGTCTTCTAAGAGACATACTAAT TTCATGCCATTTTTTTACACTCAATCCATTTC CTATCAAATCCCATATAAACCATTTTTTACCTA TT		NA	NA
Ca-II-SSR206	302.27	Ca- <i>desi</i> -LG(Chr)4	16332808	AAAAATTATAAAAACAGGGCATAGAT	(AT)10	(AT)12	ATAATATTTACCAAGGTAGGTTTTT		57.17	NA
Ca-II-SNP764	304.31	Ca- <i>desi</i> -LG(Chr)4	16481864	GGAACAAGCTGAGTTAAGTCAGCTACAATCAACT GCAGTTGCTTCACTACCTAACTCTAATGGTTCACG GATTCCTCCGTGAAGTCTATTATGCCCATC	T	C	CCTTGGAGGAGAGATTTGCCTCCTAGTCTTAA TAAAAAAGTTATTTCTTAGGAATCCAATCCTGG GTTCTAATAATTGGTATGACTCGGATTTTCGA GGAGTGCCAGTGTTC AAGGAGACGGAAGCCGA ACCAAATGGTGAAGTTGCCAACATTTACAGGGA TAGACCCATTGGGCGGCTTGCAAGGGCTGAA AGATTCTTTGTGAAGCATAAAACTCGTGAGTTT CATAAATTCACCTCCCATTCATCACAACCCAT TCCTTTCAATCTCCACAGC		NA	NA
Ca-II-SSR207	306.35	Ca- <i>desi</i> -LG(Chr)4	18058917	GTGCATGTACGCCACGTAAC	(TC)9	(TC)8			60.07	NA
Ca-II-SNP765	308.39	Ca- <i>desi</i> -LG(Chr)4	18170443	GACTTTGTAAGATTGCTCTATCTCCCAACAAGCC ATCACTGCTTCCATTGCATGGACTCTGACATGTTG TTGTAGTTGTTCTTTGAAGGAACACAGCAA	T	G	GACATAGGAAGGAACATAACCCAACAAAACATA TGTGTGTGTCTGAGAGACAGAGGAGAGGACAA CAAAATCCTTACTATCACTCGTCAGAAAGAAGC ACAACCAGAAATCTTGGCTACAGATAATAATA CAACCAATAAAACACAAATTACACTAGATGCCA TTATTGCCATTACTCTCCTCCTCCTCCACAAG GCATTCTTATCTTCCACGCAGCATGTCACAG CCACTGACAAAAGCCCTGTGACCCCTCTCT		NA	NA
Ca-II-SSR208	310.43	Ca- <i>desi</i> -LG(Chr)4	18680223	GAATTATTATTCACGTATGATGTGC	(AT)9	(AT)10	TGAATGAGTTGAAGTAAATGCAGC		58.09	NA
Ca-II-SNP766	312.47	Ca- <i>desi</i> -LG(Chr)4	18833427	ACGACATGTGTGTCGCTGTCCACCGACTTGTATC AGACATCAAACAGTTTTCAATCTAGGTGTTACAT AGGTTAGGACTTCCACTAATAGACTAGTCAT	C	T	CTGACCTCGTTCAAATCTAAGGTTTCATTTTCAT CTGCTGTGATCTGGTCTGCGTCAGTACTCGT CTGCTCACAGCTGTCCAAAACGACGCTCCTCT CAGAAGCCGTGTGAGGTGCTCATGTCACITTA CTGTCACITTCAGAT		NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SSR209	313.49	Ca-desi-LG(Chr)4	18897679	TGGGGTGTGAATGTGAGAGA	(AATAA)26	(AATAA)27	CAACAGGAATTTGCAATCACA		60.09	NA
Ca-II-SNP767	315.53	Ca-desi-LG(Chr)4	21255529	CCAAGGCTTAACAGATTGTTCTTCATGTTGGCAC ATACAACACATCACATATGAATGATTGTTGTGCAT CTCTCCTTTGAATCATCACTTTTCTACTC	T	C	ACCTCTCAAAGAAAACTAGACATCAAACCTTA AGTTAGAATAATTAATAAATAACAAATTAATCTCT TAGTAAGCACTCTCAAATAACAACAAAAAATTA CCCCCTTAAACAAAACCTGTAATCTTCAATTGT ATTTGATCATTAAACATCAAGGTAGATCTGAATTC TGTTGATGAAAATGAAAATGGATATATACACAT ATTGACATACATGTGATATTTGCCTCAACTCTA TCATTTACACTTTTACAAAACCTGTTAAAACCT GCTTGAGTTCACAAAATCATATTTAATAATAAGT TAGCCGCATCATAAATAAATAGGTGGAGTAA AGCTAAAGTGGCTACAGCTTTTACTTGTAGAA AGGGTGAGAATAATAGTACATGGCTTAGGAGG GACTACATTACACTGTTGGTTCATTCCATTTCG AGGGTCATACAAAACCCACCAGATTTCCAGG ATAAAGAAAACAACTGAGAATGCAACAGTGT CACTAGCCCTAAAGCATGCTCAACTCAACA GTTGATGAGATCACAAAAGCAGTCGAAGAAGAT CTTCGACATTTGCTCAAAATGTTTGAAAAGTTT GTTGAGTGTGCAGAGAAAAGATTATATAATGG T	NA	NA	NA
Ca-II-SNP768	316.55	Ca-desi-LG(Chr)4	21675078	GATGATGTCGCTGAGCCTGCACAGATGGAGGAG GATGTCCCTGAACCTACACAGATGGAGCAGACTG AGGAGCAGTATGTTGAGCCTGCACATGATGATG	G	A	GCTTGAGTTCACAAAATCATATTTAATAATAAGT TAGCCGCATCATAAATAAATAGGTGGAGTAA AGCTAAAGTGGCTACAGCTTTTACTTGTAGAA AGGGTGAGAATAATAGTACATGGCTTAGGAGG GACTACATTACACTGTTGGTTCATTCCATTTCG AGGGTCATACAAAACCCACCAGATTTCCAGG ATAAAGAAAACAACTGAGAATGCAACAGTGT CACTAGCCCTAAAGCATGCTCAACTCAACA GTTGATGAGATCACAAAAGCAGTCGAAGAAGAT CTTCGACATTTGCTCAAAATGTTTGAAAAGTTT GTTGAGTGTGCAGAGAAAAGATTATATAATGG T	NA	NA	NA
Ca-II-SNP769	0.00	Ca-desi-LG(Chr)5	180	ATGAGTGTTAATAATTCTGTAAGCTTTTATCAGA CCATCCATTACTCGCTTTTAAAGTTGTACAACTTAA TATCACCGACAGTCTTGTGAATTTAGTAC	G	A	GTTGATGAGATCACAAAAGCAGTCGAAGAAGAT CTTCGACATTTGCTCAAAATGTTTGAAAAGTTT GTTGAGTGTGCAGAGAAAAGATTATATAATGG T	NA	NA	NA
Ca-II-SNP770	1.21	Ca-desi-LG(Chr)5	563	TTTTAAACAAGGACAAACGACTCTATTTGGATCCT TTGCATTCTCGAAACTCAACAACTTTTCACT CCATTTTCATACTCTTTTGACAATCGATTG	C	G	TTGGTTTCTTTTTGAAACTTGTGATATGTTTTG AAAGCTTATATTTTTGTAAGTGCATTTATATAG GTCGTATAATATGGATAGGAAATGGATGTCTG	NA	NA	NA
Ca-II-SNP771	3.59	Ca-desi-LG(Chr)5	124382	CCCCAATGTTTCTCCTTACAAAGGAGCTTTCTCT TTCAGTCAGAATATCAAACGGAGTTGCCCCAATG GATTATATTACTCATAGGCAGTCAAACCTCTT	C	A	TTATCAACTCGAAGCACTCTTTGAAGCAGAGA AATGAAGGTAACCTCCAAGCATCTCAATACCCT CACCATTGCTGGTGTGAGGGAATCCTGACA TG	NA	NA	NA
Ca-II-SNP772	4.78	Ca-desi-LG(Chr)5	217556	TCTTAACCCATTACAACGGGGTAGTTTGAAGATGA TCGACAACAACCTGATATATGCTTTTGTGAAAGA TGGCATTCTGAGACATCGTCATTTACATG	T	C	GTTACTCTATCTACATCGGGTGGATTGTAGAAC TCACCCTAATAGGCAATCCGAGAAGATTGGC AACATCATCAAAGTAATCGTCATTTACCAAAT G	NA	NA	NA
Ca-II-SNP773	5.97	Ca-desi-LG(Chr)5	264577	CCTCAAAAACGACATTGCAAATCCAACAACGAC TTCTCAAAAACCTCACTTCCCTTCATTTGTT CCCTTCTCCTCTTCCGCAACGCCACGAA	C	T	AGCGTCAGAAAGCGGCGTTGTTGCTCGCGGCT TCAATTTGCGGCGTGGACCGAGTTTAGCTTC GGAGGTGGCAAAGATATTTGATTTCAAGGTGG CTGG	NA	NA	115

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP774	7.16	Ca-desi-LG(Chr)5	350477	TATAAGTTGGTTAATTGATTCTTATATACTACTTAA TTTTTAACTTTTATAGGAGTTCCTTGATATTCTGCA ATCCCCTTTCTTTGCTCTCCTCGTCTTA	T	C	AAATCACTAATGTTTGTATAGTGAATATAGT GACAAAATGATGAGTTATTTGTTTATAATTTACC ATACATAGTATTGAGAATCTTGAGAAACCAAC	NA	NA	NA
Ca-II-SNP775	8.35	Ca-desi-LG(Chr)5	408429	CCTAGCCTCATAGATTTCTCCTTTGAATAAAAA CATAGATTTCTCCATCATATAGTGATGCCAATTC AAAGTTTTATGACTTGGGATACAATGGCG	C	A	GGCCTTTTATTTACTAAAGTTGTGAATACATCAT ATACCACATGATGATCCACCTGGCCCGCCATAA AGAAAAGCTTGCATAGTAGGATCCTTGATAG	NA	NA	NA
Ca-II-SSR281	9.54	Ca-desi-LG(Chr)5	434482	TCATATCACTCGATGCACGG	(TC)6	(TC)7	AAAAATGACTGAAGATATTTGTTGTG	60.65	111.00	NA
Ca-II-SNP776	11.92	Ca-desi-LG(Chr)5	459827	TGACTTAGGAGGCCTAAGCCCAAATTTAAGAATA ATCACCATTTTTACTTCTTTGAACATTTAATTTTT CTGCTCTATTGATCTGTTCTTCTTCTA	C	T	GAATTA AAAAATGGCAGAATTTAAAAACAAAAA TTGAAAAACAATAAAAAAGTAAATAAAGAGAG AAAAAAATTTACAAAAATTTGATATAGTTCCACC	NA	NA	NA
Ca-II-SNP777	13.11	Ca-desi-LG(Chr)5	494008	TGTTGACACTCATAGTTTCTGTATTGCTGCTGGGA TGCTTGATTAACCAATTTACACATTTGTGATCATA AATTATGCGGAGCATTGATATCATGAATG	G	A	TGAAAGTGGTGAGGAAGGAAAACATAATAAAG CATAATTAAGAATGTAACCTGACAGATCATATGC AGCACATAATCAACTTTCACTGCATTTATGAAG G	NA	NA	NA
Ca-II-SNP778	15.49	Ca-desi-LG(Chr)5	576575	GTGCCTATGACTCTGAATTCAGCTTATGCACTACT TCTAGCTATCACAACTGTTCTTCTCTCCAAG TAACCATGTTTCCCCACACGAATGAGCAAT	A	T	TAGAGGTCTTCATTTTCAGAAAAATACAAATAG GAGTATCGAAGTATACACTGACTCAGATTGGGC TGGATGTACATCAACAGAAAGTCAACTACTGG T	NA	NA	NA
Ca-II-SNP779	16.68	Ca-desi-LG(Chr)5	585987	AATGAAGTAAATGATTTATTTATATTTTGCTATAAC AACTATATATGCATGCATATTTGCTCCGTGTTTGT TATTTGGAGATGACCCTTACATTTGACAG	A	C	AAATCTAGTAAGCCGGATCACAATATTGTTCCA TATCTTTTGGCATGCCATAAAAAACAAATGGCA CTGGATGACATGGAACATATAACAATTTGGGTTG GGTGACCAGGTTGTTCAATATACACACAAAAA AGAACCAGATTTCTCACCCTATGGAATCTTC AATCACCATTATTTGTGCAATCTGATTTTCTCTG TTTAGCAGCAAGTCGGGGCCTCAGCATTCTAT ATACTGACTTCTTACAACTTCACTCTCTCTC GTTTACAATATGAATAATTCACACAATCAAAC TAAACAAGACAAATAAATACCAAAATTAAGAACA GTGAAACCAAAATAGTATTTCCAAATATATTA	NA	NA	NA
Ca-II-SNP780	17.87	Ca-desi-LG(Chr)5	613252	GTTTTGGGTCCTTGGTGGTTCTTTCTGTTTTATT AAGTTGGATTCAATGTGTTAACTTAGGTTTGTG TTGAAGGTTTTATTTTCATTTTATATGT	T	G	GTTTACAATATGAATAATTCACACAATCAAAC TAAACAAGACAAATAAATACCAAAATTAAGAACA GTGAAACCAAAATAGTATTTCCAAATATATTA	NA	NA	156

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP781	19.06	Ca-desi-LG(Chr)5	717330	ACTTTATTTACCTTTTCTTTGTTGGTATTTCATTT TTTTTGTAAACATCAATTAATAGACTTATTAAGAAAG TGAATTAGAGAATTGGATCACTTCATAT	G	T	GAACGCATGTTCAACATGTAATCTTAAGTGATT TTATTTACAATTTTTGTATTTTCTACCAGAATATT TTTTTAAATAGTAAAAATAAGATAATGGTC	NA	NA	NA
Ca-II-SNP782	20.25	Ca-desi-LG(Chr)5	1367823	AATGAAGTAAATGATTTATTTATATTTTGCTATAAC AACTATATATGCATGCATATTTGCTCCGTGTTTGT TATTTGGAGATGACCCTTACATTTGACAG	A	G	TATCTCGGAGCCTCCAACATGCATGTTATTGTAC TTTCTCGCATTTTCTCCTATTAGTTGATTGTGA TATTATTCGCTCAAAATAACTATATGTGACGT	NA	NA	NA
Ca-II-SNP783	21.44	Ca-desi-LG(Chr)5	1419904	CATAGTGTGAGAGAAACCCTTAGCAACAAGACG TGCTTTGTAGCGCTCAATTGACTTATCTGACTTAG TTTTGATCTTGATATACCCAATAGTTCCTATG	C	T	CTGCGATTGTTGATCCTCCTCGTTACCCCTCTC GTCAACTTTGTCTGAGCCTTCTTCTATAAAGA GGTTGTTCTTGATCATCTTTGGCAGCAAGCTAT G	NA	NA	NA
Ca-II-SNP784	22.63	Ca-desi-LG(Chr)5	1474370	ACTTGCTTTGCAATTCATGGATTCAATTCATACCTA TCTAACCTCTCTCATTCTTTGTCTCCACACATTC GACAGGTCAAATTCAAAACCTTAACTAA	C	T	ATGAAGTAAAAGTTGAATAAAAGTCGATGCAGT ACAAAACAGTGAATGGAATATAACAAAAAATTG AAAGGGCTTAATTTAATGATGATAATCAAATTTG	NA	NA	NA
Ca-II-SNP785	23.82	Ca-desi-LG(Chr)5	1492078	AATGTACATATCCTTGACCCTATGAGCGATAAAT TCTGAAAGAATTGAACCTGATCAGTTCTTCAAGT GTTTGAGTCTCTTTAGGAGACTCAACTTCT	A	G	TCTGAGACTAATGTTTATAATTGGTTTCAGAAC AGAAGAGCTCGTTCCAAGCGCAGGCAATTGGT TTCTACAATAAATCAAACAGAGCCAGAGGCTGA GA	NA	NA	NA
Ca-II-SNP786	25.01	Ca-desi-LG(Chr)5	1523220	TGTTGTTATGTTTGCTCTTATATGAGTAGCCAAC CATGCATTAATTGCAACTACTCTTGGTAGATAGTT GTGTCGGTTATATGTTACATTGAGTCTTCA	A	G	GCTAAAAGAGAAGTACTAGGAAACCACACATATA CATAATGGAGCAAGGGATGTAATTATAAAGAA GCTAAAAGAGAACAACAACTAACATGCGGAGAGTT G	NA	NA	NA
Ca-II-SNP787	26.20	Ca-desi-LG(Chr)5	1562648	TTGACACGTCCGTTGAATATTTGCTTCTAATTATTC TTTTATAAATGACTTTAATTTTTTTAATTGTAGCG GATCAGTGCATACCAACTTAATTTTTAT	G	A	CTGTTCCCTAGTTTATTTTTGGTAAAGATAGTT AATAAATACTAAGTACTGATTTAGTGAGCCGGT CCATTTAATCCATATTTACATATACCGGACTA	NA	NA	NA
Ca-II-SNP788	27.39	Ca-desi-LG(Chr)5	1699761	AAGCATTATTCCTAATTTCCATTCAAAGAAACCA TTGCTTCCAAGGAAGAAATTTGAACCATTTTCTTCG TTTTCTTCTCGCATGGCTGCACCTTGATTT	T	C	AAACATGTAACGGTGTAGAGCATACCTTCGTC CAGCTAATATTTAGCCATGTTACCATTGTTATT GGTGACAAATACATCGCTTTCATCGCAAACAAT	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP789	28.58	Ca-desi-LG(Chr)5	1777675	TTGGTGATAGATAGGTGATTCTAGTGGTGTAGTA GTTGTATTTTGTGGATTAAATATGAAACATAA GTTTTTGAATTGGATCAAGAATCCCAATT	C	G	CTTGAAAAATCAGATGGCAGTTGCACTCGGTG GAAGGTCAGTGTACCATGCAATACACAGACAT GCTTATTACCTTATTCGATTTTCGATCTTGATTT TTGCAAAATGCAAGTTACTCTTGATCACAATTA TGCACTACTTTAAATCGTTGCTTGGCCTACTC CCGAGGGGATGTATAAGAACTGTTGTTTTAGTA TTGGCCTACTC	NA	NA	NA
Ca-II-SNP790	29.77	Ca-desi-LG(Chr)5	1800042	ACTCAATTTTTCTGTGGTTAGTCTTTAGTCCCA CTCTACCCCATCTTTTTAAATATAAATGACGC GTTCAATAATTGAAAAATGTTATCATTACT	T	C	CTGCGCCCTTTCTTATTATTGCATTGCACATG TGGCCAGCAACCCTTTGTAAGTCTGAGCTACG CAGCAAAATCAGTTACTACTCCGAATCTCTGAT T	NA	NA	NA
Ca-II-SNP791	30.96	Ca-desi-LG(Chr)5	1991486	TTTCAGGCCTTGCAAGCAGCATCAAAGCTCAGAA CCCTACTTGGAGTCCCTCTGCAATCAGATCAGCA ATCATGACCTCTGGTCAGGCTTTTCATTTTTA	T	C	AAATCAATTGACTTAAACGACCAATAATTTTTT ATTTTAGAAAATCATTTTAGTATTCAAAATTACTG ATATTTGGAGACTAAATTGATGATTCATTTGT	NA	NA	NA
Ca-II-SNP792	32.10	Ca-desi-LG(Chr)5	2003951	TTGGTGATAGATAGGTGATTCTAGTGGTGTAGTA GTTGTATTTTGTGGATTAAATATGAAACATAA GTTTTTGAATTGGATCAAGAATCCCAATT	T	C	TGCATAAGATACCAACAAAGAAAACAACAAAA ACACACCACAAAAATCCTTGACACAAAAGGAACA CAAGAAAACATCATATCCACCAGTCATATTTAA A	NA	NA	NA
Ca-II-SNP793	33.24	Ca-desi-LG(Chr)5	2027873	CTTCTATTTTGTGCAGATAAATTTATATTATTTTC ATAATCCCTCATGTTTTCCATGTAATAACACAT TAATTCTATTTTATTAAACACTTTCTCT	C	T	AATTATTTTATTTGATGTTATTAATATAATTTACT ATTTTTAATTATAATTATTTACTATTATTTTT TATTACTTTTTATTAGATTCGGATAAAAAAT	NA	NA	NA
Ca-II-SNP794	36.66	Ca-desi-LG(Chr)5	2423599	TTTGAGCTAGTGAAGAATAACCTGACCTCCAAAA CCTCCTGCCCTGGCCCTGGCAAGGTACAGGGA CCGGCTTTAATGGCAGCAGCTGAGTAAGCATC	C	G	CGGGGCACTACTTATCCAGCCACAACCAGAA ATTGAGCTGAAAAATGCAAAAACGAGCACAATA ATCACCTCTACGGTTCCCTCCTTTTTTTATCCA CGTGTCTCACCTCCTCATCTCAATTCACAAAT AACCATCACACCGTCTTTATTCTCGACCGTCG TCTCGCATTGCAATTTTGCGAAATATAAACCTC TATTCATTCTTGTAAGGAATAATACTAGTATT TCTTACATTTCTCAAGCAAAATCCATAATAC	NA	NA	NA
Ca-II-SNP795	37.80	Ca-desi-LG(Chr)5	2597436	TATTCCTTGTGTGTTGTGATCATTAAAAATGTA CTACAGTTAAAGTAGGGAACATGGTGGCTTCTAAC ATGGACTACCGTCCATGATACACTAGGCA	C	A	GTAGAGAATGGTGACACAAGGTTGAGGATAGA ATCAAAAAATATAATGTTGACAGACTATAATA GAAACAATGTTCTGCTTAATCTAATGGTCAAA AG	NA	NA	NA
Ca-II-SNP796	38.94	Ca-desi-LG(Chr)5	2763336	CATGTGTTCTGCATGGTCTAGATCATATGTTTGT TTTTGTTTGCATTTCTCTACCATGTAGACGAGTG GGGAATATGTTTGTGATAAATTTTATGTGA	A	T	ATAGCTGAAAATTTTCTGTTGACCTAAATAAAT CATTAAATCCCTGTTCTGCAATTGAGCTATG TTGCAATGCTACAAAGTATTCCAATAACAATTT	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP797	40.08	Ca-desi-LG(Chr)5	2789253	GAATTTATTTGATATGGACCATTGGCCCAACCT AAAAGGCACGTTGAAGGAAATGGGCTGACCCCA AACCTTTTAACCATATTTTGGCCTCCCGTA	C	T	CCATGGGTTGAGTATACAAATGAAATTTAAG AAATTTTACGGAGAAGGGGTATAATTGTGAGA TAGATGATAAATTTTTTAAACATAAAAAACAGCAGA	NA	NA	NA
Ca-II-SNP798	41.22	Ca-desi-LG(Chr)5	2958738	GCATTTTTCCTTCAACTACACTACCAAGCCTGC TATATGGCATTGATAGTACCTCACATCACAATTGC TTTGCAAAGTTGTTTGTGTCATTTCTTTG	A	G	CCATGAACTTCACTCACTGCAACAAATGATAAA CTCTTATCAGTCCCATATTCTGCAATGCATAT TGGAATAACATTGAAATTACACAGAAGAACGC	NA	NA	NA
Ca-II-SNP799	42.36	Ca-desi-LG(Chr)5	3010287	CTCTATTTTGTACCTAGGATCCAAAACACCAGCAA CCCTCATTCCCTCATGAACCACATCTAATATTTTT CAAATTTTCCCAACATATTCTCTGCCATT	G	C	AATATAAAAATCAACAGAGTTAGCGTATTCGAG CTACTTAAACTTAGTGATGAGTGATAACTTTTC CCAAATTTCTTTTTAAATTTTTAATTGATTGGA ATTATTCTTTCACAACAACACAATCCTATAGCT ACTAACTCATGATGTTTGGGTGACTCCAGCTTT AATTCTTGACAGGTTGTGACATTAATTAATTTA AGAGTGAATTAATTTATCTCTAATAATGGA CTTCAAAAAGCTCTCTCTAGCAAAAGACTACTT	NA	NA	NA
Ca-II-SNP800	43.50	Ca-desi-LG(Chr)5	3024118	AAATGACTATATATTTGTCTTGCCGCAATCCAA GTTGCTCTTTGGTATTTTTTCAAGGCACCTAAT CCCAGTGTGCTTTCTACCTGTCTCAATTT	A	G	GTCCCATCGACTCAACCTTGGTTTTGGTTGGAC GAAGGGACTATCATTGACTATTCACATTGTGCT GAGACAAATGACTTGAAGTTGGCCAATAGAGA C	NA	NA	NA
Ca-II-SNP801	44.64	Ca-desi-LG(Chr)5	3052692	GCATGGTTTTGAGAAATGTTAAGGAAGACGTAA TTACCGAGCACCGTTGGCGATTCTGTGCATAGCG ACCGTAGAGAAGAATGACGATCGGGAGCTCT	A	G	CGGTACGTACCATCACTTTATTTCTCTATTTTAA TTTTATCTTTTTACTTTTTCTAATTAATTAATTCA ATATTTCTATTTATTCTGTATTGTATAGATTA	NA	NA	NA
Ca-II-SNP802	45.78	Ca-desi-LG(Chr)5	3134685	TTTGAGCTAGTGAAGAATAACCTGACCTCCAAA CCTCCTGCCCTGGCCCTGGCAAGGTACAGGGA CCGGCTTTAATGGCAGCAGCTGAGTAAGCATC	A	C	TTTCTTTTATGCTCTTTTTCTGCTTGTAGAA TGTTCTCCAGCTATTCTTCTAAGATTCTTGAG GGAACACAGATCAGAATGGGCAGATACAAGTA T	NA	NA	NA
Ca-II-SNP803	46.92	Ca-desi-LG(Chr)5	3153611	CTAATTCAGTTAAAATGGATCAATGGGATTTTT CACATGTAGTTAGAGACTCAGAGCATCTCCAACG GTAGCTAAAATGAGTTCTGTCAGGTGTA	C	T	AAACAAATTTGATTTGGAGGCACTATATTGGCT ATGTAAGTTTAGCAATTGTGATTATTTTTGCATG TGCGTTTGTGGTTGGCTTAGCATTGGGGTGA ATGTGAATGCTATGATGGACAGCCTTCATACGT TGTTTACCGTAGATCAGTGCTTCAAATCATCT TAAATCTAACGAATCAACTATACTTCTCGAA ATAGTCTATTGTACTTTTGGGTGGGACAATG ACTCCATCCATCC	NA	NA	NA
Ca-II-SNP804	48.06	Ca-desi-LG(Chr)5	3233511	CGAGATCTGCTCAGCCAGCCCTCTTTTGTGCT CTGACTACATACAGAATCTTTGAACCATGTTGTGA TCCATTCAATGCTTCCATTGCCCTTTGCATC	G	A	CTTCGTTTCTCTTCAAGACAGCAATTCATGCAA TTGAGCTGAAGAATCATTCTACCTTGAATGGAG AAGCGACAAGGGTCATGTGGTCTGTGTTGTGAT CC	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP805	49.20	Ca-desi-LG(Chr)5	3310181	GAGGGGGACAACAGCTGGAACAATTGCTAATAC CCCATAGGTTGAGGAGCAAAGGAGGAATCTGCC CACGGAGGGGCTCACGTTTGATTAGCTAGTTG	A	G	TCAGTAAAGAAGCGAACTATTGATTATCCTCTC GTCCAGTGTGGTTGATCACCCCTCGAACTA GCTACTGATCATCGCCTTGGTAAGCTATTACCT CA	NA	NA	NA
Ca-II-SNP806	50.34	Ca-desi-LG(Chr)5	3319950	CAGGCCAGGCCAGGCTTTGAAAGGCTGAGCCT GGCCTACGATTTATTTTTAGGCCTAAGCCTGGCC TACGGCCTATCATAGCCTTTTTTTTCGGGCTG	G	A	TGCAACTTTGAGGTGCAGCGAGAGATGTTTCG GCAATTGGGATGGATTCTGACTCTACAAGATG TGGACCAAATGCTATGGATGCAATTGAAGAGCT TATGCAAATTTTTGTTGACCAGTGTGCCTTCAT TGACTACTCAAGAGTCATAGTCTTGCTATTAT AGATGTGTGGATTAATGGCATAAATTCGCTCCC TGTGACAACTCTC	NA	NA	NA
Ca-II-SNP807	51.48	Ca-desi-LG(Chr)5	3364304	TTAGATATTGTGCAAATACACGGTTGTGCGACCTG GTTGACACATACACTGTTCTTGACATACACTCTTTG CTTAAACACTGTTTATTTGTGCGGTGAGA	A	G	AATAAAGCAACATTCAATAACCCTTAAAGGAGT CAAAATTAATTTATAGAAGTTTCTATAGCTGGGC TTGTGTCCCAAAGCACATTAGACATACGTTTAC A	NA	NA	NA
Ca-II-SNP808	52.62	Ca-desi-LG(Chr)5	4406861	TTTTCGGAAACGTGAGTATCGTTTAGGGTGAACG GTCTTTGAGTTTTGATAATTTGTTCTAATTGTTTT GTGTCGTTTACTTAATTCAGCGTTAAGAT	G	T	AACTATTAACATGTTTGGTACCTTCATGATAAC TTCATACACATCATCAGCAATCAAAGGTGCCTT CTTCCAGATCTATGTTGAAATGATTGTACAT	NA	NA	NA
Ca-II-SNP809	53.76	Ca-desi-LG(Chr)5	4475969	CTCTATTTGTACCTAGGATCAAAACACAGCAA CCCTCATTCTTCATGAACCACATCTAATATTTTT CAAATTTCCCAACATATTCTCTGCCATT	T	A	CCTAAATATTCAACTCCAATCAATATTTTCTT AAAATTTGATGATCAAAATTGCAATAAATGAGT GGATTAATCCTCTGATGCATTGATAAAAAA	NA	NA	NA
Ca-II-SNP810	54.90	Ca-desi-LG(Chr)5	4512060	TGTACAGATGCACACTGTGGAACAAGTTCAA GTCTACCCCTATGATGCGAAGGGGCCATCTGGC CCAAGGACACTTTGCAATGCTTGTGGGCTTTT	C	G	TAAAAAGTTGAGGTCTACTTCAACAATTTATG GACACTCGCATCTCTCAATTCCTCAGCTTACAC AAAAACAGTGATGGATCAACAGTGGCAAGTTGA GAGAAAGTTCTTGTGGTCACATTTTCATCAA ACCTAGAGATAGATGCAAGTCACCTCTGCCTCA ATATGTGGAGACACATCATGTTGCAGGATATCC TATTCTGTCTGATCCTTACATGTTTGAAGTATCA ATTCAAAGCCCTGGCACTAATTTCAACAAAA	NA	NA	NA
Ca-II-SNP811	56.04	Ca-desi-LG(Chr)5	4539668	TCTGTGTACTCACTGAGGCAATTAGTAGAACTGCAT CCCAATGACAACTTACAGTGTATATCTGGATT GGCAGTTACAACCTGTTTTTCAGCAGGAAG	G	A	TTTGTAACTGATTTCTCAGAGAAATTTTTTA AAAGTTTCCATGCTTTAATATATTTCTATTTACT GCAGGTGACATGGAATTTAAACAGAATAAGTT	NA	NA	NA
Ca-II-SNP812	57.18	Ca-desi-LG(Chr)5	4643427	ATTGAATCCTCAAATTAAGTATTCATTGAAAAGG TCCTTAACCTTGTATGGTTTCTCCATTGATCCC GATGCATGCATCCGTATAAATACATAAGCC	A	G	AGAAACCAATTACTGAACCAAAGTACATTTGCA AATGCAACAGAAACAACTCTTTGGAGTATAAA CTATTTTTTACAGCATCTGGCATTATTATGCAGA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP813	58.32	Ca- <i>desi</i> -LG(Chr)5	4658083	TTGCCTTATACTGATATGCTGGAAAAATGTCATC TTTTGTTTTTAAGCTTTTGGCAAGGGGCATAAATT TGCGTTTTTCTTTATATTCTATCATCTTTC	T	C	CAACACTGAATTCATGTAAAGAAGCTTGTGTAA GAAACTGTTCTTGCCTTGTGCTTTTCTATGAAA ACAGTACTGGTAGTTGCTTTCATTTTATGATCAA CTGGTAGCTTTTCAAAGATTTTAAAGGTAGCA ATGGTGGTTATATTTTCAATATGAAGATTTCAAC TGATAATGTTGAGAATGATGGAAAGAATAGTAG TGGAAAAAAGAACATGCTGCTAGTTTTTCTCAT ACTCATECTCACTCTTCTTCTTATACTTCTCT	NA	NA	NA
Ca-II-SNP814	59.46	Ca- <i>desi</i> -LG(Chr)5	4925461	GGTTTTTGTGACACATTTGTTACCCTTGCCTGGCA TAAGATATTTTGAAGATGTTCTGGAACTTCTCT GCTTCGTCCACTTATCCATTCAAATAAATG	C	T	CAATGGTCCACAACATAAAATGGGCTGAGTGAAA GTCCAAAGCACAAGAAAAACAATTTGTAGTTGA TGCAAAACAACAAGTCAAAAACTGGTGTAAAG T	NA	NA	NA
Ca-II-SNP815	60.60	Ca- <i>desi</i> -LG(Chr)5	5234822	TGTACAGATGCACACACTGTGGAACAAGTTCAAA GTCTACCCTATGATGCGAAGGGGGCCATCTGGC CCAAGGACACTTTGCAATGCTTGTGGGCTTTT	T	C	TTTTCCAATTTCAACTGCGCTAGATAGTTGAAA TATGAACAGGAGGTTTCCCACCAAAAAA CAGAAGGATGACAATACTTACCCTATTTGCC A	NA	NA	NA
Ca-II-SNP816	61.74	Ca- <i>desi</i> -LG(Chr)5	5261100	CATAGTGTGAGAGAAACCCTTAGCAACAAGACG TGCTTTGTAGCGCTCAATTGACTTATCTGACTTAG TTTTGATCTTGTATACCAATAGTTCTTATG	G	A	ACAGTATGTTGACATTTTATAGGGTTTCTTCT GTTTTTCATTTTGCCTGGGAGGTAAGGCCAAAGT TTTTCGTGTAAATGGTTAACGGATATCCACGTG GACATCTGCTATGTAATCTTTGAATATAAATAC CATGTG	NA	NA	NA
Ca-II-SSR282	62.88	Ca- <i>desi</i> -LG(Chr)5	5265717	AACATGGTTCACCTTAATTATACGATTC	(TTA)5	(TTA)7	AGACAAAAACGGGCTAGTTAAA	58.11	164.00	NA
Ca-II-SNP817	65.16	Ca- <i>desi</i> -LG(Chr)5	5280375	ACTTGCTTTGCAATTCATGGATTCATTTATACCTA TCTAACCCCTCTCTCAATCTTTGTCTTCCACACTTC GACAGGTCAAATTCAAAACCTTAACTAA	C	T	CGGGTCAGGAAAAATACATACTTTCCCATTC AGCTGGAGGATTCACGCTGACAAAATCGTAT CAGATTTGGCATTGGGAAGACAGTTTTGAAAA CCAAATACTTTGTTGTAACCGGAGAACACCAA CATCCTTAT	NA	NA	NA
Ca-II-SSR283	66.30	Ca- <i>desi</i> -LG(Chr)5	5290196	CTAACCCAGGATCCGGAGGA	(AT)8	(AT)9	GAGACGGGATAATAATTGAAAATGA	60.01	164.00	NA
Ca-II-SNP818	67.44	Ca- <i>desi</i> -LG(Chr)5	5302276	GAACAGACAGCAATCTCTTTTAGGCCACCAGATCT CTGTACAAATTTAGCATTTTGCATATCAAACAATG CCACCTTTGTCACTGGCCGATTTTCTCCA	T	C	TGCTCTCTTGAATCTTCAATTCAGTTTGTG CAGGAGCAAAGAGAAACAATCAACACAGATTGA GCTTGAAGAGCCAGATCTATCTATCAGGAATA T	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP819	69.72	Ca-desi-LG(Chr)5	5312055	ATTTGCAAAATTGCCCTCCAGTCTTTATCCTTACG GTAAGTATGTTATAAGGATGACATCTATTGTTTAT CTCCATATCTAGTTTAAGTACGAGGGTCCA	T	G	GGGAAAACAAAACCCCTAGAAAGGGAAAGGGA AAGGGGAATTGATATTTGAAAGCGAGGTGATC GGAATTTGATTCTTCAGATCGGATCCGTGAGAT GGTCCGGTATCGAGGAGAGTGTGTTGTTAGAG GGAGAAATCATCGTCTGCTACGCGGGTACAGC TTTGGGTTTGGAAACGTGCTGCGACTCAA G	NA	NA	NA
Ca-II-SNP820	72.00	Ca-desi-LG(Chr)5	5337897	GATTGACTATTAAGTTGTGACCTTTAGATTTGGAT TAGATGCATTCAAATACAAATTTGAATTCCTACA GCCGACTTTATGGTGCAGCTGGCTGTAGA	C	T	TTTTGAAGAACAATACTCTACATCCGATTTT ATGGTGCAGCCAGTTGTAGAATGTTAGATTAGG ACAGAGAGAAACTTTATCTCTTAATCTAATG	NA	NA	NA
Ca-II-SNP821	74.28	Ca-desi-LG(Chr)5	5409164	ATCCATAATTATTTTTATGAAGTTACAAGTCATAC TGTAAGACCCATAATTTTAAAGTACCATTTTTGT TTTTTGGTATATTTTGGATTTGGCTCG	A	G	TTAAATTCATTTATTTATCGACGAGAAATCTA ATTGGCATCGAAATATCTTTTTGATTATAAACT CCAAAATATTAATAACTTTGGCTTAAAAGCCT	NA	NA	NA
Ca-II-SNP822	75.42	Ca-desi-LG(Chr)5	5425955	GGCTAGGGTTATGGGTCGTGACTCCACAGCCTT TTTAAAATAGATTTACAGTGATCTTTTTCTTAA GCAGAAGATTGAATGTTCTTGAACAATCAA	A	G	TCAAGGTTTTGAAATACACTTTTACATTTGTTA GACGATTTCCGGAATTTCAATTCACAAACTTGT CTGGTTTGAATTTGGGATATCCATTTTCTCATT	NA	NA	NA
Ca-II-SSR284	76.56	Ca-desi-LG(Chr)5	5468760	CCGGAACCGAGTCTCAAAT	(TG)10	(TG)9	AAAAGCAGCATGGTCAGTTG	60.06	171.00	NA
Ca-II-SNP823	77.70	Ca-desi-LG(Chr)5	5481759	GAGCAACGTCGCCTTGTTCATCTTCCAGAATG TTGTGATCAAAAGGCAACATCTCGGAGCAAGTTGT AGTCTTTAGAACGAGTGAACCTTGAGCTTCA	G	A	TTAAAAATAAAAGTAATGAATGTAATCATAT ATATATATATAGCATGCCCTTGAAGCGCCTACT ATAGTAATCTGAAGTTTCTATTTGAGTTGCTT	NA	NA	NA
Ca-II-SNP824	81.12	Ca-desi-LG(Chr)5	5611691	ATTTGCAAAATTGCCCTCCAGTCTTTATCCTTACG GTAAGTATGTTATAAGGATGACATCTATTGTTTAT CTCCATATCTAGTTTAAGTACGAGGGTCCA	A	G	AAATAGGTGATGTAATTTGACATGAGTGACACAC TGGTCAAAGTGGTTCGAAAAGAGAAAACAAATA ACAGCAATCATCAAACCTTAATAAAATAGAAA	NA	NA	NA
Ca-II-SNP825	82.26	Ca-desi-LG(Chr)5	5650676	TTGATTATTTCTTACTCGAATTCATGTTTGGCAAG TGCAGCTGCACGGATTGAAGTATATGAGTGGGTG GAATTTCTATTGACTCTACTGGGATGAGAA	G	A	ATACCAGTACCTAGAAAAATGATTGCAGTAAA ATCCAATGACTGGGACACAATTCAACCTATAAA TAAATTACTACCCCGCTAATCAGTTATTCTCAA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP826	83.40	Ca-desi-LG(Chr)5	5686299	CAGGCCAGGCCAGGCTTTGAAAGGCCTGAGCCTGGCCTACGATTTATTTTTAGGCCTAAGCCTGGCCTACGGCCTATCATAGGCTTTTTTTTCGGCCTG	A	G	TTAGGGTTTTAAGGATGTTTGCTTCATATTTTTAAAAATTATTTAAGTAGGCTTTAAATAGGCTTCCAGGCCAGGCCAGGCTTTAAAAAGGCCAGG	NA	NA	NA
Ca-II-SNP827	84.54	Ca-desi-LG(Chr)5	5973615	CACCTTCTGGGAGTTGGGGATTGCAGCTAGAATAGTCCGAAGTCCAGCCACAGCATTATACCGAAAACGGGCTTCTTCAAGAGCGCCACCAGCACCG	C	T	ACTTCTCCTTCCGCTGCTACCTCTCCCAACGCTCCTTCTCAACGGAGACGCCAATTCTGATAGCTCCAGCCAACACGCCGACGGCGCTGCTCCCGGTG	NA	NA	NA
Ca-II-SNP828	85.68	Ca-desi-LG(Chr)5	5992600	CATATCTTTTCTTCTCTATAATTTTTTCTCTCTATTTCTCTCTATTTGTATCAAGGAACCCTCCATGATACACATGTTTTGAAATTTAGTTCT	T	C	GTTAATGCATGATTGCATAAAGCACTTGTGGAATTTGGGTTGGAGCATGTTGCAATAATTTGAACAAGTAGAAGATGAAGATGGATATGAGTATACGAG	NA	NA	NA
Ca-II-SNP829	86.82	Ca-desi-LG(Chr)5	6134976	TCGAGGTTAAGGTTCTACATTTCACTGAGGCACACACCTTGGTGCTTTTGACATGCTTTTAGTGCCCCTTATTGATAACTGTAATTAATAAATCCCGTAG	T	A	TAGCTTTGGATCCTCATTGAACAAAACAGGGGACGTTTTGGCACATATGATTGAGGATCTTCCCTGAAGCAATGTTCTTTATGGATATCGGATAGATGACCTCAAGACTGGGGTAAGGGGCATCGATTTGACAGAAGCATTGTGCTTGTGATCCTTATGCAAACTTATTGAAGGTCGAAGACATTTGGGGATATTAGCATGAAGTTGTCTAAGTTCTAGGCACATATCATTTCACAGCTTCCCTTTTCACTCCGCAATGCGAGCATCATTGACAGCCTCAAGTATGTCCTGACTGATTGTACTAGACCCGACATTGCCTTCGTCGTGGGATTGTTGTGCAAGTTTTACTAGTAGACCTA	NA	NA	NA
Ca-II-SNP830	87.96	Ca-desi-LG(Chr)5	6333200	CCCTTCAAGGACGACGTGAAATCTTTGATACTATAATTCGAGACTCATTGTCTTTAAGGTATCTCGTGACTTTTCGATAGTGTGCAATGCTCCATA	C	A	CTCACCAGACTCCACCGCATTAGCGTCCAGCATCGCCGCTCTCCCTCCACAGACATTGCCAAATTGCACAGAATCAGCAAAACCTACTCGCCATTG	NA	NA	NA
Ca-II-SNP831	89.10	Ca-desi-LG(Chr)5	6509887	GGCGCTTGCACTCTATCATTAACTTTGGTTCAGAGTAACCGAGTCAAGCTTGTGAAACTTGGGATGGTACCCACGCTATTTTCGATGGTGAACGCGCG	G	A	CTCACCAGACTCCACCGCATTAGCGTCCAGCATCGCCGCTCTCCCTCCACAGACATTGCCAAATTGCACAGAATCAGCAAAACCTACTCGCCATTG	NA	NA	NA
Ca-II-SNP832	90.24	Ca-desi-LG(Chr)5	6543566	TTAGTTCCAAGTGGAGAAAATCTTGGGATGGTTTTAGTTCCAAGTGAAGTGTACTTTTGTGGTGGAGTAGATTGTCGGTAAGACAATGGAAGCGGAAG	C	T	CCCAATATATAGCCTTGACCTTCTTTATTCTCCACACTAAAGGATGTGAGACTTGCAATCAACCACAACATCTCCACCTTGATTGTAAGAGTTCCA	NA	NA	NA
Ca-II-SNP833	91.38	Ca-desi-LG(Chr)5	6596225	CTAATTCAGTTAAAATGGATCAATTGGGATTTTTCCACATGTAGTTAGAGACTCAGACATCTCCAACGGTAGCTAAAATGAGTTCGTCGGTCAGGTGTA	A	G	AAGATAACCATATCAAAGTACCGTTCCTCCGTGAGAGAAGGGTGTGACAACTTGACACATCTCCAACAACGAACTCACCAAAACCTGAAGGTCACGTA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP834	92.52	Ca-desi-LG(Chr)5	6675851	TTATACGATTTACGTGTATATACGCACACCCAAT TATTATATCATTCTTTTATGCGTTTGACTATTATTA AATGTGACTTAATTATATTTATTTAATT	T	C	ATCATAATAAGTATATCAAAATAAAGAAAATCAA ACGCAATATTACCACATCTCAAGATAATTATTT ATAAAGTAATAATTAATAATAATATATTTA	NA	NA	NA
Ca-II-SNP835	93.66	Ca-desi-LG(Chr)5	6815620	TTGCCTTATACTGATATGCTGGAAAATAGTGCATC TTTTGTTTTAAGCTTTTGGCAAGGGGCATAATT TGCGTTTTCTTTATATTCTATCATCTTTC	A	G	ACTTAGATATCAAGTCAAACAACCTTAAGAAAA GGTGAATTGATAGTTAAAGATATTCTAACTAAAA CAAGAACAATAACGTTCAAGAGTAAGTTACAAC	NA	NA	NA
Ca-II-SNP836	94.80	Ca-desi-LG(Chr)5	7026863	GCGTGAGGATGGGTTCTGCCTGGCCTAACAAGCT GAATGACAGTTCGTAAATTATGATGAAAAACCTTG GATCCTTTGAAAAATGATTTCCAACGGTCAT	A	C	TGCTTCTTGAAAACCTTAAAGATGCTTGATCTTTT TATGCAATTGTGTTGTGTGTAATCCAATGGAGA GCTTGTTAGCATTTTATAGAGATCCAAGCCCTT	NA	NA	NA
Ca-II-SNP837	95.94	Ca-desi-LG(Chr)5	7061392	AACCAGCACAGGTGGTAAGGTAAGTGTGCTTGTA TCTTTGTTCTGCTTTAAGCCAATTTAATTGTGGAT CGCAACTCAAAATTTAGTGTGTCAGAAT	C	G	TCTTCCATTGTCTAAATTGTTTTGATTGAAGTTA TATTGCACCGATGGTGAAAAGTTGATTTCTTGG TTTGGTATGAGAATGCCTTAAGGTTATTTGGG GAGTAATATAAGCTATTATGGGGGATGTTGG GTTTATATGGATGCATAAGAATGTTGCACGTTT TGTTGAAAAATATATTTTGTGGGCGTCA	NA	NA	NA
Ca-II-SNP838	97.08	Ca-desi-LG(Chr)5	7119562	TGGCTGAAACAATTTTAGCCGACTTTACTTATC TCTAGGCCAACTCCAGATTACTAGGTTCTTTCC CCTAAGAACCGGAGGTTAATACCAACAA	A	G	CTAATAAGTACTATACAATATAGATTCTGGTTAA TTACGTAGCCCTGAGTTGCAAATGGGATGCAC CAGGATGGAACCTGATGCTGGTATTTAGTATTT A	NA	NA	NA
Ca-II-SNP839	98.22	Ca-desi-LG(Chr)5	7177410	CGACCTGCCGATTTCGAACACGACCTAAGGAT GACAACATGATTTTTCCAACACAGTCTCCGCTC TACCAACTGAGCTAAGGTCGGTTCTGTTATG	A	C	ACAGAGTCCACTCTCAACACTGCTTACTCTCTC TTCTCCAATGAACAAAAACCTCACGGAAGCG TGCGGCGCGCGCACCGGCACCGCCGCAACAA CCACCGACGAACAGGCACTGTCTCAGGAAGA CGAGTTTCTCGACGAAGACGTGTTCTCGGACG AAACCCTCATTTTCGGAAGACGAAGAGTCCGCA ATTCTCCGTGACATCGAGCAACGCCAGGCCCT ACCTACTCTCTCTCAAACTCCACTCTCTCTCTC	NA	NA	146
Ca-II-SNP840	99.36	Ca-desi-LG(Chr)5	7236249	CCTTCAGAGGACGGAGACAAGGAAGGCTGAGGG ATGGCTGGAATGTTGGAGGAAGATTACGCATAG GTGGTTCAAGACCAAGCTTTGGGGCAAGCTGAT	A	T	CTTACAAGAATATTCACAAAAATTTGATGCTCT ACAAACTATCATTGCGCGCCAGGCCATCAAG ATAAGGAACAGGCAATTTTGCCTGACTGGATG GA	NA	NA	NA
Ca-II-SNP841	100.50	Ca-desi-LG(Chr)5	7253490	TTCGATTTATCCCACTGACGTTGAGCTGTTATG TATTTTCTGAAGAGGAAGGTTATGGGTAGAAAATT CCCTTATGATGTCATTGCTGAACCTTGACAT	T	A	TGAGAAACATAAGTACTATTATAATACTCTACCA TCCAAGAAAAATAACCACTCAGTGCCAAATC CAAACCTGGTAGATCCCATGGAGCATACTTGTA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SSR285	101.64	Ca- <i>desi</i> -LG(Chr)5	7263577	CGGCGACGATAAGAAGACTC	(TC)14	(TC)15	GCATTTCGATTACATTAC	59.98	145.00	NA
Ca-II-SNP842	102.78	Ca- <i>desi</i> -LG(Chr)5	7268725	AATATTGTTCCAGGATTGATCTTCGTTTTTCAAAA CTGTTTCAAGATCAATCTGCGTTTTCCAGAAGCTC TTCAAGATCAATCTGCGTTTTCCAGAAGCT	A	C	TTTATTTTACAACCGTTGGATTTTATATCAGCTC AATGTCAGTGGTCTTCCAGGTTTATGCTTTCTT ATATGGAAAACTTTATTTGTCAGTACTGAGTGGAGT TGAGGCTGCTATAGTCAAGTTAGCTAGAAAGGAA GGGAGACGATCCTTTGAAGGCAGCAATGGCTT CGCAATCCCTTGTTCAAATT	NA	NA	NA
Ca-II-SNP843	105.06	Ca- <i>desi</i> -LG(Chr)5	7292924	TTCAGGGAGAAGAAACACTTCCGTTTATTTGGAA TACGTCTCTGGAGGTTCTATTCAAATAACTTCA GGACTATGGGGCCTTCAAGGAGCCTGTTAT	C	T	GCTTAAATAAATACAACATCAATAGCAGAATTA CCTATGCACTGTATTTCTCCCGTGAAGATAGGC AAGTCCAGAGACAATCTGTCTGGTATAATTTG	NA	NA	NA
Ca-II-SNP844	107.34	Ca- <i>desi</i> -LG(Chr)5	7336211	TTGACTTGTCTATGGAAATCAGGAAACTGTAGATG TACTGTTGAAATTTTGTTTTTGTTAACTGCATTTT ATTCCTCAAAGTCTGCAGTTTACGATGT	C	A	TGTTTCCAACAAGCATCTTGATGCAGTCTGAT TTGTTGAATAGAGGTCTATTTCTTAGCCCAT CTTCAGAGAGATTTGTAATGTATCTCGCCGAG T	NA	NA	NA
Ca-II-SNP845	108.48	Ca- <i>desi</i> -LG(Chr)5	7359768	CTGCCTCTTCGCCGTCTGAGTGCACGTTGTTTT GTATGTTGCTTGTATGCAACATTATTTTTCCATT TTGTTGCGGTGTTGTTTATTGATCATATTGA	G	C	GTGATATAATTAAGTGTGTTGAAATATTCATGCA TTTGGAGTTTTAACGTTGAAGATGTCAAATAA TTGCTTGAATTTATAATGGATAGAGGTTAATTT	NA	NA	NA
Ca-II-SNP846	109.62	Ca- <i>desi</i> -LG(Chr)5	7440439	TTGTATCCCCTGATAAATTGATTGGTTGAAATAATG CTATTAACGATGATATATTACTGATAAATTTGT ATAAGATTGATTTGTTGCTTTGGGCGAG	G	A	TACAATATCACATATTAATTCACCCGAAACTAGC AGATACATTCATGACCATAATATCCACATCATT ATTATTAACATTCTCATTATTGACATTG	NA	NA	NA
Ca-II-SNP847	110.76	Ca- <i>desi</i> -LG(Chr)5	7498913	ACATTGTTCTTTTATTGTTTACTCCCAGGTGAAA GGTTTGGATGTCGATGCTCTATACGTATCTCATGT CCAGGTCAACCAAGCTCAAAGCAAAGACG	T	A	ATATATAAGATTAAGAATGTAACAACAATATACA TACATTAAGACATAAATAATATAAGCACAAACATA CGATTGATTCTTCCGTGAGCAGGTTATGTACG	NA	NA	NA
Ca-II-SNP848	111.90	Ca- <i>desi</i> -LG(Chr)5	7636893	ATCACATACCCTATCCTCGTCTATCATAACATGA ATCTGCAACCTGGTTTAGCCCTGATCCATGAAAC ACCAATGAACATCTTTTCCGGGTTTGGACT	T	C	GCGGTGAAATTCAGCATCAACACCATGCCTGAT GTAGAAAATGGAAGACAAGAAGCTTAAATCATGAG AATGCAGAGAATGACGATACAGTATTGTTACG A	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP849	113.04	Ca-desi-LG(Chr)5	7749351	TTCGATTTTCATCCCACTGACGTTGAGCTGGTTATG TATTTTCTGAAGAGGAAGGTTATGGGTAGAAAATT CCCTTATGATGTCATTGCTGAACTTGACAT	C	T	GTCACGACATGAACCTCCATATGATCCTCTTAG AGTCAAATCATAAGCGCGTATTATATTGCAGA ATACTATCTTTGACAGCAAGTTCTTCAAAGAA GACAGTCTCAGGTAACCAATTTTCATGTTCTCAA TGCTGAATATTTGGAGAAGCATTTTCCAGCCTG GTTTTGATAATGAAGTTCCTG	NA	NA	NA
Ca-II-SNP850	114.18	Ca-desi-LG(Chr)5	7800119	TTTTTCAAACCTTATATTTTAGAAGGCTTGGCCTA TGATGGATCGACTATGTTTTGGTATTTTAGGAT CTTGCACTTTGATTATTTTGATGCTTGCA	T	A	ATACACATACAATAAATATCAAAGTTGTAATTT TATCATAAAATCTTGCATGCATGAAAATATCA AACTTGTAGAAGGCTAAAATAACATAAAATAT	NA	NA	140
Ca-II-SNP851	115.32	Ca-desi-LG(Chr)5	7834440	ACTGTATGAGAGTTATAGATATGGCTAGTTATAGC TTTAAGTAGAACACTTTTCAAGCTTGTAGTGCAT GTCTGGTTTCAATTTTGAGGGGTCAAAAT	C	G	TACAACTTAACTTCAAGTTGGAATCAATTCTG GAGGCAGAATCAATTTCTACTCAACAACATCCAA ACATGCCAAAATCAATTTTACACATTCAAAAT	NA	NA	118
Ca-II-SNP852	116.46	Ca-desi-LG(Chr)5	7851698	TTGTTTCAAGTTGTGCCTTTTAAATTTGATCCTTT TGAGTGATTATTTTGTCTCATATGAGAGTTGTATAT TCCTAGTACATGAACTGGAATCCATTCA	C	A	AAGATCTACTTCAAAGATTAACAAAGACAAAA GCTAAGCATCAAGAACTAACAGCAAGATCAAA TCTGTTTTGAATGCAAGGAAAACATGCAAAAT T	NA	NA	NA
Ca-II-SNP853	117.60	Ca-desi-LG(Chr)5	7881404	GGGTTGAATAAGGATTTTGTCTGTTAAAAATTTTC AAGTGTAAAAACTATCCTCTTGCAGAGGATGA CAAGCCCGAGGATGGGTTTTTCAAACCTT	T	C	GGGTGAGGACTGGAAGTAGCCATCTTTGGGT GAACCAGTAAAAACAGTGTGTGCAATCTTA TATTTCTCTTCACTCTTTAGCTCAGTTCAAATC T	NA	NA	NA
Ca-II-SNP854	118.74	Ca-desi-LG(Chr)5	7952610	ACATGGCATATATAAATGTGCAGCGAGCTTAGTA CAAACATACCTTTCTCGGCCTTTTGGCTAAGAT CAAGTGTAGTATCTGTTCTTATCAGTTTAA	T	C	AAGCAACACTTGAGAAATCCAATAGCAAGCTAT TGAGTGAAATCTCCCCCTCAACAAATTAATTTA ATATCGTGTGAACCATTTGGTTACATATCAGAT	NA	NA	NA
Ca-II-SNP855	119.88	Ca-desi-LG(Chr)5	8013361	TAGGAGGAATGCTAGCGAAACACTCTCTAACACA CACTTTCTAACCCACTCTCTTTGATTGGTTAAAAAT CATTTAGGTCTCACTAAATCATGTGGTCC	C	A	CCAAATGCTAGAAGTTTCTTGATCTAATAAAA AAATAATGCTAACCAACACTCACTTTGATTGG TTAAATCCACATGGGTCCCAAAATTCATAT	NA	NA	NA
Ca-II-SNP856	121.02	Ca-desi-LG(Chr)5	8089920	TTGATCATATTAGCATTGATTCATGATCATTAAATC TTTTGGCCGGCATGCCACCAATAAAATCAAGG ATCGTGTGGAGAAAATGAGACTTGGTTCCA	T	C	TAACTTTATTATTGGTCCAAATGAAATATATT CACTCAAAAATAAAGTGCACATGAATATTTTAT TAACATATTGATGTATACACACAATCATAAA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP857	122.16	Ca-desi-LG(Chr)5	8339399	TTTATTTGGTGTGTCAGTTTCAGTTGTGTAAGTCAAGT TGTCCTTTCTGCATAGGTGCATTATCAATGTTCTCT TTATCCTTGTGTCCTATTGCTACTTGT	T	C	CATCAAGGCAACTCAAACTATGATCAAGCACA AAAGTTTAAAATAAGCAAAACAACATCTAGAAC CAGAATAAAATCAATCTCCATATTGATGACCTAT	NA	NA	NA
Ca-II-SNP858	123.30	Ca-desi-LG(Chr)5	8490412	AAAGAAATAAACTTAAAACAAAAGAGTCCTTGT CTCTGTTTTGCCGATTTCTCTGCTTTGCCGTGTG CTAGCTTTGACGTGTACAGTGCGTCTCCAT	A	G	ATTTTACACTGCTATGGGTTGTTGTTCTGGATT TTACTGCTGGTGGGTTGTTGTTATGGATTTTA CACTGCTTTAACTCTATGTGGAGACGCAACCTC A	NA	NA	NA
Ca-II-SNP859	124.44	Ca-desi-LG(Chr)5	8551737	TTATTATTTCTTAGAATTTTGTGTTTTGTTAATTTT TTATATTTTTATATTACGCTCTGTGTTATAAAT TTATAATTTTATTATTTAATACATC	A	C	TAGATCCCAACCATTGTCATTGGAGAAATGAT TGATTTTTTAGTATATCTAAAAATTAATCACTC AAAATCACAACATTAATCTTTTAAACAATCAAA	NA	NA	NA
Ca-II-SNP860	125.58	Ca-desi-LG(Chr)5	8598213	CGACCTGCCGATTTCGAACCGAGCTAAGGAT GACAACATGATTTTTCCAACACAGTCTCCGCTC TACCAACTGAGCTAAGGTCGGTCTGTTATG	G	A	AAGACAAATTCATTGATATCAGATATCGATTAC CTGCTCAAAATAAATCATTGGATTATCTTAATGCA TTACATATTGTATAATCGCATTACCTGAGGGG	NA	NA	NA
Ca-II-SNP861	126.72	Ca-desi-LG(Chr)5	8629542	ACTCATAGGCGAACCTCTTAAATCATCAACCTTAG ATCTATCTTCTCAGCCTTTTCTCTTGAGGTTTC AACCGCTCTTGATAAGCAACAACTCTTCC	A	T	CTTGAAAATCCCTAACTCTGTTAGTTAATCCTT CTTGGGTAAGTGAACAATAAGAAATGAAACC TTCTAGAACGAGTGAAGGATTATCTGTTAATGG	NA	NA	NA
Ca-II-SNP862	127.86	Ca-desi-LG(Chr)5	8685227	CCATCTCTTCTCCAATAATCGGTGCAACATGA GATTGATGCATATACTACCATTTAATTTTTCTA AATTTCAAAATATCGTTATCTTAGGTACC	A	G	TAAAACACATCGCACACAAGAAGGTTCTCACAT ATTAAGTGGGCCCTAGGTCCCCCACAAAAAC AAAACATGTCACATTTTATATAGAATGTCCT G	NA	NA	NA
Ca-II-SNP863	129.00	Ca-desi-LG(Chr)5	8772605	AACTTTAGTTAATAGTATCTTACGATACATGCAAGT CGTACCGCTTTTTCGATATAAACTGAACCCAATTG ATACGTATCTACTGTGTATCTCACTGG	T	C	AGGGGTAAGCACTGTTTCGCGCAGGTCGCGA GAGCGGTGCCAAATCGAGGCAAACTCTGAATA CTAGATATGACCCCAAAATAAGAATGGTCAAGG TCG	NA	NA	NA
Ca-II-SSR286	130.14	Ca-desi-LG(Chr)5	8857368	GAGTCAAATTAACAAAGAAGCATAGA	(AG)6	(AG)7	AAAATGCCACAAGCAAG	57.47	124.00	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SSR287	131.28	Ca- <i>desi</i> -LG(Chr)5	8858941	TGCCCAATATCTTATATCCAGG	(AT)10	(AT)13	TCCATTGATTATTGCTTTTCAA	57.99	218.00	NA
Ca-II-SNP864	132.42	Ca- <i>desi</i> -LG(Chr)5	8895007	AACCAGCACAGGTGGTAAGGTAAGTGTGCTTGTATCTTTGTTCTGCTTTAAGCCAATTTAATTGTGGATCGCAACTCAAATTTAGTGTGTCAAGAAT	T	G	ATAAGTGAACATGATTATAATTTTCTAATTCGTTATAAATGAAAGAGCAATTAATAGGACAATCTATACTATATCTCTTAGTCTCATCTAGTTGGAAGA	NA	NA	NA
Ca-II-SNP865	135.84	Ca- <i>desi</i> -LG(Chr)5	9147463	CCATTCTTTTTCAGCATCTTGTATTACCATATCAA GGTTTATTCTTTATTTTATTCCACCATATGTAGTTTACGATTTTACAAAAGTTGGTAATGTGATAG	C	T	TGACAATATAGAGTCCACTCACCACCATCAGCGAATCATCTAATCCTCCACTCCAGTGTGTTTGA GAACTACATTGTCAATCATCTTTCCACATGGCCATTTCGAACCCTATTCCTAGAAAAACCTAACCTCTATTCTCCGCAATGATCCAAACCAATTGTGCAGGCATAGCAGCATCAACTCAATCCCGTGACTTGCATGTCTTACCGCTACCCGATCTCGCTTACCACTATCCCGCTTCCAGCTCTCATCAGC	NA	NA	NA
Ca-II-SNP866	136.98	Ca- <i>desi</i> -LG(Chr)5	9152669	GGCCTTAAATCATCTCCTTTATAATCAGTGTGGAGCAAGAAGTGATCACCTTAACCAGATTCCGATGCCTAACATTTTTCAAAGTTTCACATTCTGCA	G	A	GTGTTTCTAATAGTCATGATTCTAAATGTTTTTCCCTTATTTTTGGGTTACGTTACCTGTCTAGCCAGTAGTCCAGAAAGCTTGGTGAAGTTAGTGAAGAAATTAATTTTCCCTATTTGCATAGCTATGGTGGTGGTAGTGTGGAGGATATGGTAGTGGAGGACCTAGTTTTGGTGGTGCATTGGAGGTGATATGACCATGGAGGATCAATGGCGGAGGATTCGGCTTCAATACCAGCATCTACTCCCGC	NA	NA	NA
Ca-II-SNP867	138.12	Ca- <i>desi</i> -LG(Chr)5	9317619	TGCTTAATTGCACTTTTGGTCCCTATTATAGGTGAAAATTAAGTAGTCCCTCCATTTGTTTATCCCCAGTTTTAGTCCCAAACTGAATTTCAAGT	C	T	ATCAGAAATAATAATAATGAGTTTTATTCCACATAAGCGTTTCCACGTCACTATTTTATTGACATGTCATTTAAAAATAACAACCTCATCATGTTTTG	NA	NA	NA
Ca-II-SNP868	139.26	Ca- <i>desi</i> -LG(Chr)5	9393004	AGGTGGTTTTGGTTACAGGTGATACCAGTGAATGACATGGGTTTTGGTTTTGGAGCCAATCATGGAGAA GAGATGGGTTTTGGGAGAGTTTTCTTTGAAGTTG	G	A	ACCACCACCACCTCTCTCTTTCTCCTCCTCTCTCTATTCTCCTCCACTTATCACCATCCCACTCTTCTCTCAAAAAGACCCAACCTACTTCACAACCTTA	NA	NA	NA
Ca-II-SNP869	140.40	Ca- <i>desi</i> -LG(Chr)5	9415820	TTTGAAAAAACTGTGTTTTCTGGAAAATACGGGACGGTCTGACAGGATCGGGATGTGACAGTGGTGC AAGATTAGGGCAATTCGCGGCCGCGAGCACC	A	G	GTGTCATAATCACATAATCTGTGCATCAATTCCGGAATCCCGGTGCAGTAGACAGACTTACTGCGACGCCACCAGCGTGAAACGCCTTCGACGGGTG	NA	NA	NA
Ca-II-SNP870	141.54	Ca- <i>desi</i> -LG(Chr)5	9447895	GCTTTGTCTCTCTCTGAATAGCGCCACTGTGAA GAGAGATTTTAGACAGAGAAAAAGAAATGAAAGAA TCTCGTTTTCCCTATGCATATGTTTTGTGGC	G	A	TAGTTTGAATGAGATGATTAGTAAAGTAAAAACGGCACCGTTTTTAGCCATTATTGTTGCTTTCCCTTTAGTACGAAAGTAAAAAGCCCAAACTCT	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP871	142.68	Ca-desi-LG(Chr)5	9467589	TCGAGGTTAAGGTTCTACATTTCAAGTGAAGGCACA CACCCCTTGGTGCTTTTGACATGCTTTTAGTGCCCC TTATTGATAACTGTAATTAATAATCCCGTAG	A	C	TGTTGCAAAACATAGTCCCACGGATCAGATAAC TTTTTAACAACATTCAGACTATTTTACTTCCCTT ATAATTATTCATATTACATTATGTGGCTGAGCT	NA	NA	NA
Ca-II-SNP872	143.82	Ca-desi-LG(Chr)5	9486442	TACCATTGTTTTATTATTACATTATGTAAGCCATAA CATTCTTTCTATCTCCATCTTCTGCCTCACACTTA TATTCATCATTTTCTCTCACACCCTCTT	A	C	AACATATGTTGAAATCAAGCATAATTATTGACAA AGCATAAATGGGGGTCAATAAAGATGATTGAAG ATGTTGAAGTGTGTTGAAATGAAGGAAGAAAGA	NA	NA	NA
Ca-II-SNP873	144.96	Ca-desi-LG(Chr)5	9533963	TATTCCTTTTTCTGTCTTGTACGGTATTTATTT TCCTCTTTGAATAAAAGATCAAGCATTGAAATGGA GGTTTGGTGTGTTGAACTAAATTTATTG	T	G	TGAAATTTGCTTGAATCCTAAATAAACGTCGGA TAAATTTTACTAATCGATCACCCAAAAGAACGT TCTATCCATGTGCTTTTCTCTCATGCTATTTT	NA	NA	NA
Ca-II-SNP874	146.10	Ca-desi-LG(Chr)5	9591040	TCTTAGATCGGTTTCATTAAGAGGTTTCCAATATAT ATTTTTTATAACAATGATACACATATACTCCTAAT TTTTTGTACTCATTCAACATTTCAATTT	C	A	CACCTATAGAAGTGATACACTTTGAAAAATAAA GAGATAAAAAAGTAACGTGCTAATATAATATA TTGATAATGTGATAGAAGAGAGACATAAAGA	NA	NA	NA
Ca-II-SNP875	147.24	Ca-desi-LG(Chr)5	9616056	GTTGTTTTGTTTGAACGCTATATTGCATCAATTTTT GAAACACTTCTTTTTCGTTAGTTATGGTAAATTTG GACTTTTCATTGCAAAGTATTGGATTCA	G	C	GTTCCAGAACTTATTTTGTCTCAATTAAGTTTTTT TTTCTCAAGCAGAGGATTGAATCTTCTTGACTA ATCAAGAATGAGAAAAATTTGTATCCCAACAGGT	NA	NA	103
Ca-II-SNP876	148.38	Ca-desi-LG(Chr)5	9639080	GGCCTTAAATCATCTCCTTTATAATCAGTGCTGG AGCAAGAAGTGATCACCTTAACCAGATTCCGATG CCTAACATTTTTCAAAGTTTACATTCTGCA	C	G	GTTTACAAGGGTGTGTTCAACATCAGCACTTGT GAAAAATCAAACCACACTTGCTGTTAAAATTCTG GACCTACAACAAAGCAAGCATCTCAGAGTTTT A	NA	NA	NA
Ca-II-SSR288	149.52	Ca-desi-LG(Chr)5	9669602	AAAAATGACCCAGAAAACCTTTATTT	(AC)8	(AC)7	TCAAAATCTTCGTCTCACTTTGA	57.85	127.00	NA
Ca-II-SSR289	150.66	Ca-desi-LG(Chr)5	9669764	AAACCCAGAGAGAAATGAAAA	(AG)12	(AG)11	CAAAAAGTCAGTGACGCGAA	59.11	164.00	129

