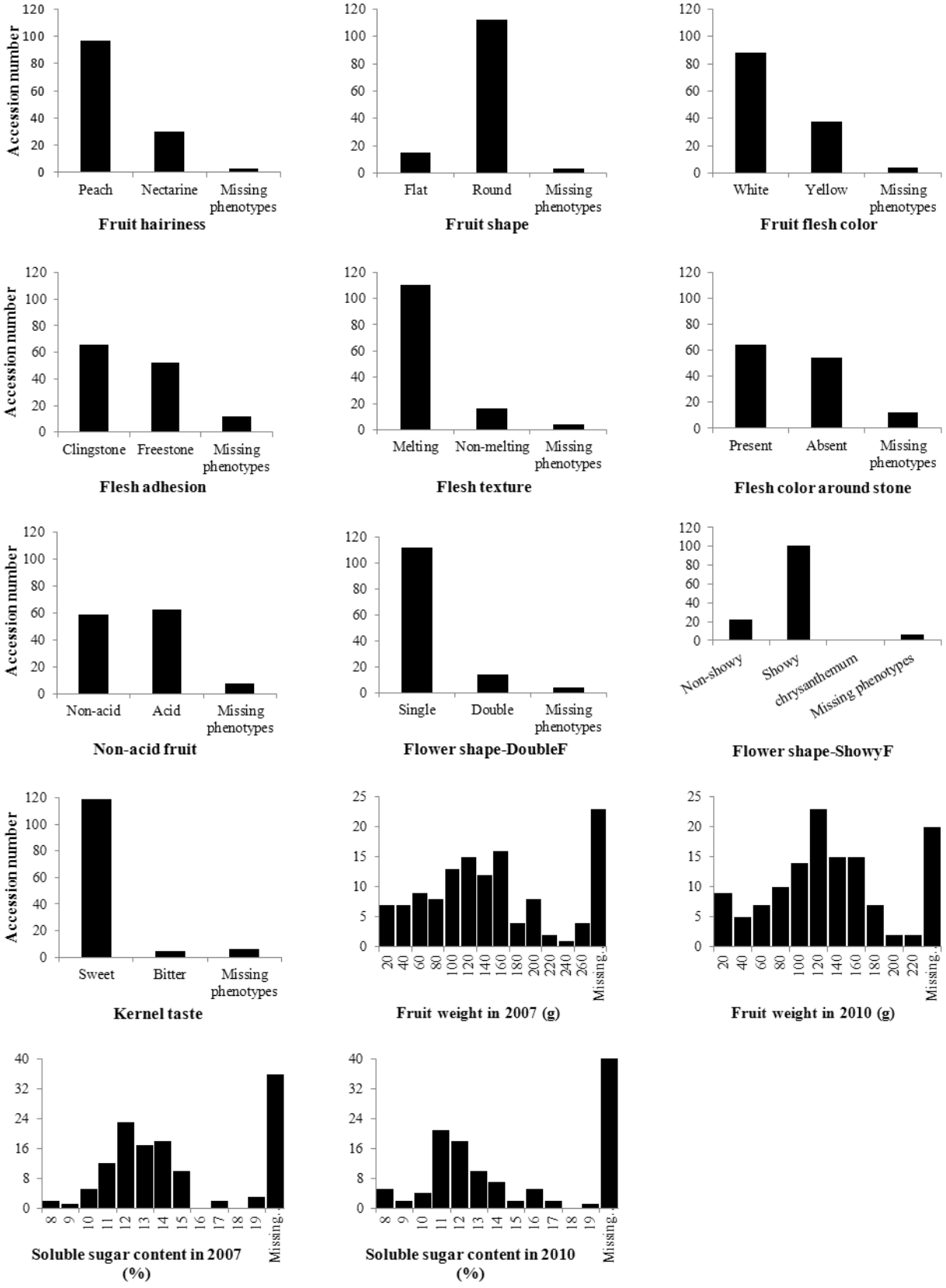
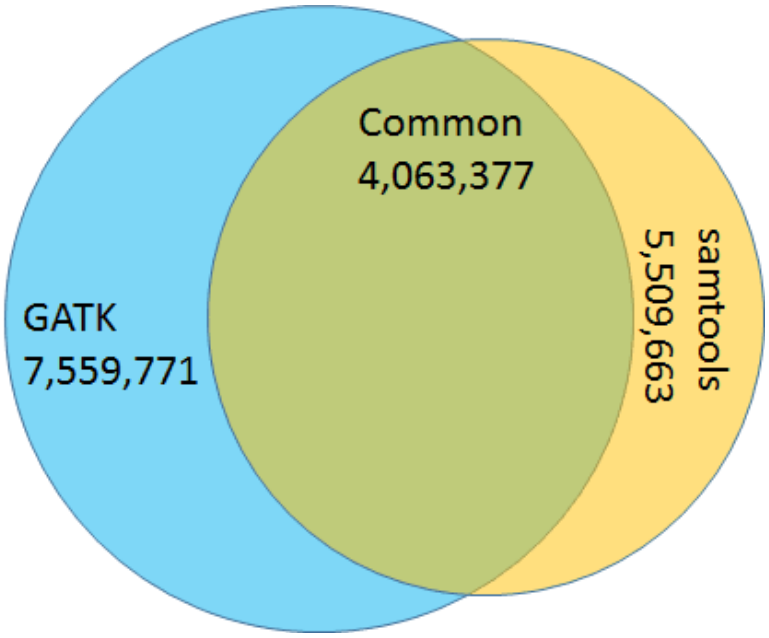
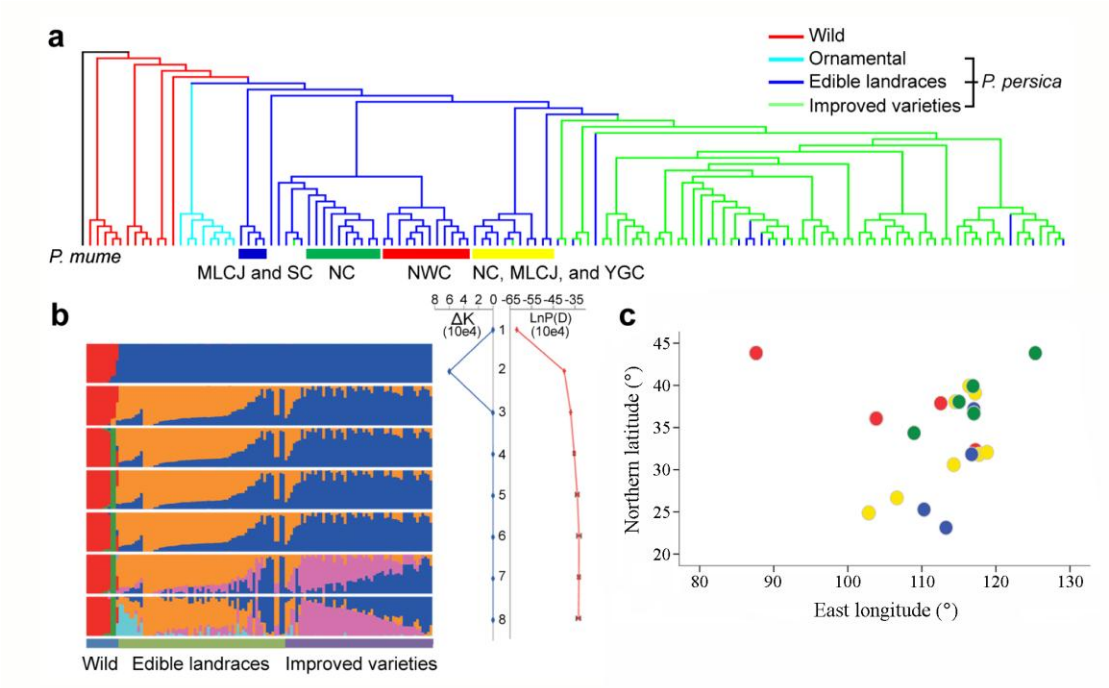


1 **Supplementary Figure 1: Frequency distribution of the variation of 12 traits**

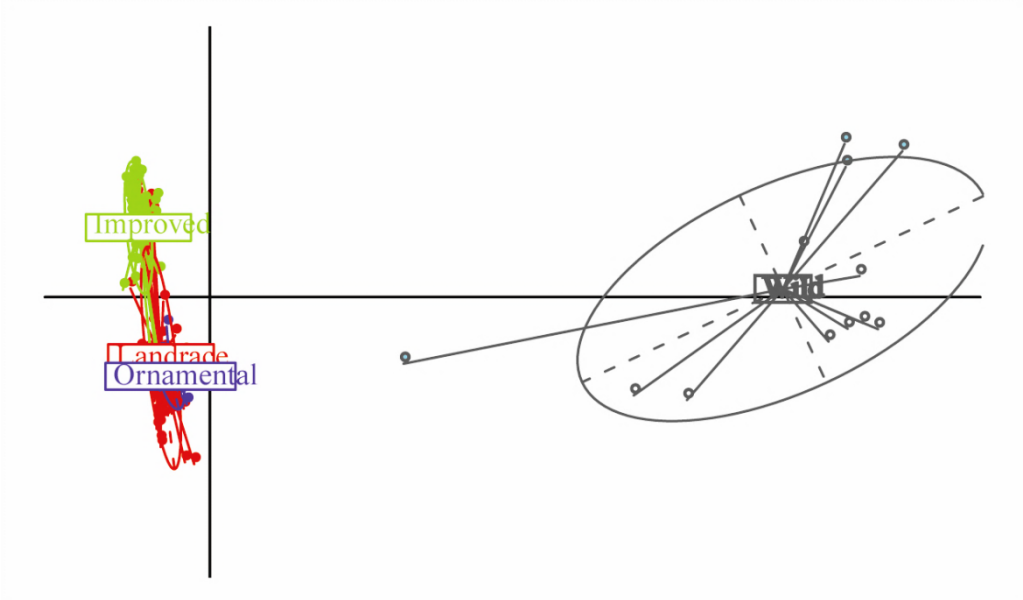
2 **across the 129 samples used in the resequencing analysis.**



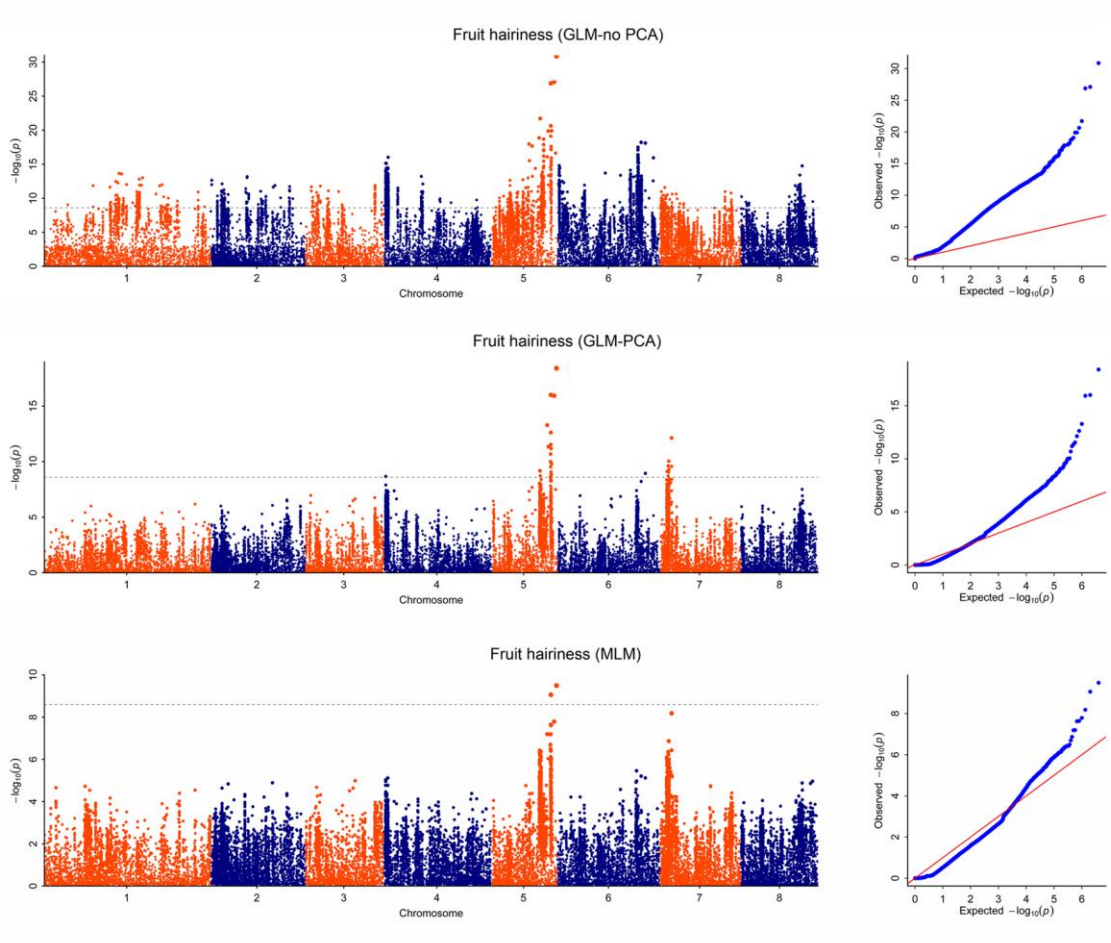
Supplementary Figure 2: Venn diagram showing the number of unique and common SNPs which called by the GATK and SAMtools software packages. The identification of the SNPs associated with variable characters was the main objective of this study, differing from a previous paper focusing on peach evolution[7]. Therefore, two software packages, GATK and SAMtools, were used to detect SNPs and those detected by both packages (common SNPs), which were classified as reliable SNPs, were further analysed (Methods).