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP877	152.94	Ca- <i>desi</i> -LG(Chr)5	9849475	AATATTGTTCCCAGGATTGATCTTCGTTTTTCAAAA CTGTTTCAAGATCAATCTGCGTTTTCCAGAAGTGC TTCAAGATCAATCTGCGTTTTCCAGAAGT	T	G	AAGATAGGTATCAAACATCACAATCAGATCAA AGAAGCAGTTCTGAAAAACGAAGATTGATCTTG AAGCAGTTTTAGAAAATGCAGATTGATCTTGAA G	NA	NA	247
Ca-II-SNP878	154.08	Ca- <i>desi</i> -LG(Chr)5	9929528	TAACTTCCTTCTCTCTCTCTCTATATATATA TATATATATATAGTTAGGGATGGGTAGGGTTTG GGTAGGGTACTATAGTATCCGTTCTCATA	C	T	TCAATTATCTCAAATAATATTGTCATATGAGTTG CAACTTCACAAAATATTATTATGGATATTTAAAT ATATACAGTATGAATATTTTTTAAATCGCAG	NA	NA	NA
Ca-II-SNP879	155.22	Ca- <i>desi</i> -LG(Chr)5	9941575	ATGAGATTATGTCTAATTGTCATCCCTACTTTTGC GCTATTTGTTGTTGCTACTTCTTACATTTAGGGG CGGAAATATGTCCATTGATTTATAGGAGTT	C	G	TTTCCAATTGAGACATGGGTCCACAATGAAATG AGAAAAATATGGTGTAGTAAAGTATATGTTTAAAT ATGAATGACAAACTACAAAAAACTTGGCTAT	NA	NA	NA
Ca-II-SSR290	156.36	Ca- <i>desi</i> -LG(Chr)5	9946606	CCGGCTTAATGAAAGAGGAA	(AT)9	(TA)9	GCTTCTGCTATGCTCTTCTGG	59.29	138.00	NA
Ca-II-SNP880	157.35	Ca- <i>desi</i> -LG(Chr)5	9988382	CTAATTCATCATTCTTCTTGAACATTGCCTCCA CTTTATATTAGAGTTAGACATTACATTACATATTAT CATTCAAGATGGCTTTTCAAGGGTCTC	A	G	GCTTGCTTTTCAATGCTATGCTTTAAATTATGAA CCCCTAAAAAGTTCAATAATTAATCTATCAAGG GCTTATAATATGAATGAGTGATTTTTTGTCTTA	NA	NA	NA
Ca-II-SNP881	159.33	Ca- <i>desi</i> -LG(Chr)5	10001294	TATCCTAACCGTATCATGCAAGCTTAGAAAATT TATAGTTGATGATGAGATCCTATGATGCTCTCCAC TTACAATAAGATCCTATGATCTTGCTACCC	T	C	CTAGTGTAAATATTACAAATCAAATCCTTATCTT AACAGAGCAAGGAGAATATTGCTTTGTCAGGTT GTCAAGATTGATATTTTATGATCAAGATCAGGAAG	NA	NA	NA
Ca-II-SNP882	161.31	Ca- <i>desi</i> -LG(Chr)5	10104591	CCTCTTCACTTCTATTATAATCATTGAATTTGGCTC CTCTAAAGTGAGTGAATCAATGGTTGATCATCACC CATGATTGGTCATGCATGTACACATAATA	T	C	AGTGAGCAACTCACTTTAGAGAATAAAGTGAGT AATATCAACCATTGATGATCAAATGAATGGTTG ATATTATGTGCACATGCATGACCAATCATGGTT G	NA	NA	134
Ca-II-SNP883	162.30	Ca- <i>desi</i> -LG(Chr)5	10115516	CCTTTACTATTACTAGGTCTAGGACTAGGACTTGG ACTTTCTCTTTTCCCCTCTTCTCTTCAACCAAA TTTTACTCCCTATGGATTTTTTCGATATA	C	A	TTCGTCTGCTGGTGGTACTTTTTGGACAATTGT GGATTCTAGAATTGGCTTTGAATTAGATTTTT CTTCTTGGCGTAGAAAATTAAGGAATTTAGGGG A	NA	NA	175

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP884	163.29	Ca-desi-LG(Chr)5	10554811	CTCAAATCTATCCTCGAATTTGGATACTTCATCCTCTAATTTTCATATAGACACATCTTGACTCATAATTC TTCTGGACTTCTTCCAAGAGATTTTATGT	G	A	TACTTAACAATAATAAAGATTTGAAAAGCCTAATTCATAAATATAAATATGATTGCCCTTAAGTCGATGATGATCATCGCAATATGTTGCATCTCAATCA	NA	NA	NA
Ca-II-SNP885	164.28	Ca-desi-LG(Chr)5	10563588	ATGAGATTATGTCTAATTGTCATCCCTACTTTTGC GCTATTTGTTGTTGCTACTTCTTACATTTAGGGG CGGAAATATGTCATTGATTTATAGGAGTT	C	T	TGTGAGGCTGTCTATACATATGAATTTAATGTTTAAAAATTAAATAAAAAAATTTATATAAAAA CTGAAAAGCTACATTAATAAGCTGACTTTGCTA TTTACCAGAAAGAGTAAGAGACAGAGCCTCACA TCTTTTCAATTTTACAATTTTAAACCACATCAGTA GTTTAATTTTATCAAATGATTCAAGCACTTGAT CGTGTGGTTTCTGAAAACGCTGGAGTGATTCT TCTCTATCAATCTTTAAGCTCTTTTCTCAACTTAC	NA	NA	121
Ca-II-SSR291	165.27	Ca-desi-LG(Chr)5	10581198	AAAAAGTCTATTAGGTCTGATAGGTCG	(AT)9	(AT)10	GGAACGACTACTTAGTGATTGCCT	58.87	140.00	NA
Ca-II-SSR292	166.26	Ca-desi-LG(Chr)5	10615669	TCTTGTAAGCTTTAGCCGGA	(AT)11	(AT)12	CTCCCACTCAAAGTTTGTTC	57.81	183.00	172
Ca-II-SNP886	167.25	Ca-desi-LG(Chr)5	10689098	CTAATTCATCATTCTTCTTGAACATTGCCTCCA CTTTATATTAGAGTTAGACATTACATTACATATTAT CATTCAAGATGGCTTTTCAAGGGTCTC	T	G	GTCTATCGTTCCTCCACTTTTTGCAATAATGT AATCAAACCCCCCGCTGGCTGTTACTGTAAA GAAACTCAGTTTTTACAAGCTCTAGTTTCCTT CCTTGGAGGTCTGTTCTCCATTTATCCTTGA GATCAACAGGAGTGCAGTATTATCAAACACAC GACAACCAAATCTAAAATTTTCTCCAAGGGA TATTCTGATTCCCGTTGAGAAGTTCAACACTC CTGCTTCAACACTTTTTCTTCTCAAGCTCTCC	NA	NA	NA
Ca-II-SNP887	168.24	Ca-desi-LG(Chr)5	10700325	GAAGGGTCCAGCACCAAGAACAAGAAGCCACGA TGGATATTTCCGTGCAGGAATTTCCCTTGGAACTCT GATTGGTCCGTACAGGATATTCAATTTGGCTC	T	A	CTGGCGCATACCCATTCTTGTATTTTGGAGC TGTTCTTCTCTGGTTCTGTATTTTCAAGTACCTC TGACCCTCATTGGAGGATTTATGGGAACAAAAG C	NA	NA	183
Ca-II-SNP888	169.23	Ca-desi-LG(Chr)5	10814276	GAGTATCAAAATTTAGGTAGAGTCATTTCTTCTG AAATATGCCAACCCCTCAGCAACTTAATTCTCTGTT AATTTTTCTTATTTCATTCAAAGGTCTCC	G	A	TTCATATGTATCAAGAAAGTACCCCAAATTTTCA ACAACAAAAAATCATGTGTTATCATCATGTTTAT AAACATTAAGTATATTGTGATGTTT	NA	NA	NA
Ca-II-SNP889	170.22	Ca-desi-LG(Chr)5	10901334	CCATTCTTTTCCAGCATCTTGTATTCACCATATCAA GGTTTATCTTTATTTTATTCACCATATGTAGTTTA GCATTTTACAAAAGTTGGTAATGTGATAG	T	C	ATCTTGGTAAACTTGTGACCCTAGGCTTGGTG AAAATTACCCTCTTGACTCAGTATTTAAGATGTC ACAGCTTGCCAAAGCTTGACACATGAAAATCC TCAACTTAGGCCAAGCATGAGATCAATAGTAGT TGCCTTAATGACACTTTCATCTGCAGCTGAGGA TTGGGATG	NA	NA	242

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP890	171.21	Ca-desi-LG(Chr)5	11006689	CTGGACAGCAGTGAATATCAGTCTCCAGATTGAT AAATATTCTCCAGCTTGTACACTTGATCTTCAGC AGCAAATATTTTTCTCCAGAATGACCAGAC	T	C	GTCCAAAACAGCTTGGTGAATGATTATACATTT CTATAGAAATAAGGAGATCAATGCTGAAATTCT GCATAATGAAGATTGATAATCAATCTGGAGAC T	NA	NA	NA
Ca-II-SNP891	172.20	Ca-desi-LG(Chr)5	11029004	CACTTGCCACCACGAAACCCACATGTGCAGTTCT CTCTGGCTACCGTTTTTCGAGCGCCGACCAGATCA GGTGCCCTCTGCCACATCTGAGGTGTTTAC	C	T	GAAACTGAAGGCACCAGAAAAAGCAGCAACCG ATACAGTGTCCGACATGACAATCTATACGAAGG GAAGATGAAAGGTTGCGAAAAATCACCAAAA GAT	NA	NA	NA
Ca-II-SNP892	173.19	Ca-desi-LG(Chr)5	11107994	GGCCAGACCAGGCTTTGAAAGGCCTGAGCCTGG CCTACGATGAATTTTTAAGGCCCTAAGCCTGGCCTA CGGCCACAAATAGGCTTTTTTTTCGGCCTGAG	T	C	CATATTTTTTTTTAAATTTTTTTGTTAGAAAAATT ATTTTTAATGTGAATAAGGCTTTTAAATAGGCTT ACAGGTCAGGCCATGATAGGCCGTAGGCCAG	NA	NA	171
Ca-II-SNP893	174.18	Ca-desi-LG(Chr)5	11131133	CACTTGCCACCACGAAACCCACATGTGCAGTTCT CTCTGGCTACCGTTTTTCGAGCGCCGACCAGATCA GGTGCCCTCTGCCACATCTGAGGTGTTTAC	T	C	GTGGACCTAGTTGGCGGTTATTATGATGCTGG TGACAACGTTAAGTTTTGGGTTACCAATGGCATT TACAACACTATTATTAGCATGGAGTGTCTTGA ATTTGGAAGCTCAATGCAAGACCAAAATTGAAAA TGCTAGAAGTCCATCCGGTGGAGCAGCGGATT ACCTTCTTAAGGCGGCCGTCAACACCCCGAC ACATTATATGTTCAAGTTGGAGAGGCTAACATG CATCACAAGCTTTGCCAAGCCGACAGCATAT GTGCAAAGAACAATTTATCATTCTCTATATTTCC TAATAAGATATCTACAATGATTTCTTTACATTC ACTAGATCAAGTTTACGCATCGAAAGCTTATG	NA	NA	102
Ca-II-SNP894	175.17	Ca-desi-LG(Chr)5	11184670	TATTGGTAATTAATCTAATTTGAAATTTTCATTTAA GGTTTTTGTATGAGAAGTTGGTGTGCACGCACAA ATTGTCAAATAGATATTCATTCTTGTCTCC	T	G		NA	NA	109
Ca-II-SSR293	176.16	Ca-desi-LG(Chr)5	11185022	CCATTGCACAACAATTACAACA	(AT)10	(AT)9	GAGCTCGAAAACTTGTAAGCA	59.39	168.00	149
Ca-II-SNP895	177.15	Ca-desi-LG(Chr)5	11199544	CGCAGCGGTCCTTTGCTCCAAATATATGACACCTTC ACAAATTAATTTACTTCTCACCTTAGTGCAAAACTT TTTAGTTTTATTTTTATAGATTGACGTA	C	T	TTACACAGTAAAGGGAATGAAAGTTCTTAATAC CATATATTATTAGGAACTCTACTATCTCATTATT ATTGTAATAACGATCACACTAGTAATAGATTTT	NA	NA	144
Ca-II-SNP896	179.13	Ca-desi-LG(Chr)5	11366972	AATTTTACATTGCGTTTTGTTTTAGTGCAGTGCTG AATTTTGGTGAGAAATCAACATGACATATATAGAG TATTTCAAGTCATATCTGGAGTTGTAGATGT	T	C	ATTTTTCTCCTCTTTAGAGTCTGCATTTGGTTCC GGTGTCTTCATGAAAGTTGTAGCTATGGATCTT AGCTTTGATGTGCATTTGTTTGACTCCAATTG	NA	NA	142

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP897	180.12	Ca- <i>desi</i> -LG(Chr)5	11452105	CCATTCTTTTCAGCATCTTGTATTACCATATCAA GGTTTATTCTTTATTTTATTACCATATGTAGTTTA GCATTTTACAAAAGTTGGTAATGTGATAG	G	T	AGAAAAAATGTGCGAGATTGCAGTCATTTAGG CATTTAATCAAACAAGTATATACTCATGAAGTT CAAATTTCAATTAAGTAAATAAAAACTATTA	NA	NA	157
Ca-II-SNP898	181.11	Ca- <i>desi</i> -LG(Chr)5	11514809	GAATTGACTGACTCAATGGTCAATAAGAAATAT GTTACCTGATGTTTTAGAGTAGCTAAGCTCTTGGT ATGCATTGGAGATTGTGGAATCACACCATT	G	T	ACTAATACTTTTACTCCATCTAGTCAATATTTT ATTTCAAATCTTGTGCGATTTTACTTTCCAGACC ATATTGTGTGGGCTAATTGGAATCCCTCCTTC	NA	NA	163
Ca-II-SNP899	182.10	Ca- <i>desi</i> -LG(Chr)5	11563778	CACTTGCCACCACGAAACCCACATGTGCAGTTCT CTCTGGCTACCGTTTTCGAGCGCCGACCAGATCA GGTGCCCTCTGCCACATTCTGAGGTGTTTAC	C	T	CCCGTTTCAGGGTGGTCTTCAATGTTGTAGTAT TAAATTAACAAAGAGATGGATGGAGTGTGAAAG AGAAGTTTGAGAGTCCAATCGACTGCCTTGGT GCGTTATGTGTGTTTTGTGTGCGACACGTCAT GAAAGCTTTAGGATTTATATATGATGTAACATC GAGGAAGATATGATAGTTG	NA	NA	146
Ca-II-SNP900	184.08	Ca- <i>desi</i> -LG(Chr)5	11567462	AAGATAATGTTTAAAATCAAGAATCCACCTTGAA GCTCTTTATATGATTCTCCTCAATTTGTCGTATATTC TCTCAATGGCCTTTTGTGTTGCAATCCAT	A	G	AGCATCTTACAAATGGTAAACAACAGATCCACA ATATCAGTTTCAGTATTGATTGCACATATACGAT CTCGGTACACATATACCACTACTTATAGAAAA	NA	NA	119
Ca-II-SNP901	185.07	Ca- <i>desi</i> -LG(Chr)5	11592149	GAACAATTTTAAAGGGTGAAGTCAACTTTTATTTCA GTCCGTCCAAGAGTTTATGAATGCATAAAAGTTCA CAGATTCTTGAGCCATTGCTCTGAATTCA	T	G	GATAGAAAATCCACCACTGGATATTGTGCCTAT GTTTGAGGAAATTTAGTACTTGGAGAAGTAAG AAACAAGGGGTTGTTGCCGAAGCAGTGCAGA AG	NA	NA	160
Ca-II-SNP902	186.06	Ca- <i>desi</i> -LG(Chr)5	11629355	CACTTGCCACCACGAAACCCACATGTGCAGTTCT CTCTGGCTACCGTTTTCGAGCGCCGACCAGATCA GGTGCCCTCTGCCACATTCTGAGGTGTTTAC	C	T	ATTTTACTCGAAGAAATAGAGAAAACATATATGA GACGTGTATGAGAAAATACTACATAATTTCTCA TTTCTGCTGTCAAACCTAGCTTCTTTGCTTAACTC TTAGTAGTCTCCTCTGAACATCGAAACAGGTAG CCCTGGTTTTCCGGACTCTAAAACCTTCGTTT TCCC GCCATACACCTCAACGGCCAAACCCCTA GCTTCCACGAATACACCGTGCAACCTCCATTAT CTACATTTCAATCTTAAACCGTAATTCCTTAC	NA	NA	208
Ca-II-SNP903	187.05	Ca- <i>desi</i> -LG(Chr)5	11842074	GAAATAGAGACTGAGTCTATTAGAAGTCAAGAAA CTGGGAGTAAGTTGTTAATTCATCGTTGTTCATT AATTGAGGATGGTTATTGTAACCTGTTTTT	A	G	TCAATGTTAATGTGCAAAATTTTCAAATAAAAAATC TTAATTTAATATTTTTAATCTTAATTAATGAAAAAT AAAAAATAGTATTTTTTAAATAAATAAAAA	NA	NA	133
Ca-II-SNP904	188.04	Ca- <i>desi</i> -LG(Chr)5	11915491	AAAACCAATATGTAGTTACGTCCAATCACTTCCAT TTTGTTAAATATATTTAATATCTATGTGACTGTGT CTATGTTGTGTTTCGATGCTACGTCAATG	C	T	GTAGTATAATTTAATTAAGGCAAAAAAATTCATG AAGTTCCTCAGCAATGGGTATGTGCAGAAAAG CATCTCTTGCTTTGAAACTCACCACATAACTA A	NA	NA	105

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP905	189.03	Ca- <i>desi</i> -LG(Chr)5	11926984	TGTGGTTGCTAAAGTAGTGTAAAAACAATTA AAAAGTGCACTGGTGGGTGAATTGAACGTATTT TGCTGTATTCTTTTCTTTTAAAGTGAC	T	C	GCGTCAGTTGAAAAGTTAGTGGCCAATTA ATAAAAAGAATTAATTAATAATAACTACTACA CCACTACTACGTTCCACCGTTGAGAATTTAGT	NA	NA	184
Ca-II-SNP906	190.02	Ca- <i>desi</i> -LG(Chr)5	11993105	TATCCCTTGGTTATTTAATCTAACGGCATCCACA TTGATCATAACCATGTACTCCAGAAAATATATT CGCTAAGTCCCAAAGGATGCAGGGTTTTTC	A	G	CCTTCAAACCTATGTTTCTCATTTTAAAGTCAGT AATCAATCACCCGTGAAAAAGGACGCATTTTATT AGGTACAACCTGGTTGACTACTCTCATCAAC	NA	NA	143
Ca-II-SNP907	191.01	Ca- <i>desi</i> -LG(Chr)5	12035418	GAGGTTTATCATATCCTCTCAATTTCTTGATATAG GCAAAAAATCATATCAAGCTCGATTGAGTCTTT CAATTCTCGTGATATCATCAGAGATTTTA	C	T	TGAAAAAATACTCGGTTGCTACGCCTAGCA GCAATCATATCAACATTTTGTAAATATCTGCTT GTGATCTATTGACAACCAACCCAGGGATACT TTAACCTATAAGCTCTCCCCTCCAGCATTTCAA CAGCATCAGTACCC	NA	NA	140
Ca-II-SNP908	192.00	Ca- <i>desi</i> -LG(Chr)5	12052770	AAGTTTATACTATTAATAATAAGTCTTATGAGTTGT TTGCAGATTTTTTAAATTATATTAACATTTATTTTAC CCCATCAGATGTTATTTTAAATCTG	A	G	TAAATTTTTTAGTCCGATTGCAAGGTCTAAATA TAAATAGTAAGTATGAATCATAGTTCTAATACTT TAGAAATTTATTTTCTATATTTTGTGCT	NA	NA	156
Ca-II-SNP909	192.99	Ca- <i>desi</i> -LG(Chr)5	12117536	GAGGTTTATCATATCCTCTCAATTTCTTGATATAG GCAAAAAATCATATCAAGCTCGATTGAGTCTTT CAATTCTCGTGATATCATCAGAGATTTTA	T	C	ATTGTGAAACTCAATGGATATGTATAAGAATTG ACAGACCAAATGTGAGTTTATGGTTGATGACC CTAAAGTAGATTGCATATGAAATTATTCTTACT	NA	NA	146
Ca-II-SNP910	193.98	Ca- <i>desi</i> -LG(Chr)5	12150221	CAAAAGAGAGAATGCATGATGTTTGATCAGGGAG TTCAGTTAATTGTGTCAAAGTCTCCGCCTGTAGAG TGGCTGCAATACCTTTGTATAATGATTCAAG	A	T	TATGGCTCATAGTAAAGTATAAATGGATAAGTC GCTTGAGCTTAAATGTTGTAAATCTGGACCGTAG TATTTAAATACAAGTTGTACACTGTAATCCTAA	NA	NA	138
Ca-II-SNP911	194.97	Ca- <i>desi</i> -LG(Chr)5	12171539	TTCTCTTTGTTTCTCTTATACCAAATAACTTCA AATCTATTTTTTTTCTTTTCATATTTTCTATCTTA TCACACTCTCTCAATTTCTCTCT	C	T	CCAATATGTGGCCGGAGCCAATAATTAGAGG GTTTGTCAAATAAATGGACAACACTATTCTTTTC TTTTCAAGTGTGATCGGTTGTAAGAGAAATTG G	NA	NA	151
Ca-II-SSR294	195.96	Ca- <i>desi</i> -LG(Chr)5	12287423	CAATATAATTGTGGAGGATGATAGTTT	(AT)20	(AT)15	GTCACCTATGCCAAATCGGA	58.06	112.00	177

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP912	196.95	Ca- <i>desi</i> -LG(Chr)5	12294571	TCTTTATATTACTTTATTCTTCTACTTTCTCTCT CTTCTCTGCCACCTGACTTTATCTCAAGACGAAAA TCTGAGTAATATTCTGAACATTCATGAA	A	C	TCTTCTTCTTCTATATTTTGTCAAACCTCATT TGTAGTTGCATCATAGCTACTTATGTATGTGGG AGCTATTAATATTTTAATAATATTTGTTGTGAT	NA	NA	157
Ca-II-SNP913	198.93	Ca- <i>desi</i> -LG(Chr)5	12433033	CCACCAATGCCTAGACCTCTTCCTGTTTTGATGGA TGGGATTACATTACCATGGTTGCAATGGGAGACA AACAAATAGCCCTTCTTCTCCTATGACAAACC	C	A	AAAATAGCACAGAAAATGATAATGATGATGGAA GGGGTAAAACATGCGCACATTAGAACAATTG TAGACACATGTTGCATAACATCCCGTATGTATC AAAATGATGTAGATTTTTTAAACATTGATCCTAT GTTCGAAGAGGTGTTGGGTACAGG	NA	NA	126
Ca-II-SNP914	199.92	Ca- <i>desi</i> -LG(Chr)5	12466514	GTTGAAATCCTATTCAAATCAAACCTAAGGATTCTT GTGGTTCTGGAGGATCCAATTACAGGAGAACCGG GAACGAAGAGCTTCTCCCCCCTTTTTACG	T	C	CACATTAGTTATTTGCTCTCAGCTTGAACAGTT AAAGGTCGGAGAAAGTGAATTAATCATTCTTAA CTTAAAACCCACATTCTTAAGACTAAGAGTCT G	NA	NA	210
Ca-II-SSR295	200.91	Ca- <i>desi</i> -LG(Chr)5	12483205	TGGAACAGGTTTTCTAGCTGC	(CA)8	(CA)9	AACGATTGGTGCTCCAGACT	59.51	124.00	147
Ca-II-SNP915	201.90	Ca- <i>desi</i> -LG(Chr)5	12510260	CCACCAATGCCTAGACCTCTTCCTGTTTTGATGGA TGGGATTACATTACCATGGTTGCAATGGGAGACA AACAAATAGCCCTTCTTCTCCTATGACAAACC	A	T	ACAAATGCCTTTCTTTGTAACAATTAATAGT TCAGTGATAACCTGAGTGGAACTTCCAGTTGCA CTATTCGGAGTCGATGTCAAAGTGTCTTATTC	NA	NA	101
Ca-II-SNP916	202.89	Ca- <i>desi</i> -LG(Chr)5	12520180	AGGAGATGAAAAATTGGAATTTTCTTCTTCC TTTCTTTTCTTCTTCTTCTTCTTCTTCTTCTTCTT TTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT	C	T	TTTAACAAATATCTAGATTTTGTAGATATTTGTTA AGTTATATTTATATATGTTTGTGGAGGGAAAA AGAAAGGAAAAGTGAAGGAAGGAAAAGGAAA	NA	NA	217
Ca-II-SSR296	204.87	Ca- <i>desi</i> -LG(Chr)5	12567943	AAATAGTCGTAGAGAAAGGATGCAA	(AT)10	(AT)11	TTCTAAAATTGAGGAATATGACAAAA	59.73	208.00	148
Ca-II-SNP917	205.86	Ca- <i>desi</i> -LG(Chr)5	12619537	TTTGTATCTATCAGCTCTGCACCTACTACGGGACC CACGATGTGGTGTGCAGAAGAGCCAACCTCAACC ATCACACCGACAAGACGTAATAGACCTCGC	T	C	TGCTTGGTGGTTCAAATGTTGTTGTGTTGGG GTGAAAGAAAATGAATGACGATGTGGTTATGGC GCTTCATTTTCAATAGAAACAGGGTGAGTCTGT A	NA	NA	154

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP918	207.84	Ca-desi-LG(Chr)5	12688787	TCTTAGATTTTAAATTTATTTTTTAAATAAATTTT ATTTTTATTTTTATTTTTTTGTTATTTTCTTAGTTG TTTACTCTTGTGTTCTTGGCTCATA	A	C	CTATTGTACTTTATTAACCAATAATGTTTACATT ATTAAGTAGAAAAAGAAATACAAAAAATAAAC CAGAAAACTGTGATAAGCCAAGAAAACCGTT	NA	NA	163
Ca-II-SSR297	208.83	Ca-desi-LG(Chr)5	12944505	CGGAGGTGGTTCTTGATGAT	(GTT)5	(GTT)6	GTGATGATCCTCCTCTTCGC	59.93	168.00	209
Ca-II-SNP919	209.82	Ca-desi-LG(Chr)5	12950426	ACTGAAGGGTAAGAACGAAGCATGAGTCTCTTT TATTTTCTCCAAGTAGCCGAATGCTTTCTAACAA TAATGCTCTGACCAGGATCAAGGTTGTCCAA	G	A	AAAACCTAACTAAACCCTCACTCCCAATTTTCATT CATCACCAAAACCTCACAAACAAAATAAAAAAAT TTTTTTCTTCAACTGAAATAAAAACAAAGAGAAA AAAATCCGAACAACAATGGCTCCGAACCTGGAA TGTCGCATGTACGAGGCAAGGTACCCAGAGGT AGACATGGCAGTAATGATACAAGTGAAGAACAT CGCCGACATGGGTGCTTACGTGTCACCTTCTCG AATACATAACATCCACCTATCATTCTTCTCT	NA	NA	175
Ca-II-SNP920	211.98	Ca-desi-LG(Chr)5	13042726	CGTCTTATATTTGGTATTTATCTCTCTCTTTAGT ATTCTTAAAAGTCTTAAACTATGTTTGGATTTGGT CACCACCTTAAATTGAGTTTTCTAGCA	A	C	TGTCATTCGAAACTTTTGAATATTCAGAAAAATT TGCCAAGTTAAAAGATTAATAATTGATTTTTATA TGGATTGGGGTGGCAGTTTTATGTAGGGGTGC	NA	NA	189
Ca-II-SNP921	213.15	Ca-desi-LG(Chr)5	13086919	ACTGAAGGGTAAGAACGAAGCATGAGTCTCTTT TATTTTCTCCAAGTAGCCGAATGCTTTCTAACAA TAATGCTCTGACCAGGATCAAGGTTGTCCAA	C	A	CATCTAATGTGTGCCTAAGGTTGTTTCGAAACA GAACAAAGGATCCAAGAACACATAATGCCAT CATGTGATGAGGTTGCTGCTTAAATAGTTGGTG A	NA	NA	145
Ca-II-SNP922	214.32	Ca-desi-LG(Chr)5	13163827	TGCTCTGTAGTACGCAACATTTTCAGATGTTTGGT TTGCAGTCCATCAAACATCTGTGACATTGAAGATA TAGACTCATCCATATCTCGTTTACAAATGT	T	C	ATTTGTTACTTATTATATTATTACGATAAT ATTCTTATTTAATTATTTGATTTTTTAAATTAT TTACAGACATGGATTTATGAGCATTTCCT	NA	NA	162
Ca-II-SNP923	215.49	Ca-desi-LG(Chr)5	13175432	ACTGAAGGGTAAGAACGAAGCATGAGTCTCTTT TATTTTCTCCAAGTAGCCGAATGCTTTCTAACAA TAATGCTCTGACCAGGATCAAGGTTGTCCAA	C	T	TTGCAAGATGGTAGAAATGCTCCTGTGAGGAACA TGATAAAGCAGCTGCGAAGAGCCAATTTATCAC ACACACAATAGGCAGGCGATTGGCAGAAATGG ATGTCAAACCCACCCTATTGACACTAAGGGCT TTCAGGCACCTG	NA	NA	112
Ca-II-SNP924	216.66	Ca-desi-LG(Chr)5	13648236	CATGTTCAATTCCATTCTGACACAAAATCCTTGA ATTCATAGGATGTATATCTCCTCCTCCATCTATC CTTAGCACGTTGACAACCTTCCACTTTAA	T	C	TAAGTATTCATAACCTTTGTTGATGAATTAAGT AGAATGTTATGGATTTATTTGATTAACCAAG ATGAGGCATTGGACAAATTCAGAACCTCAAG	NA	NA	160

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP925	217.83	Ca-desi-LG(Chr)5	13652905	TTGATGCAAATGGATTACACCTTCCAAAACCATCTC AGATTTTCATGGCTTGGTAGATTTTCTCCCATGCTC TTTGAAATCTATCCAAGACTCATTAGAGC	G	A	GTGTTCTGTGTTTGTATTAAATTAATCTTGA TCCTGTTTGATTATTGGTACTTGAAAGCCTGC TTGGCGTAATAAATCATTGTTCTTCTCCTTT TTCTGTTTTCCCCCTATGCAGTAATCACTCGAG TATCATGCTTTTGAACC	NA	NA	139
Ca-II-SSR298	219.00	Ca-desi-LG(Chr)5	13691148	AATTGGTTGCTAAGCCGTGT	(TAA)9	(TAA)10	TGGGGAGAAATAAAATGGGA	59.64	182.00	192
Ca-II-SNP926	220.17	Ca-desi-LG(Chr)5	13702262	GGTGGTTGTTTCTAGATTAACCTGTTCTACAATT ATAACTTCTCGGTATTTATTGAACCACCAAGTGT TGCTTTTATCATCAGTTTGTGAGCATAGT	G	T	AAACGTCTACATATAGCACACATAACCTAAAAAT GAATACACAAAAACTTCAAGTGTATAAAATATAA TTACATCGAGTAAATTTTGTGAGAAAAATC	NA	NA	131
Ca-II-SNP927	221.34	Ca-desi-LG(Chr)5	13715122	ATTTAATGGTTGGATATATATTTTCTTGGTATAAAT AGTTAGAAAGTCTACATCTTGGTCTGCTCCACCA CCAACCTGTTTTACCTTCTCCCTTGAAT	A	C	AGAAGGATTAATTTTTGGTTATGCTTATGAATTA ATTGTCTCACAATCACAACCAACTCTATAGGTA TTTTTCTAAAGTAAATGGTAGTGAGAGAAAA	NA	NA	172
Ca-II-SNP928	222.51	Ca-desi-LG(Chr)5	13739071	CCTTGTTATACACCTTGAAAAAGATAGTGGCTGTT GTATCTGGTATTTACTGAATTTTTATGTTTTCTCA AATTAAGTCCCTTTCTCTTTTGCAGGC	C	T	GGGAAAAGAGCTCCTGTGAATAAGGTACAACCT ATTGGGAAAAAGAGTAAAAAAGACCA AACATACCAAGTAGCTTCAAGTGTGAGTAAAT GT	NA	NA	134
Ca-II-SNP929	224.85	Ca-desi-LG(Chr)5	13768754	GAATGTTGTGTTGCCTATGAATCCATGTTTATGT TGTGTTGAACAAATCTTTAAATTATCATCTTATTAT CATGATGTTTATGATGTTGTTAAATCAT	A	G	AAAGATAAAATGTTTATGCTCCCTCAATCAT ATGTGTAATAATTTTTAAACTAAAAATCATTAC TCCCTAAATGATGCCAAAGTGTGAAATAA	NA	NA	198
Ca-II-SNP930	226.02	Ca-desi-LG(Chr)5	13790950	CTCAAATTTGGGTGATCATGAGTTGAGTTGTATAA TCTCCATTTTAGATGATTATGAGAGACTTATGGT ATCCCAACCATGCTCTAGTGAGAGGAGGG	C	T	AACCCAACTAATATGTGATCACCTACAATA TTATCTCACATCTAAGAGTTACAAGGATGATAA CACTCACATCTCACAACAACAAATAATCACCCA C	NA	NA	126
Ca-II-SNP931	227.19	Ca-desi-LG(Chr)5	13824239	AATCTTAATTTATGACAGATTTTATTCAACAGCTCT TTCATGACAGTTGGTCCCTTTCCAACGGCCACAT GAGCTGTCCCTAAGTCTTCTGGAGTCTATA	G	A	AACTATAAGAAAGATTTTGGAGACTTGAGTAT GATCGAAAAGATTGATCTTTTGTGGTGCTAA TTGTTGTGTTTTGTCTCAACTTGCAGCTGCA T	NA	NA	138

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP932	228.36	Ca-desi-LG(Chr)5	13913861	ATTTATATTTATTTTTGTCTTTCATTTCATTTTCT CACATGTTCCATCTAGTGAACAACAAGGGGC GTATTGATACTCAATCAATCTTACTTTG	T	A	AGAGGCATCAATTTTGGGAATTTGAAGATTT AATGAAAGCCAAAATAAAATTTAAAATTTAAAAT GAAAACAATAAGTTTATCATGTCTTGTAAACC	NA	NA	204
Ca-II-SNP933	229.53	Ca-desi-LG(Chr)5	14047868	TTTACAATTATGGTTTATTTTTATAACTAGCATTT TCATCTTGTTAAGCTTCTATGATCAGGAGCATCT TTTTTGTTTGTGGCTCAGAGCAAGAAGC	C	A	AGGCAGAAGCTATTGAAAGTAAACACTTTGACC AAAACTTAAAAAACGTGCATAATACAATCAAC AAAATACTCATAGAACTTAACCTTACATTATA	NA	NA	201
Ca-II-SNP934	230.70	Ca-desi-LG(Chr)5	14048205	TTTTTTAAACTCGAGTTTGTGTTTATGAACCAAT GAATAATTTCTAATTTCTATGTTTGTATGGTTATGT GTATATGATATTGTGTGTTTGTATGGTA	C	T	CATTTTCAACAGAAAATAAAATATCAACATACA GTTATTTAGAAAGATAACTTTCTTGTGGCACC AGTATGCACTTTATGAGATACTGTGATATATGC	NA	NA	205
Ca-II-SNP935	231.87	Ca-desi-LG(Chr)5	14063987	TTGATGCAAATGGATTACCTTCCAAAACCATCTC AGATTTTCATGGCTTGGTAGATTTTCTCCCATGCTC TTTGAAATCTATCCAAGACTCATTAGAGC	A	C	GTCCTGATAGCCTGGAGAATCCCTAAAAGTCA TGGAAATTTTCTCCCTTTAACTTCAGACTCAAA TCCAAGTCTGTGAGTGTGAAGTTTGAGTAGAA	NA	NA	149
Ca-II-SNP936	233.04	Ca-desi-LG(Chr)5	14087402	GTTTCAGTGATTTGGGATGTTATTAGGTTAGATCT TCAAGTCCATTTAAAAAGATGCAGTGTGATGTA AATAGTTTACACAGTCGGCAAATCATGAC	C	T	ATAAATGAATTTAATTTATATACACTGTCAATTA TAACCGTTACATCATTAGCAATGTTGATTTCTG ACAAAACACTTATAAAGTCACCCACATGATT	NA	NA	143
Ca-II-SNP937	234.21	Ca-desi-LG(Chr)5	14100567	ACAATGTGACCAATGGTCTCCAGGAAATCCAC GTTGTTGGACTTGTCTTCAACTGTGGCTCCTCA GCTTTCTCATAGTACATTTGATCAGACTCCT	G	A	ACCCATTGCATCTCATAGACAATGAATGGAGC TAACCATCCACCTCATCAACATCGTCGTAGGCG TAGTTTCAGGTCTCACGAACCTGATGAAGATGT T	NA	NA	147
Ca-II-SNP938	235.38	Ca-desi-LG(Chr)5	14165429	AAATCAGTATTAGAAAAATATCGATTGCGCATTG TTAACCGTTGGATCGGGTTGATTTTTGGACAGCAA GTTTCGCAACATTCAGATCCACGTTTTCAAC	A	G	TCTAGAATTATGCTTCACAAATTTGTTCTCACT CATTTTACACCTGCTGCTGTGCACGCACGGTTT CTCCCTCTCTGAATGTCATTTGCTGATCAGAC	NA	NA	157
Ca-II-SNP939	238.89	Ca-desi-LG(Chr)5	14222770	GCACGCACGCACGCACGCACGCACGCACGCACGC CACGCACGCACGCACGCACGCACGCACGCACGC ACGCACCCACGCACGCACGCACGCACGCACGCAC C	G	A	CCTAATTTGCACTTTAAGTGCTTGAACATTACA CTCCTAATGTGTGTGTGTGCGTGCGTGGGT GCGTGGGTGTGTGTGCGTGTGTGCGTGTGCGT CGTG	NA	NA	171

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP940	240.06	Ca-desi-LG(Chr)5	14259428	TGAGTGAAATCAATGTTTTATGATTACTTGTATGTTGAGTTTTAAGTCATTAGATTACTCATGTCTAATGGCTTAAAGTATTTGAAAGATTTGTGGCTA	G	A	TGCCAGTATGCTAAACATAGAAAATCCTCTCGGCAAACATACTTCAATTTAATAATAACTATTTCTCGTAGGCTATATTCAAATACCTCTTCTACCT	NA	NA	181
Ca-II-SNP941	241.23	Ca-desi-LG(Chr)5	14270809	CAAATCCATGATATCAGGTATTTTAATTTGAGAAAGTGATTTGAGGCTCTAATAAATTGTCATTTGTGATCCTCTTGAGTTTGATTATTCAGTTGCTCT	C	G	GAAGTTTTGAATTTCTATCCCGGGTCTTTTGTAGTCTTTAATAGAAAAAATGTTTGAAACTTATTAGAGCCTCAAATCACTTGAATAATTAATTA	NA	NA	192
Ca-II-SNP942	242.40	Ca-desi-LG(Chr)5	14297283	GATTTTGTAAATCAGTCTCAGAAAAACATCGATTGCGCATTGCTTAACCGTTGGATCGGGCTAATTTTTGGACAGCAGGTTCCGAACATTTAGGTCTTC	G	A	ACACAATCACTGAGACAAAGTAAATTAGGGATAACCTGGTGTGTGCGAGCAGATTCTCCCTCTCCAAATGTCGTTTCGTCGATCCGACCGTTGACGA	NA	NA	174
Ca-II-SNP943	243.57	Ca-desi-LG(Chr)5	14322733	TGGCCCTCTCCTCTCAATCCTGCAACGCATCGTCACTATCAATTAGGGAGCTTACATCAGTTGATAGCCCTCTCCTTACGGATGACATTTCTCATA	T	G	TGGGAAATCGATGTTATTGTTATTAATCGTTAACTGCGTTAGGTGCACCTAGTTACCTCGTGTGATTAAGGAGAGTTACCGTTAGATGGAGCCGCC	NA	NA	141
Ca-II-SNP944	244.74	Ca-desi-LG(Chr)5	14412697	AATAATGCAAACATGCTATATGTAAGACCCATAATTTTAAAGTGATTTTATGTATTTTGTGATTTTGGATTTTGGCTCAGAGGCTTTTAGCCAAAG	A	T	GTAAGGATTCACCGCAGTTAATTTAATTTATTTATCGACGAGTAATTTCAATCGGCATCAAATATCTTTTGATCATATAAACTCCAAAATATTATTA	NA	NA	145
Ca-II-SNP945	245.71	Ca-desi-LG(Chr)5	14425204	AAAACCTTGTGCTCATGCGAGCGATCCAGAACCTACCAATCATGAAGCTGATGCCACTCATGCAGCTGATGGCGCTGATCCGCCGATGAAGCAGTTGAC	G	A	TTTGATTGCTCGATGCTGCAATAAAAAATAAATAAATATGAATAGTTAAAATAAATTAATATGACTAAATAAATATGACTAATTAATATACCGTTA	NA	NA	125
Ca-II-SNP946	246.68	Ca-desi-LG(Chr)5	14463140	TATATATATTACCTTACAATGTGTATATTTGTAGTGTGTACATATATAAAATATTACAATCCTTTTCTTGTCCTTTTATAACATTTTTTTCACCTTTTT	A	T	GGCCCAATGTCGATCCTACTAAATCCATCCTTGTATATAAAACCCAAAAAAGTATATAAATTAATGAAAGTTTCGTAATAAATAATTAACACAAT	NA	NA	100
Ca-II-SNP947	247.65	Ca-desi-LG(Chr)5	14497965	TTGATTTGTGTTATCATCGTTTTTCTCCTTTGCATTACACTTGCTTGTCTCTTTGTCTTCTGTTCTATTCCTAAAACCTACAGGTGAAGCATTATCCCA	T	C	ACCCGACTAAAGACTTCCCATGAGGTAAGGAAACAGTCCCAAGTACCCTGCTTTGTAGAGCACACATCTCATCAAGCATTGCTTGCCTCCACTCAGG	NA	NA	103

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP948	248.62	Ca-desi-LG(Chr)5	14640464	ATTGTGATGAAATGACGGTGAGAAGGAATTAGCA AGAGATGAATGGTTTTAGGGTTTCAGATGGGTTG AGAAAGAAATGTTTTAGGGTTTTAGGTGGGTT	G	A	GAGTTTGAATTTTAGCGACTAACTTTCAGTGC TAACTATTTTTTAATTACATAGTTCTATTTTTCTC ACCACCACACATATCAGTTCCTCTTTCTTTCT	NA	NA	101
Ca-II-SNP949	249.59	Ca-desi-LG(Chr)5	14700126	AAGCTAGTCCAAAAGACGATTTTCCTTTCGCTCAC ATTGATGTCCTAGTTGATAGCACTGCTCAATATTC TCTTTTCTCCTTCATGGATGGTTTTCTCAGG	A	G	TCTTCAATCCAAATGGCATCACTTTGTAACAGA AAGTCCCCCATTGTGTAATGAATGTAGTTTTCT CCATATCTTCGGGAGCCATCTTGATTTGATTAT A	NA	NA	216
Ca-II-SNP950	250.56	Ca-desi-LG(Chr)5	14721876	TCAAATTACCCCTATTGGTTGTCCAGATTTTCT AGAACTTTTGTGCTTGAACATATGCTTCTAGTAA AGGGATAGGAGCAGTTTTAATGCAAGAAGG	T	G	ATTTCTGGACTGCCTGTACCAATGCCATTAATT CCCTCTCATATACTGATTTTCATTTGTGCTCTAG GTGAAAGACCTTTACTCCAAAAGCTAAAGGTT T	NA	NA	201
Ca-II-SNP951	251.53	Ca-desi-LG(Chr)5	14749055	TATCTTATTGACTTTTTTGGTTTTCTATTTATGTTT ACTGAATTGATTAATTATAGTTTACTGAACTTTTT TTTTTCTCCTGATTTATTTGTTTTCTA	A	C	ATAAATAGTAATAAAAAATAACATTAATAATAA TAAAAATATATAGGCCGACCTTTTCAGGCCTAA TAGACAAACCAACAAACCAGAAAAACCATTAAA	NA	NA	168
Ca-II-SNP952	254.44	Ca-desi-LG(Chr)5	14772066	AATACTAGTCAAGAAAAAGATGGATGCCATATGTA GGGATGGGAATAGGCTAGGCCGTCCGACAGGGG CCTATGGCCTGGCCTACTTATGGTCTGGCCTG	G	A	TCAGGCCTAATAGGCTTCTTTATAAGCCTGAGC CTGATCTATTTAAATAAATAGACTTTAAAAATAG CCTGAGCCTGGTCTTTTTATTAATAGGCCAGG	NA	NA	142
Ca-II-SNP953	255.41	Ca-desi-LG(Chr)5	14795209	TTTATACAATCAGTATGCGTCCAAAATATATCTCTC AAAACATCTGAATCTCCCGTCTTGTGTTCAATA CACATAATTTCTTGTGTTAATACTTCA	G	A	GAGAAATAAAGCTAATCTCTCAATTCCTAGTCA AATATATAAAGCAATGAGTACTTATCGAGCTTC ATTGAGAGGTTCTGACACAGAAATGCAGCATGT G	NA	NA	218
Ca-II-SNP954	256.38	Ca-desi-LG(Chr)5	14837148	GGTGGTGGGTTGATTATCGTCCGATGTCGCTTGT TGTTAGTGATCGAGTATGTTAAGGTTAAGGTTAT GGGTTGATGGGAAGAAGTATGATGCCAGATT	C	T	TACAACCTTCTCCTCGTTTTTGTCTATATATTGAA ACAAAAATTCAATAAGAGAGGGGAGAGAAATCA GACGATAAAATTGGGGATAATATCAAAGAAGAA	NA	NA	152
Ca-II-SNP955	257.35	Ca-desi-LG(Chr)5	14883642	TTTTAAATTTTTCTCAATTCCTTTTATGTCTCTAT AGGTTGATTTATTTATTTTAAATTTAGTCATTTTAT TTATCTCATTAGCCACTTTAACTTTTA	C	A	ACCACATCAAACATTTATGCACACATTAACATCT TAAGGGTCACGTTATACTTTTTAACGAACTTAT AAAAAATAATATTTGGGTAAGTGATTATAAC	NA	NA	102