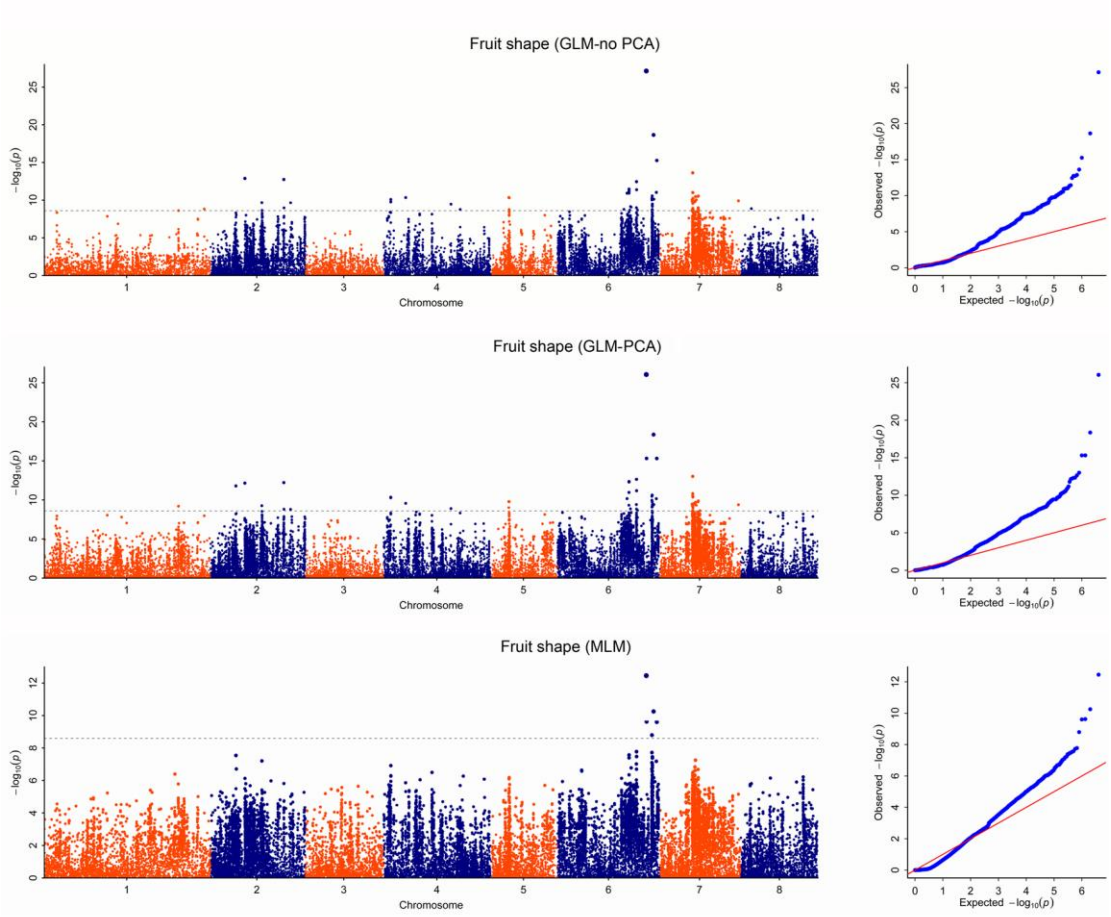
Supplementary Figure 3: Peach domestication history. (a) Rooted phylogenetic tree of the 129 peach accessions considered in this study, based on 4.1 million SNPs and using Prunus mume as the outgroup. (b) Population structure of the 129 peach accessions obtained in FRAPPE analysis. (c) The coordinates of different geographic distribution of the edible landraces subpopulations. In the Supplementary Fig. 3a, the four divergent groups, wild, ornamental, edible landraces, and improved varieties, are coloured in red, cyan, blue, and green, respectively. The description of all accession derived from two Supplementary Table 1 in this and previous study[7]. The horizontal bars in blue, green, red, and yellow indicate different subgroups within the edible landraces group. The geographic origin of each subgroup is list beneath the bars: Northwest China (NWC), YunGui plateau (YGC), Northern China (NC), the middle and lower reaches of the Changjiang River (MLCJ), and Southern China (SC). In the Supplementary Fig. 3b, Different colors represent different populations according to K (the number of populations) value analysis. In the Supplementary Fig. 3c, colors are the same as in the horizontal bars of geographic subgroups present under the phylogenetic tree. Moreover, the coordinates indicate the longitude and latitude of provincial capital where landraces originated.