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP956	258.32	Ca-desi-LG(Chr)5	14900249	ATAATTTGAAACTGATTTGACTGAGTCTGTTACAG CCTTGCTTAATCAGTTGTCTTCTACTTTAAGGG CCTTTGAAGCTTCTCACTTAATCTTTGATG	T	C	TTCTGCATAATTACAGTAGCGTTCGGTTTACTT CTGCAATGGCTTATAATCTTTCTCAAACATTT TGGCTAGATTCAAGGCTCCAGATCGAAGCTGT A	NA	NA
Ca-II-SNP957	259.29	Ca-desi-LG(Chr)5	15075698	CCACACTACGGTGTAGTGAACATAATTTGGAAGCT GCGTTGCGAGCGAAGATTTTACCGAATTACTCGC GGTACCGGAAAACACGTTAAAGCTAACGCT	A	G	TTTCCCCAAATCAACTCTCAAACCTAACTAG ATCCTTTCCACACAATCACAGATAAGTCCCTAA ATGCAAACATAAAAGTTTGAAGGAGCCCTTACC T	NA	NA
Ca-II-SNP958	260.26	Ca-desi-LG(Chr)5	15107815	GTTGACTGGTTGTCATAGTAAACAGATGTTGGTTT GCTAAAAGTAATGTGAAGATCTTTGAAGAGGTAGT GCAACCATTGTATTTACAGGTTAGGTTGG	T	C	ATGTTATGATGTCTTCTCAAGCTCACCTTTAATC TCTTGAAATCAAAGAAACAGTCCAATGTTTCA AGGCTAGTTCTGAGGATGAATATCGCGATTG	NA	NA
Ca-II-SNP959	261.23	Ca-desi-LG(Chr)5	15129853	TTTGAGCTGAAGTACTAGGCTTGTGAAGAAATG ATGAGTTTTGTATCCGAGGGAGGAGGGATCATGG GTGCAGGGTCAGAGGGAGGAAGAATAATGTTT	G	A	AGAGGAAGAAATGGAAGGTACATTCAAACATA AGCAACTATTTATGTCCTCCACATTGAACCTG AACCAAACCTATTTGTTACCCTCTCCCAACCA A	NA	NA
Ca-II-SNP960	262.20	Ca-desi-LG(Chr)5	15656274	ATAATTTGAAACTGATTTGACTGAGTCTGTTACAG CCTTGCTTAATCAGTTGTCTTCTACTTTAAGGG CCTTTGAAGCTTCTCACTTAATCTTTGATG	C	T	CTCTAATATCATCTATTTTCATATATAACTTGTAG TGCAGGACAGTGCAATAAATCAATGATTCAAT GCTTTGTAATTTGTTTGCACATGACTTGGGAA CACATTCAAAGTTGGTCACATGATGTGATTTT CAATTTTTTAATTTGCCAAAGGAATTTGAGGA AGTTGGTTTGGCCATATTGACTTCAAGTTGTCC ATTTGAGAAATCACTAATGTCTCCAAG	NA	NA
Ca-II-SNP961	1.88	Ca-desi-LG(Chr)6	566924	AGAGATCACACAATGATATATCTGGCTCATCCAA TCTGGGTTACGTCCAGTCTCACAAACCGTGAGAT TTTTCACTAAGTGTCAAAATCGGAGAATGTT	T	C	CCTTTCAAGGCTAAAAGGTGATTGTAATAATCC TTTCTAGGTTGAAAGGTGAAGATTATAACAGAT CAAGGTTGATCTGGACTGGTGGTGTAAAAACC AA		NA
Ca-II-SNP962	2.82	Ca-desi-LG(Chr)6	593723	CTAGTTTCTGAAAACCCACTTGGTTCAAATAATGT TCTTCTTTGGTCTAGGTACTAGATCCCAACATCA TTCTCTTAAATCTTGAGAACCTGCAAAA	C	T	AACATACAGGTGATATCTTTCTTAAATTAATT ATTGTTTGATATTATGTTTATTGTGATAACAAGA AGCTTGATCTTAAAAATTAAGCTAGATAAGT		NA
Ca-II-SNP963	3.76	Ca-desi-LG(Chr)6	615409	GCCTTCGTATTGGTTACCAATGTGTAGATCGACAT GAATAAAAGAATGTTTCATCTTCAGATTGGTGCGTA GATCGGCAAGAATGAAAGGATGATCGTCTT	T	C	CTAATTTTCTTATTCTTATTGATCTACGCATTA GTACCAATTGAAAGACGATCATTTATTTTCA TCCATGTCGATTTACACATCGGTAATCAATCA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP964	4.70	Ca-desi-LG(Chr)6	627292	ATCCTGATTTGAAGAAATGTGTGATGATGTGGAA CTTAATTTTGACGCTATGAATGACGAAGTTGAACC TGTTATGATTGATTTGACTGATGTGTTAC	C	T	CAGTTTCAGATCTAAAAATCACAAACAATTTC CATTTTCCCTTCCAACATTTCTAGCCATTTC TAATTCATCTCGTGTATCAACATCATGCCGGT		NA
Ca-II-SNP965	5.64	Ca-desi-LG(Chr)6	671394	GATTGTAGAGTAACTCTTTTGACAATCATTCCAAT GTGCAAGTGAAATGTACAATGCATTCTCTATCA TTTGTTTTTGTGTTTAGAATACCCCCATAC	T	C	ATAGTACAAGCAATCAAAAAACAAGTCAAACAA ATACCTTGCTTGCATCTAGCTGACCCATTACCC CAAAAAATTGTTGAAACAGATGCTTTAGATATC G		NA
Ca-II-SNP966	6.58	Ca-desi-LG(Chr)6	737931	TGATATTTGGACGAAAACGGAAAACTTTTCTGGA ATAGTTATCGATACCAATGGCAAACGATAGGTTG TTGTTGTGTTCCACTTTGGTTTTAGAGCT	A	G	GGTTTTATTTAAAAATAAATAAAGGGACCAATG GGTTTGACCATGGACTCTAATTGTTAATAAAAA AAAACAACCAAAATAAAAAATGGAATTGGATGG G		NA
Ca-II-SNP967	7.52	Ca-desi-LG(Chr)6	745730	TCTATTGTTCCCTTCAATGACAAGGTGCGATGCAT TGGTTTGATATATACGTAGAAAACAAGAGATTATCC TGATGTAAATCTTGCAATTGGGATATAAC	G	A	TTATTTGAGATACATAAAATTAAGACTGACAC ACTATTTGTTTACTTACTCCATTGGATAGCAACA TTACCCTTTGTTACCATGCATGGTCTGATTG		NA
Ca-II-SNP968	8.46	Ca-desi-LG(Chr)6	749404	CATTCTTATACAATATTTTCTATATCTAGATTATT CGCTTTCGTAAAAATACAATGTCTATGTTAATTA TCGCGAAATTTCTCTGTTATGTGCAAT	A	G	CGTTTTCAATTTACAATGAACGATTAACTCTAA ATCTCCTTTAAACTTGTATAAATTTCCATGTCC AATCCAACAACATTATACATCCACATTAATGT		NA
Ca-II-SNP969	9.40	Ca-desi-LG(Chr)6	779347	AACATCCTCTTGAACCTATTATCATTTGACCTTTTG GTCCCATCAAACCTCCAAGTCTTAGTGGTAAAAGA TATGGTTTTGTATTGTTGATGATTTCTC	A	C	ATTCACTCAACAAGTGTGTTGATTGAAGAGGG TTTCATCTCTGTAGTTATATCTGAAAAGGGTCTT GACTTTGTCAAAGATATTCTAATAGACCAAGCT ATATCATCTATAGTTCTTCTCAGCTTCCACAAA TTGAGAAATCTGTTCAAGTACCTCTTGTGGAA AAGCTCGTGTGATTCTTCTGAGATCACAAATCA AAGATATCCAAGTCAGTTCTTCTGTTGAAA CTCCACATACAAACCTTCTCTCTCTCTCTCTC CTTGTGCGCTATCTACTTTTTGCTGAATACAA GTGCTACTCAACGTGTTAAATTAGTTGCATAG GGAAATGGTGGTTGTGTTACTATTATGGAA T		NA
Ca-II-SNP970	10.34	Ca-desi-LG(Chr)6	810210	ATCATGTTTAAAGCTCTATAACTCCATTTGAAA GTTGTTGATATCTGATCTTAAGACCAGATACCAA CTTTTCAGTTATCATTGCTTATATTT	C	T	CTTGTGCGCTATCTACTTTTTGCTGAATACAA GTGCTACTCAACGTGTTAAATTAGTTGCATAG GGAAATGGTGGTTGTGTTACTATTATGGAA T		NA
Ca-II-SNP971	11.28	Ca-desi-LG(Chr)6	829507	CTAGCCCTGCCTTTATTACTAAGATAAAAAGT AAATCTCATTCAATCTTCAATTTTTTACTTTTTAC CGAATTCTCGTTCGGATCTTAGTTTTTCG	G	A	AAAGTCCACTTTCAAACATTACATGAACATTTCA GAAAAACAACATTATAAGAAAGAAAATGCTCAT CTGACATTTTTTTCCGCATCTCAAATACATTA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP972	13.16	Ca-desi-LG(Chr)6	839044	TAATTTGACTATTTTGGTTTTATAAACTCGTATCT GTTGCCATGGCCTAGATCAACCTCTAAAATATCAT AATGCCTTGCTCTATAATTTTATATATGG	C	T	AACTATATGTCAACTTAAATAATTTTACCTAAAA GATACTCACACTTGTCACTTTTGACGGTGTAA TTTTTTCAGTTGAAAACATAATATAAAAACAAT		NA
Ca-II-SNP973	14.10	Ca-desi-LG(Chr)6	880921	TCACGTTTCCCGTTTTAGTACTACGTTCCCCACTTT CCCTCTCACTTAATACTACGTTCTCCATTTACCCA TTTAATGTACGACTCCACTTAATATCAC	A	G	TTTTCTATCAAAATGGTCTCCCTCTCCTTCTCTC CTAAACCTTCCCTCTATATCCTAGATGGAATG CGTCCGTTTTGTTTTATTCAATTTTATGGGTAA		NA
Ca-II-SNP974	15.04	Ca-desi-LG(Chr)6	907028	AACATCCTCTTGAACCTTATTCATATTGACCTTTTTG GTCCCATCAAACTCCAAGTCTTAGTGGTAAAAGA TATGGTTTTGTTATTGTTGATGATTTCTC	C	T	CAATTTTTGATCCTTTTTCGTTTTGAATCTTTTT GCAAAAATGGTGGAACGCCTCAAAGGCTTCAT CTTTATGTTTTAAAAATAAACTCAAGTAAAATG		NA
Ca-II-SNP975	15.98	Ca-desi-LG(Chr)6	1324148	TTGAAATTGTTAGGTTTAAAGCTGTCACCATTGTT TCAGCATATGGTTTCTCTCTACTACCATTATGTC ATATGAAAAGTTGTTGACTTTACATAGTC	G	T	ACACTGCTCAACTGATATTCACAGGTACAACAA TTCTCGGTGCTATAAAAAATACAGTTGACAAGG ACACCAACATAATCTACAAGGAGTATCCAGATC T		NA
Ca-II-SNP976	16.92	Ca-desi-LG(Chr)6	1336769	CTTGTTATTACTTGAACCTTATGCAATTTCCCTGAG CATTGACCTTTCTTTATAAGCGTTTTAGAGCAATT AATAATGGTCAAAAGAGTTGTTGGTAGTG	T	C	CAAGAACGAAGAAAAATGCACAGTCAAACATAT TTCATAAACTGTTCAAAGGCTGAAATATTTTTAT TCGTATATATTGATTTGGTGAAAACCTGACAGA		NA
Ca-II-SNP977	17.86	Ca-desi-LG(Chr)6	1350303	CATCCACCGGCCATTCTTTATGACTTGTATATGA TTAGAACAACCATTTATCAACAAATCAGAATTGGGA CGAAGAATGTTCTTCTGTTTGTGGTAGCCAT	T	C	GTTGATGAATGTTGGGCTGGAAAAGAAGGAAA ACAAAAGAAAGAAGAAGATGAAGCATGTGTTGC TCAAGAAGATGACTTAAATTAGAACAATCTTG TT		NA
Ca-II-SNP978	18.80	Ca-desi-LG(Chr)6	1363682	TTAGTCCAAAGTAGGTTGAAGACTTCGATGAGAGT TATGCACCTCGGCCGCTACCCTTCCCTGTGAAT TTTGTGTTTAGCTGAAGTGATTACGACTT	A	G	AAGTTGGAAGTATGTAAGAACATTTCCAACCTTG GACAAAACAATAAAGAAAAAGAAAAATACAAT GAACTAATGAAAGAAAAATATAAGAAAAAATA		NA
Ca-II-SNP979	19.74	Ca-desi-LG(Chr)6	1399426	GCTCAACAGAAATGGGAAGTTGAAACACTCACAG CCTTCTGAACAGCCTCATTAGTCACTCTGGAGAG GACTTCTTGAAGCCTGAGCTGCAGCATTAG	A	C	ATTAACCTTCTTTCTTTATCCTATATCAGAGA AAACTATATGTTTTCCTGTTTGTTCACAT TTTTATGGTTTCAATTTGCAGGCCTTCTCTCT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP980	20.68	Ca- <i>desi</i> -LG(Chr)6	1448279	TGGGGAGTTAATTGGTGTATTCCTTCACTTCCATG TATTTATAATTCAACACAGTGTGTCAAATAGCAATT ATAGTGCCGCTATAGTGTATAGCGTAGC	G	A	AAAATTCGCTACGCTATAGTGCTATAGCACTA TTATACCTGCTATGATGACACTTTAGTACTAAAT AGCATATTGCAGAGCAATAGCGATTTCAAATTT		NA
Ca-II-SNP981	21.62	Ca- <i>desi</i> -LG(Chr)6	1455782	GCATTTTTCTACCTTCAAAGGAGTTATTCCT CTTCATAACCATCCAGGAATGACTGTTTTTCAGTAA GCTTCTATTGGGACAAATGCACATTAAGTC	A	T	GTTAATTGAATTTGATGATATGAATAGAGATTA GAAAATACACACATTGAGATGGTTGTTGCAACA AATTGTGAGAGACCTCAGGATCAACCCAATCAT A		NA
Ca-II-SNP982	22.56	Ca- <i>desi</i> -LG(Chr)6	1471831	CCAGCTTATAATTTTGTATCTCGCTTGTTCCTTAC TTAAAAATGATACATTTTTATTGGCAATATATCTTT TGATTCATAATAAGATTCAATTCACGAT	C	T	TCAAATTAATTTAGCATGCAATTTAACATCGGT TGTCATGTCATAGGCCATAGAATCAAATCGAG ATTCAAATCATGAATTAGAAGACCTATTTTCG		NA
Ca-II-SNP983	23.50	Ca- <i>desi</i> -LG(Chr)6	1498906	TTCTTGGTTTTACTTGTATGCAGAGTACAAGGATA CAAAGCATAGTCACATCAGTGAATATATGTGCTTT GATGTTTGCATAGTAGCTGGTGGTACTT	A	G	TTAAGATACCAAAATATATATGGAGAAGGGG TATTGAAAAATATGATGTAATTACCCTGTAG GTAGTTGATATCCAATCCAACCGATTTTGAATC C		NA
Ca-II-SNP984	24.44	Ca- <i>desi</i> -LG(Chr)6	1558305	CAATATGAATAATATGTATCTAAATTTGAGATCTTT GTAGTTGTTCCAAGCGTATAGGGATAGTTGAGTC AAAATGAGTGCTTTGTGGATTCTCTGCATA	A	G	CATATGAAATATTTATAGAAATATATAACTCT ATATGTTTTGCAGGTTGATTGGCTATGGCATG GCCACAAGCATGTGTTTCTGCTACTATGTTGC		NA
Ca-II-SNP985	25.38	Ca- <i>desi</i> -LG(Chr)6	1558359	GCATTTTTCTACCTTCAAAGGAGTTATTCCT CTTCATAACCATCCAGGAATGACTGTTTTTCAGTAA GCTTCTATTGGGACAAATGCACATTAAGTC	A	T	GTTCAATTTAGTACCAATTTTCAACCTTTAG AGGCTTTGCTAGGTCAACAAAATTGTTGGTGG AGATATTGATGAGTTCATGTTTTTCATGTGTTAG TTGTTATATGGGAATTGCATCAATTCCTGTGAG TTGTGGAAATAGATGGGTTTTGTGCATGTTGG AGTTTATAATAAAGGGTTTGTGCAAGCTTCTAA GGATACATGGGACATTTTTAATAGGGTTGGATT GCAACAATTTATACAGCTTCATCTAACTCCATC		NA
Ca-II-SNP986	26.32	Ca- <i>desi</i> -LG(Chr)6	1559819	CCAGCTTATAATTTTGTATCTCGCTTGTTCCTTAC TTAAAAATGATACATTTTTATTGGCAATATATCTTT TGATTCATAATAAGATTCAATTCACGAT	C	T	GAAGAATCAAAGCAATGACACCAATTGCAAGA CTTATTGGAGATTCAATGTACACAACATAATA GCCATTGAACATGTAAGCAAAGGGCTAATCCAA AATGCTACTTTGATGGCATTGTTGGTGTCTTG AAAGTGAACCATGCCAAATGAAACCAAG		NA
Ca-II-SNP987	27.26	Ca- <i>desi</i> -LG(Chr)6	1593638	TACGATATGGTACTGTTCGTCCTCAATCTCTACCA CCACCCCTGACTTGCATCATCAAATTAACCTC ATTAATGAGTGGCATGCCATCAGGTAATAT	T	C	TTTTTAATTAATTTAATTCATTATTGATTTAAT TTATTTATTTTTTATTACAGCGTCGAGCAATAC AAATTGTTGAAGAGCTGATTGGCCGACAACT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP988	28.20	Ca- <i>desi</i> -LG(Chr)6	1606173	CATGCTTCTCGTCTCATACGCAGCAGCTCCAAGCGTGGAATTCAGGGCACAGGATCGGTGCTCTGATACCAGTGTAACTACTGGTATCAATTAGGAAT	G	A	CTTCTCTACAATTCCTTGTATTCTTCTATTCAATCAATAATACAAGAGATTAGGGTTCATTGATCCTAATCCACCATTAGTTCAATTACGCTATT		NA
Ca-II-SNP989	29.14	Ca- <i>desi</i> -LG(Chr)6	1740238	CTTGTTACTTGAACCTATGCAATTTCCCTGAGCATTGACCTTTCTTTATAAGCGTTTTAGAGCAATTAAATAGTCAAAGAGTTGTTGGTAGTG	G	A	TGTTGATGGTGTCTGGTTTTCATATTGATCCCTTAATGGAGAAGAATCAAGCAACAAAATTGCTGATTTCTTTGAAAAATGTAAGTGGATTCAACAATTGGAAATATGATTTCTGTGACCGGATTGCAGCGCATTAAATGAAAGTTATACTTGAAGATCTATGCAAACAAGTTGCTGAATATGGAAACATTTATACCTTTGGAGACAAGTGAATAATGAACCAAAAATGAAAGCATACATTTGATCTTCTAT		NA
Ca-II-SNP990	30.08	Ca- <i>desi</i> -LG(Chr)6	1840672	CGGTTGTTGTTGCTCTCAAACCGTGCAATAATACCAAATTCCTATCTCTCTCAAATCTTAGATCGAA TTGATGTTTAGAATGTTGAAAATGGGTTT	C	G	TATATTAATATGAATTCATTTTATTACAATAAACATATATATCTAATAATTTGACATAATTTTCAGGTA GGACCTATAAAAATTTGCATATTTCAATCTC		NA
Ca-II-SNP991	31.02	Ca- <i>desi</i> -LG(Chr)6	2035499	TCTATATTTCTACATGAATCTATTATAACAACCAACATTTGGTCAGGGCAGGCTTTGATTTTTGTGTCAA TTACTTTCATATGGAATATCTTCATTG	G	A	ACATACTTGTGGATGAACAACAACAACAAAAAT TGATCCATCTTGATAGTACTATAGTATTGGCA TAACAAGACATGAAATGAATCTTGAAGCCGT		NA
Ca-II-SNP992	31.96	Ca- <i>desi</i> -LG(Chr)6	2058649	GCCTTAACACTATTGTTGGTCCCATGGATTGCCCTTCGCTTTCTTATAGATAGAGTTATAGATG ATACAAAAATGACTTCAACCTAGTATTTAC	C	T	AACAAATAATTGAGAAGTGTGAGTATTTACTTAT AAGATTTTTAATCTCAACTTTCAAGTTACGTAA GACATTTTTGTTTATGCTGAAAAAATTTGAAA		NA
Ca-II-SSR328	32.90	Ca- <i>desi</i> -LG(Chr)6	2160721	TCTTAAGAATCACTCGAATATTGAAA	(TAT)16	(TAT)29	ATCTAAATTTGTTATTTTAAATGGGATTCACA CATATAACGACGATAATAACAATAACAATAATAA TAATAATAATAATAATAATAATAATAATA	GGGATTCACA CATATAACGA CG	57.75
Ca-II-SNP993	33.84	Ca- <i>desi</i> -LG(Chr)6	2161729	CGATTTGCTTCTTCTCTCAAAGAGAAGAGCTTATTCGAAAAGTTGCTTCTGCTTTCAACGGCAAGCTC AACATACTTGTAGTCATTTCTTTCTATA	T	A	TCTTATAATTTATGCTAAAATTGTTAAATATAAAT AACTAGTTTAGGGATTTGAAAGCAATTTGAAAAAT TATAATTTTTATGATTTATGCTAAAACACAC		NA
Ca-II-SNP994	35.72	Ca- <i>desi</i> -LG(Chr)6	2203748	CTTGTTACTTGAACCTATGCAATTTCCCTGAGCATTGACCTTTCTTTATAAGCGTTTTAGAGCAATTAAATAGTCAAAGAGTTGTTGGTAGTG	T	A	GATAAACAGTAGTAGAAGAAGTTGGAGTTGGGCAAGTTGCCAAGTATTACATCAGGCGAAG AACAGTATGCTGTTGCTGGGAAAAGCTGACT GATACTTATCCTAACCTTTATTGGAGCGCTCT GCAGCTCATTGCATTGATTTGATACTTGAAGAT TTTGAAATCTTGAGTGGATTAGTACAGTAG		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP995	36.66	Ca-desi-LG(Chr)6	2208003	CTACAAAATCAGACAAGTATTGTTGAGTGGGGAA TTTGCTGATCCAAATATTTGCAAGCCAACCTTTGTT TGCTCGTGTTTTTAAGACAGTTTGCCTCG	T	A	GTGAAAAAGAAGTATGATCATGCAGGGCAAATG TAATGGCATAACGTTTTGCCAAACAAGTCATAA GGGAAGTTGAATCATCATAAGCATAACTATAAG C		NA
Ca-II-SNP996	38.54	Ca-desi-LG(Chr)6	2235926	CTTGTTACTTGAACCTTATGCAATTTCCCTGAG CATTGACCTTTCTTTTATAAGCGTTTTAGAGCAATT AATAATGGTCAAAGAGTTGTTGGTAGTG	C	T	ACTGAAACATATAAGAAGTAAAGTTGTAATGGA ACATTGGAGAAGATACAGAAAAGGAAATTAGCA ACATAACAAATTATAAAAGAACTTATTTGAGA		NA
Ca-II-SNP997	39.48	Ca-desi-LG(Chr)6	2348827	CTCTTCTGCCAACTTTTTCTTCAGTTTCATTATG TGCATCACGCTTTTCCAATTCAAATTTCCGTGACT CAAGCTCCCTTTTCTGAGATTCAGTTGC	G	A	TTTTATGCAATGATTCCTCTGTATTTAGAGATAA AGAAAATACAGACAAGTGCTAAGGATCACTTCC AAAGGATTTTTAACGATCACGAAAAGCTTAAAT		NA
Ca-II-SNP998	40.42	Ca-desi-LG(Chr)6	2376749	CACTGTTTTCTTTCTTTTCGAGGGTTTTTTCTTT TTCTCTTTCTTTCTTTGAGGTGTCGACGACTGC CATATTGAGAGTGAATATAGAACGGTT	T	C	CGATGCACTGCCAAATGTGCAAGACAGACT ATCAATCATGAAGTCCCAGGATAAAACAGTCC AGATACTTTGTATTGGAGTTCTATTGCACTGTA GA		NA
Ca-II-SNP999	41.36	Ca-desi-LG(Chr)6	2408161	CTTGTTACTTGAACCTTATGCAATTTCCCTGAG CATTGACCTTTCTTTTATAAGCGTTTTAGAGCAATT AATAATGGTCAAAGAGTTGTTGGTAGTG	A	G	TTGGAACCGGTGATGTACTTGTTCGTGTCAT GGTGAAGTAAGTTTCTTGTGATAAATCCCG CCCCCTTCTGGAAAAAGAACTTTCCATTTT CTTTTGACAGGACTACAAGCTTGAACTACTT CAAGTAGCATTCCGAAA		NA
Ca-II-SNP1000	42.30	Ca-desi-LG(Chr)6	2565245	GGTGGAGCCTAACGTGCAGTTGGTTGTGATCCG ATAGAGGAAGCAACAAAGTCGGGTCCAGCTGCTT CTTCATCCTCAGTGGATGCAGCTAGTATGTC	A	G	ATCAATAAGAATGTATCTGAAAAAGTTTATGCAT TTTTTTAAAATGTATTTTGACAAAAGTAAATGAAG TTTTCTTTACCTTTATCTTCCCTCCACCATTA		NA
Ca-II-SNP1001	43.24	Ca-desi-LG(Chr)6	2624838	CTTTTTCAATTTAAAGATAAACCAATTTTCCCTGAT ATTTTCCCATTTGATTTGGGTACCTCCTTTTGA AGCGTTGCAAGACTGACTCTGCCTTTTT	C	A	AGTGTAGTAAACAAGCTCATCTATTGTAAGGA TACAAGTTAGACATTTTAAACCTCCTAACCACTT AAAATTGACAAGAAAATATAGAAACAGCAAAAT		NA
Ca-II-SNP1002	44.18	Ca-desi-LG(Chr)6	2648414	ATCGAGATGCTCTAATTTTGCAGGTCGCTTTT TCAGGTTTTCAACCTAGCGAGCCATTTTTCGATC ATCATTTTTCTAAGCATAATATTTTTTGA	T	C	CGAAGGACCATATGTTGTAAAAAGCCTTCTC TGGTGGAGCTCTAATACTCGCAGAAATGGATG GAGAGGACCTTCCACTTCCAGTATATTGAGATG CA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1003	45.12	Ca- <i>desi</i> -LG(Chr)6	2657388	CTCATGCAGCGGTCTTTTGGCTCCAATTGCACTAC ACTTGATGAGATGAATTACCAACTCCTTCTTGAAT TCCTTCTTTTCTATCTTAAACTCTTTTGG	T	C	CCCCACTCCTGCCTTAACGTTCCCACGGCTTAA CGTTCCTCGTAAAAGAAAAAACAACAAAAGGG ACGTCCTCCATTCAAAAACACGTTGTGCGATAT A		NA
Ca-II-SNP1004	46.06	Ca- <i>desi</i> -LG(Chr)6	2661720	TGTTGGGCGTGTACTTCTTGGCATTGAGTGGAG GCTTCTGCCTTTGGTCTTTGCAATCCCTGGCTA GATGTCGGGCTTCTGGCATTAAAAACATAACA	C	T	CTCCATTTCAAATGATAGACATAGGACTTTAGA ATCAAAGCCACTACTGTTTCGTTGTGGAGACCCA AGACACCTTACGACTAAGTGCCTCTCAACGG CA		NA
Ca-II-SNP1005	47.00	Ca- <i>desi</i> -LG(Chr)6	2720364	GTGTGAAGTAGAGGTTGCATGTACCTCACTTTTGA ATTCTTCAAGTGATTACCCAGAGATATCTTGATGC AGAAACCTCTTACAGCAACTTCTACAAA	T	C	TATTTCACTTGTGAGTATCAGTACTTTTATGGGT AATATTGTATTATGCTGTAATAACAGATTTTAG TATGTATATTTTATGATGTTTCTGCTCTTTG		NA
Ca-II-SNP1006	47.94	Ca- <i>desi</i> -LG(Chr)6	2725154	ACTGAATGCAACCAATTCGAAAGCTTTTTTCGAGT AGTAGGCGATGAAGATGAACCATTGAGACTTGG TTGTTCTTTCTGCAGCAGACCTTGTACAT	C	T	AGAGGTTTTCACTTCTTTAACATTGACTACTGTT ACAACAAGGTGAAAAGTTATGAAGAACATTCTT AAGAAGCTTCATATAATGTCTAATCAATCAGAA		NA
Ca-II-SNP1007	48.88	Ca- <i>desi</i> -LG(Chr)6	2742457	AAATCAAGCTCTTGCCTTGGCTACGTCATCCTGAT ATTGTAGAAATTAGGCATATTATGCTTCTCCTTC CCGCCGAGAGTTGAGAGATATCTATGTTGT	C	G	GACCCCGAAGAAGTTGGTACAAGAAAAATTGG TGGTGCTCAGGAGTAAGATCATCTTTGCCTTA ATGACTTGATGTAGATCAGATTCCATCAACTCA AA		NA
Ca-II-SNP1008	49.82	Ca- <i>desi</i> -LG(Chr)6	2771903	CATATGAGCACAAAGGCTCCATCTTATGAGTACAAG TCACCCCCACCTCCACCACCTTACATTTACAAGTC TCCACCACCTCCACCCTATGAGCACAAAGTC	A	T	GTGGTGGAGGTGATGGTGTGGAGGAGGTGG TGACTTGTACACATAGGGTGGTGGGGGTGATG GTGTAGGAGGCGGGGAGACTTGTACTCATAA GATGG		NA
Ca-II-SNP1009	50.76	Ca- <i>desi</i> -LG(Chr)6	2775649	ACCAGTGTGGCAGCCACCCCTACGCACACATT ACATGTTATCTCATGCACTATTTAACAACAACTCTT ATTTGTTTTAGGTTATAGTTTTCTTCGAG	T	A	AATATCGTAGCTCAAAGATGATAAATTCAAACG TTTATTTAAAAGAATATGGACAGGAAGCTAGATG TTTCACTTTTCTCCAATGGAGCTTGCCTTTATT		NA
Ca-II-SNP1010	51.70	Ca- <i>desi</i> -LG(Chr)6	2844907	ATAGCACATAATACCCCATGAAGGTAGCCCTTATA GGTAGGGCAACAATTGGGTGGTAAAGTTTACTT TGAGAATCATTATTATTTGCATGTTAGTGG	A	G	TGGTTTACCCCCACAAAATGAGTCATAAGTAG CCACTATGATCACCAAAACCAGGATGATAATTC TCAATCATCTTTCATAACAATCAACCAAAATCC		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1011	52.64	Ca-desi-LG(Chr)6	2931598	TGAGTTTATTTGAATTTTGAGTTATGTATTTGATG AATACATGAATTTTCTTAAAATTGGTATTGATATTT ATGGATTTTGGTGAATTTTCTAAATTTA	T	A	AGTCATTTTTTTTTTTTTTTTTATTTGTTTATTTAT TTAATTTTAAAGTAACAATCTAATTATTGATATCT TAAAATGTCAATAATATTATCATTGTTTAC		NA
Ca-II-SNP1012	53.58	Ca-desi-LG(Chr)6	3080317	GAAAGAATTGTGAATTGTTTACAGATTGTCCAGTT TCCTCGAAACCTATCTATCTCTCACAACTCTTTTC CTATTGCTCACCCCTTGATCCTTGTAGTCA	C	A	AACGACTGTTAGAATCCAGGTAGAACTGGTG GCGATCTTCTGGGTGAGAGGCCCTCATCAAGA AGGAGCCGTACTTTGATTTTGTGTGAGTCTGCT GA		NA
Ca-II-SNP1013	54.52	Ca-desi-LG(Chr)6	3532503	GCTCGCAGCGTCTAGGATCAGCAACAAGAAGAGT ACGGTCATAACGAACAAGAATGTCCTTGATCTCCT TCTTACTCTGTTTCATCCACATATTTCTGATA	G	A	GTTTCGCCGGCGTTGACATGAGGATCAGAGTG AAGGGAGGAGGACATACTTCTCAGATCTATGC CATCAGACAGAGCATCGCAAAGGCCCTGGTTG CATA		NA
Ca-II-SNP1014	55.46	Ca-desi-LG(Chr)6	3542345	ATTCTTCTCCACCGTTGCTTTGTTCCGGTTCAAGG AAACTCTACCTTATGGAATGAACTCTTATGGACTC GTTCCATTGGTTTATCTTTTACCCTT	T	G	ACAATTGAGTGCTTCATCAATTAGTTGTGCATC GGAGTCACAAATCTTGTGAGGAATTGGAAC TATTGATGAAGAAGAAGTAGCGTCTTGAATG A		NA
Ca-II-SNP1015	56.40	Ca-desi-LG(Chr)6	3557055	GTGTGAAGTAGAGGTTGCATGTACTCTACTTTTGA ATTCTTCAAGTGATTCACCAGAGATATCTTGATGC AGAAACCTCTTACAGCAACTTCTCAAAA	T	A	AAGTACCACCAAAGTCAGGTGACTTGATCTCTA GTCTATTACAATAAATGATAATATGATCTATTAC ATCTGTTTATCCCACTCCACAAAATTAATAATA CAACCAAATAATGCCTTGAATTCACAAATTA TGGGAATTAACGTTGCTACCCCAACCCAA CCATAAAAAACATAAAATCTCACTCAACATTCA GCAACGCTGCATTATATCATATTAGACCGTTTG TCAAAATTTCTTACACTTCTCAACTTTCATCA GAACAAACAAGCATAAATAGAGCAAAAAGAGCT GCTGTACCTTGTCTGACCCCGACATCCCAC ACAGTGAAGCTGATGTTCTTGTACTCCACGGTT TC		NA
Ca-II-SNP1016	57.24	Ca-desi-LG(Chr)6	3591192	ATGTGGCCGACACAATGTGTTTCTAATGCTCCTA ATGCACCTTATGGCTGTAATCTATAAAATAATTGA GTCAATTTTTCTATCTACAGGTTCAATGT	T	G			NA
Ca-II-SNP1017	58.08	Ca-desi-LG(Chr)6	3613223	TATCTTTTTACATTTTTTTGTTTGAAAATATTGCA AATTTATTTAGTTTTAAATCCATCTTCTGAAG CCTTTCATTTCACTTCTCTTTATC	C	T	TGCCATTGTTGTTGTTGTTTTTTTGTGTTGT TGTTGTGTTGGAATGAAAGATGAAGAGAAGAAG AGAAGAAGATAATGAAAAGGGATAAGAAAAT		NA
Ca-II-SNP1018	58.92	Ca-desi-LG(Chr)6	3712916	CAGAATCTTTATACACATCAGAATCTTTTCATCT TTAGATTTCTCTTTACAATCTAGTCCACCATATAT GACCATATTATGGGTCAACCATGACTGT	T	C	TGCATAAAATTTTTATGCAACATATCCATATCGA TCTATATCATCAAGTACATATTAATGTGGTGGC CATTTGAAATTTAGTCACATTATATGTTAGTGAC		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR329	59.76	Ca- <i>desi</i> -LG(Chr)6	3786461	TCTTGCACAACACTATTCGG	(TAT)15	(TAT)17	GTAATCAAACATAGGCTAATTCCTTTACATTT ATCAAACAAAATAAATAAGATAATTTAAATAAAA TGAAGAGAAAAATAAACACATAAAAAATAATA	TCAAACATAG GCTAATTCCT CTTACA	59.84
Ca-II-SNP1019	62.28	Ca- <i>desi</i> -LG(Chr)6	3998825	AGCATCATCCATTCCATAGCTAACAGTCCCATCTC CAATTCCTTCTCACCTCGCTCAAGCTCCTCCAAT AATCTGAAATTCCTAGGAATGCATTGATA	G	C	TGTCAATGTAACTATCATTGACTACATTCATCT GATATTGTAAGTGTCTATTGCACACATAGATTT GTAATTTTAACTTATCTTGTAAAAATTTGGT		NA
Ca-II-SNP1020	63.12	Ca- <i>desi</i> -LG(Chr)6	4052251	CATCCAATATAAAACGTCTATCACATTATTCTTTT ATTTTTTTTTAAGTTGTATAATTTAAATATCATAGC CTTGTA AAAAAGTTTTTTTTTTTTTTTT	G	A	ATTTAATGAATTAAGTAATTGGACATTAATCTC ATTGCCTAGCAAAAACATAACAGATTTTAAAGA TTTTCGTTTCTGTCTTCTCACAAAGTTGTGTG		NA
Ca-II-SNP1021	63.96	Ca- <i>desi</i> -LG(Chr)6	4077783	TTGCGGCCAATGCGATCACTGACAACAAGACCA GCATTTCGTAACATCACGAATCACAACTCTCGTCTTC CCACGACATTGTGAATTGGAGAGCTGCAATT	A	G	CTCTCCACGGTCTTCTTCTCCTTTCCCGC TCTCTCCCTAATTTGATTCTCCATTTGTTTATCG GGAAACAAAAGAGGGCTTCAATTTGATTCCACC		NA
Ca-II-SNP1022	64.80	Ca- <i>desi</i> -LG(Chr)6	4132081	GTGTGAAGTAGAGGTTGCATGTACCTCACTTTTGA ATTCTTCAAGTGATTACCAGAGATATCTTGATGC AGAAACCTCTTTACAGCAACTTCTACAAA	T	C	ATTTATTGCTGGTGAAGCAAGACGTGTCTTCCA ACTTGGGGCCATCAGAGCTCAAGAATCACTTG GATGAACCTGGAGATCAGTTATTTAGTGGGACA TGCAATTTCTTCCCAAAAATAAAGACCACAAA CACAAAGGTACCGTCCGCTTTCATGTCTTCAAC GACTCAACATCCGTTTGTGCAAAAGATGGAATA ACGGTG		NA
Ca-II-SNP1023	65.64	Ca- <i>desi</i> -LG(Chr)6	4135764	TATGCGAGTTTTTTTTTTTTAAAGGGTAGAAAAGA GGAAAAGGAAATGATTTTTTCTGTTTACATATTT GATTCATTATTTGCATAAGTCATAGGT	T	C	CCTTCGACAAGCCACTTTAATGAATTTAATTA GGTTAAACCATATGGTAATAACCAAGACTCATT GTAATTCACAAGTCCTATTTAAAGTAACAGTC A		NA
Ca-II-SNP1024	66.48	Ca- <i>desi</i> -LG(Chr)6	4260700	GAGCATAAAATAATTTATGCGAGAAGAAGATGGTT TTGGTCTCCAATATGTGTATCTATTTCTCTATTA CTAACTATTATCGTTGCTTTGCAGTTTGA	T	G	TTTTATCTTTACATTGAACACCAAGCTGTAAGC CACCTGTTAAGTTGTTAATAAAAAACGGTTAC TCTTGGTTTTGGAGCAGATTGCTTTTAGAGCC		NA
Ca-II-SNP1025	67.32	Ca- <i>desi</i> -LG(Chr)6	4331449	TTGTTGTGGGACAGGTGAGGCAGGAGAAGGAG TAGGTTCCAGGAGGTTACGCAGTGGAGAGGTTGG TAGTGGTGATGGTGTATCCTCAGGTGGAGGATG	G	A	ACATTAACAGATGAAGATTCAAACTGATGACC GTCCTGTCTCAAAGAAAAGAAAACCTGTCCTT CCTCTGTTTCTCAAACCTGGAAGATGAACCAT C		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1026	68.16	Ca- <i>desi</i> -LG(Chr)6	4403765	CCACATACAACCTCCATAATGAAATGTGATGTTGAC ATCAGGAAAGACCTGTACGGTAACATTGTCCCTTC AGGAGGTACAACCATGTTCCCTGGCATTGC	T	C	AACCACCAATCCAGACACTGTAATTTCTCTCAG GGGGTGCACCACCTTGATCTTCATGCTGCTT GGGGCCAATGCAGAAATTTCTTGCTATTCTA TC		NA
Ca-II-SNP1027	69.00	Ca- <i>desi</i> -LG(Chr)6	4407916	TTGTTTTGATTTTATGCAATGGATGTGTTAAGATT GTTTGTTATGAAAATATTTAATGGTTTAAATTTGA ACATTTGAATTTTCGTGAAATAAAAGTTGT	A	C	AATTGGATTATAATAAGATATGATAACATATATA TCATTTCCCTTTTCTATCTCGACTAGTAAAAAA TTATTGCAGTTAAATTAACCTGTATTTGAAA		NA
Ca-II-SNP1028	69.84	Ca- <i>desi</i> -LG(Chr)6	4421550	ACAAGAATGATTCATGGATGATTCTTGATAAAACG GCTTCAATGGCGTTAGAAACGGCCGCTTTGAGT TTCTATGCTAGGGCACAAGTCTCCCAAGTTC	T	C	CGCGCGCCTGGAGCGCACCCCTGCACGCCTGG GGCGCGTGACGCGCATCAGCAATCATAAAAAC GCAAAATTTTACTGTTTATGGATCTTTTGACTC TTG		NA
Ca-II-SNP1029	70.68	Ca- <i>desi</i> -LG(Chr)6	4459719	AGCTTTAGCAATGCCCTTCTGTAGGATTTGTTA ATGGAAAACTTAGGTCAAGTGCTAAGATATTTGT TACTGTTTTCCATAAAAATTACCCAGTAGA	T	C	ACAGAACTTAATATACTGTGTTTAGTACTATTTT TACTCTTTTGTGTTTTCACCTTTTCAACTTCCAGCA AGCAGATCTCAATGGGTGCACCGGATGAAACC		NA
Ca-II-SNP1030	71.52	Ca- <i>desi</i> -LG(Chr)6	4472854	TCCCTTATCTTGAATTTTTTTGAAGATGTTGATGTT ATAGGTTGGATAAATAGTCTGTTGGATTAGCTTA TTTTAATTTATCAAAATGGCATAAATATTT	G	A	TTTTACATGTTATTCATCTTAGAAAATTTATAAA AATTAGTTAAAAATAGCTTATGAATATATCATAA ACTGTTTCTACAAAATTTCTCAAACAATCTAA		NA
Ca-II-SNP1031	72.36	Ca- <i>desi</i> -LG(Chr)6	4485447	GATATAATTTTCCAATTTTACTATTCTATTTATGAA TGCTGAGACTTTATCATTGTTATTTCTTTTCAAAT GTTTGCGCATGAAAGATTTGTGCAACTG	T	C	CAGAAACATCTAATATAATAAAAAGAGAAAGCA ACAGAAAGTTAATGGTATTATGAATTAACAAGA GTTGAAAGACAGAGTGTGAGGGAGAATATGGT GATGATGGTGGTGGTATGATAGGGTGTAGAT TCTTTGTGAATTCGCCAACGGAGATGAAGAAAA TCATCAACGGAACAAGGTAGCTTGAGGGGACC ATGAGCGTTGTAGCCATAAACATCGTAAGCTTT CTCCAGAACAGCTTCAAAACAGCATCTATAA		NA
Ca-II-SNP1032	73.20	Ca- <i>desi</i> -LG(Chr)6	4514928	ATAGCTGTAACAACCTGCTCCTAAGAAGTTACCTTT TGAGTTCAGACACTTGAAGCTTGATTGAATCTG CTTGTTCTGTTCTTGAATTTGAGGTATGTA	G	A	AACACAAATCATATAGAACTCATATAAACAT ACAATAAATTAATATCAAAGATAATTTTATATATA AATGAACAAAATAAATAATGAAATTATTACA		NA
Ca-II-SNP1033	74.04	Ca- <i>desi</i> -LG(Chr)6	4528042	GGTGCAACTGGCAAATCATTTTCAACACGCACC GTTGTTATTGTTGCCTTACGCTTGTGATCATCAA TACAAGAACAATAGCCAACACATTATTTCATT	G	A	CAAACCTGTTGGCCATGGATTATAAATAGACAA TTTAGAGTATAGGATAATGCATAAACTTGATTT TTAAAATTGTGATAGTTGAGTAAAAAAAATGA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1034	74.88	Ca-desi-LG(Chr)6	4567143	TTTGGGAAGGTTCTTGCCTTTCAACATACTCCTAA CCATGTTCAATTATGGTTCCTGTTCCCTTTCAACA ACACCATTGTGTTGAGGTGTGAAGGAGCA	A	G	GGAAAACAATTGAAGATACTCAGAACTGATGGT GGAGGGGAATTTACTTCCTCTGAACTTGAAAGA TTTTGCACTGAAAATGGTGTGTCATGAAGTG A		NA
Ca-II-SNP1035	75.72	Ca-desi-LG(Chr)6	4683999	GGTGATAGAATTC AAGCAACAGTGC GAAAACTCT TATTCCTCGATTGAGACTACTATTCGTGAGGGAG TTGTGTACAAC TTT CGTTCTCTCGGTGTTG	C	T	GGCTGTGACCAAAC TGGTTTCTAATTCTCGGAC CATTGTA CTTTTGCAAATTC AATTTGAATTGA TTTCCGGTTGTTCTATATGCTCCAGAGTTAGAC		NA
Ca-II-SNP1036	76.56	Ca-desi-LG(Chr)6	4756280	ACTGCTTCTCCCACAGAGCTTTGGGAAGGTTCT TGCC TTTCAACATACTCCTAACCATGTTCAATTATG GTTCTGTTCTCCTTTCAACAACACCATTGT	A	G	CAGA A CTGATGGTGGAGGGGAATTTACTTCTCT ATGA A CTTGAAAGATTTTGCACTGAATATGGTG TTGTGCATGAAGTGACTGCTCCTTACACACCTC AA		NA
Ca-II-SNP1037	79.92	Ca-desi-LG(Chr)6	4763248	TCCTCTTTTGTATGGGATAGATACAAACAATGC TATCAAAGGCGGACTATGGCGGCCAGCCTAA AAT TCGCCAAATAAACATGGCATTGCTGCCATGG	A	G	TTCCACCATGGTGGCACCATGGCCTTATGTGCG TGGTGGATTTTGTGTCAGCCGCCATACGTTGC AAGCTGAAACAGTTGTTATATCAGCCATGTTT CCG		NA
Ca-II-SNP1038	80.76	Ca-desi-LG(Chr)6	4767445	TTATGGTTCAACCACCTCACCTACAAAGCCTTA CAAAAGCTCCATATTATGGTCCACCGCCACCAGAT GCACATATCCTTGCAGAAAATGTCGACTTC	A	G	ACTTAGGAGTTGTGCATTGAGTCCAAAATAAAT TAAAGAAAATATCGCGTTTAGTTAAGTGACCGG GGATTTGATTTTCAGGCAATGAAATAACATAAT A		NA
Ca-II-SNP1039	81.60	Ca-desi-LG(Chr)6	4782646	GATATAATTTTCCAATTTACTATTCTATTTATGAA TGCTGAGACTTTATCATTGTTATTTCTTTTCAAAT GTTTGCGCATGAAAGATTTGTGCAACTG	G	C	ACTTTTCGCGGATAATTC AAGTCGTTGGCTAAT AGCAGATCAAGGTGTGCAATCAITTTTTTTTCT TCCACTTTCACTGTAGTGTTAGGAAGGAATTA		NA
Ca-II-SNP1040	82.44	Ca-desi-LG(Chr)6	4787645	AAAGATGATCCATATACCATATTTGTTGCCTTTT TTTGTTAGTAGACAGAGTGT TAAAATGACTTAAAT AATTTTTCACTTCCCCTCTCTACCTGTA	G	T	CAAATGTATGAGGAAAAAGT GAGTATAAAAAA ATTTCAACTTTATATATAGTAAAAAGGATTA A AAATATATTTTCAATATATTGAAAGGTGAGAC		NA
Ca-II-SNP1041	83.28	Ca-desi-LG(Chr)6	4792295	GACCCGCTATCCAGCCTGAACCGCTCTAGGGCT TTTTAAAAATGCAGATTTTGT TTTCTCCATTTT CATTATAATAAACCCACGAAGGGTGTGTT	T	C	AACGGAGCAAGAAAAGA CAAAAACAACAAGC AAGAGCGATGGTGACGGAGCAAGAATGACCAG AGGAAGAACGAAAACAATTTCTTTTTCATGATG TC		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1042	84.12	Ca-desi-LG(Chr)6	4799707	TTCTTCATGCTGAGGATTAATACTAATAAGTAACTT TGTAAGTTGAAGCTGTCTGGATGTCATTGTCAA CTATTCCACAACATCTTCTTACGCATC	T	G	AACAACAAAGTTTCAAGTTAGCTGCTAGTAACT CAGTAAAATGATGAAACAGCACTCAGTGTCAAG GTAACATAATTTCAAATGCCAAAATATAATGTA		NA
Ca-II-SNP1043	84.96	Ca-desi-LG(Chr)6	4807428	AGCAAGTCCTCTATGATTTGCATTTTCAACAAAAT ATCCAGCTGCTGTGGAAGCTGTGTGAGTCCATG GCCAATAGCATCTCTAGCTGAGAGATATTCT	A	G	TGTCAAGTAGGACAACACTTCAACTCAACAAAC TGCAACAAGAAGATAATTGGTGCTAGATGGTTC CTGAAAAGGAATAAGTGATCACACTAATCACACA T		NA
Ca-II-SNP1044	85.80	Ca-desi-LG(Chr)6	4811236	TGCAATTTTATTCTATTCAATTTTGTATTGTATTA AAATTGGCTACACTCCACGTGGAAATTTTATTAT AATTTTCTGAATCGTACATAAGTACATT	G	C	CAAAAAGAGAAAAGAAAGAAATGATTTTAATT TGATTGATGTAATGTTACGCAAATACACGTTG GAAATATCATGTGTTAACATTTGTCTAACACT		NA
Ca-II-SNP1045	86.64	Ca-desi-LG(Chr)6	4818263	ATAATGGAGTTTAGAAGGGATGGTACTACTTGAT TGGGTTTGTGAGAAGGACATGCCATTAATATTGT TGAAGTGCCCTTCATTGCTTGCCACCTTTG	T	C	CAGTGAATGTTTTGGTCCCCTTGTGGAGCTAT GGAAACCTATCACCCATACAGAAGATACAGTT ATGGCATTGACAATCAGAGTCTTCTCAAGCAC T		NA
Ca-II-SNP1046	87.48	Ca-desi-LG(Chr)6	4822927	ACGCTCTTCGTTGACTAAATATTTTTTCAATGAA ACCAGTTTTCAATTTCTTTGTACATCCTCATTGTGA TTTTTCACCTAAGTCTTCATTCTCCTCC	T	A	TCATACTCATGTGTAACGTAAAACATACTCATG TCTACATGATGGATATGAAGGGCCAAGGAAAA AAAACATAATAAGTGGTATCAAGATATTCAACC A		NA
Ca-II-SNP1047	88.32	Ca-desi-LG(Chr)6	4930794	AGTAACTGAAGTTGACGGTTAAATGACCTGTAAT TTTGGGTTGATGAGTATATGATGCTGATTGAGTTT GTTAGGCAGGTTCCATCCAGACATATGGTAC	T	A	CTAAATGTCTCCTGATATCACGGGGGAATCT TTGATGAATGTTTTGTTTACACAAAATTACATC TTGACCTCCACAGACATACCTACTACTATGTG		NA
Ca-II-SNP1048	89.16	Ca-desi-LG(Chr)6	4939660	TGGATATTGAGTCAAATTTCAAATAATATGCT TATTCGTGTTTGGCTTATGATGCAGGTGATTTT ATTAACCACAGATACGACGGACTTCAGCT	G	C	CCTCTAAAAGGTTAAAGGTTGAAGGATACAAGA AAAGGAAGGAGATGAAGTTAGAAATCCACACAA GTTGATGAACCTCCAGGAACACTTTGGAGCTGC CA		NA
Ca-II-SNP1049	90.00	Ca-desi-LG(Chr)6	4996054	TGCATTCAACCTTCAATGTACATTTTTCTTGAATT CGATCATCTATATGTTATTGTAGCAGTTGCCATG ACCACCTGTGCTGTTGTTTCATGGCAGGG	C	A	CAGAAAATACTAAATACTATTATTATGCTTATCT GTAATCATGTTCTAAAGACTAACCTCACTAGTG TCTCTGTAATGCACGAGAACAATATGGTCAAAT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1050	90.84	Ca-desi-LG(Chr)6	5007515	CCATTTCTGGCATTGAATATCCATGAAACATGCG TCGAACTGATGAGGTGGCTTCAGCGAAGAGATAG CATCTTTCCACTGCTAACACAAACCACATC	T	A	TGTCTCTTAGCCATCTTCTTTTTGGGAGGAAAA TTCTTATTGTTGATGACAATGGCGTGAACCGCG CAGTAGCAGCCGGTCTTTGAAAAAGTATGGA GC		NA
Ca-II-SNP1051	91.68	Ca-desi-LG(Chr)6	5010930	GCTCCAAAGTATCCATTCTTTAATAATCCAACCTT GTTGCTTCTCAAATTGTTCCCTTTTCCAGAAATGTAAC ACTCTTACAGCATATGCAACACCACCTTGT	T	A	GGTGATAGTGCAACTCAAGTGCAGAGATGAAT CTAACTTGTAAAACCTACAGAGAACATTTGCTA GGTACACAGAAAGGACAGCTTTTGAGAGGCCCT CT		NA
Ca-II-SSR330	92.52	Ca-desi-LG(Chr)6	5013080	TTGTTTAGCAGTGAATTAACGGT	(TA)10	(TA)11	TATGAACACAAAGCATATAAAAGTTGTATTCT GCTCAGTGGAAAGTGAACCATACCTTTCTCTTC TCTACATTATTAACCTACCTTACTAAAAGTAT	TCTGCTCAGT GGAAAGTGGAA	59.19
Ca-II-SNP1052	95.04	Ca-desi-LG(Chr)6	5022799	GATTAACATGAGTATATTCTATCTCACTTGCAC CAACTATTAACCTCATGTATTCCGTCATGTGTA ACATGTGTGATCAGTGACCCATTATAACTC	A	G	TTAGAAAGATATGATGTAAGCTCAATGTATTAA TGTTGGGAAAATCAGTTGACCCGACCGAAGT CGAGCCACTCGAATAGGAGAATTTGATAGTTG GA		NA
Ca-II-SNP1053	97.56	Ca-desi-LG(Chr)6	5054753	TTCTCTCACTTTGTTGCCATTTCTTTTCTCCATC GCTTCTTCTTCAAATTCACCTCCACTACTCCTTC GAAGATCTAAAATTGGAATTTCACTCTCA	G	A	AGTGTCTAGTCACTGTATATATATAGATGTA CTTGAGAGAAAAACAACATAATCCACAT ATCGAAATACGGTAGAAGAAAAGAAAATGACTA		NA
Ca-II-SNP1054	98.40	Ca-desi-LG(Chr)6	5069429	TAATGTGGGTCACTAAGATAATTGAGTCCTAATTG GTAAAGGTGGTCTGACCAAACCCCAATCAGTGTC ATGATTGTTCTCCTTTACCTGTTATTCCATG	T	C	TAATAAGTGCAATTTATACAAAATATTTCAAGTT TTGTACAATATCATTAAATTAGATCATGCATGACC TTATTCACGGTGGACATTTAGATTATTCAG		NA
Ca-II-SNP1055	100.08	Ca-desi-LG(Chr)6	5557511	GATTAACATGAGTATATTCTATCTCACTTGCAC CAACTATTAACCTCATGTATTCCGTCATGTGTA ACATGTGTGATCAGTGACCCATTATAACTC	T	C	CGAGAAGAGTTGAGTGCAAAATGAAGGGACCC GAAATATCAAATTGAGAGAAGGCAGTAGTAGTC TCTGCAACAACAATAACACAATATGGCTTTCT CTGCAACAATTACTTCTACGCACTATTCTCCCC AATTCTTTCGCGTTCCATCTCCGTTCCACTTT CTCAAACCTCACACATCACTCTTTTTCCGGTCTT CAACACCAATCCTCAATCGCCGAATTCGTACAC CTAAACCTCTCTCAATTCCTCACTTTCCATTCT AGTTGACAAAGCAAGATTCTGCTTCTAAAAA CTGCAATTTGAAAACCTCAAACCAATAATATTAG AGATGCGTGCTTCAAGGAGAGAAAGACAATGC CA		NA
Ca-II-SNP1056	100.92	Ca-desi-LG(Chr)6	5624131	TTCTCATGCAATTTAGTTTAGTGACTTCTATTCTCA CTGACGATCATTCTGCATGGCAATTTGCCCAAAT GCATTGGCCCAATCTTTGTCCAGATGTA	G	C			NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1057	101.76	Ca- <i>desi</i> -LG(Chr)6	5663010	GATTAAGTATGAGTATATTCTATCTCACTTGCACCT CAACTATTAACCTCATGTATTCCTGCATGTGTAA ACATGTGTGATCAGTGACCCATTATAAAGT	G	A	AAAGTACAAAAAAGTGTGTTCTTTATC TTTCTCTTCTCATCTCTCTATCTAAAAAAGT TCTATTAGCTTCTCATTCCACTACCAATTTTC TCTTATCA		NA
Ca-II-SNP1058	102.60	Ca- <i>desi</i> -LG(Chr)6	5722880	GAATTTTCGATTTGTTGTTGTATGTTAGGAAA TGATGTTTCAACTTGATTCATCTTGTATATTT ATCCTCATCGACCAATTCTGCAGATCTT	C	A	TTTTAGGAATTACTGAGTTACTATAATGATAATT GATAACTGAGGAGTTGAAGTGTGTACGAGGT GCGAGATTAGTATTGAAGATGAAACAAGT C		NA
Ca-II-SNP1059	103.44	Ca- <i>desi</i> -LG(Chr)6	5737988	ACTTCATGCACTTAGAATTTCTCCTGCCTCTCCA ACATAGAGTGGATAATACCTAGATAACTCCTCAA CTTAGTGGCATACTCCACTACTGACATATT	C	T	CAATTAAGTGGCTATATTCAAGAACATGTTCC TAGTCAAGTATTTCTTAAAGACATCCGCTATA GGAAGGAAATGGAATTTGTCAAATGGAACAG GG		NA
Ca-II-SNP1060	104.28	Ca- <i>desi</i> -LG(Chr)6	5748573	TTTCACTAATATAATCGATTTGGCAATGAGCTAATT TCTCACTGTAACCTCAGACACTTAATCAAATCGATT TGCCAATCGACTGATTTGTCCTGTAAGT	A	C	ACTAATCAATTAGTTAATCGATTGCATGAATGAA TTAGTTCATCATTATCAGAAACATATTGCATAA TCGATTGGCAGATCGATTTAATTAATATCT		NA
Ca-II-SSR331	105.12	Ca- <i>desi</i> -LG(Chr)6	5762498	CGTTTTGAAAAATCGGTGGT	(TG)7	(TG)6	GTTCTTATTCTCCCTCTCAGTTCCCTCCAGA ACATGATTTCCAAACCTCCAGAAGTAAAAAC AATAACAAACAAGTCAAAATCAAACTCAAAAT	TCTCAGTTC CCTCCAGAAC	59.84
Ca-II-SNP1061	105.96	Ca- <i>desi</i> -LG(Chr)6	5766119	AAAAGGCTTCTCCTCATGCTGCCATTTTTGAGT ATTTTTACTTTATTTCAAACCGCTTGAGTATTTATT AGCATTACTAGGGAACACACAAGTATTTT	T	G	AACAAGTGGAGAAACCGTTAAAAAAGTGCAG AAAGAGAATCCTCTTTTCTCCTACTATTCAACC TAACGAAATAAAAAAGCTTCTAAACATAAGT		NA
Ca-II-SNP1062	107.64	Ca- <i>desi</i> -LG(Chr)6	5794645	CCACTAGTTTATAGAGGACAGCTTATAGCGTGTGA ACTCATATGCCCAAATAGAGCTTCTGGTAACCA TTTTTTGTTGGAACCTACAAGTGTTC	T	C	TGCTATAAAAAAGATAATTTAATTAATATATACA TTTTTTCAATTAAGATGATGAAGGTGAAATGA GAAAAGATGTGATATGTTATAAGCTCAAACTCT		NA
Ca-II-SSR332	109.32	Ca- <i>desi</i> -LG(Chr)6	5830798	GGAGACCTTCAATTCGATG	(TAT)11	(TAT)10	ACCAATTTTATCAGATGGTGGAAAAGGTGATAC AACCTGTTACAGAAAGAGTTGAGATAGTTTTTA CAATTAATCAAACTTAAAAATAAATTAATAA	TCAGATGGTG GAAAAGGTGA	58.63

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1063	110.16	Ca- <i>desi</i> -LG(Chr)6	5856064	CTTGATAATGAGTTGTTAATCCTCTAACCTTTATTT TAGTCCAAGAGACCTTGTGTTTTAGTCTATACT TAAATATATGATTAGCCTTATAAATATG	A	C	CAGCCTTATTTC AAGCACAGAGCAAGTCACAAA CCTCAATGTGGACAACGGTGGTACTTACTTATC AATGAAACCAACAAACAATAATCACACCTATGA CCTTTGAGTTGGAGCAGTTTGAACATACGACTA AAGCAAACCCTGATATCACTATTTTACGTAATG AGCAAAAAATTTCACTTCAA		NA
Ca-II-SNP1064	112.68	Ca- <i>desi</i> -LG(Chr)6	5970165	ATACTGTTTTGTGTGTTGAGCATAACTATGACTCT ATCTGATGTTGTTGGAGGTTTGTATGTAACCTTT GGTGAGCTTTGATTTAAGGCTTTGAGCTA	A	G	ACCTGGTTTAGCCATTTTCAACTACTATCCCAA CCATCCAATGAGGTCACCACCAACACCTCCAC CATCTCCACCAGCTTGGGACAATGTTGATTCAA GG		NA
Ca-II-SNP1065	113.52	Ca- <i>desi</i> -LG(Chr)6	6096482	GCATTAAGTGCATTTCCATAATGTGACAGTCATT TGCTTAGACTGGTTTTAGATCAAATATTTGTACTA TTATTTATATAGATTCTAGCTAGGTTTGA	A	T	TTCAATATGAAAAATGAAACACCTTTTCTATACA TGGGACAGAGGATACCTTCTTTCTTTTATAT CACCAAACCTGCATGTGATGAGAGAACAATT		NA
Ca-II-SNP1066	114.36	Ca- <i>desi</i> -LG(Chr)6	6118607	GTGTATGAATTTTCTAAATATCATTGTTATATC AACGTGTACAATTCTGAGTTTTTCATCTCCAGGAG ACTTAGTATTATTAATTAAGGTATATTT	G	A	ATCAATATTCAATAGTACCTTTGTCCCAATTTAT TAGCCAAAAAATGTCTCTAAATATAACATTTCAT TTCAAATTCCTAATATATATTATTTTTTTTC		NA
Ca-II-SNP1067	115.20	Ca- <i>desi</i> -LG(Chr)6	6123476	ACCTTCTCTTTTGTCTATATCCACTAAATCCAC TTTATCCTATGATAAATGTGCCCTACTTACAACA GTTTTGTCTTAGTGTTCCTCCATCAAA	G	T	ATAATAGTCCAAGTGTGGTGGTCTGCAATGCC TCTAATTCATAATGCATGGCTTGCTTGCAACAT TCATGCTTAGAGGATTGAGTATAGGTAAGGAT T		NA
Ca-II-SNP1068	116.04	Ca- <i>desi</i> -LG(Chr)6	6149552	TGATAGTGGAAATTTAAAAGAATCGGTTATTCGC TTGAATATTGGTGTCAATTTCAATGTTCTATGTCTTC TCACCCTAATCCTTTAATACCTAAAATT	C	T	TGAAAAAGAGTGTCTTAACACTTCTCTCAA GTAATAACACCTTAATTTATCTCAAAGTAATAAC ACCCTAATTTAAGTCTGCAAACGAACCTCAAAGAA		NA
Ca-II-SNP1069	116.88	Ca- <i>desi</i> -LG(Chr)6	6270775	CATTCTCGTACCTTAAATAGTTTTGTCTCGAAA CTGGCATCAGAGAAAAGTTGAGTATTGCTCTCTCA TTTTGTCTTAGTTCCTCAAGTGGTGTCTC	T	C	ATCTTTTGAAGTACCTCCGGCAAGAATTGAAGA TAGAAAAAGTCAAGTTGCTTCGCAACAAAGAAAT TCCCTTGGTGAAGTAGTTTGAATCAAGCCAC T		NA
Ca-II-SSR333	117.72	Ca- <i>desi</i> -LG(Chr)6	6378408	TTTTAGTAGTCGTGTGGCAATG	(AT)6	(AT)7	TATTCAAATAATACAATCGGTCACTTATTGTAAA ACATTTATAATACTAACAACAAAACCGTGAAAA GAAACATTCATAATACTCTAATATTTTGATA	AACAAAAACC GTAAAAAGAA ACA	57.92

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1070	119.40	Ca- <i>desi</i> -LG(Chr)6	6386917	CTTGATAATGAGTTGTTAATCCTCTAACCTTTATTT TAGTCCAAGAGGACCTTGTGTTTTAGTCTATACT TAAATATATGATTAGTCTTATAAATATG	A	T	CTTCAATACAAACACAAAATTCACCCCTCATAAA AAATGGATTTTCAGTAGCAATGAGagTGAAGAAag TGAActGTATCATGCTCAAATCCATTTgTACAAAC ATTtATaAGTTTTATAAGCTCTGCTGCTCTCAAA TCTGCTGTGGAACCTGGCATAGCAGATGcAATC CACAAccATGGAAAACCAATGACTCTTAAATGAA TTAGCTTCATCTTTGAAACTTCACCCCTTAAAG TTaTATTCTCTATCGTTTTCTTACCTCTTTAAACA		NA
Ca-II-SNP1071	121.08	Ca- <i>desi</i> -LG(Chr)6	6402258	CATGCTATTGGTTTTCTCGCATTTCCTCTCTAG GTTGATTGCAACATTATTTGGTCAAGTAATACTAT ATGTGACGTCCTATCAAATGTGGTCACGTA	C	T	AGTTGAATAATTTTGGACGCTCTGATTCAGTGA CCTATTATGTTACTAACTAAGGTGATGGATATT CATGCATGCATTGGTGGTCTTAATCTAGTCGCG A		NA
Ca-II-SNP1072	123.60	Ca- <i>desi</i> -LG(Chr)6	6611519	CCTGCTTCTCTCAGGAAGGATGCACTCTTCGTGA TCTCACGCAATGGCTTGTAGTGACTCTCACAGTG TTGTACACCCATGCTCCGGCCACCGCTCCTA	A	G	ACCAATAACAGGAGCATCAATGAATCCAGCTAG AAGTTTAGGACCTGCATTTGTACACAATAAATA CAGAGGAATATGGATATATTTGGTGCACCGAT T		NA
Ca-II-SNP1073	124.44	Ca- <i>desi</i> -LG(Chr)6	6699208	AGCTGGAGTTTTAAAGGTATGTGCAAATCTTG CAAATGTATGCCATTGCACCTTTGGGGGACTAGAA TAACCTGTACTTTGTATTTTACTGCTCAAA	C	T	AAAGTTGACAAAAAATTCAGTTTACCTTTGTTC TGATACTTGTAAAGCCACCATTATTTGCCGTTG AAACAACCTGGAATACACACAAGACTCTATT		NA
Ca-II-SNP1074	125.28	Ca- <i>desi</i> -LG(Chr)6	6719297	CTTGATAATGAGTTGTTAATCCTCTAACCTTTATTT TAGTCCAAGAGGACCTTGTGTTTTAGTCTATACT TAAATATATGATTAGTCTTATAAATATG	C	T	GACTAAAATAAAAAAATAAGAAAACAAAAA ATATTTACATAAATCAAATCAAACAAATCTTT TTTAAATTCAGTGATTAAATTAATAAATAAC		NA
Ca-II-SNP1075	126.12	Ca- <i>desi</i> -LG(Chr)6	6725031	TTTTGAAGTATGAACGTTTCCCACCACTAATGGCT TAATATTCATGTCGCTCTGCATCTAAATCATCTCAA GACTATTGTCATTGATATGGGCTTGTCA	G	T	AGGTCTTTTAgTTAAGATCAAAAATTAactCAAC TTCAAAATGAGGGATTTAAGTTTCAAAAATTAactC AACTTTCGTCaAGTTTCAAAAATTAactCGactT		NA
Ca-II-SNP1076	126.96	Ca- <i>desi</i> -LG(Chr)6	6735402	TATCTTCAATTTTTCTAGTTTTTAATATATTTATTCT TGGTATTTTTTAACTTCTGGATACAATAATTTGTTT TTTTTTAAATAATATTCTTTTGAAGCT	C	T	GGGTGAGAATTGAGAAAGCATGAGAAAATAAA GGAATTGAAAATGTCAAATATCAAATAAGAAAA ATTATTTTGTGGTTTAAAGAAATTTGAGAGTGTTC A		NA
Ca-II-SNP1077	127.80	Ca- <i>desi</i> -LG(Chr)6	6741902	GAGGAACGGGTGGCACGAAAAGGGAAGAATGG TTAGGACAGAGTTTTTCTTCTCCGTCGGTTCGA ATTGACACGAAAACGAATTTGAGGAGATGCG	C	T	TTATATTTTgATTGTATCATAAAACTTGTCTAT TTTTAAACTCTGTTTGAAGACGCATTATTTTTTC CTTATGCTCCCTCGTCTATCGCAGGCGAAGCT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1078	128.64	Ca-desi-LG(Chr)6	6744604	CCAAAGCGAATATGCTGTTGATCTTCTTTTCATATGTAGCACTAGCAGTGAGCACCACTGCACAAGCAA TACGTCTTGCACTCTTTTTTGGTCAACATC	G	C	TATGTGAGTATATATTCATATTCATAGAGATCGA ATCTGATCTTTTTGTGGGAGAGAAGAAATTCCTT GTATAGTTGATTATGTAGGTTGAAAAGATACA		NA
Ca-II-SNP1079	129.48	Ca-desi-LG(Chr)6	6753701	AATGTTTATACTTGAGATTAATGAATCTTATTGTAC AAGTATGGTGAATTAGCATGCATCGGTGTATGTC GTGTATCTCAGATTTGAGTCATTTTATTGG	G	A	TCITTAAGAGGGGTACAACAGTTGCCTAGTGC TTATATACTTTGTCTTCTGTCATGAGCAAGCTG TTGCCAGTATGCCATCCATGCATTATGGTCTCT A		NA
Ca-II-SNP1080	130.32	Ca-desi-LG(Chr)6	6764579	TATTTCTTAAATTATTTATAAAGTTATTTATTATCTT TTAAATGTTTACAAAGTTACTTTCTATCTTTTTTT CTCTCATTAAAGATTTTTATCTTTTAA	T	C	TGAAATCTTATATAAGAATGACATAATTCTA CATTAACTTGTCAATAAGCATTAAAAATTCTTG TCAACATTTTAAAGGGATAATTTGTAGACAT		NA
Ca-II-SNP1081	131.16	Ca-desi-LG(Chr)6	6783139	AGTGTGATGACAGTTTTATGATTCCATCAAGCCT CAATTTATCTTCTCTCGGTACATCAATAGATAT CTGAACAGGAGTTCCATTGCGTACTCCT	T	C	ATACTGCACTACTTTGGAGAGATTAGGTCTAGG AAATCTTTCAACTGATATTTGAAAAATAAGGC GTCTGTAATGGGATTGCGATTTACGAAAGCAG CG		NA
Ca-II-SNP1082	133.68	Ca-desi-LG(Chr)6	6790995	TGGTTTTCTTTATTATGAGAACTTTCTATGAGAGA TTTCATGGTAATTTTCATTGGTGGGTATGTAACGGG CTTTTGATATTCTAGAAATAGAATATTTT	G	A	TCAAAAATAAGGACTTTATTGATATAGACATGAG TTCAATTTGCTAAGACATGTAGACAACATGTACA TGATAACGCATCACCTAACTGAAATCGAAAGAG A		NA
Ca-II-SNP1083	134.52	Ca-desi-LG(Chr)6	6800800	TAACTTAACTAATTTGGTTAACTAAATGAGGTAGTT ATAGCGTGTTCACAAACAGTTTCGAATTATTTGTG CAACCATCGTCAATTTGATTTTTTTGTTTA	A	G	GCAAAAACTAATAAGCACCTCAGTTCGGCCAG CCAATTAGTTATGTTACAGATGAGCCATGAGTG AGTTAGATCTTGAGTTGGGGAATGTTGGAATAA A		NA
Ca-II-SNP1084	135.36	Ca-desi-LG(Chr)6	6815781	TCTTTTTGACCTTATGAGCAATTCATGGCGTTTC TGAGATCACCCATTTTCGCATAACTTGCAAATTTTA GCATTTTGGTCAGCGTTACGTTGTGAGTG	A	G	TTCATCTTCTTCAAACAGCCTCGTACACCATCT CTGCTACATTCCAAATGAACATTTTTTGTGCGTA GCAGTGTGCGGCTCTTTCATCTTTAGCCAACA		NA
Ca-II-SNP1085	136.20	Ca-desi-LG(Chr)6	6825600	ACCCAAATCGATCATGTTTGGGTTGGGTTAAGTTC TAAACCTGATTTTTTTCATTTAACCCGAACCTGACC CAACCCGATCAAGAACGGGTTGGATTGACG	G	A	ATTGAAATTTTATAATTTTTGAGACATTCAAATA TTAAATATATTTTTCATTCAATATATTTCCCGTA AAATAAAGAACATGTTATTATTTATGTATGAC		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1086	137.04	Ca- <i>desi</i> -LG(Chr)6	6839524	TGTCATATTTAGTGTCAACCCCGATACCGACGCT AGTTAGCGTTGGTGTAGCGTCGGCTGAGTCGACG CTAAGTTAATTTTTATTTTCTATATTAAT	T	A	GGCTCGTGTTCGAATTAGAATCCGATCTTACTA ATATGATTTTTATTAATAATTTAATTTTTAAAAAT CATAAACCTAGCGTCGGCCCGTCGACGCTAAC		NA
Ca-II-SNP1087	137.88	Ca- <i>desi</i> -LG(Chr)6	6843142	GCATGGAAGTTCATCCTCGGTGGGATTCTCTGT CCTATGCTCCCCAAAATCAAAGAAAAAATATAT TAAACTATTATCCTTGCCATCCATTCTGTCT	C	T	GAGTGTTTTTAAATTTTATACAATTTAG GATTTTTGGTGTATAAAACACATGGCAATGTG GGAAAAAGTAAAAGGTGACAAGGACGAGAAAA T		NA
Ca-II-SNP1088	140.40	Ca- <i>desi</i> -LG(Chr)6	6850697	AACTTCAGTCACAGCTCCTTTTTCTCCAATCTA TAGAAGCAGGAAGGTTGTCACAATCATCATCA TCTTTAAGTTTTCTATCATCCAATTAGAT	G	C	AAGAGAACTCACCTTTGCAACATCGTTGGGT CTCAACAAGTTTGGTGATATGAGTCCTGAGGA GTTTAGTAAAACATACTTATCAGAGATTCAGAT GA		NA
Ca-II-SNP1089	141.24	Ca- <i>desi</i> -LG(Chr)6	6853416	CATGTAACATTGCATCTCGTACTTTTTGGTTGCGA TTTCTCAAAAATGATCTGTATTGATCAGATGTTAG GTAATTTGAACCTGTAATTCGATGTGTGAT	C	G	CAAAAAATTTTTGAAACATTGACAGTTTCTAGA GCCAATTTCTTGAAGTAAAGCAACTATTCATTA GTTAATTTCTTTGAATTGCAATACCAATTT		NA
Ca-II-SNP1090	142.08	Ca- <i>desi</i> -LG(Chr)6	6866046	AAATACTAACGTTTCTATCATGAGAATGAATATGG CCACAATTTTTTTGGGTATGGCCTATTTTTTTTA TAATTAATATAAGTTTACATTAGTTGGGT	T	A	TTACAAGACTTTTAATTGATTCACACTATTGATG TAATAATTTTATAACGTATATCTTCTTTAAGTC TTGAATTCATCTTAATTTAATGAACTACATA		NA
Ca-II-SNP1091	142.92	Ca- <i>desi</i> -LG(Chr)6	6872681	GGATCCCATTACCATCTTTCACAACACTACAAAA CTTAGCTACTTCTTCCATTTTTTCAATTACCATT TAACATACACTATCTGTATCACACTCA	A	T	TACAACCAATAATATTTGTTGTAGTGGTGG GTTAATTACCTGAAAAATGAAGAACAAAAACA AGGAAGGGAATAAGAATATGTAGTGTTGAGA T		NA
Ca-II-SNP1092	143.76	Ca- <i>desi</i> -LG(Chr)6	6875034	CTGGAGGAGCTACATCTTCTGCTGGGAGATTGGT GATTGAATATGGTGTTTTGAAGGTATAAATCTGTC AAAAGTCTCATATTTTTTCACTCTTTTGAT	A	G	GGTAATGACCGCTGTGAGGCCAACAGCCTGT TTAAAAGAAACAATCAAATCATTCTTAGCCGAA CACATAAAATCGAAAAACTAGCCACAATGAG TC		NA
Ca-II-SNP1093	144.60	Ca- <i>desi</i> -LG(Chr)6	6886340	CATCCACTTTACATTATTATATTGGAATCAACAAAT AGTTTCCAAAATAGTTTGGTAAACTTGTCTTCTT CTTTCATTTATTATTTTTCTTAATCTG	C	T	GAGGATATTTGCTCTTCAATGTTATTGTGACAT AGGGATATTAATTTAGCCAATATACTCCTCC GTCCCTAAATAATTATCATATTTGTTATTTTAT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1094	145.44	Ca- <i>desi</i> -LG(Chr)6	6896141	TATTGCATTTAATAACTTTTTAGCATTGTTCTACTT AGAATTTTATATCTGGTTTATGCTTGACTTAAGTAA AGTTCTTCACTTATAACTTCATATATCA	C	A	ATATACTGGAGCACTTCCTCCAACACCTCCTAA AGAACAACCTTATGGACAGGTAAGTAACCCACAT AAGATATATTTCTACATGGAAGTTTCAATTTCT		NA
Ca-II-SNP1095	146.28	Ca- <i>desi</i> -LG(Chr)6	6901525	GGATTTTCATACCTATTTACTTTCCTCCTTTTTTTGG TTTTAGACATACCAAATAAAAAGAAGCTTGGATGTT GGAGCAAACCTTTTTCATTGGCAATCTAGA	T	C	ACTCAATTTCAAATAAAAAATCCTAATCATTAA AAATGTTGTTACATATCAAGTACATTTGAATTTA TTCAAAGAAAAAGTTGCATATTTGGTGACTC		NA
Ca-II-SNP1096	147.96	Ca- <i>desi</i> -LG(Chr)6	6904308	CCTCCGCCGTGCGCGCCGCAACAACCTCCGCGCG TCACCGAAGCTCTAATCGAAAAAACGAGGAGCA AATCATCACCAATTCACATCCCCGGTCTTTC	A	C	AAATAGACTTGAATGCGCGAAGGTTGAATCTCT GGATAGCGATAAGAACCGGAGGATCGGAGCAA TTTAGGGTCCGATTAGGTCATCATGAAGAG GA		NA
Ca-II-SNP1097	148.80	Ca- <i>desi</i> -LG(Chr)6	6909604	AATTTTATTTGTTGGTTTTATTATGGCTGTGTCG AGACATCATATAACACTACAAGGAGGATTCATTA GATGACATATGATTGTAAGTAATTTT	C	G	AACTATTATTTGGTGAATGTAATTTGAGTGAA AATACACAACCATCATCATTTAATTTTTGAGAAT TTCAAATGATATTTGAAAAAATACCTTT		NA
Ca-II-SNP1098	149.64	Ca- <i>desi</i> -LG(Chr)6	6917240	TTTCTTTGTTGTTTTCAAAGTGGTACCAATCATTT ATCGCTCACTTGTAGGACAAGGAGGACTATGAG CTTTTACTTCGACAGGTACCATGATCCGTT	G	A	TGTGAAAATTTTATATTATCTTGTGCGGAAATTC TACAGCAAACCATTATGATAGGTGGACCACAGT GCACCAGTACTGAAAATCACTTGAACCTCCAA		NA
Ca-II-SNP1099	150.48	Ca- <i>desi</i> -LG(Chr)6	6924077	GGTATTGTTACTTTTTTAGCTTATACTGCTTGAC GTTAATGCTTATTTCTGATACTTCATTATCCAATTA TTAGCAATGCTTAAAAATGTCTTCTCTCA	T	G	TAAGTAAAAATGGTGTTCAAAAAGTTAATGTAT CTGGTTAGAAAATTAATCAGACACATCAACTT TGAGTTAACTTTTTGCTTATATTTTATGAAAGT		NA
Ca-II-SNP1100	151.32	Ca- <i>desi</i> -LG(Chr)6	6927099	ACTCTCAACAACCTTCGACACCAAGTCATGTATGT CACCTCTCATCACTCTCAAACCTCCCTTATGAAGTT GTTTTTCTTTTTGTTTTAATGTTTTTGCG	G	T	TGACAGCATTGACTGTCAATTTGCATGTCAATTG CAATTGCATCACCTTTGAGAAAATTTGGCATCTA TTGCATTGCGCACCAACCTTAAAAATAATAATA		NA
Ca-II-SNP1101	152.16	Ca- <i>desi</i> -LG(Chr)6	6938851	TTTGGATTTTTTTATGTACAATAGTATAGTTATTG TAATCTCTAATTTTTATATATTGTTATTTTTATCAC TAGAGCAGTCAATTAGTAATGTAATTTT	C	G	GCAGAAAATTTGGATATTAATGCAAATTCATAT CTATAATGCTAAGAAAATTCACATTTTCGATTT AGAATATAATCATATTCTATTAATATTTATTT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1102	153.00	Ca- <i>desi</i> -LG(Chr)6	6947535	TCCAAGTCGTGGTTCTCGCCGGTGGCGTCTCCAA AAAACCTCCTTCCCCTCGTTTCAAAGGTACTCTCAT TTTCAATCCCCTTTCTCTTTCTTATTTTTTC	C	A	AAAGCCTTCGGAAGCTCCTGCGAACCAAAAAG AAGAAATGTTTGAATGTAATTGCAATTCCTTATTT TTCCATTCCCATTTCATCACCAAGCAAACAG A		NA
Ca-II-SNP1103	153.84	Ca- <i>desi</i> -LG(Chr)6	6957538	ATTTCTTTAACTAACTCTTCAAATCTTTACTTTTC ACGTTTGCTTCAAATAAAGGATTTAATTGTTCTC TTTATTTTGGGATTGATTAATATCTGA	A	C	GTAGTTATAATCAAGTGGTTAATAAGCTTCGGC TAAGGTAATAATCGATTAGGAGTATTTCTTTCTTT GTTTCCAGTTGATAACATAATATCACAAAAACG		NA
Ca-II-SNP1104	154.75	Ca- <i>desi</i> -LG(Chr)6	6965550	TTCTTTGAACACCGAGGTTAAGGGTTGTGTGAAA GAGAGGGATTTGGGAAGAAGGGTTGAGGCATTG GTGTAGAGAAAAGAGGAGGTGATGGTGGAAAC	C	A	ATTTGAGTGCTAGTTACTACTAAGAGATAAAAT GGTCTACTACTTTTGAACCTAATACATGACAGA AAATTATGACTTTGTATATGCAGTTGACCCCAT CTAGTAGGAAAAGGCTTAGATAATAGGTATTGC TGTAACCTAATTCACTAATGCCGTTGTTTCTT GTTGATCCATGAACCAATTGCGAGTGAAAAAC ATAAGCTATGACATGACAACAATCTAGCATTTT CTTTAACTATTAGCCTATTAGCACCAAACT		NA
Ca-II-SNP1105	155.53	Ca- <i>desi</i> -LG(Chr)6	6968625	ACGGGTCTTAGGTTAGAAATTATGATAGCTGCAG CAGGAGTCCTAGCAGATACAACTGCCTGTTGC TGAAACTCCAATAAGGCATTAGCTGACTTCA	T	G	TCATAGTGCCACTGTTATGTGGACCGACAATGA TGGAACAAGCAGCCCTGGTTTTGTGCTGAGA GCCTGGTCACCAGAGGAGCAGTCGACTACTT CGT		NA
Ca-II-SNP1106	156.23	Ca- <i>desi</i> -LG(Chr)6	6975916	GTGAATGTGTGGCTTTTGTGTAATGAAATGCTTTG ACCCTAAAAAGCATAAGGTGTAGCGTTTTATAAG TTTGCACGCATGCATTTAGCATCGGCTCA	T	C	ATAAATGAAACTAAGAAGATCTTTAGTATATTTA CCTTGAAAAGTGATGATTTAGCCAAATTGATAG AAATATCTATGATATGTGAATTTGAATACTCT		NA
Ca-II-SNP1107	156.93	Ca- <i>desi</i> -LG(Chr)6	6982306	AACTTAAGATTTCTTAATGGGAAGAAGCCCTCTT TTATTTTTAGGGTTCTTTATCAAGATTTTCATCTT ATATGTATATTGTTATCTCAGCATTTCATT	A	G	TGTTGGTTAACAAGGACTTGATTATATTATTAT TATTATTATTAGTAGGGCTCTCTGAAAATTTTA GTATTACAGTTAGAATTTAAGAAGCCAGCATA		NA
Ca-II-SNP1108	157.63	Ca- <i>desi</i> -LG(Chr)6	6988975	TACCATCCTCTTCTCTCTGGTATTTTCTCTCTCTT TTTTAAATTGTTCAAATTTCAATTTATTTAATTG GTCATTTGTTATTTATTTTTGGATT	G	T	TTAACATTAGCTCTAACGTTTATATAATAAGCAC TTCACTAAGATGTTTATCCAACATGCCCTAA TCTAGTGTTCAAAAACTTTAACCTAAAAATCCA		NA
Ca-II-SNP1109	158.33	Ca- <i>desi</i> -LG(Chr)6	6995984	TTTTGTCTATGTCCAAATTGATAACATTTACTT GAATTTCCAGCAATGGTCTTGTTCAGAGCTTGA TAACATGGTTAAATTTGGCAGAAAAGTGCA	A	G	GTTTCAAAACATATTATGTCGTATAAGAAAAAC ATAGAATCACCGAAGCACATAAAAAGTAAAAG ACTCACTTTACAACCTCCATAGGAACCTGAATG		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1110	159.03	Ca-desi-LG(Chr)6	7015537	TTCTTTGAACACCGAGGTTAAGGGTTGTGTTGAAA GAGAGGGATTGGGAAGAAGGGTTGAGGCATTG GTGTAGAGGAAAGAGGAGGTGATGGTGAAAC	T	G	CTACTCTCCCCAATAAATATCGATTCCCAT CTCTCAAAATACAAAAGTCGAACAGTGTAGT TGCTTCACAGAATAAACCAACATAACATGGCTT C		NA
Ca-II-SNP1111	159.73	Ca-desi-LG(Chr)6	7022331	GGTTGTGATGGTTCGTAGGTTAGGACAACGTAT TAAATTTGTTTTATTTATTTAAAGTGAATGATTTTT ATTTAAAGCGCAAGCCTTTTACAGCGCTT	C	T	GATAAAGAGAACAAAAACTAGCGGTGTTGGT GTTACCATATCCATCACACTCACACCTATCTC TTTAATTTCTCTCACTTTTTAGAAACTCTTTCA TCATCATGGGTTCCAAAAGTGAACAACAAATC CATCACTCTCTTTTCTACCTTGATTTTCCTCGT CCTTATGTTTGGTCTTGCAAACCTCAGATGTGAA CCAAGACAAAGCTGAATGCACGGACAACTCC TACCTTCCGTAATTTCTACCTTTTCTAACTC		NA
Ca-II-SNP1112	160.43	Ca-desi-LG(Chr)6	7028534	CATCCGAATGAATCCTTCCAAGGGAGTGTGAAT CTCAGGTAATATTTAAGTGTCTTTTGAAGTCTGG TGCAACATATTCATTTATCTCTATGGATTG	C	T	AATGCATACATGTCGTATTTGCAGTTAAAGTCT TATCAGCAGCAGTGGTAACAACAATCAAACA ATAAGGTTGTGACATGCAATTCATAGCTTCA C		NA
Ca-II-SNP1113	161.13	Ca-desi-LG(Chr)6	7040121	TTCCACGTGGTTCAGTGTGAATGCAACATTCGT CTTGCCATGTCTCCTATTTTAAAGTGAACCATTTT TAATGTATAACGGTGCATAAAACGGAACAT	A	G	TGACTACTTCTTCATCCCTAGAGAAATCTTATG CAATTCATATGCACAAACAATATGGAATTTAAT CAAAATACTCTTATTATATCACATTATATCA		NA
Ca-II-SNP1114	161.83	Ca-desi-LG(Chr)6	7082685	GGTTGTGATGGTTCGTAGGTTAGGACAACGTAT TAAATTTGTTTTATTTATTTAAAGTGAATGATTTTT ATTTAAAGCGCAAGCCTTTTACAGCGCTT	G	A	CCACCTTATGTTACATGGCTTTTAAAGCGCTTT TTGTGAAAGCGCTGTAATAATTCATGCGCTTCA TATAATTAATGACCTATTAGAGCGTTTTTTATA		NA
Ca-II-SNP1115	162.53	Ca-desi-LG(Chr)6	7097471	TCCTTTCTTTTATTCAGTTTATGTTTTTTCTTCAA TATCATATTTCTTCGCAATTAACAATGTAATGTA ACCAATTAATCACTTCTTATAAGGTCT	T	C	GCTGCAACCAAGAAGCCATCAAACATAAATGG AGAGTAATGGATGATAAATACCCACAAAACCA ATAAGGGTAACAACCTGAATGAAAGATGAACAAA ACAATTTGTGACTAAGACAATTATGAGAAATCT GAATGAAAGATGAGGGTAATCTATGTACCACAT ATACCGACACAAATACCAGAGACTATATTGACA CTGACATGTCGGCACCAGGTAGTAATTTGAGAAA ATGTAATCTTCAATCTCCACATCTATTTCATC		NA
Ca-II-SNP1116	163.23	Ca-desi-LG(Chr)6	7219012	AAAAGTATCATCTTTATTATAGTTATAGCTTATATA TTGTGATCCTATCGTGAAGCAAACAACTCGTGAA GCTGTTGGGTTGATTGCAAGTCCCACAT	C	T	TTACATGGAAGGTTGGTACCCGGAGGCTGAT ATATCTGCTTTCAGAGAATGCATGCTCTTTTCA TGAAAAATCCTTATGTTCTTCGTCTTCTTTTT CTGCTGGTATTGGTGGCCTTCTCTTTGGCTAC GACACTGGGGTCATATCTGGG		NA
Ca-II-SNP1117	163.93	Ca-desi-LG(Chr)6	7231361	CAAGAGCCATACTACAATGGCTTCCTGATTATC AACCCTTCTCTTTTCAATTTACATTTTTCTGGTT CATTTAACAACCAAGTTTTAAGATTTTCA	A	G	TAATGACTTAACTACTATGACCAATTACTTGTT ATTTTTGTTTTAAATTTTGAATATAAAAATTT TCTACTTATAATTAGTGAGTGATAGAGAAAA		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1118	164.63	Ca- <i>desi</i> -LG(Chr)6	7288581	GGCCTAAGCCTGGTCTACGGCCTATCATAGGTTT TTTTCCGGCCTGACTTGACCTTTTTATAAGTCTA GCTTGACCTGACCTTTTTAAAGTCTAGCCT	A	G	ATAGATATGTACATTGATATTGGTATGTGGAGA GCATATGGTATGAGTAGAGCATTAAATGTTTT AATATGAATAAGGGTTTTAAACAGGCTCCAGG T		NA
Ca-II-SNP1119	165.33	Ca- <i>desi</i> -LG(Chr)6	7337556	ACATTGTTGAGACGGCACTTGAATTTGCTGATGA TCTACAACCTGTTGCTGCTGTTGATTTTTGTTG TTGTTGTTGCTGCTGCTGCTGCTGCTGCTGCTG	C	T	CTCAATCTCAGCCTCAAACCTCAATCACATTTCC AGCAGCTTCTTCAGCATCAGCACTCATTCACTA ATCAAAAATCATCATCTACAGCAGCAGCAAC A		NA
Ca-II-SNP1120	166.03	Ca- <i>desi</i> -LG(Chr)6	7366952	TAATGTGTTTGTATTTGCCATTTAATTTGATAAG GTATGATTTTTGTATGTTTTCTTTTTAAAGTGATAT GTTATGATAACAAGTATTGAATAGATAA	A	T	TCAATACATCATTAACTAAACCATAACACTTTTT ACATTGCATTGTATCAACATAGAATTAATGTTCA CTCATGTTGCCTATGAACCACATCGTTCTAAC		NA
Ca-II-SNP1121	166.73	Ca- <i>desi</i> -LG(Chr)6	7435189	AAAAGTATCATCTTTATTATAGTTATAGCTTATATA TTGTGTATCCTATCGTGAAGCAAACCTAATCGTGAA GCTGTTGGGGTTGATTGCAAGTCCACAT	C	T	ATACAAGCTTAAAGTGCTATTGCTGACTGGTGC ATTTGAAAACAAATGACCAAACCTCAATATATAG CTTTGGCCTTCTCCTTATTCTCCCACTAGAG		NA
Ca-II-SSR334	167.43	Ca- <i>desi</i> -LG(Chr)6	7446833	TGCTTATAGCATAGCAAATGTGGA	(AAG)12	(AAG)11	AGTCTCACCATAATGTTTTACATGCATTCTGA GTCTGAAATGTTGAGATGCATTTTCTTTTTATA GTCAAATGAATTGTCTCAGAAGGGGGGATTTT	TGAATTGTCT CAGAAGGGG G	60.06
Ca-II-SNP1122	168.13	Ca- <i>desi</i> -LG(Chr)6	7470585	CGATGGAATACTATGTTTTGTGTATCATAAGAT CGTATGCACCCATGTTGTGTTGTGCATATGAATG TAAACAAAGTTTAGCTTATTTGTGATATA	A	T	GACAACCTGCTTTTTTCATCAGTTTTCTGGAC TCATTTTGGAAACAATAAACTTCAAACATAAAAC TAGGTATCGAGGTAACAGGGAACCTATGCAA A		NA
Ca-II-SNP1123	170.23	Ca- <i>desi</i> -LG(Chr)6	7628458	TCCCATTGCAAGCGTAAAGATTGACATGTTTCATC GTGAGGTTGGTTCTATTGTTACTTATTATCTCTCT GATTGTGTGGGCCACTGGGTAAGTAA	A	C	CTGTGGAGCTTAGGAAGCGTTAGACTTTGACA CACAACTTTTGAGTGAAGAGGCTGTTTAGGCG GATACTGCTGCCACAATCAAGTACAAGGCATC AAC		NA
Ca-II-SNP1124	170.93	Ca- <i>desi</i> -LG(Chr)6	7634446	TCCTTCTTTTATTCAGTTTATGTTTTTTCTTTCAA TATCATATTTCTTCGCAATTAACAATGTAATGTA ACCAATTAATCACTTCTTATAAGGTCT	C	T	ACGCTTCCAACCTCATATAGTTTCCACAGTTTG TGAAACTAATGACACTTTTTGAATTACATAGCAT GAGATAATTGAAGATCGAGCTTGGTAGCTGT		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1125	171.63	Ca-desi-LG(Chr)6	7653975	GAGCCTATTTCTTTTATTGGTAGATGAATAAATAT GTGCTCCAATTTTTCTGGATTGATGCCATA AATGGTTCACCATTCTTTGGTTTCATGTT	T	C	CTGCAGATTCAACTGAAAGACTAGAGGCAACTA AAGAATTTGTAAATTCTCGATTGATGAAGGAG AGTTCAGTCAATTTGATTCATTGCAAGATAGCT G		NA
Ca-II-SNP1126	172.33	Ca-desi-LG(Chr)6	7686474	GATGATTTCTTTAGGGCTTCTTCATGTAGTTCTAC ATATGGTAGACTTGTGGTGATACGTATGGTAAAT TTGTCAAAGTTTTTACAATAAATTGGTT	C	A	GTGTAGAGTCTAATTTAAAAATAATTGAAGTAA GATAGAGTTGTTGTGCAAGCTTAATGCACAAC TTAAAGTCCAAGTTCAACCCATCCGCATAACA A		NA
Ca-II-SNP1127	173.03	Ca-desi-LG(Chr)6	7774516	TTAAGCACCACAACACCCCGAGAAAGCTTGGCTA ATCTTTCCTGTAATTTTTCTGTGATAATCTGAAG TGCTATTTGGATTGCCGACCTAATCTGTA	G	A	AGATTTCAATTTACCATTGTTAGTGTATTTTGCT TTCATATCAAGAAAGTTTGATTGTTCAATTGAT GTTTTCTGACTTGTCTTGTATGAATTTTTAT		NA
Ca-II-SNP1128	173.73	Ca-desi-LG(Chr)6	7788148	TTATTGTTTTCTATTACGTTGAACATTTTTCAAAC ATTGTGCCTATTTTGTGAAGGAGGAGAAGATATTT TTTTCAAAAATTGTGATTTCTTTTAAATG	G	A	AAGATATTTGGTGCCTCAGGGAACCTCTAAAAA ATAAACCTCGTGATAGTTTTATTTTACTTGCAA AAATATTAATAATTTATTCATTATAATCAAAT		NA
Ca-II-SNP1129	174.43	Ca-desi-LG(Chr)6	7794972	AGCAGCTGACTGGGTTAACCATCGATCTCCTGAG GCACCTAGTTCTTTCTTCTTTGGTCTCTGGATAG TATTCTTGCCGACTTGGGTAGCCAGCAAACA	G	T	ATAAAAAGAAAAATAAATAAAACAAAAGAATTA GACTAGTCTAAGTTACCTGAGATTTTGAAGTTA CTTGTTCACAGCCTTTTTGGAAACCCTTGGACA		NA
Ca-II-SNP1130	176.53	Ca-desi-LG(Chr)6	7829769	CTTAAGCCTTTTCACTGTGTGTGTATGTATATA TATACAGACCATCTTTTCTTAATTAATTAATGATT ATATTTTTGTAAACTCACCTTCTCTCCA	A	C	CATTCAAAAAGACCTATATCCCATTTCAAATGA TAACTATTAAGCTACATATCATGAAAATAACGTC CTTTAATTAGACTCTACGTCTACTTTTTTCATT		NA
Ca-II-SNP1131	177.21	Ca-desi-LG(Chr)6	7833350	TGAAACTTCTTTGTTTCTGTATTTTCGGAATATGA GTGTGTGACTTTTTATAAATTGTTTCTATTGATAATA CTTATCTAAAAATGTATCCATCATCTTAT	T	C	ATGAATCATAGTTCTAATATTTTAGAGTCTATTT ATTTTCTATATTTTCGTGCTTCAGATATTAGAATA AATATCTGACGAGATAAAGTCATCTCTATCAA		NA
Ca-II-SNP1132	177.89	Ca-desi-LG(Chr)6	7853727	GACTCTATGAAGTATTTAAACTTTTTCTTTTGT TTGCTGGTGGATTCAACATAGAAAACCAACATGTG TCGTTTACCTTTGCTTGAGTTTGTTCGTG	T	C	CAATAAGTCATGACACATCTACAATCCAAC AACATTATCTTTCTTTTCAAACCTATATAAGCA AATGCTACTAAATATGTCTCTCAATAGACGTG		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1133	178.57	Ca-desi-LG(Chr)6	7863456	CTAGAGCTTGCAATCAGTTTGACTGGCGTTATTTA GTGAATTTTCGTGCATGACTAGTTTCAGTAAGTC TAATTTTAAGCGAGGAAACTCAAGAGTTGT	G	C	TTCCCACTATGTTATAATTACATCTCCTATAAAA GCTTTTATTAATCAACTAATATATTGACCTTTAT TTATTGTGGTTGAATATTGGTCCAACAAGTTT		NA
Ca-II-SNP1134	179.25	Ca-desi-LG(Chr)6	7876356	AATACAAATATGAATGTGATATCTTTCATATTTGTC CGTGAATTTATGCTTCCCTTTTTTTTTATTGTTGT TGCGTTCACAAAATTATACCTCTAGAGC	T	G	ACGAAAAAACTAAATTAGTATAAAAACTACTT ATTTAAATAAAAAAGAAAAAGATTTGATAAGTG TTTCTAAATAAAAAAATAGTATGGAGAGAC		NA
Ca-II-SNP1135	179.93	Ca-desi-LG(Chr)6	7880374	AACCCACCTACCTCTTTAATCAAATAGAATGATG CTTAACACACAACTACTCTTCTTTGTTACTCGG CCTGTACTTCATTTGCTAAAGTAATTGATC	G	A	TTATAAATATAGTAGTTAATCATGTTCACTTTAT GTGTTTGTGCTTGAGTGTTCATGGAATAA ACACTAGAAAATTTGTTTAGGACTGATAATATG		NA
Ca-II-SNP1136	180.61	Ca-desi-LG(Chr)6	7895882	AGCCGAAAGCATTTTACATCCACTACCTCCCTAAC ACACTTATTCTAAATCTATAAATACTTTATCTATTC TTAATTGGACTCCGGACCCAGTTTACTGC	A	G	AAAAAAGTTCGGTTTAGTTCAGTTTAAAAACA GTTTCGATTGAGTCTACAATTTAGATCAATTTTT AATTTTTTAAACCCCTATCCTAACTATGCAT		NA
Ca-II-SNP1137	181.29	Ca-desi-LG(Chr)6	7917856	TACATTTTTTTTTAGTTAGTGTGAACGGATGAAAA ATAAAAAACCAGCCGTGCTTGAATAATAGCTTCT ACGCGTGCTGTGTTGTGCTGCGCTGAAAA	T	A	CACAAAGACAACATAAAGTTACTGTTTTTGT TTTTTTTTTTTTTAAAGATAAGGACAGTAGTTT CTAATCAGAAAATAAAGTTGATTTGGTTGG		NA
Ca-II-SNP1138	181.97	Ca-desi-LG(Chr)6	7936608	ACTAAGAACGATTTTCGATATAGTTATTTATCGATG ATTCTTGTTGATGCAATGAAACATTTTTCTCGAAC AACC GGGAATAATATTGCTTATGTGTTG	G	T	AATCTTGCTGATTAATATGATTTTTCTCTCTTG ATCCACTGATTTATAACATGATTCACCTACCAAT TAGATTGCTATTGGATTGTGATAAAAAATTC		NA
Ca-II-SNP1139	182.65	Ca-desi-LG(Chr)6	7943468	TTTTCGCCTTGTGCAGATTTTATGTGGATAATATT CCTATTCGTGAAGTTACGCGAACAGAAATCTATGG GAGGAGACTTCCCCGCCAAGCCTATGACTCT	G	C	CAAGGTCGGAGAACTTAGCAATATATGGTGCAT ATTTGTAATTTACTCTGATTTTTCCACCATTTGGT AGCCCAATCGGATGCATCCCATTATTGTAGCATA		NA
Ca-II-SNP1140	183.33	Ca-desi-LG(Chr)6	7958054	AACCTTGTTACCCTTGTTAACAAACCCTAATTCCT GTGCGTGCAATTTCCGTTCTTCATTCTCACGCC GCAGTCGCTGCACACACACACCCGGAGCCAA	A	G	TTGGTGTGGAATCGAGTGCATACGAGAGTA ATACCTCTCGATAACTTGACGAGAGGATTTCTT CACTGCTTTGTGCGTACTCGTCCCATGGTTAC GG		NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1141	184.01	Ca- <i>desi</i> -LG(Chr)6	8006246	GAGATTCAAATTGTAGAATAGCAAATGTTTCCTA TAGTCACTAGTCATTGTCTTTCTAGACTCTGTGTG AACCATTGGGAAGAAGTGGTATTTTGTCTCT	A	G	CTGCTTAAGCACAGGTCTCCCTTTAAAGTCAAC CGAGCCATCTCCTGTGTATCGCTTACTCTCTTC ATCCTTCAGATAAAAAATAACCAATAGTTCATCA		NA
Ca-II-SSR335	184.69	Ca- <i>desi</i> -LG(Chr)6	8126601	CAAACAAAGTCATGATGCAAAA	(AT)12	(AT)14	ACAAAAATAAATTGATGAGAAGAAATAAAATAAG GCATATCTATTTGTTTTGTTGGTTTTACACAC AAAAAACACACACGAAAAAAAAAAAAATAATATA	TGTTTTGTTG GGTTTCACAC A	58.72
Ca-II-SNP1142	186.73	Ca- <i>desi</i> -LG(Chr)6	8407081	TGACTGAATTGGCCCTGCGTTTGCGAAATCGTAG TTGTTACAAGTTAATGAGTCTTGAAGTTAAGTTT GGGAGGAACCTCACTCTGAAAGGTGATATCG	A	G	TATTTGATTTAATTTAAAACTTACTAGTACTT GTAAGGTTTTTCATACCAAAGTCAATTTCAAATTA AATAAGTAAAAACAAATTACAATCCTTATTC		NA
Ca-II-SNP1143	187.41	Ca- <i>desi</i> -LG(Chr)6	8455952	GTGCCTCACATTGAGCATTATGGTTGTATGATTGA CCTTCTAGGAAGGGTTGGACTTGGATGAGGCT GAAAATTTGATCTTCTGTGTTGTCGCTCTGT	C	T	GAACTAAACAAAATAAATCATATCAAACCAAAC TAAACAAAGAGAGAAGCAACAAAGCAAATCACT AGAGAGATTAGCAATCAACAGAAGAAGCCACA		NA
Ca-II-SNP1144	188.09	Ca- <i>desi</i> -LG(Chr)6	8709503	TTAGTCCAAAGTAGGTTGAAGACTTCGATGAGAGT TATGCACCTCGGCCGCTACCACCTTCTTGTGAAT TTTGTGTTTAGCTGAAGTGATTACGACTT	A	G	AAAAAATGCCTGGCCTTACTATTGGAGACACTA TTCCTGATCTTCAAGTTGATACAACCTCAAGGCA AGATCAAACCTCATCAATTTCTGTTCTGATACAT GGACCATTCTTCTCTCATCCAGGTGATTTCA CCCCAGTTTGTACCACGGAACCTGGTAAATGG CTCAG		NA
Ca-II-SNP1145	188.77	Ca- <i>desi</i> -LG(Chr)6	9229603	GCTCAACAGAAATGGGAAGTTGAAACACTCACAG CCTTCTGAACAGCCTCATTAGTCACTCTTGGAGAG GACTTTCTTGAAGCCTGAGCTGCAGCATTAG	T	C	AGTTAAATCCTCTTTTTGACAATATTATGTCATG TGTTACAGATAGTTCAAATTACAATATCTTGCAG GCCATATCAGAGGAGTGATGCAAAATCCATCT GATGTTGGAATCCAATATCAGTCTCCATGGAAA GTGTCAACACGGAATAAGGGAAGAAGAAGTA TTTACCTGACAAACCAACATCAATTGACTGTAT GCAATGACTCCAACACT		NA
Ca-II-SNP1146	189.45	Ca- <i>desi</i> -LG(Chr)6	9392890	TGGGGAGTTAATTGGTGTATTCCTTCACTTCCATG TATTTATAATTCACACAGTGTTGTCAATAGCAATT ATAGTGCCGCTATAGTGTATAGCGTAGC	T	C	TGTAGCCATGGCGGATTACTGGTGTATTATTG AAATGAAAGTCCAACATAAGAAAAATAACTAAG AATACAATCACAACATAGTTCACGTGCTGTATT ATTAGTAGGTCGTATAAGCACAAGTTTTACCGT TACTGGATTTTATGCAACAACT		NA
Ca-II-SSR336	190.13	Ca- <i>desi</i> -LG(Chr)6	9802459	TTTGTTTTCATTCAAGTGACACG	(AAC)12	(AAC)11	TTTCCTTCACTTAACCTCTATTTTGTCTTTCT TTATGCTACTGCCACACCGTTTTCCAACTCAT ACTGTATACAAATTAAGGAATTTTATTTTAG	TATGCTACTG CCACACCGTT	58.73

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1147	192.17	Ca-desi-LG(Chr)6	9923291	GCATTTTTTCTACCTCAAAGGAGTTATTCCTCTTCATAACCATCCAGGAATGACTGTTTTCAAGTAA GCTTCTATTGGGACAAATGCACATTAAGTC	T	C	AGTTTTCTGTTTCTGAATTTTCAGGTACATTGG CAGACTCATAAGTAGATTCTCAATTTGTGAGAT GAGCAGTATTCTTGTATTTGGCTATAGGAAT AAGCATAGGCTTTGTGGTGGAGTTGGTTTAA CATTTTTCAATTTAGTCATATTCAAGGTGGAA GGAAGAGAATAGACGTGGAGAAGAATGGTCCT CGGAGAACCAAGTCCGTTCTGTTTCATGTCAA CCGCTTCATTCTACTCCAGCATTATCAGACTCC GACCGATCCTGCAATTCCTTATTAAAGATCTCTT GTATCATTAAAGGCTCTCAACAATGATTGCTTTC TCCATTTCAAGTCGTCTATATGCCCTCGTTAGCT GATTTGAGGTCTGATTGAAGACTACTATTGCAC TGTTGTAGGTTCAAATTATCATCAATTGCTACC AACTTTTCTGACTTTTCCTTTGCAATTTATCTCTT CTAAGAAAGAAATGTCT		NA
Ca-II-SNP1148	192.85	Ca-desi-LG(Chr)6	9955114	TCTATATATTCTACATGAATCTATTATAACAACCAA CATTTGGTCAGGGCAGGCTTTGATTTTTGTGCAA TTACACTTCATATGGAATATTCTTCATTG	A	G	AGTTTTCTGTTTCTGAATTTTCAGGTACATTGG CAGACTCATAAGTAGATTCTCAATTTGTGAGAT GAGCAGTATTCTTGTATTTGGCTATAGGAAT AAGCATAGGCTTTGTGGTGGAGTTGGTTTAA CATTTTTCAATTTAGTCATATTCAAGGTGGAA GGAAGAGAATAGACGTGGAGAAGAATGGTCCT CGGAGAACCAAGTCCGTTCTGTTTCATGTCAA CCGCTTCATTCTACTCCAGCATTATCAGACTCC GACCGATCCTGCAATTCCTTATTAAAGATCTCTT GTATCATTAAAGGCTCTCAACAATGATTGCTTTC TCCATTTCAAGTCGTCTATATGCCCTCGTTAGCT GATTTGAGGTCTGATTGAAGACTACTATTGCAC TGTTGTAGGTTCAAATTATCATCAATTGCTACC AACTTTTCTGACTTTTCCTTTGCAATTTATCTCTT CTAAGAAAGAAATGTCT		NA
Ca-II-SNP1149	193.53	Ca-desi-LG(Chr)6	10232264	GCCTCTAACACTATTCGTGGTCCCATGGATTG CCCTTTCGCTTTCCTTATAGATAGAGTTATAGATG ATACAAAAAATGACTTCAACCTAGTATTTAC	C	A	CCACATTTCTAACCTCATCTTGCAATTTTTGCAT CACAATTTGGGTGCTTTAGTAGTTCAGCCATTGC CCATTCTAGGACTGTGTAGGTAGTGTGAGTACC TGCAGCAAACATGTCCAGTATCAAAGCCTTTAT AGCAGTTCTATCAATTGGGAATCCAACAGCATT AGTCTTTTGAACAGAAAGCAAACATCCACAAA ATCACTATGCTCCTCATCACTATCTTACCACCT CCTTAACCTAGCAACTATATCATCTCTCAATCACT AATTACAATGGCAAGTAGACAACATAGATGTAA CCAATGTGGAATACTACTAATGGTTCCACAAGA AAGCCAAGCCTTTAAGTGTCAATATGCAATGG CATAACCTATTTTTCAATCCACAGGTCCATTGAA TCAGGCCTACA		NA
Ca-II-SNP1150	194.21	Ca-desi-LG(Chr)6	10782792	CGATTTGTCTTCTTCTTCTCAAAGAGAAGAGCTTA TTCGAAAAGTTGCTTCTGCTTTCAACGGCAAGCTC AACATACTTGTTAGTCATTTCTTTTCTATA	T	C	AGTTTTCTGTTTCTGAATTTTCAGGTACATTGG CAGACTCATAAGTAGATTCTCAATTTGTGAGAT GAGCAGTATTCTTGTATTTGGCTATAGGAAT AAGCATAGGCTTTGTGGTGGAGTTGGTTTAA CATTTTTCAATTTAGTCATATTCAAGGTGGAA GGAAGAGAATAGACGTGGAGAAGAATGGTCCT CGGAGAACCAAGTCCGTTCTGTTTCATGTCAA CCGCTTCATTCTACTCCAGCATTATCAGACTCC GACCGATCCTGCAATTCCTTATTAAAGATCTCTT GTATCATTAAAGGCTCTCAACAATGATTGCTTTC TCCATTTCAAGTCGTCTATATGCCCTCGTTAGCT GATTTGAGGTCTGATTGAAGACTACTATTGCAC TGTTGTAGGTTCAAATTATCATCAATTGCTACC AACTTTTCTGACTTTTCCTTTGCAATTTATCTCTT CTAAGAAAGAAATGTCT		NA
Ca-II-SNP1151	194.89	Ca-desi-LG(Chr)6	11431448	GCCTTCGTATTGGTTACCAATGTGTAGATCGACAT GAATAAAGAATGTTTCATCTTCAGATTGGTGCAT GATCGGCAAGAATGAAAGGATGATCGTCTT	T	C	GCTGAATCTGTGAATAGCAATGAAATTTATTAT CTGCAAAGCTTAGCAATCTCAGTTTTGAGTCTT AATACACAAAAAATCTCGTCATCGAAGATTCAA GCCTGACAATGCAACCAAGTACCAGCGATAT GTATAAATGTTAGACATGGCTAATTGGTCACA CAAAGCTGTACAGGTACATAACTAGCATGGTT TTTTTGTACATCTTTGAAATTATGGGGGCTTT ACTCCAGATTTTCTATCCCAATCTCCCTCCCT TTTTAATCCTCTCCCAATCCCACTCCCACT TTGCTTTTTCTCCTCTTTCTTTTTTTCCCCCTC TAACTTCTTCTCCTGCATTCTTTCTTCTATCTAA ACCCTAGATTTCAAATCTGGGGTTTTCTTTTCT CTTCAGATATGATTATACCAACTTTACACCTTCTG ATTTTCTACATTTTGCCTATATATTTCCCAT TTTTCTGTCTGCACTGTTTTAGTTCTAAAAAA ACTCTTTTCTCCTCTTTTCTCTGTTAGCACTT TCAAACCTAGCCTACTACAACCATGTCGTGATG AAGTTGAAGTTGTTCTCAGCTAGGTTTGCAGAGA CCGACTTTAATTCGTGAAGAATCTCAAGTTGA T		NA
Ca-II-SNP1152	195.57	Ca-desi-LG(Chr)6	11443399	ATCCTGATTTTGAAGAAATGTGTGATGATGTTGAA CTTAATTTGACGCTATGAATGACGAAGTTGAACC TGTTATGATTGATTTGACTGATGTTTTAC	A	G	TTTTAATCCTCTCCCAATCCCACTCCCACT TTGCTTTTTCTCCTCTTTCTTTTTTTCCCCCTC TAACTTCTTCTCCTGCATTCTTTCTTCTATCTAA ACCCTAGATTTCAAATCTGGGGTTTTCTTTTCT CTTCAGATATGATTATACCAACTTTACACCTTCTG ATTTTCTACATTTTGCCTATATATTTCCCAT TTTTCTGTCTGCACTGTTTTAGTTCTAAAAAA ACTCTTTTCTCCTCTTTTCTCTGTTAGCACTT TCAAACCTAGCCTACTACAACCATGTCGTGATG AAGTTGAAGTTGTTCTCAGCTAGGTTTGCAGAGA CCGACTTTAATTCGTGAAGAATCTCAAGTTGA T		NA
Ca-II-SNP1153	0.00	Ca-desi-LG(Chr)7	7906	CGTTAACTTCTCGCTCTGTCTAAAACCTCTCATGC TTCATGGCGGCAAGCTCTTCTCAATCATATGTC TCATATGTTCCAATGTTTCAATGCAACCTA	G	A	TCAAACCTAGCCTACTACAACCATGTCGTGATG AAGTTGAAGTTGTTCTCAGCTAGGTTTGCAGAGA CCGACTTTAATTCGTGAAGAATCTCAAGTTGA T	NA	NA
Ca-II-SNP1154	2.10	Ca-desi-LG(Chr)7	26916	CTAAGCATTACATTTGACCCAGTGGTGACTGCAGA AAACCCCTAGATACAGGAAGTGGATTTGTGGTTG CAACTTTAGAGTTTGTGACTCAATTCGCTTC	A	C	CAGCACGTGGCAGAGGCATGCACACTAGGGCC TCAGCTTGGCTAGATTTACACATATGCACATAT TCCAGGAAGACTTCTTTGTTGCTTTATGCAAAT AT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1155	3.04	Ca-desi-LG(Chr)7	32994	TAGACCTAATATTCTATTAGTGTGAGTGTGTGTC AGATTTTAGTTTATGATCCTAAAGAAACCACTTGG TTTATATATCTGAAAGGCACTACTAACCTT	G	T	TAGTTTCCTCTGGTGCTTTTCCTTTCTACCTTGT CTCTCGTATAGTCAGCATTGTAGAAACCAACTA ACATGTACTCAGAGGATGGCTAAAAACACAAAC	NA	NA
Ca-II-SNP1156	3.98	Ca-desi-LG(Chr)7	41554	CTGCCTAAGATGATAGGCGCCCTGTTGGACTTAT TCTCTCCCTCCACGTCCAGAATGAAAAATCTGCA GGAAATGTCAAATTCATTAACCTGAAGAAGTA	C	T	TATTTTAACTCTCTTGTCTTGGACCTTTACAG AGTATAGGTGTTACCATTCAATTGGCGAACAGG AGCAATGCTCATCCTGTTGGACTTATGGAGGAT	NA	NA
Ca-II-SNP1157	5.86	Ca-desi-LG(Chr)7	86750	AAGGACATAGATGTTATGTTGTTGGTGGTAACTCG AAGATGATGGGTATGGATGGATTAACGTTATACGA ATAGGCGATTTCATGTAAGGATCTAAGTGG	C	A	AATTCAGGGTATTACACCTCTTTGACAGTTA TCAAACCTCATCCAGTCTCATCCTGAAAACTAT CAGGCGAACATCTAATATTCTTTAAAAAGCT C	NA	NA
Ca-II-SNP1158	6.80	Ca-desi-LG(Chr)7	102757	TTACAAGCAAAGATCTAATTTAATTAATCACTT TACTTGGAGTTAGGTAGAAAACTTTTGTCTCGTC TTGGTACAGTTCTAAGTTTGGAGTGGTGG	T	C	GAAGATGTTATTCATCAAAGTACAAAACTGAT TTTTTTTTCTTTTTCTTTTTATTTATTTTATT TTTCTTGATAATTTTTATTTTATTTTGGAGA	NA	NA
Ca-II-SNP1159	8.68	Ca-desi-LG(Chr)7	155116	ACTCCATCGAAAGTTTCGACTCTTCCCGAAATAC GATTTGAGTCTTTGTCCATTGACCTTGAAGTTCCG ATCGGAGTGATATATCTTCAATTTCGACGGC	A	C	AACTAGTTCTCCTATTCAACTCAAGATTGAAGTT GTTTCCCGGAAAACTAAAGTCAAGATGGTCGG GCCCTTTGAAGGTAACCAAGGATTTCCACACG G	NA	NA
Ca-II-SNP1160	9.62	Ca-desi-LG(Chr)7	196707	GGACCTGCACCTGAATCAACAGCAGGACCTACAC CTACACCTGCACCTGAACCTGCACCTGAACCTAACA GCAAGGCCTGCACCTGAACCTGCACCTAATG	G	A	TACCTCATGCAGTATGATGGGTTGGATTCTTG GACATTTCCAGATTCTAGAATGGCCTTTTCTCT CCTTGATATGCCAGATTTTCCCAAATTTTCCA	NA	NA
Ca-II-SNP1161	10.56	Ca-desi-LG(Chr)7	253246	TTTTCTTCTTTATCTTTCATCTTTTTCCCTTGATT GATCTCTCTTTAGGAACCTGCAATTTCTTTTATGT GACCCGTTTTGCCACAATGATAGCATAT	C	A	CAAAGTCACGGGGGAGAAGTCAATCTAGAAAC TTCCATAGACGCGACAACCTGAAAAGTTGTAGC AAGTCAAGAAGCAAGTCGAGGACTAGAAAAGA AGT	NA	NA
Ca-II-SNP1162	12.44	Ca-desi-LG(Chr)7	268136	TCTAAGTACACTTCTTCTTTTACCATGTCAAAC AAGATTGACTTCAAATATTGAACTTTTTTTTCAT TTACATGGCAATTTTACCTGTCAATGGA	T	G	CTGTTACATACGTAACATTCACCAGTTAAATA GAAATGTTATAAGTCTTCGTTCTCTATCAAGA GTGAAAGAATGTTCAAGAGCTACATCAATGAAAC A	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1163	13.38	Ca-desi-LG(Chr)7	272276	TTAAATACGTTACTCATATCCCACCAATAAATGTGT CGCTGCCTTCTGCTTTTTCCACTCAAATCTCAGT ACACTTCCTCTTTTTCCACCATGTCAAA	T	C	AGTGAATAATGTTCAAGAGCTACATCAATGAAA CACCCATTGACAGGTAAAATTGTCATGTAAATG AAAAAAAAAGTTTCAATATTTCAAAGTCAATCTC	NA	NA
Ca-II-SNP1164	14.32	Ca-desi-LG(Chr)7	276790	GGATTTAAGCCAGGTTAAAAAAGTAAAAGATGTC GTGTATTTAGCGTTTTATCTTCTGCTCTCATAAC ATCTGCGCTCTAAACCTCTTCTTTCCATTTC	C	G	AATCAAACATGTCTTAATGAATTGATGAAGTGA TGATGATAAACCGGCAACGGTTGTAAGTCGAA TCCAAGTTGTAGGTGCTTACGATACAGAGGTT A	NA	NA
Ca-II-SNP1165	15.26	Ca-desi-LG(Chr)7	333608	CTCTTTTTCACTTTTTTTTTAAAGTCATTATTCAG ATTTATATTGTTTATTAGAAATTACCAAACCTTCTG TTCAAATCAATTAACCAAGTTTTTCAAG	G	A	ATTGTGAACAATTTGGATAATGAATTTGAACTAA AAACTTGGTCATTCTAATTAACAAAATAAAT TTGGTTAATGACTTAAACAATATGGTTAATT	NA	NA
Ca-II-SNP1166	16.20	Ca-desi-LG(Chr)7	366332	ATCGAAACCCGGGTACACCCATTTAGTAGAAACT GCCCTAAGCCGGTAGGTCTCGTTCAAAGCCAC TTTAGTTGATGTGTCCAAACCATGTGCTCG	A	G	TTAGTGTGTTGGGTGTGTGTACACTTTTCTT CTCATGTCCCTATGTAACCAACAAAATTTCA GCAACTTGCGCATCAACGATGACAACATCATT	NA	NA
Ca-II-SNP1167	17.14	Ca-desi-LG(Chr)7	370425	TTGCACCTTGGTAATTAGTGCTGATCTGTGAGTGA TTGCACTCTAGAATGTGCTGATATGTGAGCGATTG CACTCTAGAAAATCGTGTGGTCTGTGAGC	G	A	ACTGACCAATATTAATTACCAAGTGCAATCTC TCATATATCAACACGATTTACTAGCGTGCAGTC GCTCACAGACCAGCACGACATACACGAGTGCA GT	NA	NA
Ca-II-SNP1168	19.96	Ca-desi-LG(Chr)7	425722	AATGGTGTCCGGAATGCCAATTACCATGCAAGCA TGCATCCTGAACGCGAAACCTTACATCGTTGGAA CCGCTTTCGCCGCCGGAATTTGGTGTCTTCT	C	A	CACATAAACTCTGATCAAGTCCAATAGCATCA ACATCATAAATGAAGCTAGTAGATATTGAATTG AATCTACATAGACCAGACCTGTATCGTAGCCGA A	NA	NA
Ca-II-SNP1169	20.90	Ca-desi-LG(Chr)7	465928	TATAATTATCGAAATGTTCAACAACGTTGCTCTTTT TGTATAATTTAATTATTTATGGTTTATTGTACCCAC AAATCATAATTTACTGTGTCTTTTTCC	A	G	ATACACTTAACCACATTGACATAAACATCTTCT CAACTTCACTTATCAGATGTTACTTAAACTTAC GTTGAATTTAAATGTTATAAGTTGATTTATT	NA	NA
Ca-II-SNP1170	21.84	Ca-desi-LG(Chr)7	468231	CGAGATTGACATTGATCAGGTATGTTGGACACCAT ATGAGGAGCATCGGGTGAAGTGACCGTTTGAATA ATATTTTTTATTTGAGGGTGGATACGTTGG	G	A	GTCGTCTGACCCATTATCTCTAACGGTGAGCTA GAAATGGTTTGTACATGATCGTATTGACGCAAT ATTCTGTATAACAAATGAACATACATTTTTGAAC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1171	22.78	Ca-desi-LG(Chr)7	470261	TTCTCAATATTTATTTCTCCCCTTGTTAGCTTAGA CTATTCATTAAAGAGCATCATCTTTAGGAATCATC ATTATCTCATCAAGTATGAGGTACTTCAA	T	A	GTGATAATAAAAGATGGATGCATGGTATGATAT ATGTTTACGTGATGATAATGATGATTTTTGATTG ATGATAGTATGTTATAAAATTGTGATGAGAAT	NA	NA
Ca-II-SNP1172	23.72	Ca-desi-LG(Chr)7	500019	TTATTTTAGTGATTAAGTAGGAATTTTCGTAATTT TACAGTGC GTTGTGTTTTGGTGCAGTGC TGAATTT TGGTGAGAAATCAACATAACATATGTAGC	T	G	TCTGGTGTCTTCATGAACATTGTAGCTATGGAT CTTAGCTTTTCATTTGCACCTTGGTTAACTCCAAT TGGACATCTACAACCTCCAGATATGGCTGAAATA	NA	NA
Ca-II-SNP1173	24.66	Ca-desi-LG(Chr)7	502609	TGCATCTGGGTTCC TTAATTGTT CATA CATGCATG TTGATTTTCTGAGATTGAATAGGTGTTAATGTTGC ATATATGTGAGTTGTT CATGTGTTTTATGA	T	C	GTGGTTGTGCATTTTAAACAAACAGTTGGAGTG CAGTCATGTTTTGTGGGAATTAAGGTGCAAAAAG TGGTTGTGCATTTTAAACAAACAGTTGGAGTGC A	NA	NA
Ca-II-SNP1174	25.60	Ca-desi-LG(Chr)7	618120	TATTTATGTTTATGTAGTTAGCTCCTTGAGTCTCG AAAAGGAATCGAGACCGTTGGCACCAGTTAGCG GTGGGGAGAACTCTGATATATTAATGTTGTT	A	G	TAATTATGAACACATTAATTTCAACAAACATGAA TCACCAAAATTTCCAACATTAATCACCCATATT CAATCTCCAAAATTTCAACCATAAATTACCA	NA	NA
Ca-II-SNP1175	26.54	Ca-desi-LG(Chr)7	642019	GATGACTAGTAAATAATTCTATGGTTTGTCTAGA ACTAGGAGTCGTCTCAGATTCATGTGCAGGATTG AATTCATTTAGTTGATTATTTGATTTCTGTC	C	T	CGGAGAATCTTGGGTTATGTTGTGTTGTTGGGT TCCATGTCACTCTTTGTGGAGAACTTACAATAT TAGTGCCTCTAGTCGTCACTCGCGTCTGCTCTC TTTTCCCTAATCCTGAAAATAAGCTGCATGGA CGCCGGCGGCTCAGATTC AATGGCCGCGAAT ACAACACCGCCGACGAGATGTGGAGTGAACAA GCCGGCGACCTCAATAAGAAGACTCTCTGGTA CGCCAACTCTCTCTTACTCCACCTCTTA	NA	NA
Ca-II-SNP1176	28.42	Ca-desi-LG(Chr)7	684110	TTCTTCTTTTCGGTGTGTACTCTCATGTTTGT GTTCTATTATCTATCCTTATTTATATTTCACTGTTA AAATAAAAGGATACATTATATGAAGTTT	A	G	AAACAAACGTAAACATATCCAACAAAGCAAGCC TCAATTTCAAAAAAAAAAACTCAGTTTCAATAAAT CAACCTAAACAAAATTTATTTTAAATCCTAAAA	NA	NA
Ca-II-SNP1177	29.36	Ca-desi-LG(Chr)7	765277	TGCAATTCTCTGTATACAATTTGAGTTTTACAATA TGAATTTAAAATTCATATTGCAATTTATTTTTAGG GACATCAATTTCAAGTTTGCATTGGGCT	T	C	CAAAACGTGAGCTTATAGTTGATGACCATAAAT TAAATTACACTATGAAATTCATTATCATATTGTA AAACTCGAATGATGATACATAAGAATTGATG	NA	NA
Ca-II-SNP1178	30.30	Ca-desi-LG(Chr)7	770412	CACCTTAGAACTACCATGCCTATCCAGAAACTA TACTGCTATCCTTTAAATCTTCATCAGACTCCAGG GGAAGACCCTAAC TTTTACCATCTACCT	A	C	TTGGTTAAGGCATGGATTTGGTTAGATCATGTC TTGTGGCCTCTGTT CATAGAGTCTGAAATTTGGT TGCAAGAGAAATGTTCTGAGATATATATTAT G	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1179	31.24	Ca-desi-LG(Chr)7	845234	ACTGATGTCAGTATGTGATTGAAATGAAAATTATT TGATTTGCTGGGAAATAGCATGCTGCAAGGATC TGAATATATGGTAGTTATGTTCTATGTAGTT	T	C	TATTCATATACATATTCATATATTGACAACAACA CATATTCATATAACTACATATTCACAACCTTTTCA AATGTGCCCTATTCATATACATATAACTAACA	NA	NA
Ca-II-SNP1180	32.18	Ca-desi-LG(Chr)7	870350	TCTTGTGTATAAATAGATTTGTTGTCAATCTGCTC CATTATTCGAATGATTTTGAAGTGTGGTTTTGGT TGACAACCTCAGTATTTCTATGGCCAATTTT	T	A	CTAGTGCTAGATTTTGGAAATGCCTCTTCATAT TTCCAGTAAATCTGGAGTTAATTGATCAATTA AAGGTTTGTATTAAGGCAATCCAAAACAGTTAA	NA	NA
Ca-II-SNP1181	33.12	Ca-desi-LG(Chr)7	925631	CAAAGACTATGTTCCGGTCTACTAGCTGTTAAATAT AGGAAGGATCCAATCATCCCTCTATACTCTTTTTCT AGATATTGGAGTTCCTTCATCATCTTTGTG	G	A	TCTTCATATCTCAAGAAAAATACACCAAGGATC TACTCAACAAATACAAAATGAGTTGAGCCAAAA GTATGGGAACCTCTATGCATCCATCCTCCATAC T	NA	NA
Ca-II-SNP1182	34.06	Ca-desi-LG(Chr)7	929639	ATTGACACACTGTTTTTATACTGGTTCACCCAA AGATGGCTACTTCCAGTCCCTCACACCCTTGTGAG ATTTCACTAATGTTCAAACAGATCAACCTCT	A	G	TCACACTGTAATTTCCACGTGAGGTACACTTGG AAATATTTGAAATCTGATTGTAAGCTTGGTAA GCTTGAGAATACACAAGTTGTAATCATCCTCGG T	NA	NA
Ca-II-SNP1183	35.00	Ca-desi-LG(Chr)7	944691	GATGACTAGTAATAATCTATGTTTGTCTCTAGA ACTAGGAGTCGCTCAGATTCATGTGCAGGATTG AATTCATTTAGTTGATTATTTGATTTCTGTC	A	T	ATGCATCACAACTGGAATGATACGGTAAAATTA AATTTTAAAGTAAATGGAATAATATATAACCAA TTATCATTGAATCCCAGATCCAGAATAAGAAAA	NA	NA
Ca-II-SNP1184	37.82	Ca-desi-LG(Chr)7	975862	TAACTTTTTGTTGTTTTTCATCAAACATTAATTTG AGATTTTGTCTCAACAATCTCCCCCTTTTGTATGA TGACAAACATGTTAATTTAGATTTTAATT	T	G	GGGAGCTTTGTTAACTTGGACGAAAATGGAGA AGAAGTATAACATAGATGAATACAAAGGCCAAA CAAGATTACCCAATTTTGAATTCAAAAAAATA TGAACCTCACTTACTACCTGATTTTTCAGCATG CACTTTTTCTGGCACTGTGCAAATTACTCTTTCT ATCAAAGAAAACACCAAGTTCATTGTCTTAAACT CCTTGGAA	NA	NA
Ca-II-SNP1185	38.76	Ca-desi-LG(Chr)7	1003445	TACAAATCTTACATCCTCCAATATTTGTCAACTCG CCAAAATCTGATGTGGCACATTCCAAATTCATCT TCTATTCGAATATGTTTTATTTCTTCAATA	C	T	TTTTTAAAGTATTGATGAGTCATTGAGTGATAA GTTAAAATTAATTAATATAATGATGAAATAAT TGACTTGGGCAAGTGAATGGTTTGCATTAT	NA	NA
Ca-II-SNP1186	39.70	Ca-desi-LG(Chr)7	1045780	TCTTAGCATTTAGATATGATGCCATTATAGTTGG TGATATACTGATTTATCAATTTTGTGTACGGCTATT GTGTTTGTATGTCTAGCGATGTTCAATTTGA	G	A	CAAAAAGAATGAATTAACATTTAGATCAAGAAAT TTCCCTAGTTCTGAAATACATATAGAATGAAT GCATCATTATTTAATACAGCCCTAAGGAAGA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1187	40.64	Ca-desi-LG(Chr)7	1066575	TCGTGGATTGCCATATCACTCTTGAATCACAAAAG TAGTCTCCCATTTTATTCTCCCAAGTTTTGGTC CCTCAAACAGAATTTGGTCTAAAACCTTGA	C	T	TTGAATTAAGTTACACCATCATCAAGATCTCGT GGTGTAACAATTGTACCTGAAATCTATGATCAT AAATGGTGTGGTGTGACTTAAAAATGACATTT C	NA	NA	NA
Ca-II-SNP1188	41.58	Ca-desi-LG(Chr)7	1090742	CAAGGGCTTCGTGGGTCTTCCAAGCAACACCAC TAACTCGAGCTTCGTGGGTCTTCCAAGCAACAC CACTAACTCTAAATCCCCGCAAGGATCTGTGG	A	G	TGATTTTGGACGCTCTGGTTGAGTGATCTATAT TGTTACTAACAGAAGTGTCTACATTCATGCATT CATAGTTGTGTGGTGCCTCCATAATTGGTTGGA G	NA	NA	NA
Ca-II-SNP1189	42.52	Ca-desi-LG(Chr)7	1095355	TAACTTTTGTGTTTTTCATCAAAACATTAATTTG AGATTTTGTCTCAACAATCTCCCCCTTTTGTATGA TGACAAACATGTTAATTTAGATTTTAATT	C	A	ACAAAGGGGGAGAATTATTTTAGATTTTATGTT GGTTCAAATATATGAAGCATTTCTGAGGGGGA GTTTTTAAGCTCTCTTTGATTAATAATTAGAATCA	NA	NA	NA
Ca-II-SNP1190	43.46	Ca-desi-LG(Chr)7	1451148	TTCTTAAATCTACACTTTTCAAACCCACCAACAA TCTCCTCAACATTTTTTTCATACATCTTCAACCGT ATCACTGCTCCCTCTCTAGATTTGTTCT	T	C	TAAAGATAAATGAAAAATAAAATAAAATTAATA ACTATATAAAATAATTTAAAAAATCAGAATAGA TTTCGGTATCACACAGATCTAGCTAATCCCTC	NA	NA	NA
Ca-II-SNP1191	44.40	Ca-desi-LG(Chr)7	1468684	TAATTATCTCCATTTGTTGATTCCCTTTAGATGATA GTGTTGAATATAATGTCTTAATTTATGATATCATG TGCTAGTTTTTCATTTGAGTATCTCTAA	T	C	AAGTTGGTCACAGCACTTGTCCCTGAATTTA ATTGCTGCAATATCATATGCTTCTGCAGCCTCC TCTTGTGTGCTATAGGATTGTTATGGTTCAAC A	NA	NA	NA
Ca-II-SNP1192	45.34	Ca-desi-LG(Chr)7	1483940	ATTATGATGAAACATTTGCTCGGTAGCCAAAATG ACAATTGTTCCGATTGTACTCTCTATAGTTGCTTC TAATGGGTGGACTCTTTATCAAAATGGATGT	G	C	AGGTTTTGAGCTTGACACACCATGAGATGAA GAAAAATAGACCTTGAGGAGGAGTCATATAAATA TCTTCAGTGAGATCACCGTAAAGAAATGCATTC TT	NA	NA	NA
Ca-II-SNP1193	46.28	Ca-desi-LG(Chr)7	1503761	AATGATCATTTTGATCATTACCCCTTATCTTTGGTT CAAAATGTTCTAAACACTTGTTCATTTGATTCCTG AGACAATATTTGACTTGTGGTTCTCA	T	C	AGAGAACATTCTCCTTTTTCAAAGGTGAATATT GGTTTAAGAGTTCATGGGTATTGTGCCTACATT GTGTTAGCACTTTTCAAATAGGTTTATAAACT C	NA	NA	NA
Ca-II-SNP1194	47.22	Ca-desi-LG(Chr)7	1617972	TTTTCTGGTTGACCAGATTTTTAATTTGTTGACTA GATTCCTGGTGAACCTGGAACACTAGAAATCGAA TTGGAAATGTTAGTCGGAATTGAAAATGA	T	C	AGTGAAATTGAAGCTAGTGATTGGGAATTGGTT CAAAATGATAAATCAATTGTTCCGTTATCAACG AATTGAATTCTCATTATCAATTATCAGATCCG	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1195	48.16	Ca-desi-LG(Chr)7	1649012	TGTAAC TGATGATCATGTGCCTCACCATGATGAGC AGGTTCCAGTTGAGCCACCAGTCGAGTTTGAGTT GAGAAGATCTACTAGAGAACGTCACCTTCT	A	C	TTTAACCACTTTTCTTATCAACATTTGTAATAG GTTCTTGATAAATACTCTGGCTCTCCACTATCAG TGATCATCACATACTCATGTGGAGGATATCTTT	NA	NA	NA
Ca-II-SNP1196	49.10	Ca-desi-LG(Chr)7	1698235	GAACTGTGCTGCAAATATTTCTGCATGAAAAGTCG TAATAAAATGCTAAAGTTTTCTTAACTTTGCTGC GGATTGTATTCAATTTTCTGCGGATTTA	G	T	GTTACCTGCGGATTTGCCGGCAGAACCTTATC CCCACGTA AACCTTCGTGGATAATTGTTACCT GAGGATTTCACTATCCGCAGGTA AATTACCTGC GG	NA	NA	NA
Ca-II-SNP1197	51.92	Ca-desi-LG(Chr)7	1721640	GCTGTTGTAGGGTCATATAGGGTCACATAGCGTT TGCACATAATGCTTACAACCTTTTACAACGCTTT TTGTA AAGCGCTGTA AATTGAAGCGCTCTC	T	C	TTCACAAAAGCGCTTTAAAAGCCATGTAACAT AAAGTGGGAGCGCTACATTTTACAACACTTTG TTTAAAGCGCTCAAAAAGCGCTGTA AAGCTAT G	NA	NA	NA
Ca-II-SNP1198	52.86	Ca-desi-LG(Chr)7	1776493	ATCAATCTTTATAACTTTAGGGACATATTTGTATAC TCAGTCATTTTTTTTTATCTCAGACTTCCA AATTGG TTTAATTTAATGGTATATATCAACAGCT	C	T	AAGCAAAAATGAGAGTGCTAGGATTAGAATATT TGACCTTGTCTTTCTTAAAGAACACAATTAGC ACAAGACTATAGATAATTCAATTGTCATCTTTAGT	NA	NA	NA
Ca-II-SNP1199	53.80	Ca-desi-LG(Chr)7	1791302	TTAAACATAATTTCCAGATTTTAAACAATCGAAT TTCTCCCTGAAATCCCGATTCTCCGTTTACAGAA TTCTCGTTATTTGCATCGTTCTTCTCA	T	C	TTAAGGAAAATTACCATAATCATAAAACCAATC AGTGGATAATATAGCCACTTTTTACAGATCGT TTTGGCGTTAGTTTCACTCAAATCGGACTTACA	NA	NA	NA
Ca-II-SNP1200	54.74	Ca-desi-LG(Chr)7	1842420	ACTGCGTTTTGGAGCATAAACCTAAATTTGCAG TTCCA ACTCTAGCTCGTGATTCGATCAAGTTCATC CACTTCATTCCTCTTCTTGATCATTGTTG	T	C	AAAAATAAAATTCATTTAAAACCCAAATTCAAA AAAACCGTAATCGAAAGAAAGAAAAGAAAAC TAACCAAGAAATATCAGAGAGAAATGAAGAAC	NA	NA	NA
Ca-II-SNP1201	55.68	Ca-desi-LG(Chr)7	1855882	TCTAAGTACACTTCTTCTTTTTCCACATGTCAAAC AAGATTGACTTCAA AATATTGAACTTTTTTTTCAT TTACATGGCAATTTACCTGTCAATGGA	T	G	ATTCATCACTTGATCTACAATAGTCTCAGACAA CAACTTTTTAAGCATCTTAGAACACTTTCCAAG CTTCTTCTTTTATTCTCATCAATTCATAACCA ATGCAATCAACACATTTCTTCTTGAGGCATA GATCCCATTGCTCTTATCACACAGTTTCTACAA TACTTTGCACTACAAACA	NA	NA	NA
Ca-II-SNP1202	56.62	Ca-desi-LG(Chr)7	1868303	CATTGATTGTA AATGAAATTTAAAGGCATATATTT CAAACCTTTATTGGAATCAATGTGATGTTATTTGA CTTTTGCTTCGACATTGTAGCACCTCTT	T	G	AATATTCATTTATTTCTTATATATATATATAAT GTGTTAGTTAATGCTATAATAATCACATTTATTT ATTCGATAGTCTTTACAAGTTTTTCGAGCT	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1203	57.56	Ca-desi-LG(Chr)7	1916451	GATTAAATTTAGTTTGATTAATACCATGATGATCTG ATGGATGATACTCTATATTATTCATTTTTCTCGGT ATTATATTGGAGTCAGGCAAAACATCTG	G	A	TTATTCATCAGATCATAATGGTATTAATCAAAT GCATTTATGGCTAGAACAATAATTTTTCCATGA TTGGATATTTGAATCAAACAGATTGGCATGT	NA	NA	NA
Ca-II-SNP1204	58.44	Ca-desi-LG(Chr)7	1922382	CAATCTTCCTTTTTTTTACAACAATTTCCCCATT TTTTTGACAACATTTTGTATCATAAAAGTGTGCAA CAAACCTCATTCTTGACTCATTAAATTG	A	G	TATTTATGATATTTTTAAAATTCATTTTGAGATG ATAAAATAAGTCAAATTTGGTCAAATTTACTATGT TTTTAGTGAAAAAATATCAAATTTAATATT	NA	NA	NA
Ca-II-SNP1205	59.32	Ca-desi-LG(Chr)7	1938849	CAAAGCCTCCTCTTTGTTGATGTTTTCTCTCA ATTTATAGACTAAAATGATGAATCTTTATATTCATT AGATAAAATTGAGTTCTAGATTATTACTT	G	A	CCCTAAAACAACACTACAATTTTACCATGTATACA AGAAATAAAAAAGTGCATTCTCTCTTTCTGGG TTTACCTTAGGAAATCAATTTTTCTTCAAAAA	NA	NA	NA
Ca-II-SNP1206	60.20	Ca-desi-LG(Chr)7	1949027	TTCTATTAAGTTTGAGATTACTTTAGTGGTTGATTT TTTAGTTTCCTTTTATTTTTGTTTTATTTTATTAT TATTATTATTATTATTATTATTAT	A	T	TTTATTCGAAGATTAATAAAGCAAAAAATACT CAAAATATTGAAACAATAAAACTCAAATCAA TTATCAATAATGATAATAACAATAATAAT	NA	NA	NA
Ca-II-SNP1207	61.08	Ca-desi-LG(Chr)7	1958630	GAGTCTTCGTCGCTGGCAAACCTCGAAGGAAT CATCATTACTCAAACCTCCTGGGAAGTCACTTTCA AGGCAGATGTCCTATCAGGAGAGGGTTTCAT	T	C	TGAAAAACAACAACAATTTCTTTAACCACAAAC GGGGTTGAGGGATGAAGGAAGTGTGAGAAGG ACACCTAAAAAGCAAAAGAGTAAAAGAAAATGT TTC	NA	NA	NA
Ca-II-SNP1208	61.96	Ca-desi-LG(Chr)7	1962522	ATGAAATAAATATGTTTTGGTATTAAGTGGGGGA AAATTGGAGTTTGTACATGGTTGTGGTTTGTGAT GTGAGTATGATCTAAAACCTCAATGTAGGC	T	A	GAGGAGATGGCCTACCTGTTGAGAATTGCTG CATGCATCACTTTCTTCAACCTAAATCTATAATG AAATCTTCAATTGAATAAACTCGTCTATTGCTT	NA	NA	NA
Ca-II-SNP1209	62.84	Ca-desi-LG(Chr)7	2036771	AAAATTCACCCACACTTTCTTAATAAGAAGGTTG GTGGTCAAAGAATATTTTGCAACACAGCTGTTTTTC TTATTCGGCTCTAGACTGGCCAGCACGTGA	C	T	CCAATGCACAGCAGCCAAAACCTTTTGTGGAA TGATTCTTATCCTCATCTTTGCTGAAGCTCTTG CCCTTTATGGTCTCATTGTTGGTATTATCTTGT C	NA	NA	NA
Ca-II-SNP1210	63.72	Ca-desi-LG(Chr)7	2042539	TCAATTTCCATACCAAGGATTCTCTAGCTGCTCC TAAGTCCCTCATTTCAAATTCAGAATTAAGTGATTT CTTCAAACCTGTTGATAGCATTATATCAG	A	C	CAATAGAAGCTCTTATGACTGTTGTGTCTATTT CAAAAAAGAAGGTTCAATCAACTTCATATATCTA TTACTCTATGTAGATGATATGTTAATAGCTAGT	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1211	64.60	Ca-desi-LG(Chr)7	2075045	TAATTTTCTGAGATGGCTCAATGAAAGTCCTTCT ACATAGTGTGACCTTATCAGCCCTTGCTGAAAAGG AACACCAGCTTTTGCAGCATAACCAAGTGC	T	A	CTGTTTACGAGTCTCGTAGACGTTTCGGGGAG ATACTTGCTACCGAGAGTCTGTTGATTGTGAT GTTGTCATAGCTGTTCTGACTCTGGTGTGTT GC	NA	NA	NA
Ca-II-SSR373	65.48	Ca-desi-LG(Chr)7	2084209	GGATGCAACCTCATAAAGTTATAAAAA	(AT)9	(AT)10	TAAACTCATTGACCAGCGG	60.05	181.00	NA
Ca-II-SNP1212	66.36	Ca-desi-LG(Chr)7	2091776	CAATCACAATGTTATAGATTTATTGAAACATTTCT TTCAAAATTGGGTTTGTCTTTCACGAACCCATTC TTTTTCAATGGTACCATCATAATATCAG	A	G	GTTGAAGAATTTTCTAGGTTTCTTCTGTGTTG CTGAATAAGTTTTCTGGATATATTTCTTTTGT TTTCTTGACATATAGACCCACAGGAAGCCAAAG	NA	NA	NA
Ca-II-SNP1213	68.12	Ca-desi-LG(Chr)7	2127007	GATCGCCGTTTGGCGGTCACCTCCACATAGTTG TGAGGGGAGATATGTTGGGTTTGGGCTCCCTT CCTATGTGGAGAAAGGCCAATATGTGCAAGT	T	C	TTGCTTCTCTCTCACTTTTCTTTGTCTCT CTCTGAATTCAGCTCTTTCACACCCACTAATCT GACCTCTCCACTTGGAATAAGTGAGACATG	NA	NA	NA
Ca-II-SNP1214	69.00	Ca-desi-LG(Chr)7	2163724	AGATGGATTTTTTCTCCATGGACCAAACTTTTTT TCATTTCTTCTCTCGCCCAATACATCAGGAATG TCTTGTAAGTCTTTTAAATCTTGTGT	G	A	TGGGTCATCGAGTCTTTTGGATTCAAATCATG TTTGGAGATCAAATGCAATATCTTTGATGGAA AACCAGAATATAGTCTCCACCCTCCTTGTAG A	NA	NA	NA
Ca-II-SNP1215	69.88	Ca-desi-LG(Chr)7	2190171	AAGGGACAATAATTCAAAGTCTTCTTTCTCTT CATTTTTCTTATTAAAACCCAATAACTTCAATAA TTCTAGCTAATTCATTTTTGAGGTAGTT	C	A	TGCAATAAGTATGATGCAAGATCTAAGAAAAC ATGGTAAATGATAATGTAGTACTAATAGTTTAT TATAAGTTCATTGCAATAAGAACAGTAATTAAG	NA	NA	NA
Ca-II-SNP1216	70.76	Ca-desi-LG(Chr)7	2196332	TCAGAGAAAAGTCCCTTATATCTTATTGGTTAC TCCAGGGTCCAAGTTGGAACTTACAACCTTGTGT CGGCTTCTACTCTCTCTGCAGCTCTAAGG	A	C	TTCTGCTGCTGCCAAGGAGGAGGAGAAGAAGG ATGAATTGATGGTATAGTCTATGTTACTGATCC TGGATTTGCTATGCAGAAATGAGGTGTTGAGGA TA	NA	NA	NA
Ca-II-SNP1217	71.64	Ca-desi-LG(Chr)7	2204432	GTTATGAATAAGTTATTGGTTCACATTGTTCTAG AAATTGTACAACGTGTCTGTAATCATCTGTCATG ATACTTGAGGTGTTAGCTCAGTGATAAGAG	C	T	GACAGATGGGTTTTTTTATTAATCAAAGTGATA CTAATAGCCACTTTACAATTGCCCTCAGGGGA TTTGAATTCGGTATCTTGAAGTTACAAGATTAA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1218	72.52	Ca-desi-LG(Chr)7	2227761	TCACCTTGATTTTTATTTTATTACTTTTTTGTGTC TCACTCGATCATTTTAATCATCCATCTTTGTGAAT TGTGAAATATTTTATTTAAATTTGATA	G	T	ATGAATTTTGGATTTCGATTTTGAAACCAAAATA TTAATCATTATGATTACTCTATTAATGTTAATAA CAGTTTGAATGTTTGTAAATAAAATTCTAAT	NA	NA	255
Ca-II-SNP1219	75.16	Ca-desi-LG(Chr)7	2230354	ATGTGATGAAGAGTCATCAATATTCTACCTATTTG CTAATTTTTTTCAAATATTTATTGTTGTAGTCA GAGTATTATTTTGTAGGCATATTTAATA	A	T	TCTTTTGAAGACACAATAATAAGTCTACTATGAA ACTAAATATGGATATTTTTTTGTTTTTTTTTTT GGAAAGCCACTATACTTTTCATGTTGTAGATG	NA	NA	NA
Ca-II-SNP1220	76.04	Ca-desi-LG(Chr)7	2262437	TTACCTGTCCAATCACTTTAGCCATGGCTGGATCA TAATCTGTAAAGATTGTTTTTGGTTGTTGTTTCC CATACTCTCCAAAATGCTTTGAACAACCA	A	G	AAAATTTGATTTGTGCCCTTTGTTGGTGTA ATCATCATTATCAAATGTCATGTTTGGTTGTG CCTGTTATTTGATGATACTGAAGTTTCTTTTAC	NA	NA	NA
Ca-II-SNP1221	76.92	Ca-desi-LG(Chr)7	2282511	TACAATCCCTAATAAGTTGGACACTCTGAATTTCA GATGTATGCTCTTCTTCTCTCTCGTCAACTCTAT CATCTATAACCTCATGAAATGAAATATTAT	A	T	TAGTTTCTGTATGCTGTTTTAATGACCCTGTTA TTACTTTTTGGTTAGATGGAAGTAGGGGACACT GAATTTGAACAAATTAATAAGAAGAACAAT	NA	NA	NA
Ca-II-SNP1222	77.80	Ca-desi-LG(Chr)7	2353501	CTTCCTTCAAGTGGATGGCATGGTCATGCCCTCTA GAGGGTGGTAGCCCTTAGGATTTTGAATACCT CCTGAAATTGCTGCAATAACTCCTCTAACTC	C	T	ATGGGGCATTGATGCAAGTATTGTTGAAAGAAG GTGAAGGGTTCGTGATGCAAGGTGAGATAGCA ACAGAACTTCAGCAGGAGAAACAGCAGGTCTC AGG	NA	NA	NA
Ca-II-SNP1223	78.68	Ca-desi-LG(Chr)7	2355113	TTTTTTCATTGAGCTTCATGGAGCTCCATTGCA TCTTCAATATTTCAAGATCTTCTCAATTCCTTGA ACTCATTGTTCCCGTTGCTTTCGTTTCTG	G	A	ATCACTGGTATCAGAGCACCGATCTAGGTGCC CTGAGGGAGTGGAAACCACCATACGAGCGTTGC TACAATCGTCTATGATTTTTACCAGAAGCATGG CAA	NA	NA	NA
Ca-II-SNP1224	79.56	Ca-desi-LG(Chr)7	2417406	ACTGTGATCCATGTTGGCCTGCTGCTTTATTCCTT GACATTAACAAAAATATTGAAATATTTACAGGTGA GGATTGGGAAGAATGGTGTGGAGGAAATT	C	G	TGGGAGGCAAATTTGATTCCTTCTCAATAGAT GATTTGAGTTTCAGACTTGAGGTTTTCAAGGCT TGTTGCTCGAAATCTGAGAGAGGACCTAAGCC AA	NA	NA	NA
Ca-II-SNP1225	80.44	Ca-desi-LG(Chr)7	2427737	GTATTAGCACGATATGATGAAGAGGGTGCAAGAA TTTATCGAGGCTTGTGATACTTGTCAATGTCAAAA ATATGTTGCAACCCTCCAATCGGCTTGCTG	C	T	ACCACCACAAAATAGCTTCATAGTTATTACTTT TTGGCAGACTAGTAAATGAAACCCATCAAGATTT CGCTCCAAAACAACACTGGAATGGGAAGTGGC T	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1226	81.32	Ca-desi-LG(Chr)7	2503483	ATGGCAGTACATCATCACATCTTCTCTATCATCT AATACACATGCCCTCAATAAATCTTCCAGGGACTG ATTCGTTCTCTCAGTCTGTCCGTCGGTTTA	T	C	AGTATTGTATCAGACCGTGACCTGAAATTCACG TCGCAATTTGGGAGCGTTGCATGAAGCTTTG GGAACGAAACTAAGATTGAGCTCAGAATATCAT CC	NA	NA	NA
Ca-II-SNP1227	82.20	Ca-desi-LG(Chr)7	2525183	TTGTTTCTTCATAAATAAGATTTAATGAATGACAAT TAATTGACCATTTTGTGATGTAGGCGTCACTTCC TAATTCCTTAAATGTTGTACCATTTTCTC	C	A	TCTGTTTTGTGTGTTTAAATGCATTTTAAAGTTTC TAAAGCTTTAAAAATAATGTGATGAAGCAAATG GAGAGCAAAGCCATTAAGCATTCAAATAGAA	NA	NA	NA
Ca-II-SNP1228	83.08	Ca-desi-LG(Chr)7	2545091	GGTCATTGAAAACACATTTTCTGAAATTGGGGAG AGCACATAAGAGAATTTTAGGGGGCCATCGTCC AATGTTGTTGCTTCTGTTCCCTCCTACCATTG	G	A	CATAGCATGTGATTGAGTGGCAAGAAGTATTTG AAGCTGTTCTGCAATATCAGATATTTGGGAAGC AGTCTCAGATGAGTATACAGAACCAGAACTAGA G	NA	NA	NA
Ca-II-SNP1229	83.96	Ca-desi-LG(Chr)7	2570445	CTAATTTGGATACACAAATTCACATATACAATAGT AACATTACTTGATCTATTTTTTGTGACTCTGCTC TTTCTCTGCCCTGAACAGCTTGCTTTC	T	C	AGAATAGTACCTATAAGGTCTATGCAGCATACA CCTACTGACATTATTGCTGCTTCAATGACAAGG TTTCTTATATCTGCTCCAGAGAATCCAACAGTA C	NA	NA	NA
Ca-II-SNP1230	84.84	Ca-desi-LG(Chr)7	2574968	TTTTCTAGAGTATCCCTTCTACCTTCATCAGTAAT ATCATCACCAAATACAACATGTTCCAGCACATTACC GCAGTGTATCTCATGCCATGCTTCTTGT	G	T	ATGGACGGGGAAATTCATGAATGATGAGACC GCCTAACCAAAGTTTCCCTCTTATGATTGTGA ATCTTGATTGACTGACAGATGAAACTGATTGAG AG	NA	NA	NA
Ca-II-SNP1231	85.72	Ca-desi-LG(Chr)7	2652130	ATAGTGCAATTAACATTGATGGTGATCTCCTAAAT CTAGTATTGTTAGTAGAAGCTGAACCTGTATCTCT AGAGGAAGCACTGGCTCACCTCATTGGAA	T	G	ACACCCACTTCACTTCTATAGCCTTCTTATTTCT TGGAAGCTTACCATTTCCAGGTTTTGTTCTT GTGAATTGATCTCAATTCCTCATCCATAGCATC	NA	NA	NA
Ca-II-SSR374	86.60	Ca-desi-LG(Chr)7	2717077	GCCACACTAGAGTCCTCGCT	(ATTT)9	(ATTT)7	GTGACTGAAGAACCACCAA	59.63	180.00	NA
Ca-II-SNP1232	88.36	Ca-desi-LG(Chr)7	2734808	GGAAGCTTCCAATGGCAGTCAACGGGTGGACTCT AGTGCTAGTCGACAGTCCGAGGCTGGAACATGA TTCAAGGTGTAAGTGGCAGCTCCAGTGCCGGT	A	C	GAAAGTGGTGCATCTACATTAGTGCGTGTA TATGGATCACATGGGAGAATATTGAGATCAACT GGGGCGACTCCACATTTCCAGCCTCCACCTG TC	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SSR375	89.24	Ca-desi-LG(Chr)7	2813514	CACAAACAAAATAGATAAACAAACAAA	(AG)7	(AG)6	TTGACATCTGGTGTGGATGAA	57.94	110.00	NA
Ca-II-SNP1233	91.00	Ca-desi-LG(Chr)7	2821353	ACTTTTAAGATTTTTATAGAGATGGTGTAGATCCA CTATGATTGGAAGGCCATAACCCATGAAGGTTGA ATTTGATGGGTACATTGGGATTGCATGGCAT	C	T	TTGTACTACTACTTAGCACTAGCTATGGTGCTT ATGACTATTACAAGTTGGCCCAACAATGGCCAA CAACCTATTTTAGACATTCTCAAACCATAAA	NA	NA	NA
Ca-II-SNP1234	93.64	Ca-desi-LG(Chr)7	2900339	TAAACTTTATCTATCTTTTCTTCTTATTCACAATC CATAAAATGCAACAATCTTAGGGGCCGACTAATTT GTGCAAAATATTTTTTTGCTTTTAAAAG	C	T	TATTGATAAAGAAATTATAGAAACGTTTATTTTG AAAAATATTTTCTATTTTTATTTTTAAATTTAT GTTGATTTTACTTATTAATAAGAAGATAAAA	NA	NA	NA
Ca-II-SNP1235	94.52	Ca-desi-LG(Chr)7	2931394	GGCACACATGGCTACAATCTCTCATGATTGAACATA CATGTTCCCTTTTACACTCTTATATGTTGTTATGTG ACAACCTCATTGCTGTTCTAGTTTTGCAT	G	C	AATTCAAATTCACATGTTGGTCACATGAAGGACA ACTAGAGACTTAGACAGTACCTGTTTCAAGGCA AAATGAATGTCCTATTCATGTGCTTTGTACAA G	NA	NA	NA
Ca-II-SNP1236	95.40	Ca-desi-LG(Chr)7	3057424	TCGTGGATTGCCATATCACTCTTGAATCACAAAAG TAGTCCCTCCATTTTATTTCTCCCAAGTTTTGGTC CCTCAAACAGAAATTTGGTCTAAAACTTGA	A	G	TTGATTCAGATTTCAATCCAATTTATCATGGCC GAAGAAGGAGATAATGGGTCTCTAAAATCTTCG CCATTGACACCGTATGAAGAAGCGTTGAAGC CTTGTATCTTTGATTACTAAACGCACTCGTGT TGGTGATGTCAATATGGAGGAGCGATTACAGCG TGCTATTCGAGTACCTAAAGATGCTTGAATTGG AGGAGGCGATTTCCAATTTGAAGGTTATCCATG TCTCTCCAGCAAAAGCCAAAGCATCTACATCC	NA	NA	NA
Ca-II-SNP1237	96.28	Ca-desi-LG(Chr)7	3176106	TATGTGCTTGACAAGAATGTAATCTTGCTCCTACG TATCTCCCGGTGCGATGGAGAAATCAAAGCTACG TAGTTATTGAGTAAGAAATGTTGATGTGTTG	G	A	TCGTATTTCAAATATATTTCTTTTCCAGTCAAAA CAAATTCATTTTCTTTCTCGTCAAAAACATTTT TTTATATAACAAAACCCATTTTCTTTTAAAAA	NA	NA	NA
Ca-II-SSR376	97.16	Ca-desi-LG(Chr)7	3377852	TCTAACATTTGGTCACGCCA	(ACC)5	(ACC)6	AGGTGGGTGGTATAATGGA	60.11	101.00	NA
Ca-II-SNP1238	99.59	Ca-desi-LG(Chr)7	3392731	TCCACATTAATTTGCATCTTCAACCTTTTTTTGGT AGGTTTTTTTTCTTTTATTTTTAGAAGGCTAAT GGTCGTGTCGATTATCTAGCCAATTTAG	A	C	AGTGAGGTAGATAAGCCCCCTTACATCATAGG CTAAAATAAGTTTTAAAGAATGAACTAATCGTG CACAAGAGTCCAATTTGAAAGACTAGATTGAATG A	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1239	100.40	Ca-desi-LG(Chr)7	3397685	CATTTGCGCTATCATATTTCTCTATGTAGATGACTT ACTCATATTTGGTTCAAACATTCATGCTGTAATAT TGTGAAATCATTGTTGTGTAACAACCTT	G	A	GTAGGTTTACAGTCAAAGTATTTGTATTTCTTTA GGATCTTTTCTGACCTAGTAATCTTGATCCAA CGATTACACTCGTTTCTCTGAGGTCTTTCATAT	NA	NA	NA
Ca-II-SNP1240	101.21	Ca-desi-LG(Chr)7	3400244	TTCCAATGGAGAGCTTGTGGCATTATAGAGAT CCAAGCCCTTGATGACCGTTGGAATCATTTTTCA AAGGATCCAAGTTTTTCATCATAATTACA	A	G	CTTGCACTCTGATTAAGGGAAAAACAAGGAC ATGTCAAAGTCAAAGCTATGCTGCGAGAGGAT GGGATCTGCCTGGCCTAACAGCTGAATGACA GTT	NA	NA	NA
Ca-II-SNP1241	102.02	Ca-desi-LG(Chr)7	3414861	GATGGTGAGGCATCATCAAATAATGTTGATGAAGT AGAAGTCACTAATACTCCTCTGATTTGTGGCCTTC CAGATGATATTTCTCTTTTGTGCCCTGCAA	C	G	TTTATGCTTTCTGCGATAAAAAACCACTCGTC ACTGCAAACAAAGTCCCTCCATCTTTTCGAGAC AGCCTTTAGAAGTGAATGATATTTCTAGGAAC T	NA	NA	NA
Ca-II-SNP1242	104.45	Ca-desi-LG(Chr)7	3467534	CAAAGACTATGTTCCGGTCTACTAGCTGTTAAATAT AGGAAGGATCCAATCATCCCTCTATACTCTTTTTTC AGATATTGGAGTTCCCTCATCATCTTTGTG	T	G	GCTCTCTGGTAATTATTTCCCGTTAAAAATCTT CACCAAATTTGTTAAACTAAAAACCTAATCCTC TTGGGTAGACCCCGTTACACCCCAATCCTCT TCGACGCTGTTTGCTTAAACCCGTTGACAACCG CTTGTAACACGTCGCGATTCCAATTTACTTT GCGGCGAATTTCTCTGACTCTCGTTTGTACGA ATCAACTTGAGTTGGAGTTGCACTCAACTCAAC CCCGCCGAAACCCGCCCCACTTCCTCTCG TTTTTGAACAATTTTTCTTTTTCTTTTTGGTTT GTTTCTTTCTACTTATGGAGCCCAATGCCAC ATCATCTGAAATAACTTATTCATTTTTTACT	NA	NA	234
Ca-II-SNP1243	105.26	Ca-desi-LG(Chr)7	3474237	CCGTTAGAGTTGTGCCAATGATCATCACGGTACT GTCAGGAATAAATATACACGGTTAGTGGTGGACT CTATCTAATAAACTCTTGAGTTATCGTTG	G	T	TTTTTGAACAATTTTTCTTTTTCTTTTTGGTTT GTTTCTTTCTACTTATGGAGCCCAATGCCAC ATCATCTGAAATAACTTATTCATTTTTTACT	NA	NA	NA
Ca-II-SNP1244	106.07	Ca-desi-LG(Chr)7	3502394	TCCTATTAGCGTTGGCTCTCGAAGCGTCATTCCCTT CTTGGCGACATGGTTTCCCTATAAAATCATTATCAA GTAGAGTCTTAACACTACTTCAAATAATAC	C	T	ATAGGTTAGGAGTTGTTATCTGATCATGTGTGCG GTTTAGGTGACTTGAGTTGTCAAGTCCAATATG ATTATTATGAGTTGTTATAGTCGGACGTTAGTT T	NA	NA	NA
Ca-II-SNP1245	106.88	Ca-desi-LG(Chr)7	3521319	AGAGTTCTTGCAAGTGTATGCTAATTTCCGATTGT CATGTTTGAATTTGAAATAATCATAGTATTTTTTATT GATTGCTTAATTTCTAAGAAGATTGTAGA	C	T	TCTTAAGTACAACAAGTCAATGATTGATAATACT CAGAAAAAGAATGCTACTGATCCAGCATTGAAC AGTCCAATGTCATGAACCAGAGTATGCAGCCA C	NA	NA	NA
Ca-II-SNP1246	107.69	Ca-desi-LG(Chr)7	3524538	ACTACCGACCCCTTGA AAAATAGCCTTGTCCCTCA AGGCTGAAATATGCATCAAGTATCCTTCCCTTCTT GCTGCCAATCTTCTCTGACCAAAAAC	T	A	GGAGAATTTCAATTTCTATGAAAGTTACTACTT ATGAGTATTGCTGGTATTGGTTTATCCACCTT CATGGCTGGCTCAATTTTCTATTTGATAGAAGC	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1247	108.50	Ca-desi-LG(Chr)7	3536403	ATTGTTATAATCAACTTGTTAGAAGCAACTACTCAA GTTCCAAACCTTTGTATTCAATCCCAATGGTGGTG TTATTGTGCCTTCAACATTTTGAATTGT	T	C	CCTGACCCCTCAAATCATTCTACTCAAACGGTC TGACAACCTTCAAACCTTTGAGGAACACACACCT CGACTCTACCAACCAAGTCTTCTCCACATAATC T	NA	NA	NA
Ca-II-SNP1248	109.31	Ca-desi-LG(Chr)7	3551690	ATATATATATATATATACTCTAATTTGGAACCGT TGCGAATGTCCTTAAAACTAGTGCAATTTACTTTT ATTTCAATTTGGGTTTCAGGGTGTACAT	A	T	ACTATTAGACGATTGACTATTAGACGACTGACA TTTGACTCACATTAACCTGACACTCAACCAACT CGGCCTGATTGGACAGACCTGCTCTGATACCA CT	NA	NA	NA
Ca-II-SNP1249	111.74	Ca-desi-LG(Chr)7	3554353	TTCTTTTGTCTGATTGTTGACTAAGTTAATTTAAG TGTCATTTCTATTGTTGTTACTGATTGTATTAGGCA ATTAATTCATCATCACTAGTTGATTTG	G	A	TATTTAACTTAGAAAACCAATTAAGTATAATCCA TAATTCATTTTTTTTTTCAACTCAATTAATAGT CAAAAATAATTTCAAGTAAGTAAAGGATAG	NA	NA	NA
Ca-II-SNP1250	112.55	Ca-desi-LG(Chr)7	3603706	ATTTAATCACAAATATCATTATTTATCGATTTTT TTTAGTTAAAGTGTGGGTAAACGGGTATGGGTACG GGCACTTAAGTACCCAGAGGGTAAGGGTA	C	T	GGCAATGGGTAGGGTACTACAGTACCCGTCCC CATACCCGCGATTAAAAAATACCCATACCCG TGCCCGTACCCTCTTGGGTATCACTTTAATAC CC	NA	NA	NA
Ca-II-SNP1251	113.36	Ca-desi-LG(Chr)7	3670182	TTGTCCATTTTCAGGATTTATCCTATAATTTATTCTA TTCTATAATCCTGGTTCTTGATCCGAACTTCTTC CCATCTGGTCAGAAACCTGTCTAAGGAA	T	C	CAAAATCAGCCTGTTCCCTTGGAATATGTTTT CAATAAATTAACCGGGTTAAACGAACATTCCC TTCTCCGGGTCTCGCTTCTGAAACGGCGCTCC A	NA	NA	NA
Ca-II-SNP1252	114.17	Ca-desi-LG(Chr)7	3697179	TTTTTATACTGGTTCGACTATCAATTCGATAGTCTA CATCCAGTCCCAGAAATCACTTACCGATTCCAGCCT TTACTAGAAATGATTGAGTATGTTTACA	T	G	TGATCTTGCTAGAGCTTGGTGATTAGTTCTTAA GGATAGATTGGTTGTTGTTGATGATTGATTTG AGTTAGATGTATAGGCATTGAAGTCTGGAAG T	NA	NA	NA
Ca-II-SNP1253	114.98	Ca-desi-LG(Chr)7	3702391	TTTTATGCACATTTAAGTATTATAAATGATGTGCTG ATATGGCTTGTGCTATCTGATGACAATTCATACC ATCTTAGAAATGGGTTGAGCCTAACTCA	G	A	GGGTGTGTGTGAAGAGTCCCACATTAGATGA GATATTATGACCTCAAATGAGTTTATATGGTG GAGGCACCTCACCTTAGCAATCAGTTTTGTAG GG	NA	NA	NA
Ca-II-SNP1254	115.79	Ca-desi-LG(Chr)7	3729362	ATGTC AAGCATATCCGGCTTTGTAATTTATTTGT ATTTCTGCTATTTGAAGTCTTTGTTTGATAATTT TCTTGGTCATTTCTATTACTAATTTCTT	C	A	TTTAACTATAGAAATATGGCCCAATTCCTTAGA ACCTTGAGCGAACTAGGATCCAGAAGAAGAGA TAAAACCATGATACTTTCTACTTCATCATCTATA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1255	116.60	Ca-desi-LG(Chr)7	3815555	ATTGCTTCTAACCTTGCTACTGGGGCGAATGTTTC ATCAAAGTCAATCCCTTCTCTTGATTGTACCCTT GAGCGACCAATCTTGCTTTGTTGCGGACAA	G	C	CGAAAGAACCAAGTATGGGAACCTGTTCTCAA TCTTGAAATAAACACATCATTGGTACACAATG GGTGTAAAAATAAACTTGATGAGAATGGTAT A	NA	NA	NA
Ca-II-SNP1256	117.41	Ca-desi-LG(Chr)7	3823467	TTAAGCAACCGGTCTCTCACCCGACCCACAAAA ATCTCACGCTGTAACCTTTCTGCAACCGAGAAACG CACGATTTACAGCGCTTCTACGATTAAGCACG	A	G	CATAAACAGCATTACACTAAAGCACTTATATCAT AAGCACTTATCATATAACTGTATATTTGATTGA CTGTGAGTGTGGCAAAATTACAGAGGATCG	NA	NA	NA
Ca-II-SNP1257	118.22	Ca-desi-LG(Chr)7	3845687	TTTTTTTACAACATCCAGAATTAAGGGTTAAAGTC GCCTTTGGGGCTGCCTGACTGATTTTACCCCGTC CTCCAGTAGTATCCTATGCATACACATGGAT	G	A	GCCAAACTTGAAGATGAACAGGAAGAGAAGTT GTTGCAGATTTTGAGAAAACACATGAAGGCAAT CGGATGGACCTTGGCTGATATTCTGGTATTAG CC	NA	NA	NA
Ca-II-SNP1258	119.03	Ca-desi-LG(Chr)7	3849555	ATTTTGACTGTCGTACCCGTATAAGGAACCTATAC GGACTTCTATTCCTTGATTATTTTCTTCTGATTTT CACGTGAAATTTGGAGCAATCCGAGACA	A	G	AAGACCAATTCGAACTTTGCTGGGTCTAAATT GCAGATTTTATAATCTGGATTTTATAATAATTT TACAAAAATCATATTAACCCTGTTTTAAGCGA	NA	NA	NA
Ca-II-SNP1259	119.84	Ca-desi-LG(Chr)7	3859205	GAAGGACTCATGAATGATTCTTGATAAAACTGATC CAATGATGTTAGAAACGGCCGCTTTGAGTTTCTA TGCTAGGGCACAAAGTCTCCCAACTTCCCAA	G	T	CCAGGCGCGCCTGGAGCGCGTTTCTGAGCTT GGGGCGCGGACGCGCATCAGCAACCATAAAA ACGCAATTTTCACTGTTTTAGGGATCTTTTGA CT	NA	NA	NA
Ca-II-SNP1260	120.65	Ca-desi-LG(Chr)7	3870719	TGGAAGAAGTCTTTGATCAACTTGGTTGGACTTAT TTCTTGCGTATCAATGAACCTCAATATCCTCACCT TGTTAGAGCTTCTATGCTGCATCAATGG	G	A	GCTCCATCATCTCAAATATCTAATATGTGGCAC AAGGAGGCTGGGTTGATTTCCATATGAACCCC TTTGAGCACAAATGTTGAAACCTTATTTCTTTTGA A	NA	NA	NA
Ca-II-SSR377	121.46	Ca-desi-LG(Chr)7	3913998	CACGAGTAAGAAAATGAGCACAA	(TA)10	(TA)11	CCATCCTACAACAAAGCCC	59.46	144.00	NA
Ca-II-SNP1261	122.27	Ca-desi-LG(Chr)7	3917259	AATTTTGATCGCATGTTTTAATTTATTTTCACTTT GTTTTTCTTCACTACACATAAATTTATTTGTTGAAA ATCGATAATGTTCTTATCAATAACCTAT	T	C	AAGATATAGTTTACTATCTGATTTATAGTAAAA AACTATATCTCTTTTTTTTTTTTTTTTTGCA ATAATAGTAACAAACTCGAGCTCCCTAATAA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1262	125.51	Ca-desi-LG(Chr)7	3940097	TAGTTGATAAAGCAATGGTACATGTTTTTGCAT GACCAACTTATGAGAGATTTACCAAGAAATTGGCA AGCTCCACTTGTGTTTTCTTTCAACTT	A	C	TCTTTAGATATCTTTTTGGCACCACCAATCTTAG AATCTAGTATAAAAAATGCTGAAATCTTGACCT CATAGCTTATTGTGATGCTGACTATGCGGGAGA	NA	NA	NA
Ca-II-SNP1263	126.32	Ca-desi-LG(Chr)7	4002075	TTTAATCCATGACAAGTTATTCCTCAGGGTGAAAA TTTTTAGGTCGAAAATTAGCCAGTGTTTTGATGT ATATAGATAATTTTAGTGGATCTTGACTT	T	C	TCGAGGTC AATCTGTATCTCAGAAATAGCTCGC CTCACTTCAGAACGAAGTGTTCATATATATCA CCAACTCCTGGCTGATTCCCTTTGTACGCACTGC A	NA	NA	NA
Ca-II-SNP1264	127.13	Ca-desi-LG(Chr)7	4075651	AAATTCCTTCATCTTCTTCACTATCATCTACAAC AACAAATAGATATTTTGAAC TAATCTATTTGAGGAA GTGTTCTGTTTTGGATGAGGTTAAACTT	T	C	AATCCAAACCTAAAATGAAAGACAAATAAAAAAA AAATCTAAAACCAATGTAACACTTCCAACAATAT ATTTTCTAAACAAATTAGCAAACAATCTCCGC	NA	NA	NA
Ca-II-SNP1265	127.94	Ca-desi-LG(Chr)7	4081355	TAAATAAAATATTAATGTCGCGGCCTAACTTTGG CTTTTTCTTTGCTATTACTACTCTGTTTTTTCT TCTTCTTTACGGTGTTTTTTTCTTAGT	G	A	AACTTTATAAATACACCTTATCAAATTTCAAAAA GGGGGGGATCTGAAAATTAACATTGCTGATAA AAAACGCATAGAAAAGAAGGAGAAAAAATTGGA	NA	NA	NA
Ca-II-SNP1266	128.75	Ca-desi-LG(Chr)7	4096273	TCGTCTTCGGATTGGTTACCGATGCGTGGATCTA AAGAAATTA AAAATGATCGCTTTGGATTGGTTAC TGATGTGTAGATCTATAGAAAAAATGATCGT	A	C	TACCTTCAAGATTGGACCAATTACGATCTATGC ATCGGTAACCAATCCGAAGACGATCACTTTCAT TTCTATAGATCTACGCATCGATAACCAATCCGA A	NA	NA	NA
Ca-II-SNP1267	129.56	Ca-desi-LG(Chr)7	4105738	TACTTGCCAACTCTCTTATGTCGATTTTCAACACTT CAGAAATTCATCAAAACTTGGTGGTTGCCAGTA TATCGATAAGGATTTCCCTTCTCTAGGGA	A	G	GGCGTTGGCTCAGTACTACGACCTCTCTTAA GATGTTTACCTTTCAAGACTTTCAGTTGGCCC CCGACATTAGAGGAATTTGAGCGAATATTGGGT TA	NA	NA	NA
Ca-II-SNP1268	132.80	Ca-desi-LG(Chr)7	4131862	TGTGTCATTTATTCCTTAACTCACTATCATTATC GATGCAGGTTGCTTACTTGTTC AAGTCTATGA CTTGGGCTATAGAACTAAGAACTCAAAC	T	C	AAATTTATTGATAAAACAACCTTAAATGACACTT GAAAAGGAAAACAGTAGTATCTACACATACATA CCTTCATGTTGATCACTGCAACTTTACTGGAAG	NA	NA	NA
Ca-II-SNP1269	133.61	Ca-desi-LG(Chr)7	4168119	TTTGTGTGGGGCACATACAAGTGGTCATAAGG TCCATCTTGTGGTTGGGACATGTGTTGCAACAA AAAATCAATGGTGGATTAGGTGTAAGAAAC	C	A	CCTCCCATATTTACTAATAAGAACCTTGCACCA AAGATCATCAAGTGTGTAATAGATTCCACCA TATTTTCATGAGAAAAGTCTATTTCATACGATGA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1270	134.42	Ca-desi-LG(Chr)7	4191368	AAGATCCCTAAAACAGTAAAAATCTGCGTTTTTAT GGTTGCTGGTGCGCGTCCAGGCGCG GAAAAACGCGCTCCAGGCGCGCTTGGCAGAG	G	T	AAATGCAAAATACATCAGACAGCAGATGCTGTG CGCCTGGAGCGCGCCCTGCGCGCTGGAGCG CGCCTGCGCGCTGGAGCGCATTCTCAGGA TCGG	NA	NA	NA
Ca-II-SNP1271	135.23	Ca-desi-LG(Chr)7	4201107	GATCATACTGCCAGATGTCTCTAGCATCTCTTTC AAAGTTTCTTCACTGGGATCTAGCATCTCTTCAA AGTTTCTTCACTGGGATTTTCGGCAGTATC	C	T	AAGAAACGGGAGAAAGCTCTACTCGACAAGAA CAAACTCTGAAATAAAATTGAGCGACAATTT GCAAAAATAAATTTGAAGAAAACCCCATGGAT AT	NA	NA	NA
Ca-II-SNP1272	136.04	Ca-desi-LG(Chr)7	4241579	CGTATGCATAACACCATACGTCTTTAAGGCTCTT TCTCCTACAAATCATCTTCAACATGTTCAATTTCT TTCCCATCACACTTCTTCAAACCATTTG	G	A	GCGTGTTGGTTTCAGATCGACAATGGTAGCTAT GTTAAAAAGAGTAACGGGGAGCATACCATAAG GAATGTGAAAACATCATTTGAGGACCTCTAAA TG	NA	NA	NA
Ca-II-SNP1273	136.85	Ca-desi-LG(Chr)7	4253650	TGACAAGTTTTGGTTATTTTTGGAGATATCATT AATATTTCAATTTGGTTTCTGAAAAGTGGGATC AGTACTTTTTAAATGAAAAGAATGCTATT	T	G	TGCTTACAGAGAAGTAGAAGAACAAAAAGTT CCATGCTTTCAAACAAGGGACACAAAGAAGTA AAAAATTTCTTGTGACATAAAAGTAGTGATTCA	NA	NA	NA
Ca-II-SNP1274	137.66	Ca-desi-LG(Chr)7	4325967	CAACATCAGTCAGGTATGAAGGTAAGTTTTAGTT TTTCTTGATGAAGTCAAAGCTATCTCCGGTAGTG GTTTGGTGAATATGTCAGCCATTGGTGTT	T	C	ACATATCTTACTATTCTAGAACTAAACATAGAG ATCAGACACCACTTCATTAGGGACTTTGTTCAA AAAGGGGTACTAAACATTTCAATTTGTAGACATT	NA	NA	NA
Ca-II-SNP1275	138.47	Ca-desi-LG(Chr)7	4360750	AATGAGGAATGGAGTGCATTTGTTCCAAATGTTT GGACCCCGCATTTGTCGTAAGTGATTAATTTATTA GCATTTGTGTTTTATTATTCATATTCGTAG	A	C	CGTGATTTTTGTATGGGTGGTTGGATTGCTT GCCCTTTCGCGATTTGCCTTACTAATTTTTATA TAAATAAAATAGCAATTGTGTAATAAATAAC	NA	NA	150
Ca-II-SNP1276	139.28	Ca-desi-LG(Chr)7	4367175	TCTCCGTTACGTAAACTTACGCTCGTTTCTAC GAACCCTACTCTCCTACCAACTATTGATTTCTG CGTTGTTCTTTTTGTTGATTTCTGCGT	C	T	GTAGTCTAAGTACGTAGCAGTATAAGTTCAACA TGCAATTTAGTGACAACAAAAATTAATAAATAC AATACCTGAAAAATAGAAAAACAGTAAGGTTAC	NA	NA	NA
Ca-II-SNP1277	140.09	Ca-desi-LG(Chr)7	4376143	TCTCCCTTTCTTATGTCAGTATATTTATGAGC GGTTATGTACCTTTGCTCTTTCGAATTTTATGAGC GGATGTTATGTCGATTTTCGTTGATTTTT	T	G	AAGGATTACGACACAACAAACCGCTTTAAAAGA CTACGACACACAACTGCAACAAAAGACTACGA TACAAAAACCGCTCATAGTGGTATTAGGACCAC T	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1278	140.99	Ca-desi-LG(Chr)7	4395021	GGAGCATGTCTAGAGAGCTGTGAAAAACGAGCAC TATACTCTGAAACTGTACACCTCCGTTTTGCTCC AATCGCTCAAACCTCATGAGCTAATCCATCTC	T	C	GTTTGATATAGTGTACGTGGTAGACAAGTGG GGTCACCTCCGTTAGCATGGAGAGAGTTTTCT CAGTTGTTTCATGGCTCGTTTTCTCCAGAGAGT GTT	NA	NA	NA
Ca-II-SNP1279	141.89	Ca-desi-LG(Chr)7	4496371	TCACAAAGTGATAGATTCAATATATTTTTGGCTTTT TGCCTGAATTATATGACACCTCTTCAATCTAAA CCAGGTTTTGATTTTAATTTGAACTGCAC	T	C	CAAACAACTACTTACATGAGCATCATAATGTTTG GAAGTATCATCTCGTCTATTAGGATCCAAATTC TTGTTCAAGTTTAACCAAGTCAAACATCCTCCTC	NA	NA	NA
Ca-II-SNP1280	142.79	Ca-desi-LG(Chr)7	4506937	ACTTTAATTGTCATATTGAGAGTGACTTTAACTGC CATATTGAGGGTGAATTCTAGAACGTTTTCTAT GGTGCAGTGGAACTTCGATACAGTGAATCT	A	G	TGAGTCGGGACTAGGTCGCTCTCTTTAAGAC GTTTCACGGCACTGCCAAATTTGCAAGGAA GACTATCAACCACGAAGTCCCAGGAAAAACA GCC	NA	NA	NA
Ca-II-SNP1281	143.69	Ca-desi-LG(Chr)7	4516212	TTTCCATATTGGTCTACCTCTCCTCTTTTGAAG TGGTTTTAGGTGGTTCAATAGATGGCTGTGAGTT TGTTTTGTAGGTGGCTCAATAGATTATTGT	G	T	ATAGGGAAGCCACAACATAGTTGCCTAAAAGT CTCCAAAAATAAGGGAGATCGAAAGCCAATTA TGCACCATCTATTTAACCACTTGCAAATAGCT A	NA	NA	NA
Ca-II-SNP1282	144.59	Ca-desi-LG(Chr)7	4520667	GAGGCCTTGCGACTCACATTCGACGCCAATTGTC CGTCTTGAACCTCGTCTTTGAGGGTAGCATTACC ATTAGTAAAAGTAATAATAAGTCATGGAAC	C	T	GGGTTGGCACTATCCAATTCTCCATTCCTTT TCAGTTGAATATGTTCTCTATGTACCAAGATGC CCTTTTCGTTTACTTTTCTAATTTTGATTAATC	NA	NA	NA
Ca-II-SSR378	145.49	Ca-desi-LG(Chr)7	4528657	TTTCCTAATGAATCCCGCTT	(AT)16	(AT)11	ATTTATATGAAAACCTTGATTTGA	59.92	124.00	NA
Ca-II-SNP1283	147.29	Ca-desi-LG(Chr)7	4561463	ATGTTACATTGTTTGTGTTTGATTGGTTTAAACCTT TGTTTTGAAATCGTAGTTAGTACAAGTAAGAAAG TCTTGAAGTTTGGGAGAAGCCTCTAATAC	G	A	ATTCCAAATCTCATAAAAGGCTAAATGTAGAATA ATATTTCTAAGGTGAGATTAGCAAAATTTGTCAA TTTATTCATGAGATGATGAAAAATTATTAACA	NA	NA	NA
Ca-II-SNP1284	148.19	Ca-desi-LG(Chr)7	4571592	CAACGGATTGTGAGCTTTGAATTTATGATTGACC AATCTCTTCAGAATTAATTATCTTTGATATGAAC CTTTAGAGGCATGATGAGTTTGTACACAT	T	C	GTCCAAAGACTGCCTCTAAAGAATGACTATGAA ATTGAGTCTGAAGATTGCCTCTGAAGACTGAAT TTGAAGCATGCCTCTGAAGCCCTTGATGTCTC T	NA	NA	155