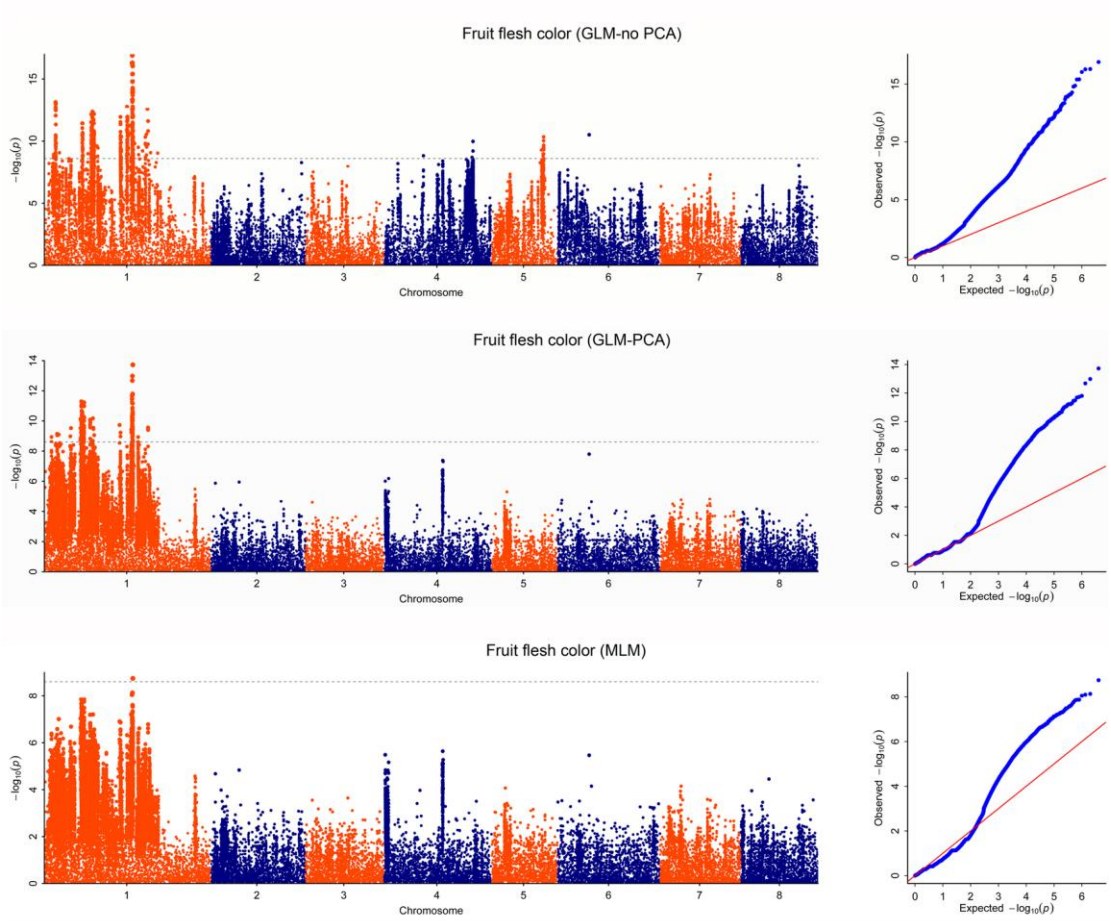
Supplementary Figure 4: Principal component analysis of the wild, ornamental, edible landraces, and improved peach varieties considered in the present study. All identified common SNPs were used in the principle components analysis. Each peach accession is represented by a point in the two-dimensional space defined by the eigenvectors of the first and second principal components. Different colours correspond to different peach groups: wild peach is indicated in black, edible landrace in red, ornamental in blue, and improved varieties in green. Samples distribution demonstrates that all cultivated peach varieties are genetically distant from wild peach.



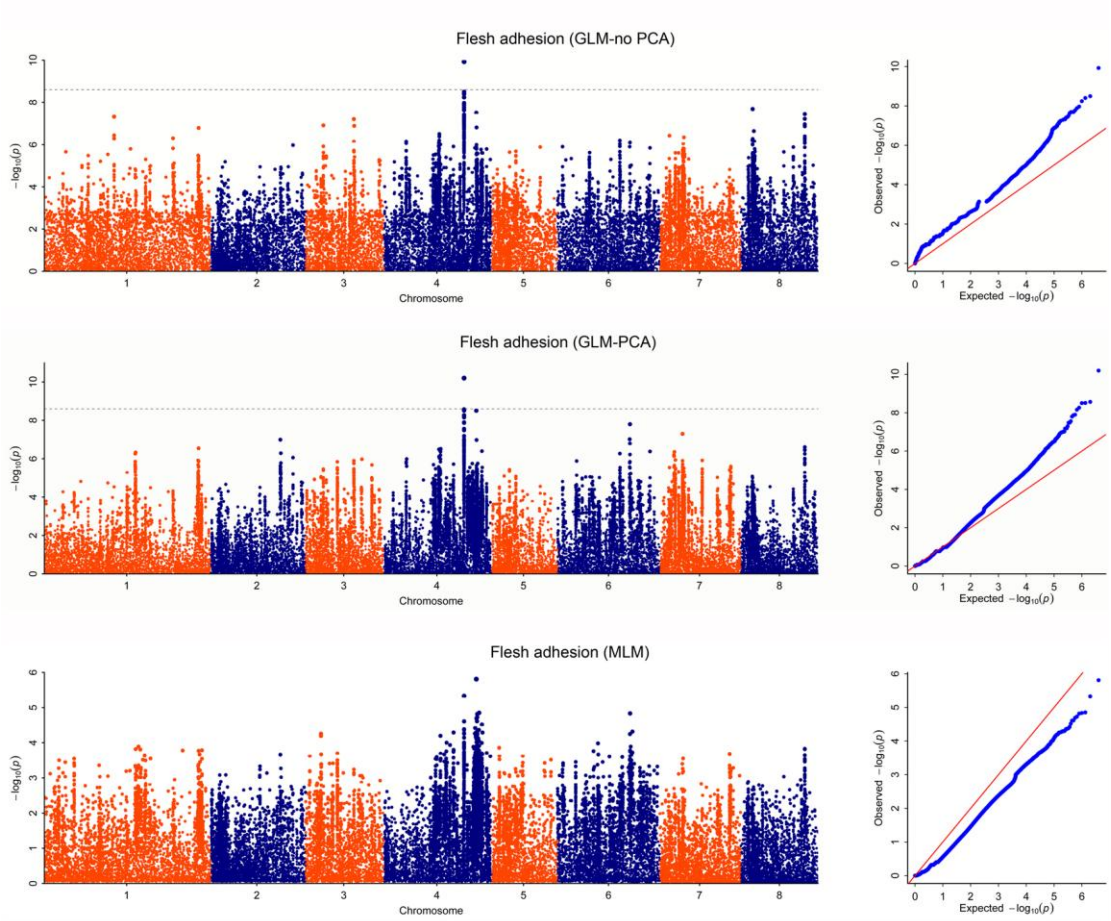
Supplementary Figure 5: Manhattan and quantile-quantile plots for Genome-wide association studies of fruit hairiness trait in 129 peach accessions using three analysis models. Negative $\log_{10}$-transformed P values from the genome-wide scan were plotted against SNPs position on each of the eight chromosomes. The dotted horizontal line indicates the genome-wide significance threshold ($P = 1.0 \times 10^{-8}$). The description of following figures were same as above.



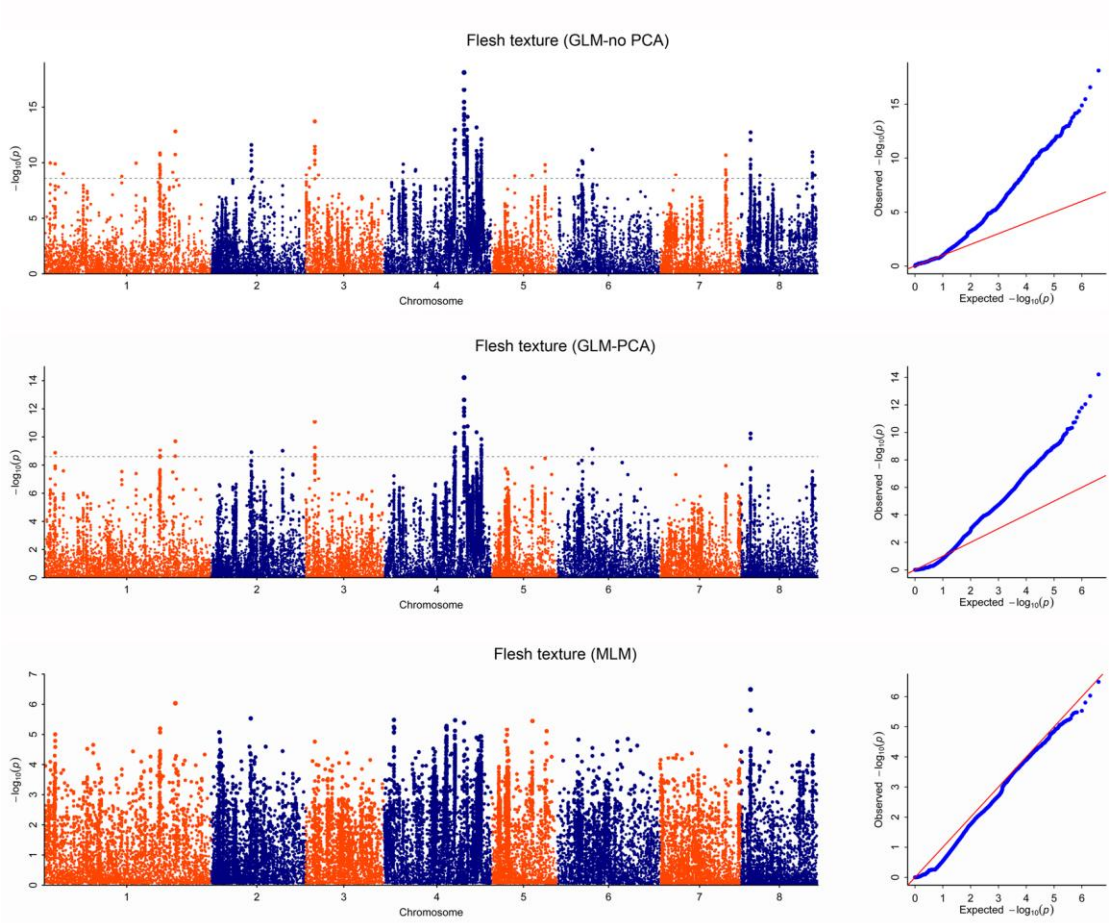
Supplementary Figure 6: Manhattan and quantile-quantile plots for Genome-wide association studies of fruit shape trait in 129 peach accessions using three analysis models.