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1285	149.09	Ca-desi-LG(Chr)7	4629079	CAACCGTGAGATTTTTCTACTAAGTGTTCAGCCAA TATCGTTCTTGATTTTCATAGATCAATCTTGATCTT TACACAATTTCTACCTTTTTACCTAGAAA	T	G	TTGTTAAAATAAGCTTGAGTGTTTGTAAAAATC CTTTCATGTTTTGAAAGGTAACCTGCAAAATCC TTTCTGAACTAGTAAGGTAGAAGTCTGAGGAAATC	NA	NA	NA
Ca-II-SNP1286	149.99	Ca-desi-LG(Chr)7	4638355	ATCTTTTCTATTCTAACCATATTTCCAATCTACA CTCATCGCTCTGTTAATACGTCGATTTCTTTATAA TAGCCAAACTTCAACTCAGTTTCATGTGC	A	G	CAGAAGGTGACGATGCGATGAAACACGATTGT GAAGAAGATGGCCATGAAACTGAGTTTGACTAC GGCGATTAACCTGAGTTTCACGATTGTAAAGAA AT	NA	NA	NA
Ca-II-SNP1287	150.89	Ca-desi-LG(Chr)7	4641911	TCTTACTTCTCAATAGAGTCAATAAACCTCTAAA TCGATAGCATGTGAGGTAGGGTGATGAGTGTGTC TCTTTTTATCATGTTTTTATATTGAACTA	A	G	TATGAATGGTGCAAACCTTGGTAAATACATAGA TAAAACTAAAAAAAGTAATTAAGTGAGACAT CTTCCACTTTAAAACTATTTTTGTATGAATAAG	NA	NA	143
Ca-II-SNP1288	151.79	Ca-desi-LG(Chr)7	4650844	TCCGCGATCTGCTATTTAGTACAAATTTGTGTCAA ATAGCCCGCTATTGCGGCACCTAAAGCACTGTAGCA TAGCAGAATTTGAACAAACCGCTATTTTCTG	C	T	TGCCAAATGTGTTTTACGTTTTTAATGAATTGG CAGTTGGCAGGAGTAGAGAGAATAAACAGGTG ATAAGGCATGAAGCAGTGTGTCAATTGCGGAT C	NA	NA	NA
Ca-II-SNP1289	152.69	Ca-desi-LG(Chr)7	4684570	GTGAAAATGGGTGGGTAGGACCACATATTTGTAG TTGTTGATCTTGTAAGTTGAGAAATTTTGCTCAG TGAATCGGTTTGTGTAACACCCCGATTTTTA	A	T	GTATTATATGATATAATTATTTATGACTCTTG TCGTTTTGCGTTACGACATATTATTTTATTAAGT TGTTTTTAAAAAAAGACATGCACTCGCGTTG	NA	NA	NA
Ca-II-SNP1290	153.59	Ca-desi-LG(Chr)7	4708534	TGATTGGAAGCAGGTTATCACCTTTCTCAAGAAGA ACATATTCGCTCGCTTCGGCGTGCTCGAGCCTT GATTAGTGACGAAGGCACCCATTTTCTAAAC	C	A	TGCTGTGGAGACTTCAACTGCCCACTTGT TGTGGATGGTATGGGGTTGCCACTCTATGACG CACATTATTTCTTTAGAAAGTATCCATATTC C	NA	NA	NA
Ca-II-SNP1291	154.49	Ca-desi-LG(Chr)7	4710789	TCCCATTTGACCAATTTGTGAGTTACGTGAGGGG AAAAAGGGTACCATTACACCTTAAGTCATCAATG AAATCTTTGGCTGCCGAACCTATAGTGATTG	G	C	CATCTCTATTTCTGACCAATCTGTGTCTGGTC TGATAAAATGCGTAGGATTTCTGACTGCTTG GTCTTATGTTGTGTTCCATAGCTAGAAAAGC G	NA	NA	NA
Ca-II-SNP1292	155.39	Ca-desi-LG(Chr)7	4718160	TTCTTAAATCTACACTTTTCAAACCCACCAACAA TCTCCTCAACATTTTTTCATACATTTCAACCGT ATCACTGCTCCCTCTAGATTTGTCT	C	T	AAAGGATGTAGAGCTTTGGAAGTGAGTTTGTG ACATTTGATAGCTGGAGCAAGTGAAGTGGAAAG TAGAGAAAGCAGAGAAGCCTGAATAACAGGAT CATCACAAGCACTGTCTATTAATCTTCCACGAG CAAGTAAACAAAGCAAATGAACCTTGTGCACAA GTTGAGCCAAATTCCTTGTCTTACGAGAAGGTC GTGATTTGTTCTGTACAGAAGAAACAGGGG TCATTTCAATTTCTATTTCTATAGCATCATCAT	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1293	156.29	Ca-desi-LG(Chr)7	4721837	ACAAGCTCTTCGTCGGTGGTACCAGCTTCTTTCATCTATTTTAACTCGTCAAAGGTTAAATAATCGTTATAATAACAGTTTGGCGTCAGAGCTATCAATC	A	G	GTATCACATTGTCCATCTGATTGTGTTTGTGAGTTTTATTCTTGTCTACTACTACCACAACTTTGGCATTAGACACATTATCATTACACTGGACAT	NA	NA	NA
Ca-II-SNP1294	157.19	Ca-desi-LG(Chr)7	4777755	AGAGTTAAGCATACTAGCAACAAGTTCATTAAGAGTTATGTTCTTTTTTTTCTTTCACTTTACCATTCACCTTCAAGTAATTATGGTGCAAGTTGTT	C	T	TAACTGAAATTGAAAATCAATTTAGTATAAAGATTAAGAAGTCCAAGTATGATTTTAGTTTATTTAATGAGTTTTATAAGTTGTCTAAAATTATACATG	NA	NA	NA
Ca-II-SNP1295	158.09	Ca-desi-LG(Chr)7	4875181	AAGCAAATAATTAACAATCCCTCCTTTGAACTTAGCTCTCTGAAGAGTTTCAAGTTCACCAACGCTCATCCCAAGTGCTTCTCGAATCTTCTGAAATGATG	C	T	TCATTTTCTAAGGGACTTAACCAAGAAGGTGTATCGAATTGGTTTATTCAGCACAATAAATGCACTAGCAGACATGATGACAAAGGCGTTAAAGTTG	NA	NA	117
Ca-II-SNP1296	158.99	Ca-desi-LG(Chr)7	4928513	TGGGTAGAAAATGCGGATGTGTTGATTGCTTTTTAAGAAAATGCGTTCGGTTTCAATAAATTAAATTTGATGAGAAAAGTTGGTTATTTATTTGGATTT	G	T	TCCTTTTAATAAAAATGACCAACTGAGATGCGACATCTTGTGAGTATAGTTCAAGACGCTTGAGTTGTGACAACTGGTGATTTAACTTTCTTAAC	NA	NA	NA
Ca-II-SNP1297	159.89	Ca-desi-LG(Chr)7	4955329	TTAATTAGGTCTCCATCTTTTGGCTTCACTTGCTTGGCTTTTAGTTAATTAATGAATTTTGGAGTAAATGAGGTAATAATTATGATTTTGGAG	A	G	ACAAAGACTTATCAACTCTCAATTTATTTTAAATAAAGCTAACAAAACCAAAAATTTAATCAAGAAATCCACATGAAAATCATGTAATGATCTCATTTA	NA	NA	NA
Ca-II-SNP1298	160.79	Ca-desi-LG(Chr)7	4960519	CTATTGAATTTACTTATTTCCAATTTCAAAAATTTATGCAAATTTTCAAGTATATCTGACCAGAAGCTAAATTTGATTTGTGCTGTTTTCCCATGGTTG	T	G	CCAACCTTGTGGAGTCGATCAATGCAGTATTAAAGGCTCGCACAACTTCTCATCACTGCTTTGGTCCAATCAACTTATTTTAAACAGGGACACAATTT	NA	NA	NA
Ca-II-SNP1299	161.69	Ca-desi-LG(Chr)7	4991975	AAAATATTTGTTTCAATCGATTTGCCAATCGATTGTGTTTAAACAGGAGCTTAGCTAATTTTATGTTAATCGGAGTGCCAATCGATTTGGTAGATTTT	T	C	ATCGATTGGACAATCTATTGTGAGAATTTCAATCATGTTAAGTTTGGTATCAATCGATTGGGAAATCGATTAACATAACAATTGGTAAGAATTTTCAAG	NA	NA	NA
Ca-II-SNP1300	162.59	Ca-desi-LG(Chr)7	5014988	GTTTCGGAGGATCCTGGTGTGCTGTTGGAAATTTGGAGGCAGTTGCTGCTGGGAGTATTGAGAGTAATTTTGTGCTGCTGGAATAGTGGTTGTTGA	T	G	CAACAACAGCAGTTTCAACAGCAACAACAATTTCAACAACAACAATTTTCAATTTCTCTGTGTTTTCATCAGCAGTTCCCGCTCGACCTCAATACTTGC	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1301	163.49	Ca-desi-LG(Chr)7	5019768	AATGAAAGTCCTGAAGGTAACAGGAGGATTTTT GGCCTTGTTGATTTGCGAATACTAGGTGGTTAAA AGGCTCTTCATGTGCATAATTATTTTCATC	G	A	TTGGCACTTTTAATTTCTCTTGAACTATAAA ACTAGATTTTGTCCATAGTAAATTGAGTAATCT AATTTGAATGATTAATGTCATGCCTACTTG	NA	NA	NA
Ca-II-SNP1302	164.39	Ca-desi-LG(Chr)7	5068949	TCCCTATCAATGCAGTCATAAGCTTTGTTGATATC CAGTTTCAATGCGACGTCACTACTACCATGG GTCTTACTTTTCATGTAATGAACAATTTCAA	G	T	CTTCAACAGGTTAAACATGTTCTACATAAAT GTATATCTAATTAACCAATCACTTTGTACCTA ATAGGTTTCATCCTTGACAATGCAATGGCAGCC	NA	NA	NA
Ca-II-SNP1303	165.29	Ca-desi-LG(Chr)7	5130849	TCCTTTAAGAGTTCATCCTCTTGTCTGTATATCCT CCAATTTGAAGACTTGATGGATTTAGTCATATTT TCTCCTCTTATCTTAATGATGAGTAAC	C	G	TCTCTCAAATGGTTTTAATAACAAAATTG TTTAAAGATTATGATTGTGGTTAATGACTAATA TGCGCTTTTGAGTGAATTCATATTAGAAAACA	NA	NA	NA
Ca-II-SNP1304	166.19	Ca-desi-LG(Chr)7	5164973	CTCTATTTGTTATTTTCTAATATTTGGTATCATA GCTTTTGATTCGGTCTAAGTAATAAGAGTTCTTAG TATGTTATGTGGTTGATGTTTGTCTGAT	A	C	AGATGAGTCAAAATGACCACTTAATAACTAAAT ATGTCCTTACCTAGAAGCTGTCTAAACAACAC TTTTACAATATAACATTTCTTTCTTGATGTGGAA	NA	NA	NA
Ca-II-SNP1305	167.09	Ca-desi-LG(Chr)7	5167898	TATAATTTAGCAACCTATAGAATTTGCCGTGAAATT ATTTATATCAAGATTGTATGTCGTCTGATTTTATGA ATATTATGTTGATTGTTACTTTGTGAATG	G	A	CACTACTCACAATATCAATCAAAAAATAAAAGA TCAAACAATATCATTTCAAGTATATCACAATT TCATTCAAGTAGCAAGAACTCCAGTACATA	NA	NA	NA
Ca-II-SNP1306	169.79	Ca-desi-LG(Chr)7	5206401	TGACTGCATTTCTTCATTCATAGCTGTCATCCAAG TTTCCTTGTCATTATTGTTAATTGCTTTCATGTAAT TGTTTGGTTCAACTATTGCAAGATCTTCA	A	G	TCTATATTTGTTGTTTTTCATTTTCATTTTATT TTCTATATCAAGCCTCCAATCAGATATGGGCAA GCATATTTTAATTTGTTATGCTTTAAGTGTG	NA	NA	NA
Ca-II-SNP1307	170.69	Ca-desi-LG(Chr)7	5244567	TATGTGCCCGGTACACCTTCGTAACCTCAAATA TCCGAATTTGTTGAAGTATACCTAATGCGATATTC CAACCACCCCATGAATTCGTTATTCCTAAA	T	C	GTCTTATTAGTCTAGGATTGATTCCATTTGATC CTTCTAACCAGTTTCGATCTTGATCCAATGTGG AGATAAGGTGTTCGTTATACCCTTCATGACT C	NA	NA	NA
Ca-II-SNP1308	171.59	Ca-desi-LG(Chr)7	5257100	TTCTTTACTCGTTTAAAAAATCGCTCGTATTTTT GATCTGTTAACTATACCTTTCATTAGTCAAATGGTC TTGTCAGTTAGTTTTTGACAAAAAAC	A	G	TATTTGATGAATTTTTAGGTTTTTATGATTGTAG GAGATTATAACTTAATAAGTTTATGAATTTGAAG ATGAGTGCATGAAAGAAATGACAAAACTTAA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1309	172.49	Ca-desi-LG(Chr)7	5451631	TTCCGGCTGCCTTTCTAGCAACCAGCCACAATGCTA CAACCGGCCTCAAAGCACCACCTTCGCTGTGTG TTTTCCAGTGACTTTTTTCTTTCTTTCAA	C	A	GATGCGCACTAGAAAAGAGGCTGTTGGTGTGG GCACAGCTGTAACAGAGTAAAATAAAAAATAAA TAAAAACTGACATTTGGTGCGAAACACAGTT GT	NA	NA	NA
Ca-II-SNP1310	176.09	Ca-desi-LG(Chr)7	5534873	TCTTCAATCTGTGTTTATCTTCAATCGATTATCT TACGGTTCAACAATTTACAATTTATGATTACAATT TTGTTATTCAAATCATCGATTAGATT	T	C	CCTGAGCTTGAAGATGAGAACTCCATTTTAT TTTTTGCTTTTTCATTATCCTTTCTCTGAAAATT AATCCCTAAATCGCTGAATCTGAATCTGAATTT	NA	NA	NA
Ca-II-SNP1311	176.99	Ca-desi-LG(Chr)7	5605819	CGCTCTCTCAGAAGCAAATCAAGCCCTCTCTATCA CCCCCAAGGATCCTTCGGTCCACATTTCTCGGGC CCGAGCCCTTTACATAGCGGGTCACCGCGCC	A	G	TTCATCTCAGCCCTAAACACCAACGCGTCGGC ACGCTCTGTGGATTGAGAACTTCGCGCGCG GAAGAGATAGAGCGGAATCGAGGGATCTGATG GCAG	NA	NA	NA
Ca-II-SNP1312	177.89	Ca-desi-LG(Chr)7	5624378	CCATCAAATTTTTCTGCGAACAACATCGTCATCTA CAGATCAGGTCTATGTCTGAAAGCGCGTCGCCAA AAGTTGTCACACGCACTCTCATGCGCTGCTA	A	C	GAGATTCTGCACACAATGGAAGTGGTTGTGTC GGAAAACCTTTCCAGCAGCGACGACAGACAGC AGCAGACGGCGGTGGCAGATCTACTTGATGA GAGA	NA	NA	NA
Ca-II-SNP1313	178.79	Ca-desi-LG(Chr)7	5627374	AAAATCTTCTACGGATCTTAAATGTTTAGCCATTT ATGCTCCCGCACATCCCGAATTTCCCAAGAAAT CATAGTCATGGTTTGTCTTGGTGAGGGAGC	A	G	ATCCTATACTTGTACTGCTGCTATTATCAACAA GATGTGTCTCTCAACACATCGTCAAGAAGACA TTCAATACAAGAATCAAATACAAATATCCACTTC	NA	NA	NA
Ca-II-SNP1314	181.49	Ca-desi-LG(Chr)7	5659652	TGGATTAATATTTAGATATTTTTCATCTTCTAGG CTTATTCTAATCCATTTAAGTTTTAACAATCTTG TGCATCCAATAAGTGTGTTTGTGTCAAT	G	A	CAATGACACAAAAACTTATTGGATGCACAAG ATTGGTTAAAAAACCTAAATAGATTAGAATAAGC CTAGGGAGGACGAAAATGACCTAAATATTAATC	NA	NA	NA
Ca-II-SNP1315	182.39	Ca-desi-LG(Chr)7	5712266	CCTCTAATGTAAGTCTAAGGATGTCCATGGA TGGTCATAAGTCTTTGAGAGATGGTTGATGTCTT TCTTTCTAATATGTACTATTGGAATTTGG	T	C	TTCTCATCAATAATAGATCAAGAGAATAATAAGA ATCTCTTTTATAAATCATATTCTAGAAAGTTACC TAACAAGTAAAAAATGTGTCAACATGTTTAC	NA	NA	NA
Ca-II-SNP1316	183.29	Ca-desi-LG(Chr)7	5722546	CAAGGGCTTCGTGGGTCTTCCAAGCAACACCAC TAACTCGAGCTTCGTGGGTCTTCCAAGCAACAC CACTAACTCAAATCCCGCAAGGATCTGTGG	T	C	TTTTCAAAAGAAAGTTATCTATATGTGTGTGGC AACATGTGTGACAATACAGTACCTACTGATCCT AATCAGATGGTTGAAAGAAGCCCAAGAAAATTG TATATGCCACAGATTTTTCACATTTTACAGCA AAATTCATTAGCAGAGAAAGCTTTTAA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1317	184.19	Ca-desi-LG(Chr)7	5799441	ATACCTATACCATTATTTTTAAAAATACCAATTA TACCCTTAATTTTTAAATTATTTTATTAATCAAT TTTTTTTTATTCATTCATCTTTCTG	A	G	GCCTGGTATTTGAGATAAATATTCTCTACAAA GTCCCCTATTAAATTGAAAAAGTTTTTCGAAAA TAAATGTGACTGAAAATCTTTTTGTAGTT	NA	NA	NA
Ca-II-SNP1318	185.09	Ca-desi-LG(Chr)7	5805369	ATAAAGCACAGTTGTCAGTACACTTTGACTTTTG GTTCCAGGCCAACCGTACCATACTTATACTTATC ATCGTCAGCTTCGTTTTGAAGTTGGAAGAA	C	T	CGAAGCATAACGAGTTAGATTATTATTAGGAAA CAGTAATTAATAATGCATAGCATAGGATACA TACCATTGACTTGCCGGAGCCAAGTCCGTGC TC	NA	NA	NA
Ca-II-SNP1319	185.99	Ca-desi-LG(Chr)7	5859634	TAGATTTGTCATTTATTTATTTGATGGTCTTTGT TATAAATATGTTATTAATTTGATTTACGTATGAGT TAAAAGTATTTAAATATTGAATTGTTAT	G	A	ACGTCGTTAACGATTTAATAATTATAACAATAT TTCCCAAAACACGTATTTAAATCATCTCTCATT TCATCGTAATTCATGGAAAACATATTCAATCG	NA	NA	NA
Ca-II-SNP1320	186.89	Ca-desi-LG(Chr)7	5865212	CCTTCCCTGTCTTCATTTGGCCCTTATCAAACAT ATGAATGCTGGCTCCTCTTAAAAACAGAGTTCTC TGATGTATCTGAATAAATTTGAATCAAATC	A	C	TTGTGCTGACTGTCATCCAAACATTGTTTCGAT GGCATGGGGTGGAGCATGATCAAGATTTTATTT ACCTTGCACTGGAACGTTGACTTGCAACTTAG A	NA	NA	NA
Ca-II-SNP1321	187.79	Ca-desi-LG(Chr)7	5880777	AGCTGGGTAAATATTAATTTTTGTTGCTTCTGGA TGCAGGCTGCAAGGATATTGATGATGCACTCCAC TGCTACGCTCTTCCAAATGGAACCTTTGAAG	T	C	TGCCACTTTAATCCACACACACACAATAATA TATATAGATTATCGATACATGATCATTAATA ATAGAAATCCTTAGACCAAGGATACGAACTCCA	NA	NA	NA
Ca-II-SNP1322	188.69	Ca-desi-LG(Chr)7	5885422	CTAGACTGTGTATGTCTAATCTGATAATTGTTTT TTGGTTCTTGCGTAGCGTCATCCAACCTCAACC AGAGAGATGCTTGAACCTTGCTACGTGTTG	C	A	AAAAAGAAAAATAGAATAAATATTTACCACA GCATGGTCAAGAGAATCAGCCAATGCTTTTGAC GAGGAAACATCCAAGTTCAGGCCAAGTGCAGC A	NA	NA	NA
Ca-II-SNP1323	189.59	Ca-desi-LG(Chr)7	6099337	GTCAATCCAACCCCATGTGAAAAGTCGGAAGCCG CCTGCCAACTCAGAGTTATAGACCTTTACTAAC TTCCCTTTGGCTGAAGTCTAACTTTTGTGA	A	G	TTCCCTTGCTCTTTTTCACTAGTTGGTTTTTCC CTAATTGTTCTCGATATACCACAACCTACAGA ACATTTATTTGTAGCCACATAAACATTAACATG	NA	NA	NA
Ca-II-SNP1324	190.49	Ca-desi-LG(Chr)7	6148005	CTGGTATGCTCTCCAAAACATACTTTATCTTAAA GAAAACCTGAATTTCTCAATGTTCTTCCCTTAGT CTCAGGTACCCACATTGATGTAATGCAAC	G	A	CATGATTCATGCATCTCTGTATAATTGTCAATA TAATGCTGACATTGTTTCATTGTCTATAGGGAC ATTACAATCTACACAATCGTAGCCGCTTTCAC	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1325	191.39	Ca-desi-LG(Chr)7	6192916	TTCATCATCTTCTTCATCATCATTGTCCTCTTCTCTTGGGGTTTGAAGAGGCAGGGGCAACACCTCCTGAACATCATCGTCATCATCAACTTCC	T	A	TATCTTGTTCAGCCAATTGGACAGCCCGAGACTCGCAATGGTGGGGGTGCTGACATTGATGATGGGAAAACCTGGATGATGAAGAGGAGGAAGAGGAGG	NA	NA	NA
Ca-II-SNP1326	192.29	Ca-desi-LG(Chr)7	6202937	TGGCATTTTCTTTTTGTGGGTGCTTCTTTTTCATTAAAGACTAAATCATAACAAGTGTGGTTATATGACTTCTATTTTTAGGAAATTTTATACAA	T	A	TGTTAAATCTTTTGTGTTAAATAGGAATTAATATTAACAAGTTGGTTTTGATATTAATTCATCAC TTAGGAAAGAATTAGATAATCTTGTGATAAT	NA	NA	NA
Ca-II-SNP1327	193.19	Ca-desi-LG(Chr)7	6248248	TTTTCACTAGTGAATAATTTTTTAAAACATTTTTCCAATGTTCTTTCTTTTCAAAATTAATCTTAAAGTCATTTTATCAATAATTTGACCCTTTTT	C	A	AAGAGCTTGACATAGAGATTAGTGAGAGACATAGAGGCATGAGATAAGCATGGATCATGTTAAAAATATGACAACCTTGGTATGAGTTGTGCAAGGC T	NA	NA	NA
Ca-II-SNP1328	194.09	Ca-desi-LG(Chr)7	6283725	TTCTGCTCTTGGATTCCCCTTTTTCTCAGATCAGTTGCTGAACTCATCTATAAATAGAGAGCTCACCTCACTTGGAAAAGCACACCAAAGCTCTC	T	C	AGTCGATTGACTGACACTCAAATATAGCACGGA GGCTACTCAAGAAAATAAGAAAGAAGAAGAA TATAAGGGGGAAGTGAGAAAAGCCTCAGAC AC	NA	NA	NA
Ca-II-SNP1329	194.99	Ca-desi-LG(Chr)7	6286042	TCGATGGATCTCATTACCAATAATGGGAGCTTTGTTTGGTGGGTTGATTCATAATCAACATGGTAAATTTGTGTATGCTTTTATGCGTAAATTTAC	C	T	TCATATTCATTAACACATGTTGCATGATTGAGATTGAACAACCTGGAGGTCTGTGAGGATTGTCCATAAATCAATTGAGTTGCAAGAGTATTTGAAGA	NA	NA	NA
Ca-II-SNP1330	195.89	Ca-desi-LG(Chr)7	6405935	GAGCCATCAATATAGGTTAAACACCATTAAATGTTCTTCTTATAACTTCCATAGGGGGTTAATCCATTCGTTTTTATTAGGGTTAATCAAGTTCTACTT	C	T	TACCGCCACACCAAAGTACAAGATAAAGAGTGATTGTGGCATTGCAATTTCTAACCAAGTTGACTTTATTCATAACTCTTTGATCAAGAGTAAGGTTTT	NA	NA	NA
Ca-II-SNP1331	196.79	Ca-desi-LG(Chr)7	6426365	GAGTTTTGTGGTGCATTGTCTATTATCTAGCTCTTG TAAAAATTTTAGGAGTTAGAGTTTATAATGTTAC AAGTTGCATTTAGACAAGCAAGGCATGAT	C	T	GTTTCATTTAATTTTTTTCATCATCTACAAAAATATATGGATAAAATAGTCTCCATCTTCTCCATTATAATTTCAAGACTCATAACCACGAGTTCTTGCTT	NA	NA	NA
Ca-II-SSR379	197.69	Ca-desi-LG(Chr)7	6459484	CATTTTCGTCTCAACCATTCA	(AT)12	(AT)11	TGGAGACGAGGAGCATACCT	58.61	134.00	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1332	199.49	Ca-desi-LG(Chr)7	6475773	AAAAAGTTTTACCGGAAATTTCAATCCTCTTGAA ATTTCCGGTACACTGTGTAATTTTTTTTTAATTTT GTTTATTGAATTTGTTAGTGAGGACCA	A	G	TTCTCTATTCTCTTTCTCCTTTTTTCAACAGCA GCTCTCCTATTTGATTGTGTAGGAGGCCGAAC CGGAATAATCACCACCGTCAGATTTTCTCCT	NA	NA	NA
Ca-II-SNP1333	200.39	Ca-desi-LG(Chr)7	6530072	GAATTCCTCCACTGCATCTCAACAGAGACCAGTTG TTGATTGGTGGGCTGAAGATCTAACAGTTCTCAGA ATTGACATTTTTCAAGAGTTCTAGTTGCA	T	A	CCTTGATAGTAAAGGATCTTACCAAACCTCTG AGAGATTTCTGTGAATAAAGCATTATAATAGGA CCAATACCACACTGTTTAAACCCTCTTGCCATC A	NA	NA	NA
Ca-II-SNP1334	201.29	Ca-desi-LG(Chr)7	6565557	TCTTAGCATTAGATATGATGCCATTATAGTTGG TGATATACTGATTTATCAATTTGTGTACGGCTATT GTGTTTGATGTCTAGCGATGTTCAATTTGA	G	T	AAATTATGCATATTTGGTACTACAATCTCATCAT TTTTTTTCTCCACTCTGCCAAAAGTTTCAAATAA TGGTTCGATTTAATCTTATACTAGTTTTTTCCT CTCATTAAATTTGTGTCTTATTCATATCTTACT TTAGCTCAACTTAGTACAAACCTTATGCTAAAA CTTGCCCAATGTTGAAAGCATTGTTAGAACAG CAGTTCAAAACAAATTCAAACAACTTTTGTTC TCTTCTCTACACTTCCCTCTCTTTTCAACA	NA	NA	NA
Ca-II-SNP1335	202.19	Ca-desi-LG(Chr)7	6598127	ACAAAAGGCAAGTTACCTCCTCTATTTACAGTTCA TAACAATACTCCATGACCTTCTTTGTTACAGGCCCT TTTGTTCCTCCTGAACCTGAAGATTTTGA	T	C	TATTATGCTATGCCAGTGATAGCAATTTCTTGC CCATTTTGAACATGATGGTTTATTATTTTTTTT TTCTTCTCTGAATGGTTGAGGATAATGATGG	NA	NA	NA
Ca-II-SNP1336	203.09	Ca-desi-LG(Chr)7	6627339	CTTCGGGCTCTGATCTGACATTTGGCTTTAGCTG TTGTTTCATCACCTTCCAGTTAATACTGCATATGC CCTTCTTACCATAAAGTGGTAATATGAAC	C	T	TGTGTCGAGTTCTACTACTTTCTGCCTTGA ACTGGATTGAAGTATGGATGGGCTGCGTAGT ATTTAAGATTTGTTAACCAAAACATTCTATAAAAT G	NA	NA	NA
Ca-II-SNP1337	203.99	Ca-desi-LG(Chr)7	6722262	ATCGCACTTTTCTCTATTTGATAAAACTCTGGCAT ACCGATCTATTCCGAATTTTTATGACCCTTTACA ATGGAAAAAATCTCTTTAAGACCTTTTC	C	A	AGATTTTAGGAACCTCATAATGATTTTGTGATTT ATGATGGTACTATTTGATACAAGAAATTTAGAT GCTCTTGATTTCTAAAATGATTGATTTTAGTTA	NA	NA	NA
Ca-II-SNP1338	204.89	Ca-desi-LG(Chr)7	6729740	ATTGACACACACTGTTTTTATACTGGTTACCCAA AGATGGCTACTTCCAGTCCCTCACACCCTTGTGAG ATTTCACTAATGTTCAAACAGATCAACCTCT	T	C	CCCACCCTCCTTTTCCCTTAAAACTCAACTC CTAGTCATATCCTAAAACAACCTTGCAATATCTAA CCACAATCGAGTTCCAGAGTGAACAAAGTCTTA TCCTCCTCTCTATTTCCCTTCCATGCTTCCAATA TTTGATATGCCGAAGGCTTGTCAATCACTCCAT CGTCAACATCATCTTTCATAGCTTTTCATCATC TGAGAGCTCATCCGAACCATCCGAAGACTT CTCAACTCCCACTCATGACAAAAATTCACCTT GTAATTTACTCACAACAACACCCCAAAATCT	NA	NA	NA
Ca-II-SNP1339	205.79	Ca-desi-LG(Chr)7	6747829	TAATTATCTCCATTTGTTGATTCCTTTAGATGATA GTGTTGAATAATGTCCTTAATTTATGATATCATG TGTCTAGTTTTTCATTTGAGTATCTCTAA	C	T	ACATTTGTCGTGAAGATGGATTTCTCACTGATC ATCAATGCAGTGCACCGTACTTCTGCTCTTGAA ACTAAATGATCACTCAATCTTCTGCCAAGATAG TCAACCACAACATTACCTAGCATCAGCTTT	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1340	206.61	Ca-desi-LG(Chr)7	6769512	CCAGTAAATTCTCTCAATCTTGTCCCGGATGAT GAATCACAAACCGTCGCGCCTCCGAGCTTGGCA ATTCCCATTTTTCTTGATGGTAGAGTTTGA	G	A	TTTAATTTGCACTACTCTCTTCCATTATCTAT CTTTTTCCCTTCTATTCTATCTTATGTCAGAATAA CACAGTTTCAGCAAGTTATTTTTAATTGCCA	NA	NA	NA
Ca-II-SNP1341	207.43	Ca-desi-LG(Chr)7	6786915	CTGTAACCTATTTTTGATTAATTAGATTTTTTAAT GACTTTAGTTTTAGTTAGAATTTGTGTTTTCTTAT CTTGTTGTGTTTAGGTTAAATAATGCA	C	T	GTGTGATCAAATTGAGAACTCCAACATTAATA ATCAAATTGAGAGACTCAATCTCAAATTATTACA ATAACACAAGAATAGCAACAATCATTCCATAT	NA	NA	NA
Ca-II-SNP1342	208.25	Ca-desi-LG(Chr)7	7087458	TTTTCTTCTTTTATCTTCATCTTTTCCCTTGATT GATCTCTCTTTAGGAACCTGCAATTTCTTTTTATGT GACCCGTTTTGCCACAATGATAGCATAT	G	C	AGTGTTCAGTACCTCGTGGGGTGACAAGGAAG GAATTATGGGCATACAAGGAAGCCAAGTCACTT GGTGTGGGAAGCTTTCGACATTAGATGAACT GATTTTTGACAGCCAGCAGTATTGGGATGCATT TGTGCTTTTATAGATGCTTGAAGAATATGG TACCCATTT	NA	NA	NA
Ca-II-SSR380	209.07	Ca-desi-LG(Chr)7	7091911	ACCCCGTATTTCTTTTGCC	(TG)6	(TG)8	ATAGGACCAGCAGCACAAAGG	60.18	187.00	NA
Ca-II-SNP1343	211.53	Ca-desi-LG(Chr)7	7160146	TACAAATCTTACATCCTCCAATTTGTCAACTCG CCAAAATCTGATGTGGCACATTCAAAATTCATCT TCTATTCCAATATGTTTTATTCTTCAATA	G	A	CAATTGCACAAGAGGGAAAGTGCAGACAAAA CCTAGCAGCAGCTTGCAGTTGTACCCACCATG AAACAGAGAAGTGCCACCTTCTATATCAATAGT ATATCAAATGACGATAAGGAAGTACTTCCAAT GTTGCCAACCCCTTGTGAGTTGGGGCTGATGCA CCATGGGGCCATGGGTGTCTAGAAAAGAGAGC ACACTAGTTACTATTATATACAGTGAATGATG AATCCACACACTCTCAAGCAAGCCACAAAG	NA	NA	NA
Ca-II-SSR381	213.17	Ca-desi-LG(Chr)7	7492313	TCCTTGGTGTCCAATCCTTT	(AT)9	(AT)10	GTCTGAGGCCGATGAGGTAA	59.38	203.00	NA
Ca-II-SSR382	130.37	Ca-desi-LG(Chr)7	7874736	TCTATAGCCGAAAATGACAAACT	(TAA)5	(TAA)7	GGGTTTACCGTGCATCACTC	57.21	146.00	NA
Ca-II-SNP1344	213.99	Ca-desi-LG(Chr)7	8206701	ATTATGATGAAACATTTGCTCCGGTAGCCAAAATG ACAATTGTCGACTGTACTCTATAGTTGCTTC TAATGGGTGGACTCTTTATCAAATGGATGT	C	T	GTGTGAGTTGAATGTTTTAAGTTGCTTGTGAGA AAAAAGTTGGACTATCTTACTTTATGCAGTTCAT AACAATTTTGTATTGGGTTTGATTAAAGCAGA ACTTTGCAGGCATTGATGTGAATAATATGTGAC CTCTAAA	NA	NA	111

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1345	0.00	Ca-desi-LG(Chr)8	42890	ACGATCTTGTTACCGCCTTTCGTGTCTAGAATATG AACGTCGACATTTTATCGGCGGTGCCGGAGAAT ACCATAACTCCGTCGTTCCGCCCTAAAAACCT	C	T	TTCTGAAATCACTGGATTGTAATAATTA ATGGGTAATGTAACGGGAACAGTGGCCGCGAA ATTCCGCTTTTCCCGCCAGAACCACCCACATA C	NA	NA	NA
Ca-II-SNP1346	0.85	Ca-desi-LG(Chr)8	99835	TTACCTGAACAACATAAGTAACAGCACATGAATTA TCTTGAAGCTTCTCTACTACCCATCTGATTGTAG CAATAGTCTCTTATTGCATTATTTTGCTT	C	A	TGTTTCAAAGTCCACATGATGAAGTCCAAACCT TATACTGTATCCATGATCCACTCAAAGTTATCT AGAAGGGACCACAGAAAGTACCCCTCACATC TGCTCCTTTCCTTATTGCTGTTGCTAGAGAATC CAAGTATCCACTCAAATATCCACTCTTTTGACA TCGTTCAATACATCTTACTTGTGGGTAGGAA TTCTCAGTATCCCAAATCCATTTTCAGTGATG AAATTCCTATCTTCTTCTATCTCTCTTTATCT	NA	NA	NA
Ca-II-SNP1347	3.52	Ca-desi-LG(Chr)8	131020	AAACATGGGAAGTGAATTTGCCTGTTGAGGAAGT GCCTCCTGAACTTCCGGAGCCAGCATTAGGTATA AACTTTGCTAGGGATGGCATGCAGGAGAAGGA	A	G	GAAGCACAAACAGTGTGCCAAATATGTTGATCT CAAGAAGTGGGATGCTCAATTTGTGGATGTCG ACCGTGAAACTCTGTTTGTCTTCAAACCTCTG CAGGGTACATGAGAATTGATAGTCTGCTTAAGC TGGCATGGGATAAAATAGATAGCATGATAAAG ACAAGACACCAGAGGAAATTGCTCAGTTCTATG TCAGTTGAATTTTGCCTGAAACTCATGTTACAG CAACACACACAGCCACCATCTCTCAGATTTT	NA	NA	NA
Ca-II-SNP1348	4.41	Ca-desi-LG(Chr)8	156792	TAGAATCTATTCTCCTTTGTGCTTGTGGTGACCT GATTTTATTTAATTCAGATTTTTGTGGCAATTTG GATCCTAATGTCACAGATGATCATTGAG	A	G	CTAACTGATTAATTTACCTGTCAGCAAATTTGGA CAAATCCGCATCTCTTGCCTGCTGGAATCTTAA CATGAACTAGCTCACCCTACTGCCAAAAAAGTT G	NA	NA	NA
Ca-II-SNP1349	5.30	Ca-desi-LG(Chr)8	218174	TACACTCATCAGAGGATCAGCTTCGTGTGCATAAG AAGCAGACCTCGTTCCTAACACAGTTGACAGCAAA AACACTGCCTAAAGGTCTCCACTGTCTTCC	A	G	ATATTGCATAATGGTAAAGTCCAGGGTCTTCTA ACTTCTCTTGATTGGGAATTGTTGCTGGGAAG AATTCAAATTATAATATTCAGTTGTAAGGCGCAA	NA	NA	NA
Ca-II-SNP1350	6.19	Ca-desi-LG(Chr)8	219169	TTGATCCTCGTCTTGTGGATGGGCATATGGTAT GAATGTTTTGATTAGTAGGATGGAAGAAGCAAA ACATCACAGAGGTGTACCACAACCTGGCAGAA	A	T	CAGCAATGGAATTTGAAAGAAACAAAGACACT GCAGATGCTTTTCACTTAATTTATGTGATTTTT GTTTTGGAAAAGTAAACCAAAGTGTGCTTACCA G	NA	NA	NA
Ca-II-SNP1351	7.08	Ca-desi-LG(Chr)8	237547	CTTAGTCAAATATGTTTGATTACAAAATTTGTAG AAGTGCATGACCTTCTAGCTTTTACCACCTAGTTGG TTGTTGGTGAAGTACATGCAATCAACGAT	C	T	TACTTGTAGAGAGAATCCACAACGACTGGT TTACCTAAAATGAACTCCTTTTATAATGCATCA TTTTTCTGATTGAATTACCCAAATGATGTTTG	NA	NA	NA
Ca-II-SNP1352	7.97	Ca-desi-LG(Chr)8	238144	ATGATGTATTTATACTAGTGCTTTTGCTCATGGCA TTTGACAATGACAACATGACTCATAAATATATTTCT ACACTTTGACCCGTTGAATGACATTTTGA	A	G	ATTTATGTATAATTATTATAAATATGTTTGTAA GAAAATCAAATTTTACACAAAGGTAATAAAAAA AATCAGTTGAAAAAACAAACATTGATGTAACA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1353	8.86	Ca-desi-LG(Chr)8	244409	TCTCATTAAATTAATTTCTCCCGGTACCATCTAT CATACTACCCCTTATCCTTATTTGTGTTTCTACAAT ATTTGATTTTGTTTTATTCTTAATTAAT	G	T	ATGTTTATCAAGAAATGTAGTGCCCAATAGTA GAAACTTTAACTCAATCGGTCTCATCTCATTGA CTATCATTGTAATAGCCAAATACTGTATGTGTT C	NA	NA	NA
Ca-II-SNP1354	11.53	Ca-desi-LG(Chr)8	252008	TTACCTGAACAACATAAGTAACAGCACATGAATTA TCTTGAAGCTTCTCTACTACCCATCCTGATTGTAG CAATAGTCTCTTATTGCATTATTTTGCTT	A	C	CGTGTTTTGAATCATGGCTTTAAGTTAACTG AATGAATGAATTTGTAGGTAGTAGCAGTTGCTT CATTGCCAAAGGAGATAGCTGCTGGATTACATC C	NA	NA	NA
Ca-II-SNP1355	12.42	Ca-desi-LG(Chr)8	307458	AAACATGGGAAGTGAATTTGCCTGTTGAGGAAGT GCCTCCTGAACCTCCGGAGCCAGCATTAGGTATA AACTTTGCTAGGGATGGCATGCAGGAGAAGGA	C	T	GTTCTTACCTTTTATTCTTACCAAATCCAAAGC GGGCACCAAAGTAGAAAGCAACAGCTAGCAGC CATGAGTCACTGTGAAGTGAACCCAGCGATAA CCA	NA	NA	NA
Ca-II-SNP1356	13.31	Ca-desi-LG(Chr)8	392134	GTTTTCAAGGACTATATTGTCTGGGCTGACATTGC ATTCTGGAACATAACATGATTCTTCGAGCATAGAT CTGATTTTCTCATTTGATGTCATAATGTCC	C	A	GCTTGCATGGATGTGACTGATAGTATCACAAA CCTGTTGATGTGAAGTTCAATGTGAGAAATTTCT CATGCTGATAGATCAATTAGGAGAAAAAGATTT G	NA	NA	NA
Ca-II-SNP1357	14.20	Ca-desi-LG(Chr)8	395111	GCACTCACTCACAAAGAGATAAAGCAAGCCAG CAAGCTGCCTAGAACCATACGCTCAAAGCTTTT CCTTCTTCCAAGGCCTCCCTATTGTATCCA	G	C	AAGAACAATTTTGTGAATGTGTATAGTCTATC CATGCATTTACTGTCTATATAACGATTGTAGGT AGGTCTAGAAGGAAGTGCAATGGGCGAGTGGT GG	NA	NA	NA
Ca-II-SNP1358	15.09	Ca-desi-LG(Chr)8	396980	CCAACATCCATGTGCCAATCAAATTTCTGATATT GTGTCGTCTGTATAAGTAAGTTCCCTTGAGGCCA GCTCTGATCTTATTATGCTGTCAACAGGGC	C	A	TGCTCATAATAGTCTGTGCTTAAATTTGGCTGT TGGTAACGGTTCTGTGTATAGCTTGGCAACTCA TGGTGGCATAACGCGATGGAATATTGCATCCC CA	NA	NA	NA
Ca-II-SNP1359	15.98	Ca-desi-LG(Chr)8	397569	CTTGATCCTGCTGCACCGACGACATGTCAACTCG ATTTTCTGGCTGACCGTCGATGTTAAATACTTTCA AAAGGTCCTTTGAACGGGCATCCCTTTAAAA	T	G	TGGTATTCTATTTCAAACCTTCACTTTTCTGCTA CTAGTTTGTAGTTAGTCTTTGTGTTTCTTCTACT CCAACCTATATATAATAACTTGAATCCATC	NA	NA	NA
Ca-II-SNP1360	16.87	Ca-desi-LG(Chr)8	406836	AGGGTTGTCCTAAGATGTTGGGTGTAACATCCTG CTTTTTCGAGATATTATCTAACGAAATTTCAAACGT AGAAATACAAATTTGTTTTTATTATTTA	T	A	TTACTTTTGTAAATGTAATATTTGATTCATTA TTTTTGAAATATAGCTAAAAATATTATTAGTTA ATTTTAAGATAAATGAGTATTTAAGATAATC	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1361	17.76	Ca-desi-LG(Chr)8	509122	TGCGCGTCACGCGCCCCAGGCGCGCTTGACAG AACTGAAACACGAGAAATGCGCTCCAGGCGCGTG TTGACAGAACTGAAACACGAGAAATGCGCTCCA	A	G	ACTTTCATGAAGACACCGGGACCAAATTCAGAC GCAAAAGATGAGAAAATGAAAATACATCAGA CAGATGCTGTGCGCCTAGAGCGGCCCTGCG CGC	NA	NA	NA
Ca-II-SNP1362	18.65	Ca-desi-LG(Chr)8	513632	ACATAATTTTTCCATTTAGTTTCTGGATTTCAACC TTGAGGGTATTAGAAGTTCCCTCATGGCCAAAAA GTTGGAAGAACCATTCTGGCTGCTTAGGC	C	T	CCTTATGGGTAGCGGCGACAATGACGATGGTT TGGCAAAAAATTAGACGTAATCAACAACCCTG ACAATTTAGACAGCGTCATAAGTGGCAGTGGC AGC	NA	NA	NA
Ca-II-SNP1363	19.54	Ca-desi-LG(Chr)8	571310	AGGGTTGCTCCTAAGATGTTGGGTGAACATCCTG CTTTTTCGAGATATTATCTAACGAAATTTCAAACGT AGAAATACAAATTTGTTTTTATTTATTTA	A	G	CTTTAACCGCAAAAGTTATCTAATGGGATAAA ACAATTTCAATTTGCCTAGGTAGTATGTTGAGA ATGGAATCTGTTGAGCACATCTGGTCTCGTG GGTATTAATTGAATGGAATGTTCTTTTTGTTTT GTAAAGTAAAAATGAAGGTTGAATTATACTTTG GTCCCTAAATT	NA	NA	NA
Ca-II-SNP1364	20.43	Ca-desi-LG(Chr)8	582713	TCTGCCACACTACATTTTCTAATTTCTTGATCTT AATTTTCTGTTTATTAGATGATCCATTATATTATTA TCTAATTAATTAAGTAGTACTCAAATGA	T	A	ACCTAATCCCATTCTTCAAATTAATAATTTAGT CATTGGAGCAACAAATCTCATCTAAGGTACAT TCATTCATTAACCTAGCATTAAATTTACATTAA	NA	NA	NA
Ca-II-SNP1365	21.32	Ca-desi-LG(Chr)8	926918	GACTATCGGCGATCTTCCATTTTTTTTAAATTT TAGTTTTCCACGTATCCCTTCCACAAAGATAATT GTACGAGGCACTCTTAAACTAAAAGGT	A	G	GTTTATCTGATAAATGTTGAATTTACCGAAAAGA GTTAATTTTCCACAAGTTGGGACGTGGCGAAGT ATAGTTTAAATAATTTCTCATGAGAAATCTGTC	NA	NA	127
Ca-II-SNP1366	22.21	Ca-desi-LG(Chr)8	1082099	TTTATTCTTTCTGAATGACTCGACTTTGACTTGT ATTATAGCTTTTTCTGTAAACATGATGTTGCTGG CTTCATACCCGCTGATTATATCATATCA	G	T	ATACGCAATAACATATTTTATAGAGTCAATTTTC AAAGAGAGTAACATTAATGACTAATAAGTTAT TCACAAAACCCCTTCAAAGCAAGATAGATTA	NA	NA	NA
Ca-II-SNP1367	25.77	Ca-desi-LG(Chr)8	1371017	GGGGGACATCAATCCAAAGTCCATCTTTAAGGAG CTGAAGTCCACCAACCTTGTATCTTTGAAAAGTA AAATGATACCACCAGCATCTGTGTGGGCTCT	C	A	GGTATTTGAAGAAGGTGTTTTATGGATCCAAGG GACCAATTTTGGAAACAAAAGTTAGCAACTACC CTCCTTGTCTAAGCCAGAGCTAATAAAAGGAC T	NA	NA	NA
Ca-II-SNP1368	26.66	Ca-desi-LG(Chr)8	1384864	TTAAACAAGCTGAAGAAACAGTTCTCAAGCTAGAC TTGGATGGGCTTGTGTTATTGGTGGAGATGACT CAAACACAAATGCATGCCTCCTTGTGAGTA	T	C	AAAGACTACATGATGCCCTCCTCCCGCAAAA ATAAAGACTGCCCTGTTCTAGCCATAAATCAT GCCGTAATAAAATTTATTTGCAAAAACCTGAA	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1369	27.55	Ca- <i>desi</i> -LG(Chr)8	1388006	ATATGTTCCCTTGAACGTATATAATTTATGGCATGT ACCGTTAATGCTGCTTGTACATGGTCTGACCTTGT TCACATTTTTATGTTAATATAATGCAGAT	C	A	TGCAATAGTCTGAAGAGTTTTCTACGATAGTAT ACGTACAGTGGTAATATTTTCTGTTGATCGAG CATCAATCATAACATTTCCAATCATTTCTGCATA	NA	NA	NA
Ca-II-SNP1370	28.44	Ca- <i>desi</i> -LG(Chr)8	1390716	TAAAATTCATAGCATTATGAATTTCAATTTATTCCA ATGTTTTCTTTTATGTTTTGATGTTTATGAATGTG TGATTTTCTGTGCGGTAATTTCAAGCC	T	C	TCTACATGGGTTAAATATAGTTCTCGGCTTGT ACTTTTGAGGAGTAAAGAATACATAAATAGATA TACCTTCAAGCTCCACCATTGCTTTCTTAATCA C	NA	NA	NA
Ca-II-SNP1371	29.33	Ca- <i>desi</i> -LG(Chr)8	1391715	CTCTATGTTGTATTGGAGAAACACTGATGATCTCG ATCTTTACTGTAGGTCCGATTCAAATCACTGGCC AGGATCTGATGCAATTAGTCACACTCTACT	C	T	TCAACAGAAACACGAGCCCTATATGATCTCCGG TTTATATATTTGCCACCATCAAACGAATACTC ATAGCAGGCCTAAGCTTGCGCACCAAGCTCCA A	NA	NA	183
Ca-II-SNP1372	30.22	Ca- <i>desi</i> -LG(Chr)8	1427874	ACCATATCAGTAAAGGAGAATATGATCCCTGATGT TATTATTATTATTTTTATTTCTTTTTGTCCAGACTTA AGATCTTTGTACCTATAGCGTTCCTAGC	T	G	TTGAAACTGAGAGTTTATCAACGTCGCTGGAAG TTATGTTTTTATCCAGCCGTTTCTAGCCAG TGCTTGTCCAGTTGACGGGAACCAGCATCGCC CA	NA	NA	NA
Ca-II-SNP1373	31.11	Ca- <i>desi</i> -LG(Chr)8	1441739	TCGGAGAGAACATGATGTTTTCTTTTCTATATGT GGTGAGTTATTGGTTATTTATGTTGCTTTTTATCT ATGATGGAACAGATAAAGAAGATGATAGT	T	C	CTATAAGGAAAAATGAAGTAGCTTTCTTCATGC AGCATTGAGCCAATCAAGCACAATTGAGTAAAG CTTTTAGGCTTTTGACAGCTTGATCAACCGCAT A	NA	NA	NA
Ca-II-SNP1374	32.00	Ca- <i>desi</i> -LG(Chr)8	1465861	AGGGTTGTCCTAAGATGTTGGGTGAACATCCTG CTTTTTCGAGATATTATCTAACGAAATTTCAAACGT AGAAATACAAATTTGTTTTTATTTATTTA	A	G	CAGCAGATAAAAATGAAAGTAAACAATTGTTTT CAATAGATTTGCTAGTGGACTAACCGAAAGGAT GCCACGAGTAAGATTTGGTTATGCACACGTGG TGAACAACAATATGATGAGTGGAAAAATGATG CTATAGGAGGAAGTGTAAACCAACCATTTTAA GTGAAGGGAACTTTTTATAGGACCAAATGACC AAAATGCAAAACAGGTTACCAAGAGGGGAGCC A	NA	NA	NA
Ca-II-SNP1375	32.89	Ca- <i>desi</i> -LG(Chr)8	1467895	AATTGAAGAACAAGTACTCATTTTGGCTGAAAGT TTGAATCTTTTCTTGTGCTAAACTAAATGGTCTT GTGGTTCGGTAATTATCACCATCTTGACA	A	T	CACAGAACTCGAACTCAGAACCCTTCTGGTA GATACCTTGTTCATAACATTACCTATTATGATCC ACACATTGTTGCTACTGATCCATTCATGTGGAA	NA	NA	NA
Ca-II-SNP1376	33.78	Ca- <i>desi</i> -LG(Chr)8	1478675	TTGAATTGGTGCAAAAAAGATTACAAAAAGAGA TGGATTCTGAATTTGGTCTAGGGCTTCATACTGG TTTGCAAAGTTTTTTTATTGCTGTGCTTTGA	A	G	GATATCATAAAGCAAGCTATCAAATAACCAATT GCAGGAAATAAAGAAGAAGAAAAAAGACTT TGAGAACAGAAAAATGAAAGTCAATTTTCAG A	NA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1377	34.67	Ca-desi-LG(Chr)8	1478723	CAATTGGTATTTGGCGGTTATGTTTGACAAAGTAC TAGCTACTAGTATGTCTACATTGGTAAGAGATACC TTAGATGGTTGCATTTGTTTACTCAAGA	T	C	CTTCTTCTTTTATTTCTGCAATTGGTTATTTGA TAGCTTGCCTTTATGATATCTTATTAATCTCGAA CCTATTTGGAAAAATGAAAAATGATGTTACATGTT CAATTCAGCTAATCAAGGTAGAGTGCTTCATTT GCATGATCCCTTGATTTATGGTTTAGAATATAG CTATTTTTATACACTTTACACCAGCAACAATAT CAAGTTGATTTGATGTAATGATTTTTGCAAGG CCTGCAATTTCTTAGATGCAAGATCAACTACAGC	NA	NA	NA
Ca-II-SNP1378	35.56	Ca-desi-LG(Chr)8	1485942	TGGTGGATTCTTGACCTAAAGTGTGGCTTTGCAAT ATGAATTTGTAATCATGTGAATTTGAACAGTATG CTTGGATGTCCTTAAATTTAACCATGAGAA	C	T	TCATATTGAAGTTGCAATTTAGAATTTATTGCCAT CCATACTATCCCAATTTATACGAATAAATTTATT CATATTGCAAGACACGTTTTGGGTCAAGAGTC	NA	NA	215
Ca-II-SNP1379	36.45	Ca-desi-LG(Chr)8	1486798	TGGGTGTTTCTTGCAAGGCGTTGTGTGCGGGCA GGACATCATGGGAATTCATGATAAATTTGAATAAAA TTTGGTTACTAATGTGACCAGTTAGTGGTTT	T	C	ACATAATTTCCAATTTTATATGAATAAAAAATT CATGTTACAAGCCAAATTTATTTTGTTAAGACAA CTACCAAAATAAAAAATTTGATCACCAACACC	NA	NA	113
Ca-II-SNP1380	37.34	Ca-desi-LG(Chr)8	1487952	ATTTGATATTCGAGACTAGTAGATTGCCTTCGATA AATCAAGATGATGATATTGTGTTTCAATCACCTTA GATTTGAAATTTGATCTTGTGATGATGATG	G	T	ATTTAGGACCTTTTACTCTAAATATTAATTT TACATCTAAGGGACAATACCATCATCTCAAATT TTGGTTTTAAGATCACATGTTTATCAAGGTCCA	NA	NA	161
Ca-II-SNP1381	38.23	Ca-desi-LG(Chr)8	1488017	CCTTAGATTTGAAATTTGATCTTGTGATGATGATG GTGGACCTTGATGAACATGTGATCTTAAACCAAAA ATTTGAGATGATGGTATTGTCCTTAGATG	T	C	TTAGGAACATCTATGTTCAATATCAATGTCGT CAAGGTACAATAACATCACTCTAATTTATCGAAT TTAGGACCTTTTACTCTAAATATTAATTTT	NA	NA	180
Ca-II-SNP1382	39.12	Ca-desi-LG(Chr)8	1491840	GGTGCCAAAGGATATCAATTTACATACTACACAATA GTCGCTTGGGTTGGAAACTGTGAGTGGAAATGTT ACATCACGTGATTTTCTGACCTTTATTATGA	T	A	CACCAATCCTTGATTTATCGAGGCTATAAAGT CCAGGGTCTACAATCATTGGCTTCCCTCTCTTA TTCTGAAATAAAATAAAATTTGGATATAAAAAAG	NA	NA	186
Ca-II-SNP1383	40.90	Ca-desi-LG(Chr)8	1492057	AGTTTGGCTACATCTTTCAACTCTACACAGGTTT TATTTCCCTTCAATCTCTCACCTTATTCTGGATTTT GCTAATGTAGTATGTGTTTGAAGTGCTT	C	A	TGATTCGAAAAAAGAAAAACATAACATAAAAAGG TAGGAAAACATGCCTGTAATGAAAGGAACAAGA GGAAGCACTATGCGTGTAATGAAAGGAACAAG AG	NA	NA	156
Ca-II-SNP1384	41.79	Ca-desi-LG(Chr)8	1493698	ATGTGGTTTGCAATGAGTTTTTATTATCATATGAAAT TGGGATTGTATGGTTGGACGACCCTAAATCAATC ACGAGATGCATTTTGACTCAAAATGTGG	C	T	AGCCACATTTTGAGTCAAGAATCCACCATCTCA TGATTAATTTAGGGTCAATCCAAGCTTACTATC ACAATTTTATGTAATACACAATCCATATATCAA	NA	NA	174

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1385	42.68	Ca-desi-LG(Chr)8	1496943	TGCGATGAGTTAGAGTAATGGTATTGTACTTTGATGACATTGATACTTGTGCCAAGATGGTTCTAAATTC AATCATTAGAATGACATAGTTGTGTCTCG	A	G	ATCAAATTTTGCATACAACCTTTATCGAGACAATT CAATATCATAGCAATTTATTGAATTTAAGAGCAT CTAGACTCATATCAATTTTGTATTGGAAGTCA	NA	NA	160
Ca-II-SNP1386	43.57	Ca-desi-LG(Chr)8	1501529	TTTGTTGGTGCATTTGCTTTATAATTATTATTATT ATTCTATTGTTAGGTTGTTAATATTGTTAAGTTAG TTATATGTTGTTGAAGTTTGTAAAGTTG	A	G	GATTCATGAAAAAGTTGATTACAATATGAGC ATGAAACACTTTATACATTCATCCTAATTATACT TACAAATCTTAACTAATTTGTAACATAACTAA	NA	NA	112
Ca-II-SNP1387	44.46	Ca-desi-LG(Chr)8	1526844	TACTCACTGGAATTGCAGCTATAGGTTCTGTTTT GTAGGAAATAATGGATCAATTGCAGGTATAAATGCT ATGATGGCAGGTTCAATTAGGTGCTGCAGT	G	T	AAGTGGACTCAACTGTTTCTTCCAACAGTTTGA AAAATCCACCACAGTTTCTATACATTTCAAAAAC CATACCAACTTGCCACCATGCTCAAAAGCATT	NA	NA	148
Ca-II-SNP1388	45.35	Ca-desi-LG(Chr)8	3401303	TGTAAGTGGAGTATCCGTACGGACACACTTATGAT TCTTGTTGTGATGCTGCTATCTTTTTCTTCGGGTT GATGTAATTGGCTCTTTGTCAATTATTATT	G	A	AGACAGAAAATCATGCATCCACCCATCATACT TTCCATATATTAAAGATGTCAGGAATATATACA CTCACGGACTTGGCTTGGTAATTGTAATCAAAT	NA	NA	177
Ca-II-SNP1389	46.24	Ca-desi-LG(Chr)8	3563996	CTTTTTGGAGTATCCTTCTGGTATAATGCCTTTAT ACAGGTAATAAAGTACTCATTCTGTCCCTTTTTTAT AAGCCACTTGCTTTCATACAAATATTGCGC	A	G	ATTTGAAACGCTTTCGACGTATCCAACAAAAGC CATGTTTGAATTAATGGATGGATAGTTCCCTT GTCATGATTAGCATGTATCAAATTTATCAGTTTCT	NA	NA	130
Ca-II-SNP1390	47.13	Ca-desi-LG(Chr)8	3670804	CAATTGGTATTGGCGGTTATGTTTGACAAAAGTAC TAGCTACTAGTATGTCTACATTGGTAAGAGATACC TTAGATGGTTTGCATTTGTTTTACTCAAGA	G	T	CTATTGTTAGAAACACCTTTAAGATTGTTTAGTC CAATCTGAGATGGTATGCTTCTTAAACCATTTT CATCATCTTCAATTTTATTTTGCAGAACATCTC	NA	NA	214
Ca-II-SNP1391	48.02	Ca-desi-LG(Chr)8	3683992	TTTATACCATTGTCTGGGATACTGTTAAGTCCAT ATATTGATCTTTGAAACAACATGTCATGTGTTCC TTTCTAGGTGCACCATAACCCTCAGGTTGG	A	C	ATTATACTCGCCTTAGTTGCTACCTACAACCTTG GAACTGGAACAATGAATGTCAAGAATGCTTTC TTACATGGTACCTAGAAGAGAAAATCTATGTG A	NA	NA	126
Ca-II-SNP1392	48.91	Ca-desi-LG(Chr)8	3684044	AAACATGTCATGTGTTCTTTCTAGGTGCACCATA ACCCTCAGGTTGGATCACATAGATTTTCTCTTCTA GGTGACCATGTAAGAAAGCATTCTTGACAT	T	C	AATTGACTTCAAGAAAATATTTTCTCCAGTTGTG AAGCACACTAGTATCAGAATTATACTCGCCTTA GTTGCTACCTACAACCTTGAAGTGAACAATG	NA	NA	133

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1393	49.80	Ca-desi-LG(Chr)8	3710991	GCAGGTTTGACTTCCCTAGTAAAGCTCTATTCTGACATGTGTGCTTTGTGCAGTTCTGAGTCAGAGACCTTGCTCATTCTCCACAATGACAATAGCC	C	T	TTTACTACCAAACCTGGATGGTGAACCTGAA GAGACTGATTCAATAAATGCCAATTCTCTCTAG AAATGCTAAAAGCTTATTCCAAGATAACTCA C	NA	NA	100
Ca-II-SNP1394	52.47	Ca-desi-LG(Chr)8	3728139	ATAATCCTTCTTTGAAATAGCTTTTGGACTTTATTG GTTTAGCATTAAATCAATTATGCTCTTTTAGAAA GTACTCTTGACGTTTCTTCATTGATCTT	A	G	GTTTTCTGCACAATAACAACAATACTGCATCTT CTCTGAAATAGCCTGTAATTCATCTCCAACATT CTCTAGCTACACTCAAGACAGAGAATGTACCAT C	NA	NA	210
Ca-II-SNP1395	53.36	Ca-desi-LG(Chr)8	3742949	TCTTGAATTATGCTTTGGGTGGATCACCTGTTTTG TTTTATATGAGGACCATCTTTTATTATTTTCAA TAGAATTTAATAGAAGTTAAGACTGAGGG	G	A	AAACTCAAGGTGATTCTAAATATACATATCTT ATGAGTGCAATATATTTCTTATCACCACCTTAGT CAACTGAAGATATTGTTCCCTTTGGATATTTT	NA	NA	205
Ca-II-SNP1396	54.25	Ca-desi-LG(Chr)8	3747818	ATACAAGACCTTCGACAATACCATTGTACCTTCT AGTCCTTCTATGCATGTATCTGGATTACAAGAAC AGCACTCAGCCATGTTCTTAGATCAGAGCT	C	T	GTGTTATAATTTCTCTGTTTTTATTATTATTCT TATTTCTCTGTTATTGTAGCTAACAAATTCGTC ACACAGGGAAAGATAACAGTACTGGAAATCT	NA	NA	125
Ca-II-SNP1397	55.14	Ca-desi-LG(Chr)8	3753564	TTTTACTATTAACCTGGTTGATGTAATATATTCAC ATATTTATCTTTTTTCAATTTTATAAATGCGTTGA ATTTGATTTATATATGATGACTCCAT	G	C	GAATTAGTGGTTTATGTTGTCAGTAAGTGTAAG ATTGTTTATCGACAATGCACTATTATTTTTTTT TGAAAAAAAAAACGATATAAATCTTTCAAAT	NA	NA	158
Ca-II-SNP1398	56.03	Ca-desi-LG(Chr)8	3787620	GTGTCATCTCTGGCTAAGTGCATATTTGGTTTAC AATGAGATTGGAAAAATCACGGTGACTCATCGTGA TTTTGCCAACTCACCATGAATCAAACATG	C	T	AAAAGGCTCTATTATTGTTCTACATACCCTTTT TGGAATCGGTAGATCCAAGATGGTTAACAACTT AACATGGACTCAAATATGGATATTAACCTTAGT	NA	NA	175
Ca-II-SNP1399	56.92	Ca-desi-LG(Chr)8	3788385	TAGTTTTAGGTTTATCATTATTTGAATTTGGAAG TGTTGTTGTCCAATACTGCTCCTGATGGAATAGAA AATAACTTTGTTTTATGCACTACTATT	C	A	TGCTGCGACCAGGTAATTTCTGTATATGCAAA TAATTCCAGGGTACGTTTATCTGGAATTTTTTG CTTCTGTTATGACTGGCTGAGATATAAGGAAA T	NA	NA	145
Ca-II-SNP1400	57.81	Ca-desi-LG(Chr)8	3806673	GTAGATAGTATCAGAGTCGTTAATTTGATGTGACC ATACCTTCCAACAATGGTGTGTTGATTCCTCGTGT AGTAAATTTATGTCGCAAGTCTCTTGTTT	A	G	TTCAAACATTGTCAAAAACCCGCTTACAATG TATCAAGATACATGTATACGTAGTAAAGTCGAT TCATCAACATTTTTATCATTGATTACTATAG	NA	NA	188

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1401	58.70	Ca- <i>desi</i> -LG(Chr)8	3811946	TCCAGAATATTCAGACAGAAATCCCCTCCTATTT TCGTGGGAAATACTTTTTCTTCCTTCATTACAAT CTCAACCATGGAGTTTATAACATGCAACA	T	G	CTACACTAGTAAACAAGTCTTACAAGCTAATTTG TCATAGTAGAAAAAGAGCACTTCCCTATAAGTG AAATTGACTTTCCAATTGACAAGAAATATATATA	NA	NA	169
Ca-II-SNP1402	59.59	Ca- <i>desi</i> -LG(Chr)8	3823729	TTTGCCTTTCTATATTTATTTTTTTGTTCCTTTTT CCCCCTTATGATGAATGCCTCAAAGGGATTTTAT TTATGAAATAGGACTTGAAAATCAACGT	G	C	CAAAGTTCAAACATAAACTAAAACCTTTCTCAAAG CCTAGAAGAAGCTTTCTCATAGCCTAGAAGAACA CAACATTTAAAATTACAAAATTTGTTGTGTTTA	NA	NA	145
Ca-II-SNP1403	60.48	Ca- <i>desi</i> -LG(Chr)8	3868129	CAAATGACCTATTTACGTATCACATGGCCTACCTA AGCTCTCTCTCTCTTTTTGTTTTCAATTTGAAAC TGTAATAGTATAAATTTTGGATACAA	G	A	ATGGGGGATGATACATGGACACAGTTATTTCT CATCATTTTGAAAGATCCTATCCATATCCTTCTT TTAATGTCAAAGATCTTGATACGGTTGATAACG GATGCATTGACCATTTATTTCCATCCCTTTATGA AGACGATTGGGATGTTCTTATTGCACATTTTCT CGGAGTGGATCAGCTGG	NA	NA	210
Ca-II-SNP1404	61.37	Ca- <i>desi</i> -LG(Chr)8	3903353	TTGTTTCTATTTAATTTTATCTCTTTGGGAAAAAC AATGTTACTTACTGTGATAATGTGAAGGGAGGGA CCCTAATGCAGAACTGTAATTTCTGAGCAC	G	T	TAAACCTTCATCCAACATTAATTAATCATTAA AATCAATTTACATCACTGCAAAGCCAAACAATT CTTTGTCGACTGCCCTACCCATTACAATTTGCA	NA	NA	187
Ca-II-SNP1405	62.26	Ca- <i>desi</i> -LG(Chr)8	4050848	CTTCCCCTTTGTGGGCTCTCCTGAGTTCTCTCAT CTTGGCTGGGGCACTGGTTTACATTGAGAGACC TAGAACTTGCAACAAACAAGTTTTCGAAGGA	T	C	AAACTTACAGATTATTGAGTAGCTTCTTAATAGC CACTGGATTCCCATTGATCAGCTGGCCTTGATA AACAACCTCATATCCACCTTCACCAATAACATT	NA	NA	246
Ca-II-SNP1406	63.15	Ca- <i>desi</i> -LG(Chr)8	4051597	GAAACTACTCAGTACTGGTTTATATAATTTGGATT CTTGACCCCTAGAAATTCCTGTAAATTTGAGGTT GTTGGTTTATGAGTATGTTAAACAATGAAAA	T	C	AATGATCTTACGCTTTAGCTGTTCCAAGAAGAA TTTTAATCCGAGCCTCCCATGTGAGAAAACCAT ATTGCCGCATGGCTCCATGAAGCCATTGCTCTA A	NA	NA	181
Ca-II-SNP1407	64.04	Ca- <i>desi</i> -LG(Chr)8	4054628	GTGGTTCCTTTGGTTGAGCAGAGCGAGTATTGAG TAGAGGCTGTAAGCTTTGACAATGATGCTCATAT TTGGTCGAAACTCAGCTTCATATTGAACACA	T	C	ACTACATAATTATTTGAAGGTAATTTGTGTTATA ATGTAGTTTTTATTGATTTGTTGCACTTGTGTA TTTTTGCAAAGATGGCTGCTGTTGCTGCACT	NA	NA	171
Ca-II-SNP1408	64.93	Ca- <i>desi</i> -LG(Chr)8	4099504	CCGACTGCTCTCGCAGTTCATATGAGTTGCAGCC ACCTTTCTATTTGCAGTCCCTGTGATTTTTGTA GGAGAATAACATCATCAAATTCACAGCACCG	G	A	TTGTGTGGTCACCGTCAATGATGTTCTGAGGCT TTTGGTACAGGTGGGTTCTGTGGTCAAATATA TTTGAATTTGAACTTACCTTTATATTTTATACA	NA	NA	138

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)	
Ca-II-SNP1409	65.82	Ca- <i>desi</i> -LG(Chr)8	4193971	CACTGAGCAGGAGGAGGATGTCCTCAGCCTCCA CAGATGGAGTAGGTCGCTGATGATATTCATGATA CTTCTGCACATGCTGATGATGCTGATGAGTCG	G	A	CGAGCCACGTGATGCTCGTACTGTGTTAACAC ACATGTCACCGTCGGTCCTCCGGGAAATTCGG TCTGCTGATCCTGATCATCAATATCAGCAGCAT CAT	NA	NA	170
Ca-II-SNP1410	66.71	Ca- <i>desi</i> -LG(Chr)8	4194075	ATGCTGCTGATATTGATGATCAGGATCAGCAGAC CGAATTTCCCGGAGGACCGACGGTGACATGTGTG TTAACACAGTACGAGCATCACGTGGCTCGGAG	A	G	AACATTTATATAAATATATAATTAATTAATAAAC TTAAACACAATAAACAAATAATTAATATAAAA ATAAATTAACATTTACCTCTCTTTCCCATAG	NA	NA	168
Ca-II-SNP1411	67.60	Ca- <i>desi</i> -LG(Chr)8	4195630	TCCGTGATGGATTATCAGTTATATTAATACCTGAT CAGTGGTGAATTTGTCGGTATAATCTATTATATTT CTTGAGGCAGGAACCTCAACTCTACTCATA	T	C	GTTACACAGTTTCGAAAGTTTCGAAAATTTCAA TTTTTTTTTAAATTTATTTATTTTATACATATTA TTATTTATATTTACTATTTTTTAAATTAG	NA	NA	135
Ca-II-SNP1412	68.49	Ca- <i>desi</i> -LG(Chr)8	4228643	AATTTCTTTGTACCTTTTTATAAGTGATATCTTTTT TTATTTTTTAACTATATTAATTTATTTACTAACG TACTTCTAATTAATTTACATATTTTTT	G	A	TGTTGATTAATTTTTTAACAATTTGTTTTACAT GATTATCTTGTACAAGAGATAATTAGTTAAATTA TATTATTTAAATATATTTATTGTTGATTG	NA	NA	144
Ca-II-SNP1413	69.38	Ca- <i>desi</i> -LG(Chr)8	4252710	TTGGTGGAGCAACAATGCATGCATTTAGAGGTGG AGCCCCAAATATGCCATTGACATCTAGATTTGT ATGAGTTTGTCAATGCCCTATGTCTCACGCT	T	C	ATTTATTGAAGATGGTGGAAAAGTTGGAAC AATAAAAGGAGGTGATTGATTATCTGTTGTGAT TTGCATTACAGGTTATGACAAATGGAAGATTGG T	NA	NA	206
Ca-II-SNP1414	70.27	Ca- <i>desi</i> -LG(Chr)8	4257596	CTTTATATAAAACTTTTTTTTTCTCTATTTATA AGTCGCTTTTGTAAATGGCGTATTCCTTAAGAAAG TTCGAGTTTGCAAATGCGACTTTCTTGA	T	G	CCAAATACCATTGTAAAAGCAATTTCTTTAAG ATTTTTTTTTTAAATTTTTGTTTAAATTAACAAA GAAATGCTCAATTTTTTTTTTAAAGATTTT	NA	NA	
Ca-II-SNP1415	71.16	Ca- <i>desi</i> -LG(Chr)8	4324943	ACGCGCCGCCCGCCCGCCCGGCTTGCTCGG TCCGGTCCGGTTGTGGTGTATTAAGTTTTTCAG ATGTTTGCCACGTCAAAACCTAAAGCTGAGT	A	C	GAGCACGAAGTCCATTAAGTCCACCAGGAA CGTGCCCTCAGAAATAGGAAACGTGATTGACAA GGTTCTTGACCGGGCAAAGTCAAACGTGG GAAA	NA	NA	
Ca-II-SNP1416	72.05	Ca- <i>desi</i> -LG(Chr)8	4325065	CCCGGTCAAGGAACCTTGCAATCACGTTTCTAT TTCTGAGGCACGTTCTGGTGGCCAGTTAATGGA CTTCGTGCTCTTGGATCCCCCTTTTTTCTC	A	T	AGGGGGAGAAGTGAGAAAAGCCTCAGATATGG AGAGCTTTTGGTGTGCTCTTCCAAGTGAGGTG AGCTCTCTATTTATAGATGAGTTCAGCAACTGG ATC	NA	NA	