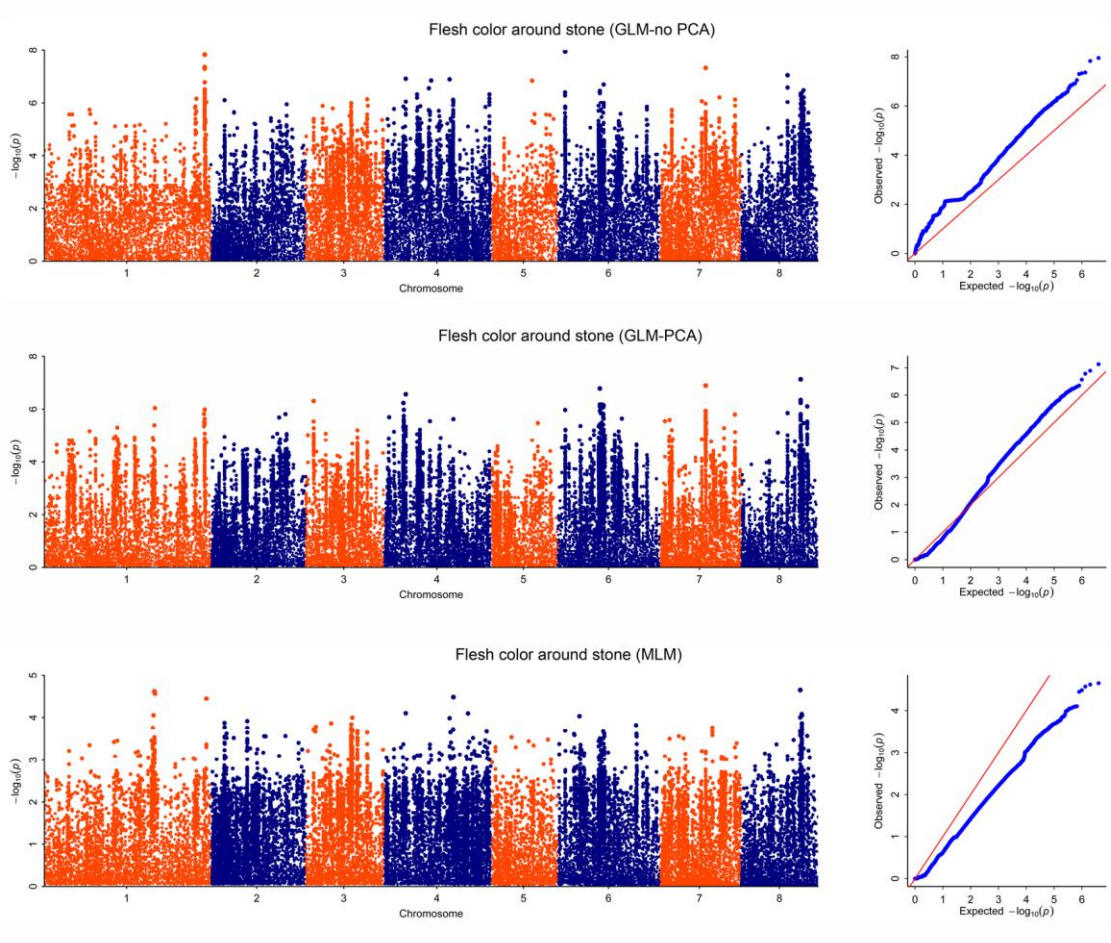
Supplementary Figure 7: Manhattan and quantile-quantile plots for Genome-wide association studies of fruit flesh color trait in 129 peach accessions using three analysis models.



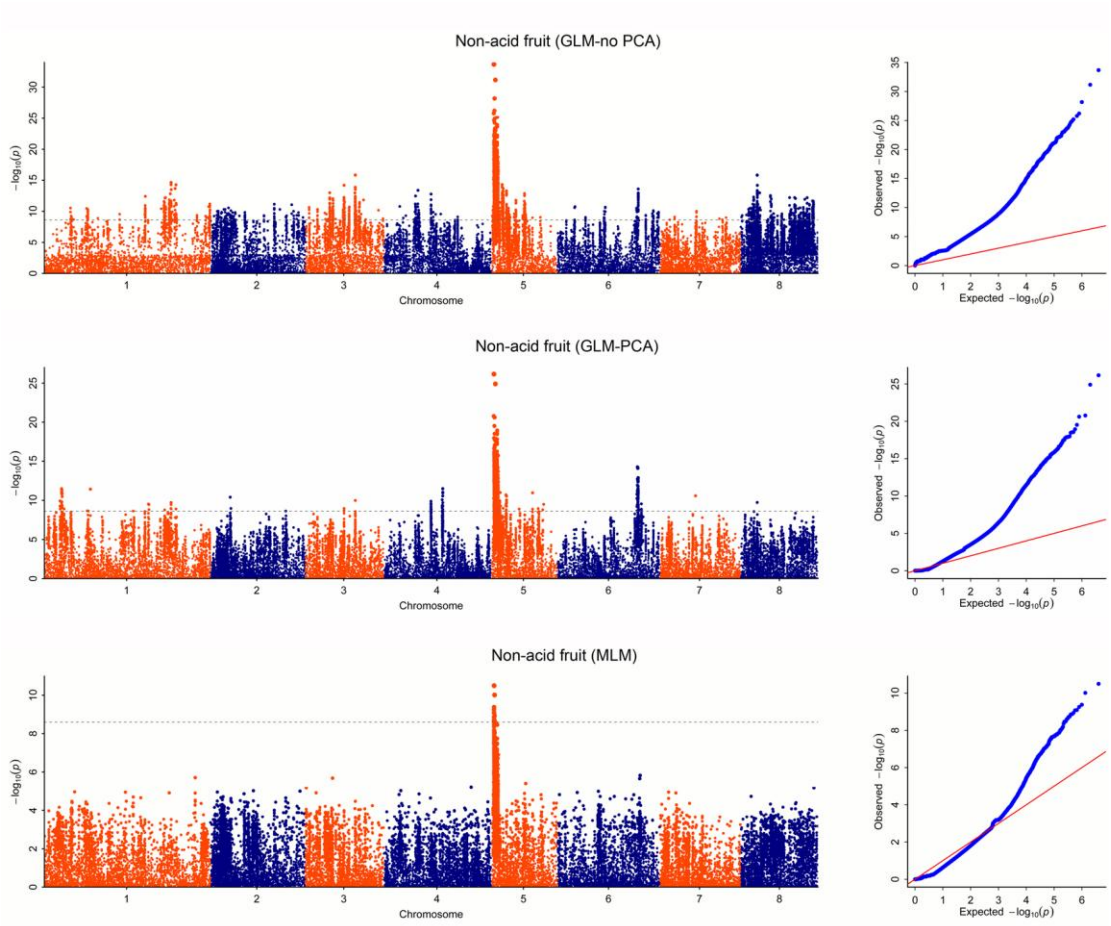
Supplementary Figure 8: Manhattan and quantile-quantile plots for Genome-wide association studies of fruit flesh adhesion trait in 129 peach accessions using three analysis models.