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR424	72.94	Ca- <i>desi</i> -LG(Chr)8	4335277	TTTTCAAATATCCTTTTCATTGATAC	(TAA)16	(TAA)18	GGCCAACCATAGATAAAATATACAA	57.04	239.00
Ca-II-SNP1417	74.72	Ca- <i>desi</i> -LG(Chr)8	4369989	CAAATGACCTATTTACGTATCACATGGCCTACCTA AGCTCTCTCTTCTCTTTTTGTTTTCAATTTGAAC TGTAATAGTATAAATTATTTGGATACAA	C	A	TCTACAAGAAGCGTATCTATGAATATATATCTCT TTTATTATCTTAGTAGCTTTCTATTATTATCTTA CGACTTTACTCTTGTGTGTTCTAATTTTATT	NA	NA
Ca-II-SNP1418	75.61	Ca- <i>desi</i> -LG(Chr)8	4370215	ATTTTCGTTCTACATTCTTTATCTTTAATAAAATATTT ATTATTTTTAGATTTTTGACTTTTTGATTCTTAATAAA TCTTATTAAGTTTTTCTTTGATTAT	G	A	GCTTCTTTTTGAATAATTTGTTTTGTTGTC CAATAAGTTTTTTTATCTTTCAATGTAATGGA GTATACATAATAAGTATAGAATATAGTAAATC	NA	NA
Ca-II-SNP1419	76.50	Ca- <i>desi</i> -LG(Chr)8	4415284	ACTAACAGTTTTTTGTCTGAATCGTTCGGTCTTG ATTTTGATTCTCTACATGTGTGATTGCACGATCTT CATCTTTATCCTTCGCTTCTTCTCGAGTA	A	G	TCCTATCTCCGTTTCCTCTTCGATTTCTTCATCC TCCAATGAAGTTTGTGTTGCGAACAAACCAATT GTTCCGGTAGCAGGAAATGAACATGAACCTGAA	NA	NA
Ca-II-SNP1420	77.39	Ca- <i>desi</i> -LG(Chr)8	4446531	AGTTATAGGCCTTCTAAAAGGGCCCGAGCTGATC ACAGGTCGTCTGCACCAAGCGATGATGATCTTGA TGGGATGAATAGTTACCTGGTAGGTCACAAC	A	G	TCTTTCTAAAAAATAAAAATAAAATCAATGTT GAAAGTACCTCATATTGATCATCGTCTTTTGA TCAGTAGTTGGTTATCTCCCTTGAGTGCCA	NA	NA
Ca-II-SNP1421	78.28	Ca- <i>desi</i> -LG(Chr)8	4515504	TTTTTAAGTAAAAATTTGTTTTTTAGGGAGGTC TAAAGCGCTTGCTTTGGTAGCCTTACCCTTAAACC GGCTCTACAGAATGAGCCGCAGATAACTT	A	C	CAGTCTGTCTGGACTTCCTTAGTGAAGACAT AACTATTATTGCGACAAAACCTCATGTTGAATAAA GTGAATACAGGTATCAAATAGTAACCATATTTT	NA	NA
Ca-II-SNP1422	79.17	Ca- <i>desi</i> -LG(Chr)8	4521706	ATAACACGATCAACATGGCCTTCATCTCCCCCTC AACATTGCGCTCAACTTCCTCCTCAACAGTTTCAT CAACAAAGCTCTCAACTTGACCCACTCTCT	T	C	GGAAGAAGGCGCCCGAAGTGACGAGCAGTC GCGGTCGAAGCTTGGCTCTAGGCAATAGGCTA GTAGTAAGAAGTTGAGGTGTCTGAAATTGCAAG GACG	NA	NA
Ca-II-SSR425	80.06	Ca- <i>desi</i> -LG(Chr)8	4611654	TAGATGAATTGCAATGCCCA	(GA)9	(GA)8	CTTTTGCATCGCATCAGTTC	60.04	140.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR426	81.84	Ca- <i>desi</i> -LG(Chr)8	4714629	TGGAGTACTTTAGATACACAAAGGTC	(TAA)19	(AAT)18	TTCAGCTAAATAAATTTGAAGATGTTG	57.22	129.00
Ca-II-SNP1423	82.73	Ca- <i>desi</i> -LG(Chr)8	4930608	ATGCTGCTGATATTGATGATCAGGATCAGCAGAC CGAATTTCCCGGAGGACCGACGGTGACATGTGTG TTAACACAGTACGAGCATCACGTGGCTCGGAG	A	G	GAAGAAACCCATTAAGTAGCTGCTGCGGAAGC ATTCTGCATCTCCACAATATCAAAGAATAGGT TTCGCAGCAGCACACTGATAATTAATTAATA AATAAACAATGGCTCTCTCTCTCACAAAGT AACCGTCTCTGTACCCTTCTTGCTCAATCTCTC CCGCTGTTTCATCGGCGAGGGTTTGCAGCCGC TTCTGATGCTTTCAGTGAGAATTGAATGGGTAG TCTTCCAAAGCCCGCAAGCTCCGAAAGC GTTAGCGGCGAAGACGAACTACTGAGCCCGC CATGCCCATTTCTCATTATCTCGATGCTAAATC CACCGTTCAACAAGAACACCGTTTCGATGAACA AT	NA	NA
Ca-II-SNP1424	83.62	Ca- <i>desi</i> -LG(Chr)8	5010723	ATTGACTGCTTCAACAAAACATCATCTTTGTCAT CATCACCGCCCTTCTCCTATGCGTCATCTTCTTCA TCAGCAGTTACCTTAGCAATAGGTCTCGGA	T	G	GTTAGCGGCGAAGACGAACTACTGAGCCCGC CATGCCCATTTCTCATTATCTCGATGCTAAATC CACCGTTCAACAAGAACACCGTTTCGATGAACA AT	NA	NA
Ca-II-SNP1425	84.51	Ca- <i>desi</i> -LG(Chr)8	5062175	TATCTTTTGTGGGTATAAAGTTGTTAGAATTTGCA ATAGATCTTTTCTCTGTCTTTGTTTGTGTTTCT TTCTACCATTGACTTTTCTTGATCCCAT	A	G	ATTATTTGCATATATACATATATAAAAAGTTGTT ATTTAATTTCTTCATGTGTAATACTAATACACGA GTCTAATAATTAGTTGATTAATATATAGGCAA	NA	NA
Ca-II-SNP1426	85.40	Ca- <i>desi</i> -LG(Chr)8	5111434	CTTTGCAACCCACGGTGGTCTCCTCTTCAAATCT AAGATTTGGTACAAGAGAAGAGCTTCGTCACATCA TCATCGCCGCCCTTCTACCTTACCAAC	G	T	CAGCAATAAGAAGATGGGGATATACTGTCATT CTATTATGGGAGATTTTACAAGTCTGACAAACA TCAGAGATGGGCTGGAAAGTAGGAAAGTGAGAA GCAGGAAATACATTTTTCGGGCAAAAGATTTTCA CTGGACCAAGGCAAC	NA	NA
Ca-II-SNP1427	86.29	Ca- <i>desi</i> -LG(Chr)8	5125571	AAATGAACCATCATCTCAACACCATTTTCTGCTT TGGAGATTTTAAATCCTGGGACCATTTGATTTTCA ACAGAATTGCTATGCTCCATTCCAATCTG	T	C	TCAGATTTGGGTAAGATGAGGTATTTTCTTGGT ATTGAGGTAGTTTCAGTTTGTGGCGGCATATTC ATCAGTCAACAGAAGTATGTGACAGAAGTAGTG A	NA	NA
Ca-II-SNP1428	87.18	Ca- <i>desi</i> -LG(Chr)8	5125998	GCTTTGTTAAGCTTATATACCTTATGCTCCTCATC CTTTATTTTCATAACCCCTTGGCTGCTCCACGTACA CATCTCAACTAACTTCCCATGAATAAAGG	A	C	AGAAGTATACGCTCCTGTAGCTCGTATGGACAC GGTTTCAATGATTTTGGCACTTGTGTCACAAAG AGCTTGGTGTGTTTTCAGATGGATGTGAAGT CA	NA	NA
Ca-II-SNP1429	88.07	Ca- <i>desi</i> -LG(Chr)8	5199404	TTTATTAGACACATAAGGTGGATAATCTTCTTAT ATAGATTTTCTTTATATAAGAGGTATAGATCAAA CTTCTGACCACCTTGCCTAAGGTGTTTGA	G	C	GTATTTGAAGAAAATAGAACGACAATTTTCTTAT TCTTATATACAATGTGATATGATTTGTAGGAGA CTCTCAAATTAATATATTTGAGTGGTAAGGGA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1430	88.96	Ca- <i>desi</i> -LG(Chr)8	5205782	GGAAGAAGCCCTTACCTTAATGTTAGCTTCAACGT GGTTTTCCGATACCGCGAGTAAAGCCGGTAAAT CTTTGCTCGCAACGTCGCCTCCAAATTGGTC	T	C	TTCTTTTTTTTTTTTTTGTTCATTGTGTGAGGG GACATTTTATTTTACAATAATGTGTTATTAGCCT TATGCTAATTTCAATTTACACCTACCACAGTTT GGACCTTTGGTTTCAATTTTCCCTTTTTTGAT GAGTAACATAGATGGTATAAGGCTGTGTTAGTT TGCTATAAAT	NA	NA
Ca-II-SNP1431	89.85	Ca- <i>desi</i> -LG(Chr)8	5236445	GGGAACCCTTCCTAAAAGCTAGCTACCAAGAGG GAAGAACCTGGTCAATTAATACTCCGCTGAACAT CCCATACTACTCGATGTGGGACTTGGGCACC	C	T	CTTCAATCAAACATGCCATCACAAGTGGTACA TTGGTATTGTAGCCTAAATGCTGGTTGGTTTC ATTGTATCAAATGTTAGGGAATGGGTATTAT G	NA	NA
Ca-II-SNP1432	90.74	Ca- <i>desi</i> -LG(Chr)8	5462785	GTTAACATCACTATACACATATTGTAATAATCTTTG TCATACTATTGAATACTATCGATATATCTCTCATTT TATTTTCTGTTTTGTTGGTTCAACTAT	G	A	AATCGATGAAAATAGATAAATCAAACCTGTAATT GAACCATTAATAATTTGAATTTTATTCAAGAT GAATGTCATAAATCTGACGCTATGTTGAGAAG	NA	NA
Ca-II-SNP1433	91.63	Ca- <i>desi</i> -LG(Chr)8	5519042	TAATTAATTTGATTTGATATTGTTTTTTTCTCTT ATACTCTTATCTAAGAGTATTTTGCGAATAGTTC GAATATTTACTTAAGAGAATATTGATGT	C	A	ATAATTTAATGTGAAAAATATATTTGTATAATG AAAACGTAAAAATAACAATGAATTTTATAGAAC ATAGATATTTCTTAAAGGTTCCACAACCTCAGG	NA	NA
Ca-II-SNP1434	94.30	Ca- <i>desi</i> -LG(Chr)8	5573153	ACAGAGTAACTTGACGGGAAAATTTGTTAATTTCT TAGGTTGTGAACAACAGCTTGAATCCTGTTGGAA TCAAACATTTGACTTTGTAGTTGAGGATGG	A	C	AAAAAAGGCAATCTTAGTAACTAATCAATATG GTGCAAAATTTATTACCTTTCCAAAAGTGTGCT GGTCATAAACTTCAACAAGTAGCATTTCATGTA A	NA	NA
Ca-II-SNP1435	95.19	Ca- <i>desi</i> -LG(Chr)8	5612410	GAGAATTTTCATTTTAGTCTAGTTTGGAGTTTATT CTTATAAAGTGTCAATTTAATGATGTGAAATTTCT TTTAAGTATGTGTGACATTGTTGATTTG	A	G	GACTAAAAATAGTGGACCACAAGATCGGTTACA ACCTCTTTTTTTCAATTTTCATTGATCAAATGT AAATTTATGCTTCTAAAATCAACTGTTTTGGT	NA	NA
Ca-II-SNP1436	96.08	Ca- <i>desi</i> -LG(Chr)8	5663720	CTTTGCAACCCACGGTGGTCTCCTCTTCAAATCT AAGATTTGGTACAAGAGAAGAGCTTCGTCCATCCA TCATCGCCGCCGCCCTTCTACCTTACCAAC	G	C	TAGGGAGGGAGAGAGACAGAGGGAGGGGA TGAAGAGATAAAAAATAAAAAACAATAGAAAAATA ATTGCCATCAAACATAAAAAAGAGAGAATCC AC	NA	NA
Ca-II-SNP1437	96.97	Ca- <i>desi</i> -LG(Chr)8	5676823	AGAATTTGCCATTGGTACGACATGTTGCTTTTTTC ATTCATTTCTTTCTGCATCAGTCGTCGTCTTACAA ACTCCATCAATTATATAAATGAACCAATTA	A	G	ATTTTTATTGCGATTGGATATACATTTTTTTA ATTAAGGTTGCCAACTCAATGGTAGAATTCGG ATTTGCAACTATTTTTTACACATTTCTATGAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1438	97.86	Ca-desi-LG(Chr)8	5705748	TCTAGGGTTGGTCTTAAACACTATTTAGTATAG TTTTATTTTGGTTTTGCTTCTTTTTTTTCCCTTCTT TTGTCTATGCAAGTTTTTTTTTAATAGA	T	C	TTGGGATATGAATGAATTACATGCCGGAAGTCT ATATTTCAATATCTAACATTAGTATTTTTTTCTC CCTGTAAAATATATACTAACTATAATAATATTC	NA	NA
Ca-II-SNP1439	98.75	Ca-desi-LG(Chr)8	5715980	CGAAATCTTCCCTCTTTGCCCTCAATAATATCTGA AAACGATTTGCAAACCTTATATGATTGTCCTCAT TGATTGTCGCGGATTCCATTATCAAGAA	A	G	ATTAATGATATCATCTAGTAATCGAAAAACCT ATTCGTAACATGTTTATATTTTGTATAGAATGA GTATCTATTTAATTTTCTTAATAGAAATTACA	NA	NA
Ca-II-SNP1440	99.64	Ca-desi-LG(Chr)8	5741859	ATAAAGCAGTTTGCTTAATGTATTATTACATTGCT TGGGGTATTCCTCTCTGGTTACAGGTTTGCAGAA GCTTACCACATTAATGTTGAAGGATGCA	G	A	AGAACAAAAAGTTGATGTCTAAAATCAAGAAA AAATTAATAAGAGAATGAAATGAGAATTTTTTA CCAGAAATATACTCAAAAAATGCAGCAGTAATA	NA	NA
Ca-II-SNP1441	100.53	Ca-desi-LG(Chr)8	5885427	CATCACTTCACTCATCAGTGCATGCCACATTC CTGGCTTCCAACCTCCAACATACACTCTTTTCAT TATATTTATCTTTATGGAATGGCAAATC	C	T	TTGCGTCTCAGTTACAGAAGAGCTTTTTTTACC TTTGATTCCAATTCAAAACATAACAAGGCTAAAC TAATTCATCCTTGTGTGCGAAATTTCCGGAAT	NA	NA
Ca-II-SNP1442	101.42	Ca-desi-LG(Chr)8	5919381	TCTCTAAGTTGCTTTTAAAGCCCAAGAAAACCAT ACCATCTATGCTATCTAGATGGTGTATTATGCCCC AACCATCTCTCATTTTTTCTATGTTGTTTT	T	C	GTTTTAAATAGAGACTCTAAGAAAAGTCACTTT TACAATTTAGGATAAAGTCTTCATTTAACATTTG ACCTTTTTCCAACTCTATCAATCAACTCTTT	NA	NA
Ca-II-SNP1443	102.31	Ca-desi-LG(Chr)8	5943582	TCCTTTTGGATTAATTTATATCCTTTTCTCATTCTT TCAATATAGAATTTATTTCCACGTTTTCTATCGAGA TTAATAATAATAAGCATATCTGTTACAT	C	T	TTTTGTTGTACACCGACGGGAAAAATTTAATA AGAAACTCATCCATAGAAGTAACCTCCTCTGTT AACCATGGCACATGCATCAATTATCCAATAAAT G	NA	NA
Ca-II-SNP1444	103.20	Ca-desi-LG(Chr)8	5966950	AAATTATTGGGAATAAGAGTAATACTTTGTTTTGG AAGGATTCATGATTGATTGGTGGGTCTTGCGTG AGAAATTTAGTAGATTATTTAATTTGCTTT	G	A	ATTTCTCCTCCCACGCAAACTGTCTTCGCC ATCTCCGTCATTGAATACCCTCCCGTCAACA TCTCTACCATAACCTCTACATTTTCTCTTGTG	NA	NA
Ca-II-SNP1445	104.09	Ca-desi-LG(Chr)8	5967238	GATCATATTCGGTAAATGAGGCATATTCTGTATTA CGGGAGGAGTTTGTGCTAGTATCAACACCTC AATTTCAAGACCTAGTGTGACATCCTTTTGT	C	T	TTGATCTTCGCAAAATGATACCTCGACGAAA TAAATTTCTTTTGTAGGCAACCTATGTTAAAC AACCTCCACAAAATATGATATTTTTTGTCTTG	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1446	104.98	Ca- <i>desi</i> -LG(Chr)8	6009417	GCGTGTGAGAGTGCGTGTGACGACTTCTGGTGAC ATGTTTTCAGGCGTGGCTGATCTAGATAGAACG AAGCTTATGGAGAGATTGTTCTCTGGAAAAGC	T	A	AAACAACCGTTATTTGTTTTGTCAACCCTTTTT CAGCACTCGTTTTCAACATTTTCTGTCCAGATCC ACTGCTATCACCATCGTACCCTTGTTCGGAC	NA	NA
Ca-II-SSR427	105.87	Ca- <i>desi</i> -LG(Chr)8	6012940	ATTGTGGCACTAGTGGAGGG	(TA)11	(TA)9	TCCATGTATGGTTTGTATGGTCA	59.99	182.00
Ca-II-SNP1447	107.65	Ca- <i>desi</i> -LG(Chr)8	6026460	TTGACATTAATTACATTTGTGGTCCCACTAATTGT GGTCTCCCTTTATACCTTATGGTGGTCAGATGAG GTAGAAATTTTTAGATCATTAGTGATGGA	A	T	GGAATTGCGAATGAGAAGTTGGAATCTGAAG TAGCATCTAAATCTAAACCCTTGGAAATCGGGTG GAATACCTCTTGTTCGAAGTGAGCGTCTGATGA CTACAGGGGTTCCGTTTTAGTTTTTCTCCG ATTTCACTG	NA	NA
Ca-II-SNP1448	108.54	Ca- <i>desi</i> -LG(Chr)8	6094120	TAGCTTGAGTTTCAAGAATGATGATTGTCTCCTCG TTTACTTGGGCTATGGCTTAAGTTCTGCACAAAG TTCATGTCAGTGTAGAGTTTGGGGTTCGAG	A	G	CCAATGTGAACATTAAGAAAGGAAGTAGTGAAA AAGTTCTATTGTTGATCAGAGATTTCTCTATGAA AAATGAATCGGGTTTTGAAAAGAGGAAGCAGT	NA	NA
Ca-II-SNP1449	109.43	Ca- <i>desi</i> -LG(Chr)8	6234529	ACACTTGAAGATACATGAGCAGAACTATCTGATTC GTTATTTAGAATTTAGAGTAGTAGTTTTCTCTCTCT CGAGATTTGGAGTCACTATTACTCCAAT	G	C	AATGCAGTACAATCTGATAAACTACAAGCATAA TCAATACTACCAGGCAAATAATGCAAATCAGTA ACATCAGGATCCAATATACACCATTGTTTTCCC AAATATTTACACCTTCAACAGCTACAAGACCT TTATTACT	NA	NA
Ca-II-SNP1450	110.32	Ca- <i>desi</i> -LG(Chr)8	6328459	ATGTCCTCATCATCGTCTTTAATTTCTCCTTGAA GCTGTCCGGTCAATCCTCTCTAGGGATTTCATCG CGAATGATGTAGAAGTATCCGTGTCATGTGT	A	T	TTTTAATTAATTAATTTTATAATTAATAGTGAT TTATTTCTTTAATTTTAAATTTTTCAGTGGACG CACGAGGAAGAGACAGCAAAATCATACGAAT	NA	NA
Ca-II-SSR428	111.21	Ca- <i>desi</i> -LG(Chr)8	6423497	ACAGCTAAGCAATGAATGCG	(AG)11	(AG)12	CTTCCTCCGGTCCATTGTAA	59.09	167.00
Ca-II-SNP1451	112.99	Ca- <i>desi</i> -LG(Chr)8	6440897	AGTATCTTTGTTAAGAAGCTCTTTGTGTGGCTT TCAATTCACCTCAAACATGCGAAAGCTGATCCCGA ACTTTCACAGTTTCTAATTTAAGATCAGTC	T	A	ACTTTGTTGAAAACCTCTGATATTGAAAGAAAC AAATATGTGACGAATGTTTCGAGGGTAAAGCT AGCAAAGACGAGCTTGAATCAATGACAAAAGAG A	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1452	113.88	Ca-desi-LG(Chr)8	6469017	ATTTCTACGAAAAAATGTGTTTTTTCCTTAGTCT ATTGTGGGTGTTCTTTGTTTTTGGGATCTAGCTT TCTCATCATATAATGTTCAATTTTGCTAG	T	C	CAGTTACACCCCAAAAAAATAATCTTTGAATGT GAATTAGTATTTTTTAACTAAGTTCGGGTAGG TTTCTTGAATTAATAAATAAAACGAGTCTT	NA	NA
Ca-II-SNP1453	114.77	Ca-desi-LG(Chr)8	6491984	CCATTTTGTTTCTCCCTGTTTTGGTCTCCAAACA GAATTTTGGTCCAAACTTGATGAAATTTCAATTTT TTTGCATTTATTTAAGTCACACAATGCCT	T	C	AATTTTAGTCCAAACTTGATGAAATTTATTTT TTTTAACTTGTACTACCCATTTATGGTCATAT ATTTTCGGGTACAATTTGTGCAATGAGATCTT	NA	NA
Ca-II-SSR429	115.66	Ca-desi-LG(Chr)8	6529039	GCTCGTATATTTGTTGATTTTGG	(AT)7	(AT)11	AATAAGTTGCAAATCTTCATAGGATAA	59.02	142.00
Ca-II-SNP1454	117.44	Ca-desi-LG(Chr)8	6641248	GGAAGAAGCCCTTACCTTAATGTTAGCTTCAACGT GGTTTTCCGATACCGCGAGTAAAGCCGGTAAAT CTTTGCTCGAACGTCGCCTCCAATTTGGTC	C	T	TGAGATTTAAACGCAAACCCCTCCGTTTCTTCT AGATCCAAGCTTCATTTTCGCGAAGAGTTAGAAG GGAAAGTTGCTCACTACCACGCCACGGTGCTA GG	NA	NA
Ca-II-SNP1455	119.22	Ca-desi-LG(Chr)8	6673883	TCATTGGATTAATATATCTGGATTATGCCTCTGA GAAGATGTAGTTGCATATGATTGACGGTAAATG ATATCTGCTTTTGTGAGAGATGGCACGCA	G	T	GGTGTA AAAA ACTCTCCAGTACATGAGATGCTC AAAAGACCCCGACGTCGTCAAGAGTAATAGT CATTTCACTGAATGGCAGGTGAAATGAACTAGT CT	NA	NA
Ca-II-SNP1456	120.11	Ca-desi-LG(Chr)8	6674022	ATTACTTTGACGACGTCGGGGGCTTTTGGAGCA TCTCATGTA CTGGAGAGTTTTTACACCTCCTGCA AATGTCAATGAAGATTTGGCAATTTGTGCTG	T	C	AAAAA TACTCTTTCAACCACTCAAAC TATAC GAGGCCCTCTATTGGTCTAGTCTCAGTGAC AGCTTCATCATATGCAACTCCAACA ACTCAAC A	NA	NA
Ca-II-SNP1457	121.00	Ca-desi-LG(Chr)8	6675197	ATATGGGTGGTCTGAAGATCAGATGTGTGCTTA TTAGAGAGAGCTTTATACATTTCTAGAGGAGGGG ATTATCAGTAGTATTATAGTTGATTATTCA	A	G	ATAATAACTCTGAATAATAAATAACTAACTAAAT AAGTCTGAATAAGTCGCTAATACAATAAGTCTG AATAACAAATAACTCGCGAATAATAAATAAGT	NA	NA
Ca-II-SNP1458	121.89	Ca-desi-LG(Chr)8	6716647	CACGATAAATTACA ACTCAAGTTATTTTCATCTCATG CTTGTTTCTCAATTCGATCAGCTTACCGACAGATT CACGAAGCCTCTTGATCCTCAACCGTTCA	T	C	TTAGCGCAACTCATATATAACTCTAAAAATATTC TCTAAATCATTTTTCTTCAATTTATTAAGTGCA TGTAATAATGTCTAGTTTTGACGACAAATAC	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR430	122.78	Ca- <i>desi</i> -LG(Chr)8	6719856	AAATTGTTCTTTAAGTTCTGCACTC	(AT)11	(AT)10	CAATAATCTGTTAGGGTCTTTTGACA	57.43	124.00
Ca-II-SNP1459	124.56	Ca- <i>desi</i> -LG(Chr)8	6871710	TTGACATTAATTACATTTGTGGTCCCACTAATTGT GGTCTCCCTTTATACCTTATGGTGGTCAGATGAG GTAGAAATTTTTAGATCATTAGTATGATGGA	C	T	AAGAGTTGTACATGAGAGGATAAGATAACCAAA CATGCTACTAAGGACAAAAAATATCCCGTATGGG CTAGTTCATAGGACACAACTAATGGATCTATA T	NA	NA
Ca-II-SNP1460	125.45	Ca- <i>desi</i> -LG(Chr)8	6879863	GTCTGAGCCTTGCTTATGATTAATTTTTAGGCTT AAGCTTGGCCTACGGTCTAATATAGGTTTTTTTC GGCATGACCTCTTAAAAGTCTGGTCTAGC	A	T	TGGGGGGGACTACTTTCGCGATTGAGCTAAAA TAGGGGGGACCAAACTGCAATTAACGTAATAA TTTTAATATGAATAAGACTTTTAAATAGGCTTCC A	NA	NA
Ca-II-SNP1461	126.34	Ca- <i>desi</i> -LG(Chr)8	6883558	TTGCTTCTTCTTTGGTGACATCCCTCTTGCCCCC CCGGCTGTCCAACCACTCCTGCGATTGTTGATC CTCCTCGTTACCCCTCTCGTCATCATCTTCA	A	G	TCAACTAAAAAACGAAAACGTTTAAATGGAAT GCATCTTTGTGAGCAAATCAGCAATCTGTAAG AAGAAGAGACAAACGGTAGAGTAATGATTCTAT G	NA	NA
Ca-II-SNP1462	127.23	Ca- <i>desi</i> -LG(Chr)8	6890882	GATTCCTCATGCATGTGAATATGTGATTTTTAATT GTAAATTAGTCTTCATAACAGTTTTTTTACTGTT GAAAGTTGAAAACATTTGGTTAATTACT	T	C	TTCAAAGGAAAGTTCCTTGATTCAATTCCAAAA GTATCAGCTGTAATTGTGCAATGACTGTGACA AAATCCAAAATAAAAAACAATCAAAATATGT	NA	NA
Ca-II-SNP1463	128.12	Ca- <i>desi</i> -LG(Chr)8	6900162	TCCACGCATCGCATGCCATGTTGTTTTTTTGTGTC TTTTTCGTTTTATTGCAACATATTTGAAAGGAACAA CAGAAATGAATTTGTACGAAGCTTCTTTA	G	C	AATTATACTTTAATTATTCATGACCAAAATTTAA ATTATTAGAATCATATATATAAAAGTGTGTGTGT GACCATGTCCCAAAGTAAACAAGATGGATGCCA	NA	NA
Ca-II-SNP1464	129.01	Ca- <i>desi</i> -LG(Chr)8	6901022	TCAAGAGCATGTTGATTGGCTCTACTTAAATTATG GTAATCCTTTGTCTTTAAGTTTGTGCGATCTTTC TCTAATTTCTATATAGGTTTGAAAAACC	T	C	CTTAAGAAACGCCATTGACATTTTAAATTTCTT TTTTAGAAATATTAAGACACTTTTTGAAACGTC AATGAGATTATTTAATATAAAATTCAGCACAA	NA	NA
Ca-II-SNP1465	129.90	Ca- <i>desi</i> -LG(Chr)8	6906044	GACACTTTGTTTGTGGGGTCTACTTAAGATTTT GGGTCTTATGCGATTGATAAATTTATATCCATG TCTAAATGTAGATAATTTTTAACATAAAA	G	A	TACATGTTCTAGTAAATAGATACATGTATAACTA ATTTTGCTATAATTCATTTTGTATTTGGTTTAA TATGAATTTTTCAACTTATATAATATTTAA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1466	132.49	Ca-desi-LG(Chr)8	6914175	TTTGGTGGTTCGTTATGCTCCCACTAAGATAGTT ACATCATCTACGAAACCCAACTCATTGGCCCTAC TTTATAGTCAATTGATTGACTCGTTATAAA	A	T	TTTTTACATTTAAAATGTATAACAATTAGACTCC ACATTTCTATTAGATGTGCAATGTTATGGAGA AAGTAAGTTTACATTTTGAAAAATAAACTCAAT	NA	NA
Ca-II-SNP1467	133.34	Ca-desi-LG(Chr)8	6919957	TGCAGTTTTGGTCCTCTTATTTAGTTGAATCGTA AAAATAGTTTTTTTTTTTTCCAGTTTGATCTCCG AATAAACTTTTGGTCCAAAACCTTGATGAA	T	G	CGTTTATTTAAGTCACATCATACTCAAGATCTC ATGACGCAACAATTATATCTGAAATATATGATTA TAAATAATGTGGTGTGACTTGAAAAAATGAAA	NA	NA
Ca-II-SNP1468	134.19	Ca-desi-LG(Chr)8	6931424	TCCTTTTTTTTTATTTCCCTAAATGCCCTAATTTA AAAATATTTCTCTAAATGTCTTATTTTTTTTTAA GCAGGAAGTCGTTCTTTGAGGAAGCGAC	C	T	CAAGAAATAATTAATGGTATCATTGGCACTTAG GATATGAAAAATTTGGAGGTTTTTTTTTATCAAT ATATCCCTTTTTATTTATTTATCGTCTTCAAGT	NA	NA
Ca-II-SNP1469	135.04	Ca-desi-LG(Chr)8	6945723	TGCGGCACCTTTCTATATTATGATTCAAGTTTAGT GTTTACGACGTACAATTTGTGTTAAATGTTTCAG GCTAGTTTACAAGATTATGAGTCATACTTA	C	T	AAAATAAATATCTTTTCAAAAATATATTTAAAT GTTCAAAAAGTTAGAAGAACAAACACGTACAAA TTTTTATCTTTAAAGTATGACTAAGGATTGTC	NA	NA
Ca-II-SNP1470	135.89	Ca-desi-LG(Chr)8	6954083	ATACGCTGCGTGCCAACATAATCAATACACAGTG GATGCTTTTATACACTGTGTGGCCTCATTGACAC AACCATTATACAATTTCTACACTTCTTTGTA	T	A	CACAATGAGGTTTAAATCATATGCAATCTTAACA ATGAATAGGCGAAAATACTAAGAAATAAATCTAC TTTTTTTTAAAGAGTTTACAATTGTTCAAAGT	NA	NA
Ca-II-SNP1471	136.74	Ca-desi-LG(Chr)8	6955563	ATATGAGCCATACTTAATATCTCAGATATAGTTTAA AAAATTCATTGTGTACATATTTGTTTTCCCTAATTT TTCATTTTCCCTAACATGTTTTGTTTATG	G	T	AATGCTTGGAAATAACTCTTTTTTCTATGCTCT TAAATTATGCTATAGATTCAAAGGATGAAATCT ATCTCTAGAAACTATAAAAAAATCCTGTTGG	NA	NA
Ca-II-SNP1472	137.59	Ca-desi-LG(Chr)8	6957824	AATCATCACTGTTTTGGGAATCCAGTGACCAACA CTGATCAAAATCAAACCTGTTGAGTTGGGGTCTG TGGGCTATATCTATGAATGTTGATTTATGA	G	C	TTTTGTTTCTTGTTCTTGTCCCTTTACTATAA CTAAGCAAATTTATGTTTTGTCTTCTTTTTCCCTC AACGAAACTACTTTAATAAATTTCTACTTTTC	NA	NA
Ca-II-SNP1473	138.44	Ca-desi-LG(Chr)8	6960219	GAGTTACTTATGATAGGGGATTTGAAATGGCTATT TGAAGATCCAGTTTCATTTTTACCTTTACAGTTTAT TTTTTTAACTAAAAGCTATTTGCGCATA	T	C	TCTGTTATCCGATACAGTACCTTTAGAAAAACA TTTATCGAAAAGAGCTCAATCATATATAAATAAT TACAATTAGTTCAAAGATTAATCTCTATTATT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1474	139.29	Ca-desi-LG(Chr)8	6961782	AGAACACTTGTCTGAGTTGTCAGTGTATACGAGT GTCGTACAAGTATCAAACGCTGACACGTGTTAGA CGGGAAACAGCCTAATCTCGGAGATGCTGA	G	A	CTGTTTATCTCTCCCAACAGGTTAGTTTTTTCA GTTTGATTGAACCCCTTTAACCTGTTTGATGAA TTGCCTGATATGACACATTAATCTAATGGCTG	NA	NA
Ca-II-SNP1475	140.14	Ca-desi-LG(Chr)8	6964897	TCATCATGGAGTTCAACACACTCCCAAAAAAGGA TTTTAGAGCAGGAAGGCTGAGTTGTATCCAGAAT CACTGATTGCTTGCTCGTGGTACCAGGTC	C	T	CAATGGCCACGCACCTCGTGGTGTGCAAATA GGAATGCATTAGCAGTCTTGTGGAGTCGTTGC TACCGTGGTAACTTACGAGGATAGGGAGGAT GGT	NA	NA
Ca-II-SNP1476	140.99	Ca-desi-LG(Chr)8	6968877	TTTAGAACCTGGTTCGGGTTGAGAATCGTGGT CGTTGAGGAGATCGAAGGGTTGATTGAGGAAGG TGCAGTTGAACCTTCTTCTCCTCATCATTTT	C	T	AACTCACAAAACGATGTCGGGTCGATTGGTGA AGAAGATTCTGAACAAACAACACTTTCCTC ATCAACTCATCAAAGAAGAAGAAGAAGATG AT	NA	NA
Ca-II-SNP1477	141.84	Ca-desi-LG(Chr)8	6971496	ACACTTGAAGATACATGAGCAGAATCTGATTC GTTATTTAGAATTTAGAGTAGTAGTTTTCTCTCT CGAGATTTGGAGTCACTATTACTCCAAAT	T	C	ATAATTTAGGTATCCATTCATCTATATTTCTC ACATTCAAATCCTTTTGATTGAGCATGCAATGT AAACTTTTATGATAGTTGAATACTTCAAATTGT	NA	NA
Ca-II-SNP1478	145.24	Ca-desi-LG(Chr)8	6972137	TCAGATTTAAATATGCCTTTGCTCCTTAAAAATATA TCACTTTTGATGTTTGTATCCTAAGTTTTTTGT TTGAATTTAGTCACTAAATAAGAGACC	A	G	TTAGGGTTTTTAAAGAAATTCGCCTTCTCCGT GCCGGTGCAGTTTGTAACTCTTTTTGTATG TAGCTTTGATATGATTAAGGACAAAAACCA A	NA	NA
Ca-II-SNP1479	146.09	Ca-desi-LG(Chr)8	6978739	CGCACATTGTGCACCGCATATAAAGTCGAGCAA CATACTCCTTAAACGAGAAGTTTGAAGCAGTGTG CCGATTTGGGGTGTGCGGGTATTCTTCC	A	G	TGTACACATCTCCTCTCAGAGTAGCCACCCATG CTTGTCCGTACTCCGGAGGAATGTAACTAATG TACCTACAAGTTCTGTTGTACATGAGTTTGAT A	NA	NA
Ca-II-SNP1480	146.94	Ca-desi-LG(Chr)8	6979516	ATATCTTGTTAAGAATACAGCATTTTCAATTCTT CTTGTTTTACTTCTCAATCTTAATACAGCAATGCTA CAACTTACTGACTTTTATTATTGCCATT	C	T	GAGTCTGAGCTATAAACACAAAATTTGACATGT CTTTTCCTTTTGAATTAAGCTATACATACTAAC TATAATTTAAAGGGATTACATTTAGTAATGT	NA	NA
Ca-II-SNP1481	147.79	Ca-desi-LG(Chr)8	6982315	GTCAGATGGCATATCTACGGATCCTTGACAATCAC CTCCATTCTCCTCGGAAACAACTTGAACATAAT TCTAATTTTTTTGTTCAAATTTATCTGTC	G	A	TATTTATTTAGCCCTTGTCTTTTGTGCGCATCTT TAATTGAATTGGCTCTACCTTTACCTTTTCTAAC AGTTATTTATTTTCTGATATATTCAAATGTGA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1482	148.64	Ca-desi-LG(Chr)8	6984120	TCACAATTTCTTTTGTATTTCAGACTTTCTTTTG TACTTTAAGGACTCCCAATGTGCCTTCAGTTGAGC CCATACATCCTCTTCCATCCAAATTGGTT	G	T	GCCACCTCAGCATAAAGACATGGTGCGGCGTA ACTTTGAGAAAAGGGTTTCAAGCTAAAATGATTCA AATTAATGCAAGAAGCACGGAAAAATTTAGATCA AA	NA	NA
Ca-II-SNP1483	149.49	Ca-desi-LG(Chr)8	6990174	TTAGTTGGGGATATATGGTGGATCTATAATTTTT TTGATTTTGTGGAAATATTTTATGGAGTTTGTG GGATATTGAAGAGTTTGATGGTTAGAATC	A	G	ACACAAAATATGGTAAGTTAGTTATGCATTTTAC TAAATTCACACTATAAAATTTGTAATAATTTACAG ACATTTTTTAAATGTTGTGTA AAAAGATGCAA	NA	NA
Ca-II-SNP1484	150.34	Ca-desi-LG(Chr)8	6993303	AGGTATCAGAATTATGTTTTGAGAAGTCATCAAA GTATTTACTAGATACTATCAAACCTGTGAGTCGTC TACCTTCCCTTTGGATTTTTGTGGATGGTT	G	A	TTGTAACTGGATAGCAAATATACACATGAAA TATAAACAATTTGTTGGCAAATCTATCATGGATT ATTTTTCCCCAGTTCATATAAAGGGTGA	NA	NA
Ca-II-SNP1485	151.19	Ca-desi-LG(Chr)8	7004534	TACCTCGTGTTCCTATGAATACCATGCAGTATTCT GCTCCTAACAACAGTGGCCTTCCGATGCCTCCAC CAAGACCACCAGGCATGCACATGATGCCATC	T	C	TCATATGATGCATTGATGGATGCATTGGAGGTG GTTGACCAGCCATCATTGAATGCTGTCCAGAG GACATTTGCATTGGAGGAGGGGGCGCTGGCC GAAC	NA	NA
Ca-II-SNP1486	152.04	Ca-desi-LG(Chr)8	7009241	TCTCAAACCTTTCCATAAATGACTCTCCTGTATT GACGAAGATACAAATGTTTTCTTTAATTTGATT CAGACTTTGTACGTAAGAATCTACTATTG	C	G	AAAACTTATTAGTTAATTTTTTTTACAGTTAATT ATATGTAAGTTATATACTTATTTTTAATATACAT TTATTAGTAAGCTAATTAACAATGAGGGG	NA	NA
Ca-II-SNP1487	152.89	Ca-desi-LG(Chr)8	7012940	TTACTTGTTCAGGGATCTCTTTCAATTTCTTAA CAGGAGACCTCCCTCAAACCTATGAACCTCACTTCA AGCATAACCACCATGTAATGTCCAACCT	T	C	AAGGACATTAATGGTTCTGTAAAGTTGGTTGTT TTGTAGATACCTACGCACACGTAACAAGTCAA CTTAGAATGCAATCAATACCAATAATTAACAC	NA	NA
Ca-II-SNP1488	153.74	Ca-desi-LG(Chr)8	7023172	CAATTATTTTCATTGGTACGATATCTTTCATTATT TATTAGAGAACATTTTTCGTGATAAATTTGATTTA TTTGAATTCGTTTCATATGATTTTTCAT	T	C	TAAGTTAGTATATACAGTCTCCAACGATTATCTA CAACATACCTATCAATAATATTAGAAAAAGACA GAAATATAAAAATATGAGAGACTAAATCAAACCT	NA	NA
Ca-II-SNP1489	154.59	Ca-desi-LG(Chr)8	7024894	AATATCTCAATTCAGACTAGACGAGAATATGTATA CTTACCCAATGTGGTTCTTGAGAACAAGGCTTTCT ATTTTTAGAATCTTTATGCTCAGTTTCTT	G	C	TAAGAATCTGCTCGGTTTTATCTTCAATTTCTCA GGGAAGTGAGAAGCTGCTTCAACTAGTCTCAG ATAGTTGCAAGTCTTCCAACACTTATAAGGATA A	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1490	155.44	Ca- <i>desi</i> -LG(Chr)8	7029788	TTCAAAACTCCTAACCTTGGGTAGATCTTTACTTT TTTGAGATGAATAGTATAAATCGGACATCTTATCAA TTTTTTGTGATGCACATTATCATATGATT	G	A	ATTCTAAAAAAAAAAGAATACTAAAACAAATCAT TTACAATGCAATTACAAAATGATTTTAGATAAG AAGATGAATTATATATGTTTATAACAAGTGGT	NA	NA
Ca-II-SNP1491	156.29	Ca- <i>desi</i> -LG(Chr)8	7036172	TATGTTTGGTATCGAACCTCTGCGAACTACAAGTA ATATTTGTCTAAAATCACCATCTATTACAACCTGGA GTTCCACCAAATGGTTTGTGTTTGTGCT	T	A	TCATGATGACTTAGTCCTTAATGTGGCCTTAAG TGGTATTACATCATTGTTACTACCAGGCGGTCA TACAACCCACTCTACATTAATATTCTGTTGGA G	NA	NA
Ca-II-SNP1492	157.14	Ca- <i>desi</i> -LG(Chr)8	7037315	TCCATAATTTCAACGCTATTGCAATGAAGCACCAA TTAACCTTTTGCCTGTTAACTTCGTCATTCTATC GTATTTGGATTCAATTATGTTGAAATATTAC	T	C	TATTTATAACTTTATTCTATTTAGTGTGTTATT GATTCTATTGTTCCGGTAAAAAGGTCCTACATAT TATGTTATCTTTAACCCACTACACGTTTAGTT	NA	NA
Ca-II-SNP1493	157.99	Ca- <i>desi</i> -LG(Chr)8	7043758	TACACCAGAATTTGTGGATACATTTGGTACATTTT ACTCTTTAGTATGTGCAAGACATTTTGGACTTCT TTGTTGTCAAACCTAACTCTTACAAGATA	G	T	TTGTTAGATAAAAAATGCCTTACAAGTTATCAT TTAACATCAATCTTATAAAAAATCTGGTTTGATA TGTTTGCCTTTGTGTTTATTGTACTATTT	NA	NA
Ca-II-SNP1494	158.84	Ca- <i>desi</i> -LG(Chr)8	7044735	TTGGTTTCTCATTGGCTGTTAACATTAATTTGTAAC TTGTTGTAACCTTTAGATCGAAATGAATGAATT TTATTATTTGCATATTGACCGCTGTTTG	C	T	TTTTATTCCAACATAAAAAGTTGTGACTTTGATTT TTAGCTTTCCAACGCCTGCTTGCATGCGTCAAT ATGATATGCAGAACTCAAGTTATGACCTACAGA	NA	NA
Ca-II-SNP1495	159.69	Ca- <i>desi</i> -LG(Chr)8	7045300	GGAATGCTTTATGCTATTTTATTTGATTAATTTGC TGCCATATATATGTAGGTTTATATTGCGCGTATATT ACTTGTTATTGTGTTTTGTGTTTATTC	C	T	CAAGTTAATTTTTAATTCGTGACTCTATTCCTA TTTGACTATAGAATTGATCAAACAAGTGAATTA ATCCCATGTGAATTCGGTTTCTTTGACTGGAG	NA	NA
Ca-II-SNP1496	162.24	Ca- <i>desi</i> -LG(Chr)8	7047467	ATTAGAAATAAACTGTGGACTATAAGTGGGTGTTT AATGTGATTGCCCTACACCCACTGAATATGAAAA ATGCTTTCTTCATGTATGATCCCCCAGCT	T	A	CTTACTGGCTAGGTGAATTTCAAACCATTCC CTGAAAGACTATTTCAAGCCACAGAGACTTC TCCAATTTGCAAATCTGACCCAAAATTATCTTCA	NA	NA
Ca-II-SNP1497	163.09	Ca- <i>desi</i> -LG(Chr)8	7049649	CGTATTTGATTAGTCTCGATGTTTTGTA AAAAGA CCAAAAATATATCATTCAATGCCTTGCTTGCATTTA TTTAGCGTTTTAAGCCAAAATATTAGTTG	C	T	GTCTGCCATCACCATTGGCTTTTGTTCCTTT GTTAATGCACCTTGATCCATGAATGACTTTGAT TCTATTTAGGCTCCTCTTCTCATCAGATATG G	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1498	163.94	Ca- <i>desi</i> -LG(Chr)8	7061028	GGCGAGATCATATTTCCAGCTCAGATTTTGACTT TGTCATGCGCAACCTGGTTGCATTTAAAGGGAA AATACCCTATTTTCTAAATATATTCTTCATC	A	G	AATATCAACACTCATCTTCATTAATCTCATCGCC TCCTCCATCATTTCATTATCTCCTCCATCATCA TCGTGAGAGGTAGAGAGGATGGTTGTGAGTCG	NA	NA
Ca-II-SNP1499	164.79	Ca- <i>desi</i> -LG(Chr)8	7062955	TTATGATGAGGGTATGGAATTAGCCCGCACAAA CTCCTAAGATAGTGAAGGCTCAATCTCAATATGA GTAGTTTTGGTGTGCGCATCTCCTTCATATA	G	A	ATTTCTGTTTATTTGTTTTGAAATAATATTC GTGACAACCAGTAATCTCAGTTGCCTCACCAGT AATCTCAATTGCCTATTTTCTTTATAGATTGCT	NA	NA
Ca-II-SNP1500	165.64	Ca- <i>desi</i> -LG(Chr)8	7066214	ACAACAATCCATTTCAATTAGCCGTGTGTGATCTA TGGGGCCCTACACCAGTTAAGTCCTCTGGTGGCT ATATGTATTTTCTCACCTGTGTAGATGCTTA	C	T	ATTTTACAACGAATTGAAGTTCTACCATGGCT TTGAATTGTGTAATTTGTGCTAGAGTATCAGAC TCCAACTTTAAAGGATAAACCACAAACCTAG A	NA	NA
Ca-II-SNP1501	166.49	Ca- <i>desi</i> -LG(Chr)8	7067157	TTCTGACCCAAACTGCGATCCAGACCTGAAGCA CGTGAGTCCAAACTGGAGCATCTGTCTCCAGAC CTGAGGCATCTGCACCCAATCCTGTTCCCATC	G	A	TTTATGCTGCGAGTTAGGAGCAAAATGGGTTG CAAACGGGGTAGTATAATGCCATCCTTAGCTCT AGTCCCCATTGGGTGAATGTTCTAGGATGTAT CC	NA	NA
Ca-II-SNP1502	167.34	Ca- <i>desi</i> -LG(Chr)8	7068247	TCTCACTTGTGAATCGGTTTGGAGTCAAGTAAAGG CACTCTATACTAACGACACACAACGTCCTATGGA GTTTGTACCGCTTGTGAATATCATTACT	A	C	ACTGGATTACTTGCAGCAAGAGGGAGAACTTA TTAAAGTAATGAAGTGGCTATGAACGATGCCA AGATATGCAGAAATAGAGCCATCAAGTGTCTTC G	NA	NA
Ca-II-SNP1503	168.19	Ca- <i>desi</i> -LG(Chr)8	7677137	GGGGTGAAGATATTGATATGATATGTATACAATGT ATTAAGTTTTTAAGTCAAGTTGTTGGTGTAGAGAA GGCACCCCTACAGCTCTCCAGCACCCATGG	A	C	AATTTTTTATATATAATGAAAATAACAACATG GTGACTAGGTAGCTTATCATTTTACTCCCTAGG CCAAGCCAGGTTGAGTTTTCTAAAGCACTTGAA	NA	NA
Ca-II-SNP1504	169.04	Ca- <i>desi</i> -LG(Chr)8	7749615	CTCAGTTCGGAACAACGCTCTCAACGTCTAGAAG TACAATGAGACTTGGTGAATGTCTGGCTGTTGA TCATGTGCAGGATTGGGATAGACAGGGAGAT	A	G	TTTACAGTGGCACCTATTTCTTCTGTGCTGATC TCATGCCGTACTCACTCACTAAACATAAGCTGG ACTTGTGTTTTGTCAGGAAGAAATTTATCAACAA G	NA	NA
Ca-II-SNP1505	171.59	Ca- <i>desi</i> -LG(Chr)8	7770919	AATTTTGATTACTTGCATTTCTTCACGGAAAAGC ATTTTTTATTCGTTCAACTTTGTAATAACTCTT TTATATTGTATGCAAGATTTAATTTATAT	A	C	ACCTACAAAAACAACAGCATCACACATATCAC ATTTTTAAACATCAGATTAACATTTTTAAATCA GAAGGTTGTGATGTGATTACACTATCAGTGTA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1506	172.44	Ca-desi-LG(Chr)8	7879595	GACACGGTTTCGTGAGTTCCTAATTCTCTGGTTG GATTGATGGTTTTGGATTTGCAAAAAATGAATAGAA TGGTATGAAACATGATTCCATTCCCTACCAC	C	T	ATAAAACAATAAAATAGGGGTAAGAAATAAATA TTTAATTAAGTTGCTCCATTCTATTGGATACATT CCAAATTGGAGGGAAGAAAAATAGGAGGAGAG	NA	NA
Ca-II-SNP1507	173.29	Ca-desi-LG(Chr)8	7943790	TGGTGGCTTTTTGAGTTAGAATCCCTTCACCGTTA AAAACTACCAAGTTTGGCAGCACCATCTCGGTT CTCTGGTTTTGCTATGTGCTTTTCGCTTC	A	G	CTAAATCAAGGGAGCGTTATGAAAAACAAGAC AGTGTACATTGTCCTAATCTGAAAAATGCAT AGCTATGTGGAAAGCAACGAATGACTATGCAGT G	NA	NA
Ca-II-SNP1508	174.14	Ca-desi-LG(Chr)8	7944361	TTGTCTGAACCTCCTAAATGTCAATAGAACAA ATATTTCTTTGCCAATACTATTATGGTATGCCATTT TTAATTGTCATGGATGCAAGCTTTTGCT	T	A	TTAAATAAAATTCAGCAAAAGCTACAAAAATA AGCATATAAATAACATCACTAAATTAACAAAGC AAGAAGCAACCCTACAGAAACCATTCCACAC	NA	NA
Ca-II-SNP1509	174.99	Ca-desi-LG(Chr)8	7945632	AACTTGTTTTAATTTAGCACTTCAGAGTGGCTGT AAATTTATGTTTTAACCTTACAAAAATTAATCAAATG TATTGCAACTGCTGAGTGAATGGTTCTT	G	T	TCCCATCGCTGGTGAAGTTGCATCGTTCACAT AAGATGTATGGCCACGAAACTCTTTCAACATCT TTCCAGATTTGAGGCCATGGATTCTATATTACA T	NA	NA
Ca-II-SNP1510	175.84	Ca-desi-LG(Chr)8	8060043	GCAAGTTCATTATTAGGGTTCCTACAAAGATTAG AATAATGACACATCAACTTGAATTCTCGGTGT AGATGCTACGTAGTTGGTCTCATCCTTCA	A	G	GTTCTACAAAACTAGACTCGAAAAGCTTGAGA AAGAAAATAACCATCTTAAGTTGATCCTTTTT TTGACGAATGCTCCTTTATTATACTTGTAGTCT	NA	NA
Ca-II-SNP1511	176.69	Ca-desi-LG(Chr)8	8086999	AAAGGCGCTTAAATGCCATCATTGCAACATACTTA CCTGGATGGAGTCAATGGCTGATCAGAAAGGCC ATGGCTTAAGTTGTGACCTCCATTGCATT	T	A	AGACTTGACTAAGAAGGGCCGCGCAACGCA GGCCCCAACAATAACAAATTATGATGTAGGCTC CACCCTTGGGTAGACCTTAGGTGAGCACCCC TCC	NA	NA
Ca-II-SNP1512	179.18	Ca-desi-LG(Chr)8	8111791	ATTTCTTGGTGTCTTTTTCTCTCCGTGATTATA TTAATATTTCTCTGTCCCTTATTATAAAATCTACT TAGAAAAATTCACAGGTACTAGAAAAGTA	G	C	ATTTAATTTACCGTTGAAAACGTAAATTCTCAT TATATCAAAAATTGTAAGGTAATTATGGAATAG TAGGACATATTTGACAAATTTAATGCTACAA	NA	NA
Ca-II-SNP1513	180.01	Ca-desi-LG(Chr)8	8140661	AAGAAGTTAATATTAGCATTAGTTGAACCTTCTACA CTTGTTGTTGGACTTGTGAGACTTCACATTGAAGA CCACACATATTGTGTTGGCGCTAACATGG	A	G	AGTTGAATGTGAGAATGTCCAAATGCAACGAG CCCGGACAACATTTGTGAGCACGAAATTACAAC AGGAGCTCTTATGTCACATAGGCCTCTCTTCC T	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1514	180.84	Ca- <i>desi</i> -LG(Chr)8	8141174	TAGTGGTGTGTTATCTTAAAAGTTTTGTTAGAAG TTTGTAGCAGAAATCCTATGGTGGGATTTGTACAT TTTCTGACAATAGTAAAAAATCTCTTGTA	A	G	GGACAGTGTAGGACAATGAGTAAATGACAGTA AATTAATGAACACATAATATTCCTGGTTTCTT TTGTGACAAATAGTAAATCCAGTCCTTTGCAC A	NA	NA
Ca-II-SNP1515	181.67	Ca- <i>desi</i> -LG(Chr)8	8376853	ACTCATACACTTGTGGATTTTTGCACAATAGCTC ACTTGAACCTCCCCAATTGATCTATAAATCACTTA TTGTTGTTAACATTACTTCAACAAGCTA	C	T	TAGCTTTATTTTGTCTCAATTTATGTTTT GTTAGTTACAGTTAGTTATGGTTCTAACTAATTG GAGGGAATGGATAACTATATAAGGCATTGCTT	NA	NA
Ca-II-SNP1516	182.50	Ca- <i>desi</i> -LG(Chr)8	8449855	ATTAGTTTTTAGCCTCTATAACGGTTACTTTATAT TTTTCTTATTTTTACTTCATTCCCTTCAAAAAA AACTTCAGTCCTGCATTTGAAACCTACG	C	T	AAAATCAAAGAGAGAAGGCTTGAACCTTGACAC TCATAGAATATTGTTGCAAAAGAAATTTTTGACA GTTGGTTATTGTATTATGAAAGAAAATAAACTG	NA	NA
Ca-II-SNP1517	183.33	Ca- <i>desi</i> -LG(Chr)8	8522269	TTGCATGGTGATTTAAGAGATATTAGATTTGATAA AACCTTGAATCTTTCTCTTTGAATGGTGTAT GTTGGAAGTATTCTAGGATGCATTGAGG	G	A	TCTAAGCCTCACTCTCAACAATGTTTCATCATC ATCTTCTTCTTCTCTCTCTCCACTTTTTTCC ACTTACAACAAAGTCACATCACAACAAATGAA	NA	NA
Ca-II-SNP1518	184.16	Ca- <i>desi</i> -LG(Chr)8	8579338	GTCAAACATAATTTTTAATTTTTACGCTTAAATAT ACAATTGGTCCTTACAATTACTCTATTTTTATTTTT CCACAGTTTTTTATTTTTGTCTTTGTA	G	A	AAGATTAATAATTAATATTATTTATTGCAGTG ATTTGTTCCAATTAACCTAATTTATATAGACTA AAACAAAAGAGCAAGGATAAAAACAAAAAT	NA	NA
Ca-II-SNP1519	184.99	Ca- <i>desi</i> -LG(Chr)8	8645587	GCATATCCTAAGAAGCTCTGGAGCATATGCTATT TTCTTGATCAGCTCATTATAAATTCATCTATATAGA GAGAGGAGCTATCTTGCTTAGTATTAGTA	C	T	TGCCAAAGGAAAGAAGTCCCGCAGCTGGTTTG CTTAGCATCAAGTGAATCACAATATCTCACCGA CTCTTGTGGATAATTTGTTCTGTTCAACTTTCTT G	NA	NA
Ca-II-SNP1520	185.82	Ca- <i>desi</i> -LG(Chr)8	8779980	AGTCTTTAAGTTTTGTTGTTTCATGTTAGTCTATT AGTTCCAAAACCTTTAGTATCTTGAGTTACAAATAT TATACACCTCCTTTTTGTGCTAACATT	G	A	GTTATAACAGAACATTTAATCTCTTAAGTTAC AAAAAATTAACAAACATTTTAGTGCTTAAGTT ACAAAAATTAACATTTTGATCCTTAACTTA	NA	NA
Ca-II-SNP1521	186.65	Ca- <i>desi</i> -LG(Chr)8	8784040	TGATGAAAAAGGTATATTATGCGCTTGTACATGT TTGAGCAATCATGTGTGATACTAAAGTGTGTTGTT GATTATGTGAAAGAACTGTTGACTCCAC	A	T	ATTCAACAATATATAATAAAATTACATTACATAT ATGTTAGTCGTTGTGTTCCCAATGCATCACT TGATTTGTCATGCTTCAACAAATCTTTCTTCTTA	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1522	187.48	Ca- <i>desi</i> -LG(Chr)8	8912416	TAGCTGTTTGTGTCGTAACAACAGACGTCTGGG AGGTAGTCATAAATCACCACGGGTGCAGCACTAC CCCATGCATATTTATCTATACCGTCTAAATAT	T	C	GATTGTGCTTCTTGAGCATATCTGTTGAATTTA GTAGGGAGTACTATTTTCGCGGATAAGAGTCAT ACTCTAGTTGATGCGAAATACCTTCCTTTATTC A	NA	NA
Ca-II-SNP1523	188.31	Ca- <i>desi</i> -LG(Chr)8	8963019	GGTGTTTGCATCTGTAGCATTTCCTCAACCGTAC TTTTGCCATCTACACCGTCTATGTGGGTGGCTGG AATGACATTTGGTTATGGATTGGGTTCTTG	C	G	TGTGAGATTGAAGAAAAGGCATATACTTCAATT TTATGATGGAAGATTGAACCAATTATAAAGGG AGTGATACCCACAGCTGCTGCAGATATTATA A	NA	NA
Ca-II-SNP1524	189.14	Ca- <i>desi</i> -LG(Chr)8	9007562	AATTTTGATTACTTGCAATTTCTCACGAAAAGC ATTTTTTATTCGTTCCATAACTTTGTAATAACTCTT TTATATTGATGCAAGATTTAATTTATAT	T	C	AAACAAGGCGGGTCAGCTCCACCTCCGACTGC CGGGGCCCCACCGGTAAGAAGCTTCTTGACA TCTCCAAATTTATTTCCCTTTGTTAACTTAGAA CTTTAATCCACAATTAGAAATGCATTACATTA TGTACCCAAAAAAACTGCATCCAC	NA	NA
Ca-II-SNP1525	189.97	Ca- <i>desi</i> -LG(Chr)8	9031119	GACACGGTTTCGTGAGTTCCTAATTCTCTGGTTG GATTGATGGTTTGGATTTGCAAAAAATGAATAGAA TGGTATGAAACATGATCCATTCCCTACCAC	T	G	CCAGCCTATCTTTAGCTTAAGAGGGAAGAGAG AACTTCTAATAAAAATAAATAATTATAGAAAGAA GGGACCGGAATACGCTAATATCCTAACTAATT TGCTTATTTTATTAGAAAAAGTATGACACGCAT ATGCACTACCAATACTAAAACACTCATCCTCTC CTAACCAAGTACTCTGAAAAGAAAATAACATT ATCCACATATACATCTTGGGCTGAGCTGGCCCA TTTCTTCCCTGCTTACTCTTTAATAATCCAAAA CCTTTCCACAAGCCATTAGGGTTTGACGCTCTA ACCAACCGAGCTAAAAAGAACAATGGGTGGTA AAGTTTACTTTGAAAATCATTATTATTTGCATGG T	NA	NA
Ca-II-SNP1526	190.80	Ca- <i>desi</i> -LG(Chr)8	9879668	GCCTTTTCTATCAAATAGTCTCTCTCTCTCTA CGGTAGATCCCAGGATGATAATCTCAATCATCTC TTCACAACGATCAATCAAATCCCCAAT	T	A		NA	NA
Ca-II-SSR431	191.63	Ca- <i>desi</i> -LG(Chr)8	9887641	TACCCGGATTTGCTGAACAT	(TAA)18	(TAA)20	TTACGGATCCGGATTTTATGA	60.33	205.00
Ca-II-SSR432	192.46	Ca- <i>desi</i> -LG(Chr)8	9906628	GCAATGTGTCGGATGCATTAT	(TA)13	(TA)12	TTTGCAAAGGCGATTTTCTT	60.75	193.00
Ca-II-SNP1527	193.29	Ca- <i>desi</i> -LG(Chr)8	10009717	TGCTACGTTTTCAAGGGCAGTATGCGTTCATGTA GACTAAAACCTAAAGGCAGTTTTCGCATTTTGCCC GGTGGAAACTCAGAGTGTTTATGCTATGAG	C	T	ACATCCACAGTTTAGAATCCACATGAAACATGT GGCATAACAAGCAACAAATCCAGCTCATAAATA TGTGGTCCCAATAAATGCAAGTAAAAGATAGT C	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1528	194.12	Ca-desi-LG(Chr)8	10136505	TTTCTTCTTTTGTTCCTTTTTCGTTGATTAACCA AATTTTAGGGCTTCTACTTCATTTTCACTCTTTAGT TTATGCATGTTGAGTTTGTGTGTGCA	T	G	ATATTAGAAGAAGCATAAAAAAGCTTGAAA CAATTAATAAATGGTAGCATGTCATTGATGGA GCAATATATATTATTCATTATCATGTAAGTGA	NA	NA
Ca-II-SNP1529	194.95	Ca-desi-LG(Chr)8	10138754	AGTATCAGTACTACAGAGAAGTTGTAATAAATCT CTTCGCTGTCAACAGTGCCATAGGCCCTTCGTTG CATATATCCTGGATGTGCAAGGTTTCATCACG	G	A	CAACATGCGAGTTGCCTTGAGATCCAACATCCA CCTTGAAGTGCCGTGATTCAACCATCTTTCT GCTGGCCAAACGCTTGTGACTCGAAGTAGTT GT	NA	NA
Ca-II-SSR433	195.78	Ca-desi-LG(Chr)8	10224265	CAAGAATGGTAGCTAGTAGAGGGAA	(GA)15	(GA)17	GGAAGGTGTTTTAGTGGGTG	59.41	133.00
Ca-II-SNP1530	196.61	Ca-desi-LG(Chr)8	10225098	ATTGAATATCCACAAGGATCAAATGCAAAATCACA AATGAACGCATTTGGGTTAATTTTCGTTTATTCCGG TAAGCTCCGTCATTTCTTTCCGGCAGAGT	C	G	CAATCAAAGTGATATCTTACCATGGAATCTG CATGACAGAACTCGACCCGATTCTAGCTCGCA AATTCTTCCGCCGACCCGGAGACGAAAAACC GGC	NA	NA
Ca-II-SNP1531	199.10	Ca-desi-LG(Chr)8	10247387	GTTGGCTAAATTCAAAGCAACCCAAGTCAAGTATC TACATTTGTTTTGGAAGCCTTTGCCATTTCTCTGA TAACCAGTTGTATGAGATTGCAAGCGCGAT	A	T	TATTTCTCTGTTCAAATGCCTTTGGCAACCACT TTTTCGTTCTCATCCTCATTCCCTTTCTCTCGG GGACAACCCATATGTATTGGTCTCTGATGCTT T	NA	NA
Ca-II-SNP1532	199.93	Ca-desi-LG(Chr)8	10252427	CAACACGCGCACTTACTTTCCGGGTGATCCTCACT TCACCCCGGATAATGCTCATTGGATTACCACTTGG CAGTTACCACCTACCTTGTGAGCTTTTGT	A	T	TTTTTAAATTTGTGGAGTATAAATACAATGTGA GGTATAGGAATTTTTTAAATAATTTTGTGAA AAAAGTTTTTTTAAAAAGGGCAGTCTGATGA	NA	NA
Ca-II-SNP1533	200.76	Ca-desi-LG(Chr)8	10512305	TCTTGTAAGTTCAATCATTAAATAGTAAATTAATCT TGTTTGCTTGTCCGTGACGTAGGCTCATCGATTG AGACTGAACACGTAATCTGTATGTTATT	A	C	GAAAATGGAGAACGTTTTGGATTTTCTGCTCA AAACAGATAATGTTTTAAACAATTTTCAACAATC AAATTAAGAAAATTAATAAAGGATAAAGGGAA	NA	NA
Ca-II-SNP1534	201.59	Ca-desi-LG(Chr)8	10532681	AGCCTCTTGAGAGGGAGGTGTTGGTACCGGAGG GAGAAAGGACGATCTTTCCTCATGCTTGTGTC TTGCAATGCCATCCGGTCCATGTCCTCCTTG	T	C	CACACTGCTGACCACAGGTAAGATCAGACTGT CGATCGGAGCATCGGGTGGCAATCTTTTCTTC CCACAAGGGCACAAACGAGGAGGAGCAATGC TTT	NA	NA

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SNP1535	202.42	Ca- <i>desi</i> -LG(Chr)8	10539192	TTACAATGTACGTGAACTCAGTTTAAGTACGTTTACGTGAACTCAGTTCAAGTACGTTTATGTGAACTCA GTTCACGTACCACCAATGAGTCTCAAACCTC	T	C	CGTGAACCTCAGTTCACGTACATTTTAAAATTGT AAAAATTTCAGGCAGTACGTGAATTAAGTTCCG ATAAAGGTACATGATTTAAGATTGTGTAATTAAT	NA	NA
Ca-II-SNP1536	203.25	Ca- <i>desi</i> -LG(Chr)8	10541585	TTTTCAAATCTCATGCTTGTTATGTGTTGTACATTC GTTCGGTTGCTAGGGAAAAACAATTTTCATGTTTAT TAACCATGGTCCTTCAAAAATGATAGTTC	G	C	AGTCACATCCACACCTTGCGAAGGTAAAAAAA AGTAGGACAATTTCTCAACATTTCAAATTTTCAT GAATATTACAACCTCAATTTTGAACAAAAATGGA	NA	NA
Ca-II-SSR43	94.41	scaffold00032	297366	AAATGGGTAAATAAAAGCTTGAA	(AT)12	(AT)15	CAATTGTTGATAGAGTCGTGCT	59.37	170.00
Ca-II-SSR17	79.47	scaffold00046	81914	AAATCGGATGGTGGTCTAC	(TC)7	(TC)15	AAATTGAAGGATTTGGGCAG	59.82	147.00
Ca-II-SSR36	200.30	scaffold00046	231127	TGCTCTTCAAAGTAATTGTTCC	(TTATT)9	(TTATTT)8	TTCAATCACATCATTTTCAGGTG	57.64	109.00
Ca-II-SSR7	102.71	scaffold00055	43281	GAAACTTTCATGGTATAAATTCACAG	(TTC)6	(TTC)7	TCCAACACCATTTCCCTCTC	57.45	124.00
Ca-II-SSR25	199.54	scaffold00078	152204	CAATGGCCACTTCAACAATG	(TCT)7	(TCT)6	TCTTCCCATTCCAATGTTCTG	59.96	101.00
Ca-II-SSR34	168.31	scaffold00079	201569	TCTTTTGAAGGTTTTGCACTCA	(AAG)17	(AAG)13	GGCTCAAACCCTCTTCTCTCT	59.90	139.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR44	97.73	scaffold00079	359228	CAGGGAACGACCTCCTACTG	(AT)7	(AT)6	TTGTTTAGGTAGAGTTGGGAGTAACA	59.72	156.00
Ca-II-SSR18	88.60	scaffold00119	87150	CACAATTTGGGTCGACGG	(AT)8	(AT)7	TCTGGACATCCTTGAAAATTAGG	60.94	125.00
Ca-II-SSR35	190.42	scaffold00119	210194	TGGAACCTTGTGCCTTTTAG	(TATT)12	(TATT)11	CAAAGTGTGTTAAATAGATGGGA	57.88	137.00
Ca-II-SSR1	1.90	scaffold00122	14473	TCGGTTCCAACAAATTACGG	(TG)11	(TG)10	TGCAAATTCTCCATCACCTG	60.72	141.00
Ca-II-SSR40	172.06	scaffold00122	273687	AACCCGACACTTAACCGATG	(TTC)5	(TTC)6	TTTGAGAAGGGTTGAGGTG	59.85	163.00
Ca-II-SSR6	96.90	scaffold00126	38794	GGGCTTTAAATTGAGTGAGGC	(TA)8	(TA)7	TTTGAAGTTGATTCTGAGCC	60.09	150.00
Ca-II-SSR31	106.86	scaffold00126	178029	AAGCAATGAGTCTTCCACCG	(AATTG)6	(AATTG)8	CCCTCTCTCCTCCAAATTCA	60.26	139.00
Ca-II-SSR42	86.11	scaffold00143	295903	GGAATGATGAAGTTACAGGGGA	(TA)8	(TA)9	CGTGACTGGCTCACAAAGCTA	60.19	166.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR2	47.97	scaffold00156	26854	TTGTTTCATGATCTTGAGAAGTGTC	(TA)19	(TA)15	AGCTAGGGGCATATTAGAGGA	59.69	171.00
Ca-II-SSR33	146.71	scaffold00156	199922	TCACCATTTGTGAAAGTTGGA	(AG)12	(AG)11	CATTTGCACTTCTGCTCTGC	59.01	153.00
Ca-II-SSR38	143.11	scaffold00156	246641	AAATTCACTCTCTCCCTCTTCA	(ACA)7	(ACA)8	CCTTGGAATTTCCAATGGTG	58.52	193.00
Ca-II-SSR9	137.71	scaffold00157	54110	GCTCCGTTTCCACTCAGGTA	(TC)8	(TC)7	GCAAATTGAGGGAGGAAACA	60.26	108.00
Ca-II-SSR8	128.44	scaffold00158	47686	TGAAATATCGATCAAATCACGTAAA	(AT)10	(AT)9	TTTCTGAAACTGTTGAATTCATT	59.77	113.00
Ca-II-SSR26	70.47	scaffold00167	153407	TCCGTCAAAGATGAATGTGG	(AATA)6	(AATA)7	CAAAGTGAACAATTAAGACAAAAACA	59.65	181.00
Ca-II-SSR27	85.28	scaffold00167	162678	AGTGAGGGGGAGATTTGTTG	(TAT)9	(TAT)8	CCTTCACATGGACCTAGTCCTAA	58.99	158.00
Ca-II-SSR29	93.58	scaffold00173	170626	CCTCTAAGGTCAAACCCCTTG	(TC)13	(TC)14	GCATAGCAGCAAACAAGCAA	59.98	100.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR39	147.61	scaffold00185	252811	GGAGCACTCAAACAACCTTCCA	(TAA)25	(TAA)24	TCAATGTAAGGACCAGATGAATG	60.28	200.00
Ca-II-SSR23	164.56	scaffold00192	136270	CGAGACAACATAACCTTTTCGG	(ATA)6	(ATA)5	GCAAAACAATGTAATTCATATCTCA	59.62	194.00
Ca-II-SSR28	87.77	scaffold00198	169684	AACCCTGTAGCTGCTGATGC	(CT)11	(CT)12	ATTTTGCCACACTTTAGATTATCA	60.43	107.00
Ca-II-SSR10	159.31	scaffold00216	55316	GGTGTTATGCGTTAAGGTAGCA	(AAT)19	(AAT)22	CGTCCTCGTCACCTAATCGT	59.21	182.00
Ca-II-SSR30	104.37	scaffold00216	171314	TGGTCCATGGTACACCACTC	(AT)8	(AT)9	TGTAGGTGCTTCATAAATGCCA	59.23	100.00
Ca-II-SSR16	76.77	scaffold00225	81661	TTATATAAAATTCGATATGCAGGATCT	(AT)15	(AT)16	TCTCAATTCAACTTCCACTCAA	57.91	145.00
Ca-II-SSR3	65.07	scaffold00229	29109	AATGGAACACCGCCAGTAAG	(AG)9	(AG)15	TGTGGCTAAGCTGCTTGTG	59.99	170.00
Ca-II-SSR20	106.03	scaffold00233	99420	GAACGAGAATGAACATAGAACGAA	(GA)12	(GA)13	CGGCTGTACTTCACCGTTT	59.67	148.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR11	184.34	scaffold00252	56127	CTCGAGGGTGACCATTGATAA	(TA)14	(TA)11	CCGTCGTATATAGCCGGAGA	59.94	149.00
Ca-II-SSR37	108.52	scaffold00258	245622	CCAAAACGCATGTGTA AAAA	(AT)8	(AT)6	TTGAAAAACTGAACGACACCA	57.24	167.00
Ca-II-SSR41	109.35	scaffold00258	287444	CCCTCAGTATGCCAGTCGAT	(AAG)6	(AAG)7	CACTTGAAAAAGCACACCAA	60.10	148.00
Ca-II-SSR5	84.45	scaffold00270	33338	GCTATGTATCCACTTGCTATGTTTT	(TA)10	(TA)8	GGAATGATTAGAGATTGTTCTTGATT	59.14	138.00
Ca-II-SSR22	144.01	scaffold00278	135415	CAACGAATGTATCGCTTCAGA	(TC)9	(TC)10	CGAACAACCTCAGTACCAGAGA	58.93	153.00
Ca-II-SSR4	73.17	scaffold00289	32825	CATTCTAACACGTATCCAAATGAT	(TA)7	(TA)9	AGGCAATTGCACCCACAA	57.20	106.00
Ca-II-SSR19	100.22	scaffold00292	95837	TGAAGAATTGATACACTTACCTCTTTT	(AATA)5	(ATAA)5	TTGACAAACCAATTGAGGTTTATTT	58.09	118.00
Ca-II-SSR13	205.62	scaffold00307	65051	ACATTTTAATTATCTTGACACCGTT	(TA)8	(TA)7	TGCTCCACGAGATATTGAGGT	57.34	156.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR15	56.07	scaffold00307	75928	TGGTTCGAAGTTCAAATCTCC	(TA)12	(TA)11	TCATCCCTCGTTATAAACTTCTC	59.16	102.00
Ca-II-SSR12	198.02	scaffold00316	57060	GGAGAGGGGGTTTATCAATCT	(TC)7	(TC)9	CGCACATCCATTTAAGCAGA	58.40	174.00
Ca-II-SSR21	131.76	scaffold00316	118750	GCATACCCTTTTGTTGACGG	(TGT)5	(TGT)5	TCTCACTTCAACTTTCTTCTTTCA	60.37	117.00
Ca-II-SSR14	207.90	scaffold00325	68230	GGGTTCGGGTTCCAGAAATTTA	(TAT)7	(TAT)8	GAAATGACCCAGCCCAATAA	60.17	127.00
Ca-II-SSR32	135.08	scaffold00327	178985	CCATATGGCATAATCGTAGAAGA	(TA)14	(TA)13	ACAAAAAGAATAAAAGAGACAACGA	58.19	162.00
Ca-II-SSR24	188.14	scaffold00331	139676	TTGGGATGTGCCTTCAATTT	(CA)6	(CA)7	TGTCACTCGTTTCTTAAAATTGC	60.31	179.00
Ca-II-SSR114	167.14	scaffold00333	180215	AAAAACAACGGGCGTAACAT	(TA)11	(TA)10	GGAGGAAGAAAATAAAGAATTCCA	59.38	129.00
Ca-II-SSR112	109.84	scaffold00335	139785	TTGGTATTTGAAGCCACAA	(AAAT)5	(AAAT)7	TCGATCCTTTTATCGTTTGT	59.01	100.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR81	159.22	scaffold00337	22733	TCGAGTCAACCAAAATAACCG	(AG)12	(AG)6	CTTGCCCTGCGAGAAGAGTC	59.98	197.00
Ca-II-SSR83	173.30	scaffold00346	28936	ACAAGTTTTAATGGTAGATCAATCTCT	(AT)11	(AT)13	CCTTTCTCCTATTTGCAAGAAATC	57.25	107.00
Ca-II-SSR107	5.12	scaffold00346	110316	TTTTAAAGAGATTTGCAGCGG	(TA)8	(TA)7	TCAAGCATTTTGTGTGAGTGTG	59.50	100.00
Ca-II-SSR105	108.93	scaffold00358	107460	TTCAGAAATTTGGTTTTTGACA	(TA)14	(TA)15	TGACGTGGATGAGTAATTTCCG	57.35	135.00
Ca-II-SSR88	184.95	scaffold00360	50340	TTTAAATAGGCTGGGTCAAACCTT	(TTA)10	(TTA)12	AACGACTAATGAGTGATTGCCT	57.48	192.00
Ca-II-SSR101	100.74	scaffold00360	93243	TCATTGTTGATATCGCGCTC	(TA)8	(AT)7	TCCATTTGAGAGACCAACAGTG	59.80	185.00
Ca-II-SSR90	146.15	scaffold00368	61125	CCCACAACCCAGTACCTGAA	(TC)13	(TC)14	ATGAGATTTTGTGGAGGCG	60.80	145.00
Ca-II-SSR78	86.45	scaffold00370	15189	CAATGGCCGACCACCTTATCT	(GA)8	(GA)9	TGTGGTCCATGGTTCAAAT	59.96	127.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR73	228.70	scaffold00370	17175702	CAAACCTCAAGTTAAGGAGAACCG	(AT)12	(AT)11	CTAACTATCTCAAACCTCCTCTTGC	59.35	101.00
Ca-II-SSR87	224.35	scaffold00381	47571	GCCATGCATTCCGAAAATAA	(AAT)12	(AAT)11	GGGCTTCACGGGTCCTATTA	60.78	191.00
Ca-II-SSR92	77.65	scaffold00381	62796	ATCCATGCAATTGGACACAA	(AT)9	(AT)7	ACTTCAAACGGTGCCTAAA	59.78	164.00
Ca-II-SSR103	135.71	scaffold00384	102322	TATCGCGCTGAAGAGGTTCT	(TTA)8	(TTA)9	TCACAGAACCTAAACTTCACCAC	60.12	156.00
Ca-II-SSR109	82.05	scaffold00385	116670	CCAAGCTGTTGGAGGAGAAG	(TTA)29	(TTA)27	TCCAAACAAAATATACACATGTTCAA	59.98	182.00
Ca-II-SSR80	129.62	scaffold00394	21061	CAGTTATGCACCATGTGCTC	(GA)9	(GA)8	TGATGTCTCAACAACAGGC	57.70	102.00
Ca-II-SSR100	83.81	scaffold00398	92449	TCAAGTAGGCATTTCTCAAGA	(TA)9	(TA)10	CGCCACTGTCCACAAGTTTA	58.97	181.00
Ca-II-SSR93	82.93	scaffold00401	64508	AGGTGCAAACATGAGAAGGG	(ATAA)8	(ATAA)9	CGGAATCCGATTGCTTCTAC	60.11	155.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR77	80.29	scaffold00407	9006	GTGGAAGCTGGAGGAGTTTG	(TTG)5	(TTG)6	CCCAACACTGTTTCATTCTTGA	59.84	135.00
Ca-II-SSR84	198.25	scaffold00409	31592	GGGACTACTTTTCGCGATTCA	(AT)9	(AT)8	TTCAGTGTCTCGAACACAC	60.21	114.00
Ca-II-SSR97	161.86	scaffold00414	74911	TTCTTCTCTTTCCCTCGGC	(AT)9	(AT)11	TGCCTTATGGGTGAAATGGT	60.82	123.00
Ca-II-SSR99	78.53	scaffold00423	83002	CCCCATATCCAAAGTAGCTCA	(AC)9	(AC)6	TGAATTGGGTGCTGATCAA	59.05	126.00
Ca-II-SSR89	180.34	scaffold00438	54674	TGCAGTCAAAGTCTGTAACACAA	(TAA)8	(TAA)9	GCCACATTATTGAATGAATAGATAAAA	59.89	148.00
Ca-II-SSR116	175.06	scaffold00446	258085	AAAGTTGAGTGTGAAGGAAATCATC	(AT)12	(TA)11	TGCTCCCAAAACACGATTTTA	59.93	212.00
Ca-II-SSR94	94.37	scaffold00448	66428	AATCCACCGGCTCTTCTCTT	(CT)7	(CT)8	TTGTTTCGAGTTTCAGAGCGA	60.21	159.00
Ca-II-SSR106	137.45	scaffold00448	107965	AATGGTCCAATGATATTAATAGATGTT	(AATA)11	(AATA)12	ATTAAGTGGGTATGGGTGCG	57.54	196.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR108	13.20	scaffold00451	113441	TGGCAACGACTGGTACAAAA	(AT)9	(AT)8	GTTGGGCCATTAATGAAAAA	60.15	192.00
Ca-II-SSR113	143.54	scaffold00476	142835	CCTTTTTGTTGAGTTAGAAGTGTGC	(AT)8	(AT)11	AATTTACCACATGCATCCCC	60.57	142.00
Ca-II-SSR91	11.18	scaffold00481	61602	AACATTGTTGAGAACACACGAT	(TA)10	(TA)9	GTTACAAACTGATGATGTAACACGC	57.11	100.00
Ca-II-SSR104	164.50	scaffold00488	103491	GCGACACTGCACITTCAGG	(TTA)11	(TTA)10	GGACCAAAATTCTGTTTGGG	60.61	139.00
Ca-II-SSR96	133.10	scaffold00491	73070	TCGTTCAACAAACAAATTCTCA	(AT)6	(TA)11	TTGGGTGTTGTATCAGTGCC	58.32	154.00
Ca-II-SSR115	174.18	scaffold00514	244293	TGTTCTACGATAGACAAGGAAGAA	(GA)9	(GA)11	TCTATTCTCATTTACAAATTATTCA	57.30	163.00
Ca-II-SSR98	12.19	scaffold00517	82863	TTCGCTCAAAGGAGAAGGA	(ATT)9	(ATT)8	TGGGTTGGATTGATTTGTATG	60.07	186.00
Ca-II-SSR82	172.42	scaffold00534	24252	GACAACATAGCCATACTCCACG	(AGA)6	(AGA)5	CGCATGGTTTGACATCTCT	59.52	168.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR102	108.02	scaffold00539	93728	TCACAAGAGTGATGTTTCGTTG	(TA)13	(TA)12	CCGTCATTACATAACAATTGACC	57.29	205.00
Ca-II-SSR86	220.27	scaffold00555	37885	TCAGATATGGTAATGCTATGGATTTT	(GA)13	(GA)18	AGCATGTCCATGCAATAATAACT	59.26	180.00
Ca-II-SSR111	105.29	scaffold00557	136653	AGGGAGAGGGAATTGCAAAG	(AG)12	(AG)14	TGAACTCGTTTCATCGTTGG	60.57	168.00
Ca-II-SSR74	0.00	scaffold00579	1298	TTTTTCTCTGTGCAGCTTTGA	(ATAA)5	(ATAA)6	ATCGGCCATAAAGTTGGAGA	60.17	141.00
Ca-II-SSR79	99.83	scaffold00580	18617	CAATTGATCGCAATTCTGCT	(AT)16	(AT)18	ATACACTATTTAAACCAATGGACAAA	58.87	106.00
Ca-II-SSR95	104.38	scaffold00592	70266	TTTTGCCTTTTCCATCATCA	(TTA)6	(TTA)7	TGGATTGAAAAACCATGCAA	59.09	194.00
Ca-II-SSR76	75.01	scaffold00596	4454	CGGTGAATCCTTTACGGAGA	(TA)7	(TA)6	TTTCCTTTCTGTTTTCTCCAA	60.07	135.00
Ca-II-SSR85	202.05	scaffold00598	36659	AGGTCAAGTAGTTGGCGTGT	(AT)12	(AT)10	AAATGCAGGAGTTTGTGGAA	57.32	134.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR110	89.97	scaffold00604	129503	CCCAGATCAAATCAAATCAA	(TC)8	(TC)9	AAAGAAAGGTTCTCGTGTGTTG	58.92	169.00
Ca-II-SSR75	63.78	scaffold00611	2144	TTGTTGATACTTTAAATGCAAGACA	(GA)12	(AG)6	AAAACAAGTGTTAATCAAGAAGCA	58.03	102.00
Ca-II-SSR144	6.75	scaffold00612	230414	AGCAACGGAAAGGATACACG	(ATT)21	(ATT)31	TGACATTAGTAGGTGCAACACAGTT	60.13	252.00
Ca-II-SSR145	11.23	scaffold00620	123255	TGTACCAATTCATGCCATTTT	(AT)13	(AT)12	TCTCATGTTTCCAACCACA	59.23	178.00
Ca-II-SSR146	5.63	scaffold00626	23909	CCTCTCAAACAAATCCTCTCG	(AT)8	(AT)13	ATAAATCGATATGTGTAGAGCATCA	58.92	111.00
Ca-II-SSR147	16.83	scaffold00628	46633	TGCACCAAGACCAGCTTATG	(TA)10	(TA)9	CTTCATGATTTGATCAATGGCT	59.86	154.00
Ca-II-SSR148	36.46	scaffold00630	91885	CAGCTACGTGCTTCATAGATCC	(TA)12	(TA)11	AGTCCACAAAGTGAAGGAAG	59.02	139.00
Ca-II-SSR149	38.40	scaffold00630	109187	AAAGACTGAAGAAGGTCCTTGA	(TA)7	(TA)6	TTCGTCCCTCGGATCATAGA	58.57	159.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR150	42.28	scaffold00634	141913	GGGCTAAAGCCCAATTACAC	(TA)13	(AT)12	GCAACCGTAATATTGGATGGA	59.86	110.00
Ca-II-SSR151	49.07	scaffold00659	119412	TGGTGCATGTAAAATTAATTAAGA	(AT)6	(AT)7	TGCACCATAAAAAGCATGACA	58.28	155.00
Ca-II-SSR152	73.31	scaffold00670	160289	CAATTTCAAACAATACTAAAAGTGA	(AT)9	(AT)8	CCGACAACGTCTCATACATTC	57.32	190.00
Ca-II-SSR153	88.75	scaffold00703	31447	TTCATGTTGGATTGGTGTGA	(AG)12	(AG)13	CCTTCTTACCATCCACTTCTC	59.81	100.00
Ca-II-SSR154	103.25	scaffold00719	39896	TGTGAACCTCCCTTACCCTT	(TTC)6	(TTC)5	CCAAACCTAGCCGTGACACT	59.55	127.00
Ca-II-SSR155	112.75	scaffold00724	106748	TAAGCAAATTTGGCAAGCAA	(TAT)13	(TAT)9	GTATCCTTCCATTCCCCCTC	59.47	197.00
Ca-II-SSR156	114.65	scaffold00731	60987	ACACATCGTGGTTGCATACG	(AT)9	(AT)8	TTTAACACTTTCACCCTCTCATTG	60.46	100.00
Ca-II-SSR157	153.61	scaffold00747	54731	GCAAACAAGAACCGAAAACA	(TTA)10	(TTA)9	TGTTGACACCTAATTTTGTCCG	58.80	168.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR158	126.05	scaffold00760	51907	TTACATGAAAAATAAAACAAGCAA	(TC)8	(TC)9	AGCAATGGAAAGTCCCATC	57.26	190.00
Ca-II-SSR159	162.25	scaffold00777	19305	TCATGTGACCATACAAAGCATTC	(TAT)26	(TAT)27	TCAAGCTGCAAAGAAGAAACC	59.88	260.00
Ca-II-SSR160	168.01	scaffold00792	53958	GTGGTGAGGTTAGGTGGTGC	(TAT)23	(TAT)24	TGAGGGATACATGAGGGACC	60.43	246.00
Ca-II-SSR161	135.55	scaffold00795	12245	GAGATGGTGAATCATAAATACCTAAAA	(AAT)19	(AAT)20	ATTATTCATCCCGTCCCAA	58.16	138.00
Ca-II-SSR162	186.25	scaffold00795	94285	TGTCTCCAATCCTATAGCCAA	(TA)7	(TA)6	CTTGTTCAATAGAATTACCTACCT	58.72	100.00
Ca-II-SSR163	195.24	scaffold00807	516	ATGGCACTGCATCTGAAACA	(ACA)5	(CAA)5	CCAAATTAAGCCTTTGGCTC	60.27	108.00
Ca-II-SSR164	201.30	scaffold00825	55018	GGCTAGGTTAGAAATTTTACATATTGA	(TC)8	(TC)7	CCCAACTGTTGACATTATCAAAG	57.68	154.00
Ca-II-SSR165	208.37	scaffold00825	90232	GGGCTTGAATGTACAAGAA	(AT)7	(AT)8	ATGCGTCGGTGCTAGCTAAA	58.77	146.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR166	225.54	scaffold00840	67415	AAAAACCACAACCAAAAAGTTTATTC	(AAT)25	(AAT)22	CCGAGTTTCGAACTTTAAATTGTAT	59.97	205.00
Ca-II-SSR167	230.59	scaffold00851	103140	ATTGGAGAAGCATTGTCCGG	(GA)16	(GA)17	TGCATTTAACTTGGACGAA	60.07	182.00
Ca-II-SSR168	237.66	scaffold00852	13148	ACACAAATTGCTTTCGCAAC	(AT)11	(AT)12	CGAAATCGAAATCATTGTTC	58.82	187.00
Ca-II-SSR169	252.67	scaffold00885	82619	GCAGCAGTTTTTCTGTGCAA	(TTAT)7	(TTAT)9	TGACTATGTGAGTTAAGATTCCAATG	60.18	121.00
Ca-II-SSR170	258.31	scaffold00888	7232	CAAATTCAAAACAATAACCATGT	(ATA)19	(ATA)16	TTTTAATGGATGAAATCGAAATTCT	57.18	170.00
Ca-II-SSR171	256.43	scaffold00907	141878	TCTTTTGATTTAATTTTGGAGTGTTTT	(TA)10	(TA)8	TGGATGGAGTTAGTTAGACTCTTGG	59.76	159.00
Ca-II-SSR172	10.11	scaffold00908	148256	GGTCTTACATTGTGTTTTCAAAGAA	(ATT)16	(ATT)17	GGGTTCAACTTCAAAGCCA	58.71	128.00
Ca-II-SSR173	20.19	scaffold00912	14526	TACCCACACCCCTCAAATGT	(TCT)7	(TCT)6	TGTGTTGAATGAAGATGATGAAGA	60.09	124.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR174	33.55	scaffold00928	35611	TGGTGTGTTGCTATACATGCC	(TA)9	(TA)10	CTCCAACCAATTATGGACGC	59.48	135.00
Ca-II-SSR175	34.52	scaffold00965	32759	CCCTTTAAAACAATTAAGCATCG	(ATT)20	(ATT)15	TGACGTGGAAACATTTGTGG	59.13	152.00
Ca-II-SSR176	41.31	scaffold00978	49512	TCAAACTCAACTTGCCATT	(AT)10	(AT)9	GGTTTGCAAATAGTGTGGC	59.74	134.00
Ca-II-SSR177	46.16	scaffold00997	30906	TGCAACATTGATTTGTAATTTG	(AT)9	(AT)8	GCATTTTAGATCAATTTGCTTTTG	58.99	176.00
Ca-II-SSR178	72.28	scaffold01004	239200	GTAGGTTATTTTACATCAATGTATCA	(AT)11	(AT)12	GAAAAGTCCAAAAGCAACCG	57.68	111.00
Ca-II-SSR179	91.45	scaffold01018	64137	TCTTCAACTACTGACTTCTGCTCA	(ATT)22	(ATT)28	GAGACAATTGTGTGGAGGTTG	59.76	206.00
Ca-II-SSR180	105.15	scaffold01040	84732	GCCCCTTGAGTCTTGCTCT	(AAG)12	(AAG)11	TTCAACCTACCATGGGCTTT	60.90	181.00
Ca-II-SSR181	110.85	scaffold01046	10884	GGGTGACACTGGATTGGGTA	(ATAACA)6	(ATAACA)5	TGACTTTGGCAAACCATCA	60.63	167.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR182	113.70	scaffold01046	92052	TTTCACTCGGTTTTAATCTCCA	(TTA)5	(TTA)15	TCATTTGATGGAGATTGGTTG	58.74	172.00
Ca-II-SSR183	125.10	scaffold01086	69905	TTCTCTCATACATTGTCTCTCTTTC	(CT)8	(CT)9	GGTGATTGAAGTTTTCCAACAA	58.73	151.00
Ca-II-SSR184	127.00	scaffold01090	109221	AATATCGAAAATTACCGTGGA	(TA)12	(TA)7	TTTCTTAATCATTGTTTCAGAGTCTT	57.60	100.00
Ca-II-SSR185	168.97	scaffold01092	90916	TGGAGGGAGGACATACACTTG	(AT)19	(TA)16	TGTCTCTCTTCCCTCGTTG	59.97	115.00
Ca-II-SSR186	136.50	scaffold01093	56567	ATGGCCGTGTCCAATAAAAA	(ATTC)5	(ATTC)6	GCTTCAATATGCGGGTCATT	60.19	141.00
Ca-II-SSR187	170.89	scaffold01109	52905	CGAAGAGACATGACTTTGTCCA	(TA)11	(TA)15	TTTAGAGCTGATCATTCAAAAAGA	60.29	219.00
Ca-II-SSR188	185.29	scaffold01121	18387	CAAATACACTTACATTCAATTCCTTCA	(AT)9	(AT)8	CTGCCTACTCATGTTTCAACTTT	57.95	200.00
Ca-II-SSR189	194.23	scaffold01133	48159	AAGTGGACATTGGGATTGGA	(AT)10	(AT)11	TGATTCCCCAACCAATCTTAAAAA	60.17	140.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR190	203.32	scaffold01134	88246	TGTTGTTGTGGGTTGATTG	(AC)11	(AC)12	GAGAATGTTGCGTGGTCCTT	60.26	139.00
Ca-II-SSR263	203.19	scaffold01155	53620	TGACTAAATCGAGAGTTTAAACAGGA	(TA)11	(TA)9	AGCTTGCAACCTATCGAC		59.75
Ca-II-SSR245	148.53	scaffold01203	35498	GCAGATGTGTGCGACTTCT	(AT)7	(AT)8	TTGGGCTTATGTGCAATATAAAAA		59.04
Ca-II-SSR210	0.00	scaffold01218	897	TCAGACATTGACAACAGAACCA	(AT)13	(AT)11	GTGGTGGGTGATTCTCACAA		59.19
Ca-II-SSR280	309.41	scaffold01236	103282	CCAACACTTTGATGTTTGTA	(TTA)9	(TTA)10	GCGGAACGTATCAAATCTAACA		58.58
Ca-II-SSR267	101.34	scaffold01245	57148	CGTCTAACTTTAATTGGAATTGTTT	(AT)7	(TA)7	AAATATTTGTTAAGCCACCAAAA		57.56
Ca-II-SSR229	314.51	scaffold01280	20397	TCCTTTTCTTTTCTCCCCAAA	(AT)13	(AT)12	TGCGGTGAATCTTTTACGAA		60.03
Ca-II-SSR249	33.58	scaffold01291	38908	TGCAATGAACAACAATTTTCAA	(ATA)6	(ATA)7	AGCTGCAACAGCAAGCCTA		59.10