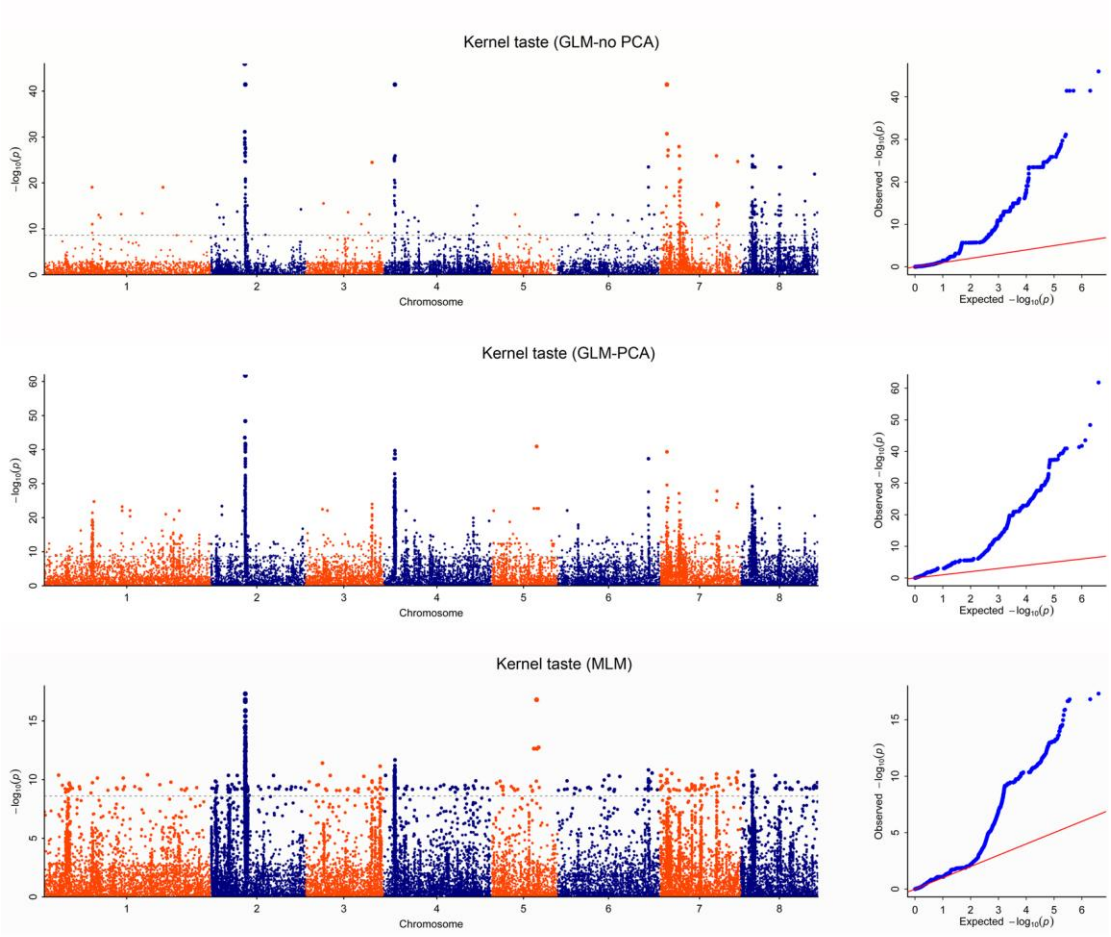
Supplementary Figure 9: Manhattan and quantile-quantile plots for Genome-wide association studies of fruit flesh texture trait in 129 peach accessions using three analysis models.



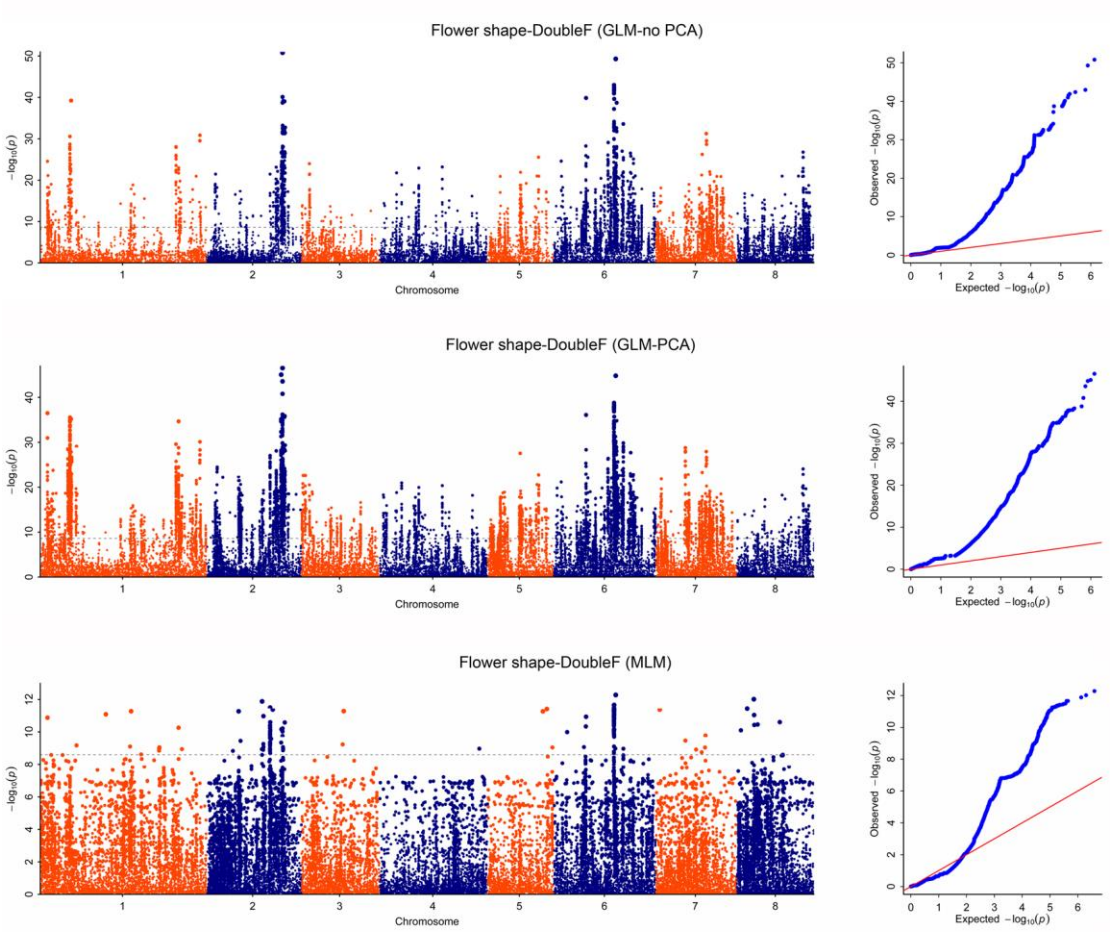
Supplementary Figure 10: Manhattan and quantile-quantile plots for Genome-wide association studies of flesh color around stone trait in 129 peach accessions using three analysis models.