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR219	243.14	scaffold01321	6929	ATCGGTTGGAATCACTTTCC	(AAAT)12	(AAAT)14	ACATGGGTCAAGCCCAATAA		58.84
Ca-II-SSR231	127.96	scaffold01327	21087	CCTGATGAAGAATACATTTTGTGC	(AT)9	(AT)10	TTTGTGTGTTCTCTACCATTGTC		59.90
Ca-II-SSR271	231.64	scaffold01330	60713	TGTTTAAATGAGTCACGCCA	(TA)6	(TA)7	AGAGCATGGGTCAATCTTGG		59.22
Ca-II-SSR256	131.59	scaffold01332	45869	TGAATTGAATTGAATGAAACCC	(GAA)11	(GAA)9	CCAACGCTTTCTTCTCCAC		58.79
Ca-II-SSR262	192.69	scaffold01335	53353	TGTACAATGACATGGGAGACTCTT	(AT)9	(AT)10	AAAAATGGGTCAACTATTTGGATT		59.93
Ca-II-SSR226	303.29	scaffold01347	15322	TGTGTCTTGAGGAAATTGATGA	(TA)8	(TA)6	TCCTTTACTATAAAGTTTTCCGCAT		58.20
Ca-II-SSR265	61.41	scaffold01364	55137	TCAGTTCTCACTTGATACGCTC	(TA)13	(TA)12	GAACCTTCTTGTTCTATAATTGCG		57.23
Ca-II-SSR211	11.80	scaffold01381	3060	GTATTGCGCGCAGCTTTTAT	(TA)11	(TA)12	TCTTTTGATTTCTTTTGTCATTCA		60.38

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR274	287.99	scaffold01385	68176	TTGGAGAGTGGTCTGGTTG	(TA)11	(TA)13	CGAGCATAATTTTCTTTTCATTACC		59.87
Ca-II-SSR278	160.41	scaffold01385	76539	CGCTGTAACATGTACACCCAA	(TG)8	(TG)7	TGCCATAAAAAGCTAAAAAGCG		59.52
Ca-II-SSR215	94.08	scaffold01404	4084	CATCCAGTTCGACGATATGC	(TAT)9	(TAT)15	AGCTTCAAGTGAAAATAAACATT		59.11
Ca-II-SSR225	159.42	scaffold01420	15047	TTCTTTGCCATTTATGTTTTG	(ATA)5	(ATA)6	TAGCATCACATCATTTTATTCTTGT		59.02
Ca-II-SSR232	147.32	scaffold01425	22480	TCGTGAATTGCTGCAAGATT	(TA)8	(TA)10	TGAAAAGGTACACCTCCACAT		59.43
Ca-II-SSR218	224.19	scaffold01427	5868	CTGAACCAGTCTCTCGTCACA	(TC)6	(TC)20	GGCTGCATTGCAAATAACTG		59.03
Ca-II-SSR276	204.24	scaffold01453	70656	TTTGCTTCGACACTGTAGCAC	(TA)15	(TA)10	TGCACGGCAATTACAACAAT		59.14
Ca-II-SSR275	193.74	scaffold01480	69857	TGAAGACCATCCTACAAACAAAG	(AT)11	(AT)13	CACGACAACGCAAGTAAAAA		58.30

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR223	292.07	scaffold01498	12514	TGAGGTAATAAACCGACTCCAA	(AT)13	(AT)15	AATTATTTGTTGTTAAGGCGAGTT		59.89
Ca-II-SSR244	130.38	scaffold01508	34787	GGAAATCCAACCTCATCTTCA	(CTT)19	(CTT)22	TGAAATTGCTCTTTTCACCAGA		58.97
Ca-II-SSR269	132.80	scaffold01522	57922	GGAAGAAACAACCTTCTCACCTT	(TAT)8	(TAT)5	CAACAAGGTCGATCTCCTCA		60.03
Ca-II-SSR272	256.94	scaffold01526	63824	AATATTTGCATTGAGGATGACTTG	(TTC)5	(TTC)6	TGACCAAAAACCACCCTCTT		59.42
Ca-II-SSR260	258.09	scaffold01529	51454	TGATTGCTGATGGCACTCAT	(TTA)27	(TTA)17	CCGGAATGTGGATCATGC		60.23
Ca-II-SSR255	98.92	scaffold01544	45590	TTCTTGCTCTCTCACTGCCC	(CT)11	(CT)12	CGGAGAAGAAGCTGTTTTGG		60.39
Ca-II-SSR266	89.24	scaffold01547	56961	TTGGCTTAAACAACACACCAA	(TA)15	(TA)16	TGGTACCGACGAACCCTAAT		59.12
Ca-II-SSR279	305.33	scaffold01565	90966	TAAACCATTTAAATTTGCAACAA	(AT)15	(AT)14	TCATGATGTTGTTCAAGTAATGA		57.85

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR241	85.61	scaffold01576	31865	CATCATTATTGAGAGTTGGGTAGTT	(TG)8	(TG)9	TTAAGTCTGGCCATCAAGG		58.97
Ca-II-SSR220	178.23	scaffold01589	8052	TCGGTCTTTCATGATCTCACC	(TA)10	(TA)11	GAAGAGAAAGAACCCCACTAGG		60.07
Ca-II-SSR248	247.74	scaffold01618	37514	ATTTTCATGTTGTAGATGAGATCAAT	(AAT)25	(AAT)26	GCTTACAAGTTGCAACCCAA		57.31
Ca-II-SSR270	152.49	scaffold01619	58432	CGACAAATAATTTTATTCGGGGT	(TA)11	(TA)13	CAATTGAATTTTAGTTGGGGA		60.30
Ca-II-SSR268	102.55	scaffold01632	57696	CGTTAATTCATGGGATGGTG	(TAT)5	(TAT)6	AATGCTCGTAACATACACATCTTT		58.70
Ca-II-SSR237	19.06	scaffold01638	30068	CCAATCAACAACCCTTCGTT	(TC)11	(TC)9	AGAAACTCCTGCACCGTCAT		59.83
Ca-II-SSR277	269.59	scaffold01647	74883	TGTGAAATGGATTGGGCAGT	(TA)6	(TA)11	TTCTCGTTTTTACAATAAATATCAA		61.31
Ca-II-SSR251	202.14	scaffold01649	40919	ACATGATGAGAGAAACCCGC	(AG)7	(AG)8	GCCATCCATTTATTGCATTG		60.08

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR273	250.04	scaffold01689	63911	ACTTAAATGAGGGGTGAACTT	(TA)11	(TA)10	GGCTTCAGAAATAATTCTCCACA		57.38
Ca-II-SSR253	86.82	scaffold01716	43992	TCACAGAAAGCCAAAAGAAGG	(AG)9	(AG)8	TCTAGGTTGTGATTCTAGGTCA		59.48
Ca-II-SSR216	126.75	scaffold01788	4719	TTAAGTTGAAGAAAGCGTGTG	(TAT)10	(TAT)9	GGGGCAGCTGTAATACCTCA		57.34
Ca-II-SSR243	96.50	scaffold01803	33820	TTGCATCGCATTGTCTTG	(AG)6	(AG)7	GGGCTTCTTTGAAGGAAACAT		60.79
Ca-II-SSR212	49.31	scaffold01838	3309	AAATGCTCATAAATCCATGTCTGT	(AAT)15	(AAT)12	TACATTGCCTGCAACGAAAC		58.96
Ca-II-SSR224	299.21	scaffold01855	13824	CTTGTTGTCATCTTGATTCTCA	(AT)7	(AT)9	CCAATATATAGGACCCGACACA		59.23
Ca-II-SSR240	50.52	scaffold01886	31675	TTTCCTTCTTTTTCCCTCCA	(TA)10	(TA)8	TATTTGGATTTTGGCTCGG		60.03
Ca-II-SSR258	230.49	scaffold01910	48198	GAAAACAGCTTAAATCATTCTACTCA	(TA)13	(TA)14	TTGTCGATGAATCACAAAACA		60.07

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR264	268.44	scaffold01927	54554	AGAAAAGCATAATTCGGACAAT	(TAT)27	(TAT)24	TGCAGTATGATTGTTGATCAAGTG		57.00
Ca-II-SSR259	246.59	scaffold01928	49480	CCACATGCCCCCATATATTC	(ATA)15	(ATA)10	AACAATGGTCTACGGTGGATT		59.86
Ca-II-SSR238	201.09	scaffold01951	30269	TTCACAAAACAAAATAAAGAATGAGA	(AT)14	(AT)15	TACGCGGGTGTCTTCAGATT		58.42
Ca-II-SSR235	185.34	scaffold01955	24240	GAGGAATTATTGTGATGATTGATG	(TAT)9	(TAT)8	CAAACCAAAGTTAAACACACCA		57.52
Ca-II-SSR234	179.22	scaffold01970	24170	CGATGTTGAAGAGGTTTAGCTG	(TA)9	(TA)10	TGAAGTGGTATATCTTAACCCAGGA		59.04
Ca-II-SSR221	284.54	scaffold01989	8513	CAGTGTTACCTCATGGAACCAA	(TA)14	(TA)12	ACGCAATTGCCATGGTTTTA		59.89
Ca-II-SSR239	267.29	scaffold02000	31067	TTGAACAGCTACCGAATATGGA	(ATA)16	(ATA)13	CCTATTAGGTCTGACAGGACGA		59.61
Ca-II-SSR233	226.29	scaffold02037	23187	TTCCATCTTCTGCCAATCC	(AT)9	(AT)10	AATTTAATTTGCTCTTTATTATGCAGT		60.01

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR252	60.20	scaffold02048	43471	ATCATCAATCATACAACATCACG	(ATT)31	(ATT)20	TGTTGTGACATTTAGTGTGGAATG		57.38
Ca-II-SSR217	141.27	scaffold02082	5575	TTCTCTTATTCTTCAATGATCCTTAGT	(TA)14	(TA)15	TGATTTTCAAAAACCAAGAAGACT		57.42
Ca-II-SSR250	191.64	scaffold02087	40378	TCACCATCAGGACTCTGCAA	(AT)13	(AT)12	CCAAAAATTTTCAATTACTTGATCC		60.40
Ca-II-SSR213	81.98	scaffold02104	3371	CACCCTCTGTATGGCAGTCA	(AAG)7	(AAG)6	TCATTTGGAAAAGCACACCA		59.70
Ca-II-SSR228	311.45	scaffold02109	17748	GGAGTTGTTGGCGAGTTGAT	(CT)8	(CT)9	GACAACTATGTGGCGCAGAA		60.12
Ca-II-SSR236	32.37	scaffold02116	26571	AACATTGTCCTTGTCTTAGTCTTGG	(AT)6	(AT)7	TGAAAATCATTAGAGAGCACTTCA		59.98
Ca-II-SSR227	307.37	scaffold02164	15661	ACGTGGCATAATCAGACGTT	(AAT)11	(AAT)12	GCTGTCTGCAGAGTGCATTT		58.10
Ca-II-SSR261	286.84	scaffold02243	52608	TGAATTATTTGTCCTTACCATCTCTTC	(TA)7	(TA)6	AATTAACCTCTCAAAAACCCGACTC		60.14

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR222	17.85	scaffold02281	9375	AAATAACTCTTAATCATGACCATCCA	(AT)13	(AT)17	GGGAAAGTGGCGAAAGGATA		59.25
Ca-II-SSR257	149.52	scaffold02331	46651	GTGGACGAGAAGAGGTTGGA	(GA)13	(AG)12	CCGGAGGAGAGTGATTGTTC		60.24
Ca-II-SSR214	91.66	scaffold02336	3789	TGGAGCGTTTTCTCTGAACA	(AT)14	(AT)16	TGAAGTTAAAGTCGAAGAAATGACA		59.57
Ca-II-SSR246	228.39	scaffold02408	37253	ATGCAAGCCGAGCATTTAGT	(TTA)10	(TTA)11	TCGGAAGGATACTTGTGATGTG		59.87
Ca-II-SSR254	97.71	scaffold02430	44672	CTGGCATCACTGTCAAGGAG	(TA)13	(TA)14	GTGCATCATGGTTGTTGGTT		59.42
Ca-II-SSR242	109.81	scaffold02435	31937	AATTGGAGATCGGTCGTGAG	(GA)15	(GA)14	CACCAAAACCGCATAAAACC		60.07
Ca-II-SSR247	184.29	scaffold02437	37521	TGTTTCTGTCTTCAATTTGTTG	(TC)8	(TC)9	TCTCCCATAGCTGCACACTG		58.48
Ca-II-SSR230	108.60	scaffold02462	20792	TCTCGAAAGAATTTGATCTCCA	(AT)10	(TA)11	GAATATACCCGATCTACAATTAATGC		58.90

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR319	70.86	scaffold02487	32478	TTTGAATCCACCCACACTAGC	(AGA)5	(GAA)5	CGTGAGAGGAAAGAAAGAAAGG	59.99	105.00
Ca-II-SSR327	160.32	scaffold02501	119889	GGCCAGATCGATGAAATGAC	(TTC)7	(TTC)6	TTGATTGTCTCTGATTTACAAGGA	60.44	125.00
Ca-II-SSR322	106.20	scaffold02520	35644	AAAGAATTGTCTTTTGGTCATTTT	(AT)8	(AT)9	TTATTCAAATGAGACTTTTGCTTT	57.45	141.00
Ca-II-SSR324	134.70	scaffold02575	38694	TGCTGCAATGAGTCTCCTTAGT	(AT)9	(AT)11	GGAGACCGAATTTGAATGAA	59.15	172.00
Ca-II-SSR307	151.80	scaffold02585	12978	TGCGTTACGGGTAAAATGGT	(AT)9	(AT)10	TTTCCTTTCTTTTCCCTCCA	60.24	118.00
Ca-II-SSR309	158.34	scaffold02606	21574	TCTCACTAATCCAAAACACAAAA	(AAT)24	(AAT)26	TGAACAACCTCAAATAAACAATCTTCC	59.91	267.00
Ca-II-SSR302	68.58	scaffold02620	5627	TGGTGGTGAACCTTTTGTGGT	(TG)8	(TG)9	TCTTGAGAAGTTGTGCACGG	58.88	123.00
Ca-II-SSR318	14.30	scaffold02667	31666	GAGAAAGAAGAACGGTTGTACC	(AAG)7	(AAG)9	TTCCCTTCTTTCCGAATCT	58.38	129.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR314	203.88	scaffold02674	27650	CTACAAATGATCCCCAAGC	(GA)20	(GA)21	CCTAACAAATAATACGGTCATTGTCT	59.39	237.00
Ca-II-SSR306	35.52	scaffold02688	9765	CTTTTAGTTCCTGTGCC	(TTC)5	(TTC)7	GAAAATGGAGTTTGCCTTC	59.61	141.00
Ca-II-SSR310	236.55	scaffold02701	21753	TGATCAATCACCTTCTCGGA	(ATT)21	(TAT)20	TCCCATGAAAGAGAAGCTCG	59.17	222.00
Ca-II-SSR308	183.09	scaffold02705	19900	GGACAAAACACTAGGGGAAA	(TA)8	(TA)9	CGACGAGTTTCACCAATCA	60.16	190.00
Ca-II-SSR305	34.38	scaffold02714	9100	GAGACTACAACAAAACCAAAA	(AT)13	(AT)11	CTCGAGTTCGAATCTGGGAC	57.43	191.00
Ca-II-SSR312	178.14	scaffold02799	23183	GAACTTGGGTAGAACGGTACTATTT	(TA)11	(TA)10	CATCCAACAAGGACGGAGTT	58.25	158.00
Ca-II-SSR299	2.40	scaffold02862	544	GGCTGCGGTGAATCTTTTAC	(AT)8	(AT)17	TCCTTTTCTTTTCTCCCAA	59.71	189.00
Ca-II-SSR316	210.81	scaffold02874	29955	TGGGCTGTTGTTTTAGAGG	(GA)12	(GA)13	CACCACAAATTTGCGCTTA	60.10	170.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR303	78.84	scaffold02887	6803	ACTCTCACACCTCCCCCTCT	(TG)11	(TG)12	CAAACCACCATTTTCTGTGTG	60.11	109.00
Ca-II-SSR317	223.68	scaffold02920	30731	GGGGGAAAACGTTTCCTTT	(TA)8	(TA)7	TGAGATGTGAGTGAAGTGTGTG	60.15	133.00
Ca-II-SSR323	133.56	scaffold02923	35666	TTAAAACAAAACGCACCCATT	(AT)11	(TA)9	AAATTGATATGTGTAGAGCATCATGT	58.07	167.00
Ca-II-SSR320	73.14	scaffold02932	33000	TAGTGCATCAAGGCCATTG	(AAT)14	(AAT)13	AAGTTTAAAAGTTTAATTGGGGCA	59.69	162.00
Ca-II-SSR321	79.98	scaffold02984	33584	TCCACTATTATGGCGAAAAGTT	(TA)10	(TA)7	ATCATGTGGAACAACGCA	57.85	140.00
Ca-II-SSR326	253.47	scaffold03073	40474	GTTTTGGGAATTTGAGGGT	(GTG)5	(GTG)6	CTCCTCCGAAACCAAAAACA	60.03	149.00
Ca-II-SSR304	103.92	scaffold03176	8432	GGAGATTGACACGTCCCGTA	(TA)13	(AT)12	TGTTCTGTGAGGAAGAGGAG	60.92	147.00
Ca-II-SSR311	237.72	scaffold03215	22172	CCGTATCTGAGGCTTTTCTCA	(TTC)8	(TTC)5	CCCTCTGTATGGCAGTCGAA	59.46	106.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR313	197.94	scaffold03300	23828	AGGGCAGATGTAAAGTTGCG	(AG)13	(AG)14	CCCTTTCCTCCACTCTACCC	60.27	181.00
Ca-II-SSR300	10.73	scaffold03309	5226	GATTGAAACTTTGTTCCCTAAAGTGA	(TA)14	(AT)15	GTTAAAGGTTTCAAACCTCATGACT	58.03	140.00
Ca-II-SSR325	252.50	scaffold03391	39428	TCAACCTTGTTTATTTAATCCACC	(AAT)13	(AAT)10	AGTAGTTCATCATGTGACAAATTAATA	59.59	200.00
Ca-II-SSR301	64.02	scaffold03401	5376	ATTCGTTTGGGTTTGGATTT	(TA)9	(TA)11	AAAAGGACGATGGGTTTGC	58.28	117.00
Ca-II-SSR315	206.85	scaffold03419	27662	TCCAGTTTGAAGTTTGAAG	(AAT)24	(AAT)27	CAGTGATCAAATAAATATCACATTGAA	59.20	183.00
Ca-II-SSR355	139.56	scaffold03420	8229	CCCTCCAACACGTGGACTAA	(TAT)6	(TAT)7	AATTTTGATTGGTCAAATGCAATTAGTTAACTT GATTGATTTGTTGGACCTAAATTAATTTGGCTA ATAAAGTATCTTAATAATGATTTGATATTATAA	TTTTGATTGG TCAAAATGCA A	60.94
Ca-II-SSR351	175.83	scaffold03480	7425	TTCAAACCTCCCTTCTTTAAAGTT	(TA)13	(TA)12	TTTTTTTATCTAAATAAATGACGGAAATAGATT AAGTTGTCTGTAAGAGGTCTATGGTCTGACCTG ACATTTTTAATAAAAAGACTACGCTCATATTTA	GGTCTATGGT CTGACCTGAC ATT	59.94
Ca-II-SSR361	78.24	scaffold03542	16118	CCGTCGAAATATTTTCCTCTTC	(TA)10	(TA)11	TAATAACTAGTATAATTTTTAGAGAAATGTT TTGTTATGAAGTGATTTGTAAGTAACATCTAAC ATTTTTAAATTGTAATTATTTACTCTCTTTTA	GAAATGTTTT GTTATGAAGT GTATTTG	59.12

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR370	79.08	scaffold03589	26039	CTGGCTATGACAAAGTGGCA	(AGA)5	(AGA)6	CAAACATTCACCTTATTCCTAAACCCATCCACTT ATCATTGACGTGAAAAGAAAGAATCTAAAAGA AAAAAAGAACACTTAATCACTCTCTAACTTCT	CCTTATTCCT AAACCCATCC A	59.86
Ca-II-SSR369	37.60	scaffold03648	25093	AGGCCTGACAGTCCAACCTA	(TTA)14	(TTA)19	TTATTACTTCAAACAATATGGAATGACTACTGA GTGATTGCTTAATTGATAAAGCTTTAAAATATGAA ATAATATTATAATAAATAAATAAATAATAA	GGAATGACTA CTGAGTGATT GCTT	59.72
Ca-II-SSR371	99.24	scaffold03653	35219	TGAAGATGAAGAATGTGTTGAATG	(AAG)12	(AAG)11	CCCTAATTTACTACCCACACCCCTCAAATGTTT TAAAAAATAAATATTTTCAAATTACCCCTCCCT TCTTCTCTTCATTAACCTAACTCATTTTCTTT	TACCCACACC CCTCAAATGT	59.13
Ca-II-SSR366	169.53	scaffold03665	21120	CATTGATCTGTCATGATGCCTT	(AT)7	(AT)6	GAGGAACACTAAAGCCACTATCGAGCTTGGTTA CAATGAATTGGAAACTATTTTTGTTTTGCTTCT ACTAAGCAGCTTTGATATAATGATTTTCCATA	AGCCACTATC GAGCTTGGTT A	59.96
Ca-II-SSR360	191.49	scaffold03723	15777	TTCTATTTTCACTAAGTCGCTCCA	(TTA)27	(TTA)23	TTGTATTATAGGTTATAAAAAAATTGTTGAGACT TTGGGATGACAGTGGTAGATATATTTAAGAGCG GAGAGGTCACGACAGCCCCAAAATTTATTTTT	TTAAGAGCGG AGAGGTCACG	59.47
Ca-II-SSR368	0.94	scaffold03772	22132	CCCATCCATAAAAGGCAGAG	(AG)15	(AG)16	CATTTTAGTTAGTCTTTTGACCTTTAAAAGTAA TGAATTTTTGTGATGAAACGAAAACATCTTAA AGTTATTTCTTACAGGTTCTTTTCGTCGCTC	TTTCTTACAG GTTCTTTTC GTC	59.52
Ca-II-SSR349	132.00	scaffold03877	3759	AGTCATCATCATCACGCCTC	(TC)10	(TC)11	GGGTTTTGAAAATAATAGAAGAGAAAAAAC GATTAAGACATGGAGAAGAGAGAGAAAGAAAA AAAATTAAGAGAAAGAGAAAAAAATTA GA	CGATTAAGAC ATGGAGAAGA GAGA	58.62
Ca-II-SSR367	0.00	scaffold03924	21916	TCTGACGGCTATCAGCTTAGATT	(AT)10	(AT)9	TAAATATTTAGTTTTTTTATTATACAAGATC GCATGTTCAATTAAGTAAATAAATTTATCG CAACACTAATTTTAAAAATTTAATAAAT	CAAGAGATCG CATGTTCAAT TT	59.56

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR353	77.40	scaffold03950	7589	TCAGGCCTATCAGACCAACC	(ATT)11	(ATT)15	ATGTCAAAAATTGATGTAGATTAGATTGCTTAAAT TTATAGAAAATTTAGCTAATTAATGATTAACA CAAAATGTGCAATTTAATAATAATAATAAT	AATGATTAAC CACAAAATGT GCAA	60.07
Ca-II-SSR342	118.56	scaffold03965	2194	TCACTCCTCAAGTGAACCC	(TTA)33	(TAT)31	TTTGCAATTAGGATTTCCCTTTTCTTCTTTTA TTTTATTTATTTTACATGGGTCAAGCCAATAAA TAACTTTTTTTTCCCTTTTTTTCTTTCAATA	ATTTCCCTT TTCCTTCTT	60.09
Ca-II-SSR338	60.60	scaffold04027	1150	TCCAAGTTTTGAGGCTAGTGG	(AT)9	(AT)8	AAATTAGAGGAGCATATCCTTTATACGAGATAA AAGAGAACCACCTCAATAATATGCTCAATTCTT ACCATACAAAACCTCTTTATCATTGTTACAAAA	CGAGATAAAA GAGAACCACC TCA	59.36
Ca-II-SSR348	138.72	scaffold04158	3631	CTAGCCTGGCAAGCCTATCA	(AT)10	(AT)11	TTGAATTGTGACTGAATTGAGAATTTAACAGGG ATTTTATAAATTTGAAATGTTGAATTTATAGAG GATACTCTGCCGAAATTTGAGTAAAAAGTATA	TGAATTTATA GAGGATACTC TGCCG	60.50
Ca-II-SSR356	132.84	scaffold04194	10213	TCTTGAATTGGTTGATCATCTTG	(CAT)5	(CAT)6	TTTGAATTTTCAATAAGAGAACTCTATTAGTCA AAGAATCAATGCATGTATCTTTTATGAACTAA CCCTTGAAAGAGGACAAAAACATTTCTTATG	ACCCCTTGA AGAGGACAAA A	59.08
Ca-II-SSR345	190.81	scaffold04214	2954	CTGCGATTGCATCCTTATCA	(ATT)13	(ATT)11	ACTTTGATTTCAAAAATTCTAAAGGTAACAATG CAACAATAAGAAAGAACTACATTCTATATCATT TCAATTTCTCAATTATCAATTTGAGAAAAAT	TTCTAAAGGT AAACAATGCA ACAAA	59.79
Ca-II-SSR364	111.00	scaffold04224	19662	TGGACAAAAGGGCTGTAAAA	(TA)6	(TA)7	ACTTATTTCTGCTTATATTTAGCTTGATCTTAG TGTTTTATACTAAGTTCATGTAATTTAAGTGAC ATTTAACTGATCATGTAATTTAGCATTGATA	TTTTCTGCTTA TATTTAGCTT GATCTT	58.27
Ca-II-SSR365	122.76	scaffold04292	19923	TTGCTTCTAACTCCATGAGCA	(AT)10	(AT)7	TGGGATAGCAACTTTCTAAATTTGGGGTGGTGA TTCTCAGAAAAAGAAAATAAATAAATAAATAT AAAAAGAAGAAAAAGAAAATAAAAAATAAAAA	TTTGGGGTGG TGATTCTCAG	58.66

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR339	93.36	scaffold04309	1576	GCACACATTTATTCCAAAATCG	(AAT)9	(AAT)10	GACATCCGTTAAAATACGGTTACCTATAACTAA TTGTGCAAAATTAATTAACCTTAAGTATATTTA TTTATCCTTATAATTAATATGAATAACAATTA	CATCCGTTAA AATACGGTTA CCT	59.37
Ca-II-SSR346	61.44	scaffold04352	3139	ACACCTATACTGCTCAAATATTCTTTT	(TA)12	(TA)15	AATATATCCCACTGACTTTGAAAATGGCTGAGA TGAGTGATGGGTTGGGGTTTTAATTTTTATGA GCACCAAATTTTAAACTTAAAAATAATATATA	GGCTGAGATG AGTGATGGGT	57.35
Ca-II-SSR362	96.72	scaffold04413	16586	TCGCTGTTAAAAATCGTAGTGC	(AT)7	(AT)8	TGGATCCCTTTTACTTACAATGTTATTTATTTAA TAGATTTAGCAGTGTTTTTATATATAAAAAATA AAAACAAAAATTATATATACACCCAATA	GGATCCCTTT TACTTACAAT GTTATTT	59.45
Ca-II-SSR363	108.48	scaffold04423	19170	TGTTGAACTTTTGAACGTGGA	(AT)10	(AT)11	TTAATTAAGAGTTAAACAACTATTTGACCACA TGCTTTAAGTTACTATCTAAACCGATTATTAACA ATAGTTGATAATTCATAAAAAGAAAGACTATA	AAACAACTA TTTGACCACA TGTCTTA	59.21
Ca-II-SSR372	111.84	scaffold04453	139717	AATTGGGGACACAGGAATA	(AT)20	(AT)12	CTTTTACATTTCAAATTAGATTTCAATATCTTCA TGAAAATGTAATATGCATGTTAGATTTCAATTT ACAACAAATGTGAATCTATTTGAACATCTACA	TGCATGTTAG ATTTCAATTTAC AACAA	59.10
Ca-II-SSR354	95.88	scaffold04477	7666	AAAGTGTTTCAGACTAAAATGCCTC	(TA)11	(TA)13	GTGTC AATATATATCATATCAATTACATCACTT TTATTAATTTATATCTTTCTCTAAGTATATACATT TAATAGGGGTGTCATCAAACATCTAATATAT	AGGGGTGCA TCAAACATCT	59.31
Ca-II-SSR352	12.22	scaffold04583	7538	TGCACATAGCAATTACAGATGG	(AAT)27	(AAT)29	CAAGTTATGGGATCCAGGAGGATACATTTTTTC TACGTTGATGTCTTTACCTTGAGGACAAGGT GATAGTTTGGGGGATATTGTTAGACTTATTAT T	ACAAGGTGAT AGTTTGGGGG	58.73
Ca-II-SSR343	175.13	scaffold04585	2415	ATTGTTGGCAGGTTGTGGTT	(AT)16	(AT)11	CGATTGTAGTGGGGCTAATCCAAAAAATTCAC CCACGTCTTATATCTCGCAGAGTAAATTGTTG TAGCTTTTTACCATGAGATTAATATATGAAAT	CCCACGTCTT TATATCTCGC A	60.28

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR359	186.05	scaffold04590	15529	CCCCAGTTTTGGTCTCTCAA	(TAT)26	(TTA)24	TTTCCATAAAAATCTCAATCTTTTACGGACATTT TAACCTTTGTATAAGTATTAATAATTAATACAAA AATATTAAGGTTTAAATGAATATAGTCTAAC	AAAAATCTCA ATCTTTTACG GACA	60.08
Ca-II-SSR337	34.78	scaffold04616	429	CACGTTCAAGTATATTTTGAAGCAA	(TAA)14	(TAA)12	AATACTAGCCATGCTGCTAAAACAAGGATAAGT ATAATGTAAAAAATTTGAGAATATATTTTTAAA TTTTACTTTTACGATTTTCTTTAAAAATTTATC	GCCATGCTGC TAAAAACAAGG	59.64
Ca-II-SSR347	94.20	scaffold04869	3258	TGCGATTCAAGAAGGAGATTG	(TA)8	(TA)9	TCCTTTATTTTTCAGTTAGATCACTTTTTGAGTATG TTGAATTGGAGTTGTTAAAATACTATGCGATAT CATATTTGAACATAAATAAGTTAGAATCAAATA	TTGGAGTTGT TAAAATACTAT GCGA	60.34
Ca-II-SSR358	168.83	scaffold04875	14016	TCTGGTTGTTTATTAATTCATCTTTG	(TTA)8	(TTA)7	ACAAAATCCTCCCCCTCGTTTAAACCATTAAGT AAACAAGATTGAATTTAGTGTTAATGCTAGTTTC ACACAATTCACACCCGCATATACACAATACAC	CCCCCTCGTT TAACCATTAA G	57.89
Ca-II-SSR350	120.24	scaffold04961	5959	CAGATCAAAGGTTGGATCAAAA	(AG)12	(AG)11	CACTTCAATGCTCCATTGTCACTTGCTCTTTTCT CGGATCTCTCTCACCCCTTTCATCTTTTCTTC TTCCTCTTCTCATTCTTTCACAATTTGGTAT	TGCTCCATTG TCACTTGCTC	60.33
Ca-II-SSR340	106.80	scaffold05077	1646	ACCCACGAAATGTGTGTGAG	(CT)6	(CT)9	CCGACAAAAGAACCATGTGGGACCAACATAC TTCCAAATCTAACAGAGAATCAACCATGTGGGA CTCTAACATCCTTTCCATTGTGATTGCATAGAG AG	CAAAAGAACC ATGTGGGACC	59.44
Ca-II-SSR357	121.92	scaffold05186	12370	TGATTGTTGTTGTTGGTGTCTG	(AG)8	(AG)9	CATTCAATTTATACCTTTTATTTTTTCTTTTCCA GTCCCTAATCTATGTATCTATCAATTCTTCAATA TACAAATAAAAACCATTCCATTATTTATCTC	CCAGTCCCTA ATCTATGTAT CTATCAA	59.51
Ca-II-SSR344	185.37	scaffold05190	2785	CAAACGATTCATTTCGAGGCT	(AT)7	(AT)8	AATATCAAATATCTCACATTTATTAATAAATAAT CGAACATCTCAATAATATCAAATACCACATATTT AACGAAGTTAAATCAATCAACACCTTATAAAT	CGAAGTTAAA TCAATCAACA CCTT	60.21

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR341	147.12	scaffold05191	2017	ACGGTAACGCTAAAAATTATCAA	(ATA)22	(ATA)29	AAGCGCAGCTGTTGCGCTTCAGGCACACAGTG TAACACCCAATTTCTTATTATATTTTAGTAATAT AATATTGATAATTTATTATTATTATTATTAT	GGCACACAGT GTAACACCCA	57.15
Ca-II-SSR383	73.40	scaffold05272	9743	CCTCATGTTTAGCGTTTGTGA	(TAT)6	(TAT)7	CAACGACGAATGACGATGAC	60.17	154.00
Ca-II-SSR384	50.04	scaffold05576	4036	GGTGAGAGGGCTCATCAAGA	(AG)6	(AG)7	ACAGATGTTCCAGCGCTCTC	60.35	143.00
Ca-II-SSR385	110.12	scaffold05581	5773	TCTTTAATTAGAGTATGCTTGAAACG	(CA)12	(CA)13	TTTTCAACTAAAGACGGACTCG	58.69	103.00
Ca-II-SSR386	91.88	scaffold05583	56098	AGAATCGCGAGAAGGATGAA	(TA)12	(TA)13	TGAATTGCGGCGAGAGAATA	59.92	184.00
Ca-II-SSR387	102.83	scaffold05624	1140	ACAGGTTGGGAATCATTGG	(AT)14	(AT)12	CAAGGTGTGGTGGCATTGTA	59.65	168.00
Ca-II-SSR388	123.89	scaffold05741	8345	GGTTTGAAAGTGATGGGTG	(TA)8	(AT)8	CTCTGTCCGTGTCCTTGCTT	60.21	131.00
Ca-II-SSR389	167.99	scaffold05896	797	TTGCATTTTCTCATCTTCTTGC	(TTA)25	(TTA)33	CCGCAAAGTAAACTTGGAGAA	59.48	196.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR390	179.69	scaffold05921	6372	ATCATGCTTTATGGCTGCTT	(AC)7	(AC)8	CCACTTGAGGGAAATTTGG	57.48	127.00
Ca-II-SSR391	212.35	scaffold05945	121055	TTTAGTGTGTGTATGTGCGTG	(TG)6	(TG)7	GCATGTTATAAAGAACACACCCC	58.74	135.00
Ca-II-SSR392	175.19	scaffold05946	1181	GGCTTTTATAGAGCTTATTGACAAA	(TA)10	(TA)9	TTGAAAAAGCTTTGTTGAGTACC	57.51	155.00
Ca-II-SSR393	131.18	scaffold05983	2502	CCTGGCACCATAGACCTCTT	(AAT)27	(AAT)22	TCAATTTGTTAATTTGACTGCATTT	59.16	204.00
Ca-II-SSR394	27.48	scaffold06002	3449	TGCACAGAAAAGAAAATAAAAAGG	(AT)8	(AT)9	TCAACATTGGAATTTGCCTG	58.94	142.00
Ca-II-SSR395	19.02	scaffold06035	8254	TCTTGCAATGACCAAAACCA	(TA)7	(TA)8	GATCCACTACATGGTCATTATAACA	60.09	146.00
Ca-II-SSR396	18.08	scaffold06182	582	CCATACATGTTTCAAGTTTCAACG	(AT)17	(AT)15	TTTGATAGAAAATTTTGAATGTCCTC	60.65	155.00
Ca-II-SSR397	4.92	scaffold06315	3095	TGTGACACCCTAAATGCCAA	(AT)10	(AT)11	CGCGTTATTATGTTTGTATGGAA	59.96	191.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR398	1.16	scaffold06342	3787	CGATATATAATCTTAATTGGGTCTCA	(AT)10	(AT)9	CACAATTGAGTTTTATTTGGGAA	57.04	132.00
Ca-II-SSR399	35.94	scaffold06438	4342	CCATATCACAAAACTGCACG	(AT)11	(AT)12	TTCCATTAAACTAGGAAAAAGTGG	59.10	148.00
Ca-II-SSR400	74.28	scaffold06441	5645	TCCGCTGCAAATTTAAAAGAA	(TA)15	(TA)13	CCAATTGGTAACTGTGACACC	59.85	100.00
Ca-II-SSR401	11.50	scaffold06839	2320	TCACCATTTAAAAATACAATACACCAA	(TA)11	(TA)12	TGGTGAAACCTCTAACGGAAA	59.85	185.00
Ca-II-SSR402	7.74	scaffold06885	4049	GGGTAAGCAAAATCAGTCACG	(AT)12	(TA)11	TGACTTTTCAAATACGTTGTTGTT	59.62	125.00
Ca-II-SSR403	67.24	scaffold07041	5574	TTATGTCGCTATCATTCAATGTG	(AT)13	(AT)15	CGTGCAAGAACAAGGTTCAA	57.76	171.00
Ca-II-SSR404	87.48	scaffold07062	1520	GCGACCATTACAACAATCCC	(AT)7	(AT)12	CGACACTGTAGCACCCCTTT	60.20	191.00
Ca-II-SSR405	90.12	scaffold07242	5503	CGCGGGATGTATTTTACCAA	(TA)12	(TA)10	TTGAAGTCAATGCTCAAGTGC	60.69	143.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR406	98.78	scaffold07311	1902	GCACATAGTTTCGAACTTGCTCT	(TA)11	(TA)9	AATGCCAGTGGAGTCACACA	59.97	129.00
Ca-II-SSR407	123.08	scaffold07533	7350	GTGAAATAGCAGCACCGACA	(AG)10	(AG)11	TCACCTCCTCCAAAATCACC	59.87	138.00
Ca-II-SSR408	168.89	scaffold07615	6328	GGCTTTTCTCACTTCTCCCC	(CTT)9	(TCT)8	TCCTCTGTATGGCAGTCGAA	60.19	108.00
Ca-II-SSR409	180.59	scaffold07735	4651	TGTGTTTCCGAAGCATACCA	(TA)6	(TA)7	AGAAATGGGCGCATAACTGT	60.11	139.00
Ca-II-SSR410	210.71	scaffold07987	3854	TTTGCCTTGTGGATTCAATTT	(AAT)18	(ATA)15	CAATATCGATTGCACTCATTCA	59.44	158.00
Ca-II-SSR411	173.39	scaffold07993	3308	CGGTTGGTCTCACCAAATCT	(AT)12	(AT)14	CATCATGAAACAATTTCAAAGGTA	59.97	141.00
Ca-II-SSR412	97.97	scaffold08095	3404	TCCTAGAGTCAACGAATCTCCA	(TA)12	(TA)11	TGTTGGAACACGTCACATCAT	58.93	131.00
Ca-II-SSR413	124.70	scaffold08140	6452	TGCGGTGAATCTTTTACGAA	(AT)15	(AT)10	TTCTATTTCTTTTCTTTTCCCC	59.30	144.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR414	146.39	scaffold08236	758	AGATTTCGCAGGCAGTTGAGT	(AT)8	(AT)7	GCGCGCAAGCTATACTCCTA	60.02	156.00
Ca-II-SSR415	198.59	scaffold08475	299	TTCAACAATATTCACAAATCCTCAA	(TA)8	(TA)7	ATTTATCCGCTGCAAATTTTAT	59.78	139.00
Ca-II-SSR416	209.89	scaffold08482	3815	CTTTCCTCCCTTCCATTCC	(CT)9	(CT)10	TCATAGCAAAGTTTAGCAAACAAAA	59.88	130.00
Ca-II-SSR417	174.29	scaffold08490	4849	CCTTATAGGGGATGGAAAATGA	(AT)9	(AT)8	TTTTGGCGATTGTACCAACTT	59.19	136.00
Ca-II-SSR418	131.99	scaffold08492	3756	TCCACTTTATCCATCATTCCG	(CTT)14	(CTT)15	CCAAACACGAGAAGAGGTTGA	59.77	170.00
Ca-II-SSR419	36.88	scaffold08497	3479	TGAATTTAAAGATTTGTTGGAAACTT	(TTA)17	(TTA)15	CATGAAACATACTCCCTTCAATC	58.70	172.00
Ca-II-SSR420	50.98	scaffold08547	414	GCATTCTCGCTGTTCTTCT	(AT)9	(AT)7	CACTCATTTGAGCTCGGAAA	59.58	166.00
Ca-II-SSR421	110.93	scaffold08648	6145	TCGTAAATGTGTGGCATTG	(TGA)5	(TGA)6	CCATTAATACCGTCATCTCAGACA	59.48	176.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR422	92.76	scaffold08666	3070	CGGATACCAAAAAGTATCACCAA	(AAT)23	(AAT)20	TTCTGTGTGATTGGGGTGAA	60.12	180.00
Ca-II-SSR423	103.64	scaffold08707	2537	GCAACTGTTTCTTGGTCTTCG	(AT)7	(AT)8	CAATTTCCATTTCCACAAATCA	59.91	140.00
Ca-II-SSR464	144.39	scaffold08854	4837	TTGATACTTGATTGATCCTTGATCTT	(CA)9	(CA)8	TGTTGCTCGTGTACGTCAGAT	57.55	144.00
Ca-II-SSR443	169.89	scaffold08907	692	TTTGAACGGTTGACGAATGA	(TTA)32	(TTA)31	CGTGGAATGTAACACCTAGTCG	60.09	189.00
Ca-II-SSR460	10.64	scaffold09135	3338	TTGTAGAGTCCAAAACCTTGCA	(TA)9	(AT)11	TGTTGGAGTTGTGTTGATTCTT	59.79	133.00
Ca-II-SSR453	143.54	scaffold09202	2058	TCGGGATATTAGTAATGTTCTGTTTG	(AT)9	(TA)9	CATCATTAGAGGATGGTCGAAA	59.73	148.00
Ca-II-SSR440	116.55	scaffold09234	574	CTGTTTTCAATGCCTTGCCCT	(CA)14	(CA)13	GAGATGTGAGTGAAGTGATGTGTG	60.25	152.00
Ca-II-SSR445	9.75	scaffold09449	813	CCTTTGCTTTTCCTTCCTTC	(AT)11	(AT)9	GGAATGAAATGATGGGGTA	58.05	178.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR459	2.63	scaffold09742	3299	TTGGGGGAGAATGTATAAAATGA	(TA)10	(TA)9	TTTTCCCTCAAGCTGCAAT	59.58	148.00
Ca-II-SSR439	112.10	scaffold09754	527	GGTTTGGAAAGTGATGGATGA	(TA)7	(TA)6	TCCAGTTTTCTCCGTTCTC	59.78	171.00
Ca-II-SSR441	123.67	scaffold10234	718	CCGCCAAAATCCAAAGTTTA	(TA)12	(TA)13	ATCGGGTGTTCACGAGAC	59.94	163.00
Ca-II-SSR458	198.27	scaffold10438	2543	TCCTTTTAGAGAATTAATTGTGTTGG	(AT)13	(TA)12	CAACACATAGTAAACCAATGTGTAAA	60.16	144.00
Ca-II-SSR463	51.58	scaffold10813	4131	CAAATTCCTTTCCCATTTGTTCA	(CTT)5	(TCT)5	CAAAGCAGAATGTCCCTCAA	60.20	128.00
Ca-II-SSR465	118.33	scaffold10990	112130	AATGGGGAAAGTAGGGAACG	(TTA)27	(TTA)26	TTTAGGTGTAGAAATAATTGTTGATGA	60.18	203.00
Ca-II-SSR442	177.52	scaffold11736	734	AAAGGATCAAATCGGGAGAT	(AT)7	(TA)10	ACCAGGTGTTGCATTTGACA	57.53	157.00
Ca-II-SSR462	24.88	scaffold11762	3896	CGCTGTAGAGAACCTCCCAC	(TTC)17	(TTC)19	CCGAGCCAAAATCCAAAATA	59.87	179.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR461	93.41	scaffold11876	3439	GCCAAAGTTAATAATATTTTGGAGA	(AT)6	(AT)8	TTTTCTTTCTTTTCCCCC	57.18	110.00
Ca-II-SSR456	178.35	scaffold12317	2469	CATCGAGCTGCAAAGAAAGA	(AGA)11	(AGA)15	GCTACGGCACTATATGAGGCT	59.30	144.00
Ca-II-SSR447	23.99	scaffold12437	992	CATCACAACCATAAACAACAACA	(AAC)12	(AAC)8	AAAAGGGGAGTTCAGCGACT	58.38	169.00
Ca-II-SSR436	80.95	scaffold12901	236	TGTATGTGAATCTTGCCCTCGTC	(TA)16	(TA)14	TGGATTTCACACAACAAGAA	60.14	222.00
Ca-II-SSR435	73.83	scaffold13062	139	TATGATCGGTTGTCGCACAC	(ATA)18	(ATA)17	CGTTTTGCTCATCTGTAAATCA	60.55	202.00
Ca-II-SSR437	23.10	scaffold13160	285	AAACTCTGAGGTTTAATTGACTTGTA	(TAA)13	(TAA)14	CTGATTTATGTGGAGTGCGG	58.14	204.00
Ca-II-SSR450	160.54	scaffold13471	1289	ACTCCCTCTTGTGCTAGAAAAT	(TA)8	(TA)9	ATTGGATTAGTGAATTCATTGTTT	57.70	198.00
Ca-II-SSR434	1.74	scaffold13784	101	GAAGCAAAGAGGAGGAAAGG	(TTA)27	(TTA)29	ACACGTGTCGGACATCAAT	59.47	198.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR449	142.69	scaffold14000	1152	AAAAATTTACGATGCAATGAACA	(TA)7	(TA)8	TGAGCTCTTGTGAATACAATTATCA	58.60	199.00
Ca-II-SSR444	197.44	scaffold14143	773	TTTAGGATTTTATTTGTGGGGG	(AAAATA)5	(AAAAT)5	TATCCAATCATGCCAGTCCA	59.13	151.00
Ca-II-SSR455	131.64	scaffold14352	2439	GGGATCTTTTGGCTGAAGA	(TTG)9	(TTG)5	GGTCGAAGTTGAACATACCGA	59.24	100.00
Ca-II-SSR446	92.52	scaffold14449	909	CGAACATCAAGCAATTTTACGA	(TA)7	(AT)6	TCAAATCACACTAAGAGATACGAAAA	60.13	140.00
Ca-II-SSR457	170.74	scaffold14543	2519	AAGGGGAATGAGTTTTTGCC	(TA)8	(TA)9	GATTGAGAAGGGAGTGATGTGA	60.30	141.00
Ca-II-SSR451	130.79	scaffold15923	1495	TGAAACCAAGAATTATGTTTTAGGG	(AT)8	(AT)9	TCATACCAGATGCTCTCCACA	59.70	146.00
Ca-II-SSR454	161.39	scaffold16191	2082	GCAAATTCCTAAAAAGCGGTG	(TA)18	(TA)17	CGGATATCCTAAAGCCTTGTC	58.93	115.00
Ca-II-SSR448	40.01	scaffold16819	1116	TGCTGACTGTTTGGTTTCGAG	(GA)12	(GA)10	CTTTTCCCCAAAAGCTGGAC	60.03	118.00

Marker IDs	Genetic positions (cM)	Chromosomes	Physical positions (bp)	Flanking sequences/Forward primers	ICC 12968	ICC4958	Flanking sequences/Reverse primers	Annealing temperature (0C)	Amplified Product size (bp)
Ca-II-SSR438	106.76	scaffold16843	435	TACATCTCCAAATGCGACCA	(AAT)15	(AAT)13	CACTACGTGTAAAAATGGGCAA	60.07	134.00
Ca-II-SSR452	50.69	scaffold16975	1903	CCTTGACGACGAGTACAAC	(AT)14	(AT)11	CACTGTAGCACCCCTTTTGT	59.37	181.00

*Ca-ISSR (Cicer arietinum ICC 4958 and ICC 12968 Simple Sequence Repeat) and Ca-IISNP (Cicer arietinum ICC 4958 and ICC 12968 Single Nucleotide Polymorphism)

Supplementary Table S2: Phenotypic variations of three quantitative agronomic traits determined in an intra-specific chickpea mapping population (ICC 4958 x ICC 12968) using diverse statistical measures

Traits	Years	Parental genotypes		F ₄ mapping individuals		Heritability (H ² %)	Coefficient of variation (CV)	Least square difference (LSD)	ANOVA significance (P)
		ICC 4958 (Mean ± SD)	ICC 12968 (Mean ± SD)	(Mean ± SD)	Range				
Pod number per plant (PN)	2012	101.6 ± 2.2	46.7 ± 2.3	59.8 ± 12.6	37.1-109.4	75	21.1	24.8	< 0.0001
	2013	110.5 ± 2.5	50.8 ± 2.4	65.0 ± 13.8	40.4-119.0	76	21.2	27.2	< 0.001
Seed number per plant (SN)	2012	137.2 ± 2.1	54.2 ± 1.8	71.8 ± 15.5	43.9-137.2	72	21.6	30.6	< 0.001
	2013	146.4 ± 2.0	57.8 ± 1.9	76.6 ± 16.6	46.8-146.4	70	21.7	32.7	< 0.0001
100-seed weight (g) (SW)	2012	35.4 ± 2.2	20.8 ± 2.1	28.1 ± 4.2	20.4-43.0	89	14.9	8.0	< 0.0001
	2013	33.8 ± 1.6	22.6 ± 1.5	29.0 ± 4.3	21.1-44.5	87	14.8	8.2	< 0.0001

Supplementary Table S3: ANOVA-based summary effects of three quantitative agronomic traits measured in an intra-specific chickpea mapping population (ICC 4958 x ICC 12968) across two experimental years

Traits	Variance	Degree of freedom (<i>df</i>)	Mean square (MS)	Significance (P)
Pod number per plant (PN)	Genotype (G)	189	348.3	P < 0.0001
	Environment (E)	1	3967.6	P < 0.0001
	G x E interaction	189	0.62	P < 0.001
	Error (e)	380	174.5	P < 0.001
Seed number per plant (SN)	Genotype (G)	189	515.4	P < 0.0001
	Environment (E)	1	3316.8	P < 0.001
	G x E interaction	189	0.54	P < 0.001
	Error (e)	380	257.9	P < 0.001
100-seed weight (g) (SW)	Genotype (G)	189	36.2	P < 0.0001
	Environment (E)	1	138.4	P < 0.0001
	G x E interaction	189	0.01	P < 0.0001
	Error (e)	380	18.1	P < 0.0001

Supplementary Table S4: Genomic distribution of SNP and SSR markers physically mapped on eight *desi* chickpea chromosomes

Chromosomes	Size (Mb) of chromosomes (pseudomolecules)	Number (%) of SNP and SSR markers mapped	Average map density (kb)
<i>Ca-desi</i> -Chr01	14.79	205 (12.4)	72.1
<i>Ca-desi</i> -Chr02	17.30	207 (12.5)	83.6
<i>Ca-desi</i> -Chr03	23.38	219 (13.2)	106.8
<i>Ca-desi</i> -Chr04	22.09	211 (12.7)	104.7
<i>Ca-desi</i> -Chr05	16.30	210 (12.7)	77.6
<i>Ca-desi</i> -Chr06	11.48	201 (12.1)	57.1
<i>Ca-desi</i> -Chr07	8.46	202 (12.2)	41.9
<i>Ca-desi</i> -Chr08	10.57	202 (12.2)	52.3
Total	124.37	1657	75.0

Ca-desi-Chr: *Cicer arietinum desi* chromosome

Supplementary Table S5: SNP and SSR marker-based comparative mapping between the chromosomes of *desi* and *kabuli* chickpea genomes

Chickpea <i>desi</i> linkage groups	Number of chickpea unique loci	Chickpea <i>Kabuli</i> chromosomes								Total
		<i>Cak</i> Chr1	<i>Cak</i> Chr2	<i>Cak</i> Chr3	<i>Cak</i> Chr4	<i>Cak</i> Chr5	<i>Cak</i> Chr6	<i>Cak</i> Chr7	<i>Cak</i> Chr8	
<i>Cad</i> LG01	197	156 (64.19%)	8	15	4	16	24	13	7	243
<i>Cad</i> LG02	183	19	98 (38.74%)	6	25	17	68	17	3	253
<i>Cad</i> LG03	179	29	13	101 (39.29%)	14	17	21	22	40	257
<i>Cad</i> LG04	192	17	26	12	137 (53.31%)	18	20	18	9	257
<i>Cad</i> LG05	169	13	10	5	8	153 (71.16%)	13	9	4	215
<i>Cad</i> LG06	176	14	47	3	13	8	132 (54.32%)	20	6	243
<i>Cad</i> LG07	157	18	15	13	27	17	40	103 (42.56%)	9	242
<i>Cad</i> LG08	197	28	3	6	20	25	9	173 (64.31%)	5	269
Total	1450	138	122	60	111	118	195	99	83	1979

Supplementary Table S6: SNP and SSR marker-based comparative mapping between the chromosomes of *desi* chickpea and *Medicago* genomes

Chickpea linkage groups	Number of chickpea unique loci	<i>Medicago truncatula</i> chromosomes								Total
		<i>MtChr1</i>	<i>MtChr2</i>	<i>MtChr3</i>	<i>MtChr4</i>	<i>MtChr5</i>	<i>MtChr6</i>	<i>MtChr7</i>	<i>MtChr8</i>	
<i>CadLG01</i>	28	10	18 (22.22%)	16	6	11	6	7	7	81
<i>CadLG02</i>	35	10	12	20	36 (25.35%)	31	6	19	8	142
<i>CadLG03</i>	34	9	8	16	13	14	4	31 (29.80%)	9	104
<i>CadLG04</i>	28	19 (27.53%)	7	10	6	7	7	9	4	69
<i>CadLG05</i>	29	17	22	49 (24.87%)	21	33	15	20	20	197
<i>CadLG06</i>	25	8	5	10	14	18 (21.43%)	2	9	18	84
<i>CadLG07</i>	21	10	16	21	28 (18.92%)	28	4	25	16	148
<i>CadLG08</i>	31	4	8	6	21 (30.00%)	5	5	6	15	70
Total	231	68	78	99	60	129	49	95	97	895

Supplementary Table S7: SNP and SSR marker-based comparative mapping between the chromosomes of *desi* chickpea and *Glycine* genomes

Chickpea linkage groups	Number of chickpea unique loci	<i>Glycine max</i> chromosomes																				Total
		<i>Gm</i> Chr1	<i>Gm</i> Chr2	<i>Gm</i> Chr3	<i>Gm</i> Chr4	<i>Gm</i> Chr5	<i>Gm</i> Chr6	<i>Gm</i> Chr7	<i>Gm</i> Chr8	<i>Gm</i> Chr9	<i>Gm</i> Chr10	<i>Gm</i> Chr11	<i>Gm</i> Chr12	<i>Gm</i> Chr13	<i>Gm</i> Chr14	<i>Gm</i> Chr15	<i>Gm</i> Chr16	<i>Gm</i> Chr17	<i>Gm</i> Chr18	<i>Gm</i> Chr19	<i>Gm</i> Chr20	
<i>CadL</i> G01	29	8	2	0	6	3	8	4	5	15	7	2	6	16 (12.16%)	3	15	7	7	1	6	2	123
<i>CadL</i> G02	25	3	13	1	20 (11.56%)	11	12	6	5	6	0	12	7	3	20	6	11	13	7	6	11	173
<i>CadL</i> G03	27	10	12 (9.98%)	9	3	7	0	2	8	9	8	5	9	5	6	8	2	2	4	12	2	124
<i>CadL</i> G04	29	0	10 (12.99%)	3	4	1	5	3	5	2	6	2	7	6	4	1	1	2	4	9	2	77
<i>CadL</i> G05	27	15	14	11	17 (10.37%)	10	13	2	7	2	7	2	1	4	7	9	8	12	5	3	15	164
<i>CadL</i> G06	17	2	7 (13.21%)	0	1	9	3	2	7	2	0	4	0	4	2	1	2	0	4	3	0	53
<i>CadL</i> G07	18	3	1	0	2	1	1	3	4	4	4	3	1	2	1	0	2	4 (10.00%)	2	0	1	40
<i>CadL</i> G08	21	2	6	5	9	4	15 (14.15%)	12	5	3	1	1	2	3	1	12	2	7	6	8	2	106
Total	193	43	36	29	25	46	42	34	46	43	33	31	33	27	44	52	35	43	33	47	35	860

Supplementary Table S8: SNP and SSR marker-based comparative mapping between the chromosomes of *desi* chickpea and *Lotus* genomes

Chickpea linkage groups	Number of chickpea unique loci	<i>Lotus japonicus</i> chromosomes							Total
		<i>LjChr1</i>	<i>LjChr2</i>	<i>LjChr3</i>	<i>LjChr4</i>	<i>LjChr5</i>	<i>LjChr6</i>	<i>LjChr7</i>	
<i>CadLG01</i>	8	2	0	4	1	1	2	5 (33.33%)	15
<i>CadLG02</i>	13	11	3	6	5	3	6	14 (29.16%)	48
<i>CadLG03</i>	17	13 (39.39%)	3	5	3	5	0	4	33
<i>CadLG04</i>	10	7 (41.18%)	6	2	0	1	0	1	17
<i>CadLG05</i>	13	5	6 (21.43%)	3	5	1	2	6	28
<i>CadLG06</i>	9	3	2	4	10 (37.04%)	3	2	3	27
<i>CadLG07</i>	10	2	5 (27.77%)	2	2	0	2	5	18
<i>CadLG08</i>	19	2	1	0	10 (47.62%)	2	3	2	21
Total	99	25	15	26	16	16	17	21	207

Supplementary Table S9: SNP and SSR marker-based comparative mapping between the chromosomes of *desi* chickpea and *Cajanus* genomes

Chickpea linkage groups	Number of chickpea unique loci	<i>Cajanus cajan</i> chromosomes											Total
		<i>CcChr1</i>	<i>CcChr2</i>	<i>CcChr3</i>	<i>CcChr4</i>	<i>CcChr5</i>	<i>CcChr6</i>	<i>CcChr7</i>	<i>CcChr8</i>	<i>CcChr9</i>	<i>CcChr10</i>	<i>CcChr11</i>	
<i>CadLG01</i>	11	0	3	2	1	0	0	1	5 (27.77%)	3	1	2	18
<i>CadLG02</i>	17	2	5	2	2	0	3	0	0	3	2	11 (36.66%)	30
<i>CadLG03</i>	17	4	4	7	0	1	1	8 (21.05%)	3	1	2	7	38
<i>CadLG04</i>	18	4	5 (16.66%)	4	2	0	4	1	3	1	2	4	30
<i>CadLG05</i>	17	3	3	3	0	2	1	4	2	1	1	10 (33.33%)	30
<i>CadLG06</i>	14	0	6 (30.00%)	3	1	2	1	0	3	1	3	0	20
<i>CadLG07</i>	6	1	1	0	1	0	0	0	2 (25.00%)	0	1	2	8
<i>CadLG08</i>	13	0	1	3	0	0	0	1	3	1	1	8 (44.44%)	18
Total	113	14	17	24	7	5	10	7	14	11	13	15	192

Supplementary Table S10: Chickpea genotypes utilized for evaluating polymorphic potential of SNP and SSR markers

Sl. No.	Genotypes with Accession No.	Cultivar types	Geographical origin
1	ICC7571	<i>Cicer arietinum</i> Kabuli landrace	Israel
2	ICC16796	<i>Cicer arietinum</i> Kabuli landrace	Portugal
3	ICCV1	<i>Cicer arietinum</i> Desi variety	Western India
4	ICCC37	<i>Cicer arietinum</i> Desi variety	Southern India
5	ICCV88202	<i>Cicer arietinum</i> Desi variety	Northern India
6	ICCV93952	<i>Cicer arietinum</i> Desi variety	Central India
7	ICCV93954	<i>Cicer arietinum</i> Desi variety	Southern India
8	ICCV91106	<i>Cicer arietinum</i> Desi variety	Central India
9	ICCV92944	<i>Cicer arietinum</i> Desi variety	Central India
10	ICCL87207	<i>Cicer arietinum</i> Desi variety	Central India
11	ICC4951	<i>Cicer arietinum</i> Desi landrace	Central India
12	ICC8933	<i>Cicer arietinum</i> Desi genetic stock	Northern India
13	IC296131	<i>Cicer arietinum</i> Desi variety	Northern India
14	IC296132	<i>Cicer arietinum</i> Desi variety	Northern India
15	IC296133	<i>Cicer arietinum</i> Desi variety	Northern India
16	BGD112	<i>Cicer arietinum</i> Desi genetic stock	Northern India
17	BGD1103	<i>Cicer arietinum</i> Desi genetic stock	Northern India
18	Pusa256	<i>Cicer arietinum</i> Desi variety	Northern India
19	Pusa547	<i>Cicer arietinum</i> Desi variety	Northern India
20	BGD72	<i>Cicer arietinum</i> Desi genetic stock	Northern India
21	IC244160	<i>Cicer arietinum</i> Desi variety	Northern India
22	IC244217	<i>Cicer arietinum</i> Desi variety	Northern India
23	SBD377	<i>Cicer arietinum</i> Desi variety	Northern India
24	Pusa2024	<i>Cicer arietinum</i> Desi variety	Northern India
25	Pusa1103	<i>Cicer arietinum</i> Desi variety	Northern India
26	ICC14402	<i>Cicer arietinum</i> Desi landrace	ICRISAT
27	ICC5135	<i>Cicer arietinum</i> Desi landrace	India
28	ICC13524	<i>Cicer arietinum</i> Desi landrace	Iran
29	ICC13219	<i>Cicer arietinum</i> Desi landrace	Iran
30	ICC13187	<i>Cicer arietinum</i> Desi landrace	Iran
31	ICCV89314	<i>Cicer arietinum</i> Desi variety	Eastern India
32	ICCV96970	<i>Cicer arietinum</i> Desi variety	Central India
33	ICCV94954	<i>Cicer arietinum</i> Desi variety	Central India
34	ICCV10	<i>Cicer arietinum</i> Desi variety	Southern/Central India
35	ICCV93958	<i>Cicer arietinum</i> Desi variety	Southern India
36	ICC4958	<i>Cicer arietinum</i> Desi landrace	Central India
37	ICC3512	<i>Cicer arietinum</i> Desi landrace	Iran
38	ICC8950	<i>Cicer arietinum</i> Desi landrace	India
39	ICC6263	<i>Cicer arietinum</i> Desi landrace	Russia & CISs
40	ICC283	<i>Cicer arietinum</i> Desi landrace	India
41	ICC1431	<i>Cicer arietinum</i> Desi landrace	India

Sl. No.	Genotypes with Accession No.	Cultivar types	Geographical origin
42	ICC4918	<i>Cicer arietinum Desi</i> breeding line/cultivar	India
43	ICC1205	<i>Cicer arietinum Desi</i> landrace	India
44	ICC1882	<i>Cicer arietinum Desi</i> landrace	India
45	ICC1356	<i>Cicer arietinum Desi</i> landrace	India
46	ICCX-810800	<i>Cicer arietinum Desi</i> variety	Northern India
47	ICCX-820065	<i>Cicer arietinum Desi</i> variety	Western India
48	ICCV90201	<i>Cicer arietinum Desi</i> variety	Northern India
49	ICC1392	<i>Cicer arietinum Desi</i> landrace	India
50	ICC3362	<i>Cicer arietinum Desi</i> landrace	Iran
51	ICC2969	<i>Cicer arietinum Desi</i> landrace	Iran
52	ICC12037	<i>Cicer arietinum Desi</i> landrace	Mexico
53	ICC1052	<i>Cicer arietinum Desi</i> landrace	Pakistan
54	ICC11284	<i>Cicer arietinum Desi</i> landrace	Russia & CISs
55	ICCV2/ICC12968	<i>Cicer arietinum Kabuli</i> variety	Southern India
56	ICCV92311	<i>Cicer arietinum Kabuli</i> variety	Central India
57	ICCV95311	<i>Cicer arietinum Kabuli</i> variety	Southern India
58	ICCV96329	<i>Cicer arietinum Kabuli</i> variety	Southern India
59	ICCV95334	<i>Cicer arietinum Kabuli</i> variety	Central India
60	IC411514	<i>Cicer arietinum Kabuli</i> variety	Northern India
61	Pusa5028	<i>Cicer arietinum Kabuli</i> variety	Northern India
62	IC449069	<i>Cicer arietinum Kabuli</i> variety	Northern India
63	Pusa5023	<i>Cicer arietinum Kabuli</i> variety	Northern India
64	Pusa2024	<i>Cicer arietinum Kabuli</i> variety	Northern India
65	IC 296376	<i>Cicer arietinum Kabuli</i> variety	Northern India
66	IC 244243	<i>Cicer arietinum Kabuli</i> variety	Northern India
67	ICC5003	<i>Cicer arietinum Kabuli</i> variety	Northern India
68	PhuleG0515	<i>Cicer arietinum Kabuli</i> variety	Central India
69	BGD1105	<i>Cicer arietinum Kabuli</i> genetic stock	Northern India
70	ICC8740	<i>Cicer arietinum Kabuli</i> landrace	Afghanistan
71	ICC16524	<i>Cicer arietinum Kabuli</i> landrace	Pakistan
72	ICC13523	<i>Cicer arietinum Kabuli</i> landrace	Iran
73	ICC12328	<i>Cicer arietinum Kabuli</i> landrace	Cyprus
74	ICC7272	<i>Cicer arietinum Kabuli</i> landrace	Algeria
75	ICC11764	<i>Cicer arietinum Kabuli</i> landrace	Chile
76	ICC15697	<i>Cicer arietinum Kabuli</i> landrace	Syrian Arab Republic
77	ICC8261	<i>Cicer arietinum Kabuli</i> landrace	Turkey
78	ICC15333	<i>Cicer arietinum Kabuli</i> landrace	Iran
79	ICC10755	<i>Cicer arietinum Kabuli</i> landrace	Turkey
80	ICC10885	<i>Cicer arietinum Kabuli</i> landrace	Ethiopia
81	ICC9137	<i>Cicer arietinum Kabuli</i> landrace	Iran
82	ICC15406	<i>Cicer arietinum Kabuli</i> landrace	Morocco
83	ICC8151	<i>Cicer arietinum Kabuli</i> landrace	United States of America
84	ICC14199	<i>Cicer arietinum Kabuli</i> landrace	Mexico
85	ICC12824	<i>Cicer arietinum Desi</i> landrace	Ethiopia

Sl. No.	Genotypes with Accession No.	Cultivar types	Geographical origin
86	ICC12537	<i>Cicer arietinum Desi</i> landrace	Ethiopia
87	ICC9643	<i>Cicer arietinum Desi</i> landrace	Afghanistan
88	ICC8621	<i>Cicer arietinum Desi</i> landrace	Ethiopia
89	ICC9895	<i>Cicer arietinum Desi</i> landrace	Afghanistan
90	ICCV95332	<i>Cicer arietinum Kabuli</i> variety	Central India
91	ICCV95333	<i>Cicer arietinum Kabuli</i> variety	Central India
92	ICCV92337	<i>Cicer arietinum Kabuli</i> variety	Central India