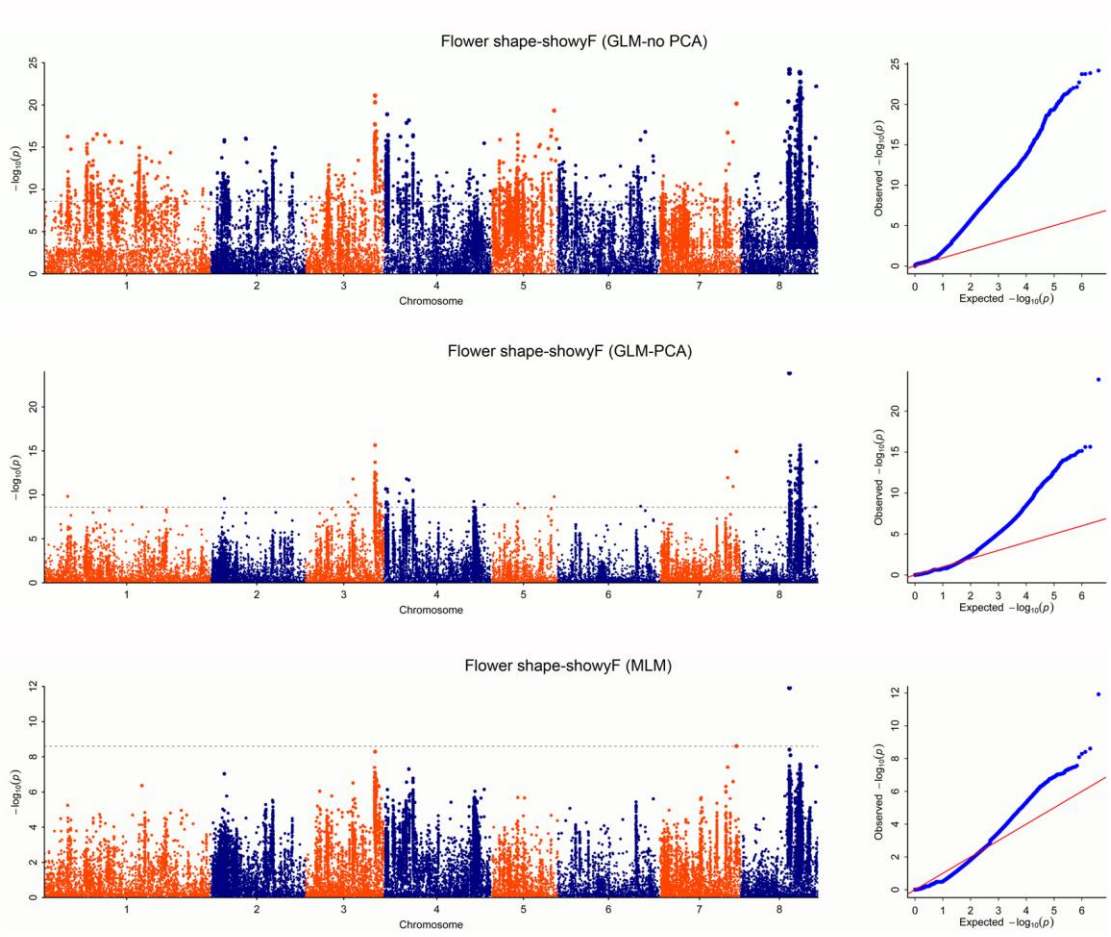
Supplementary Figure 11: Manhattan and quantile-quantile plots for Genome-wide association studies of non-acid fruit trait in 129 peach accessions using three analysis models.



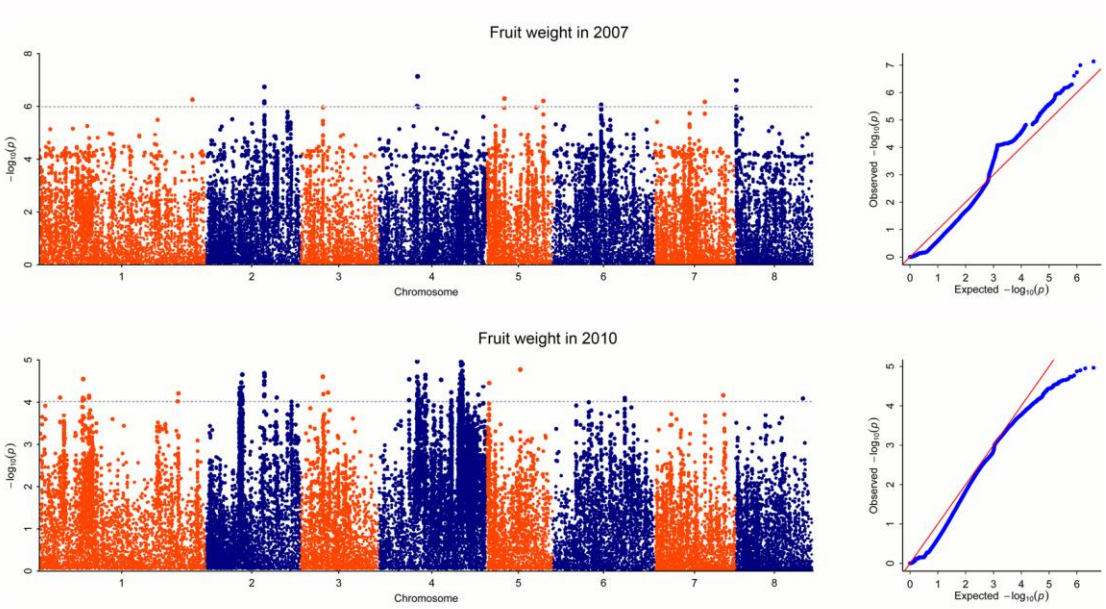
Supplementary Figure 12: Manhattan and quantile-quantile plots for Genome-wide association studies of kernel taste trait in 129 peach accessions using three analysis models.



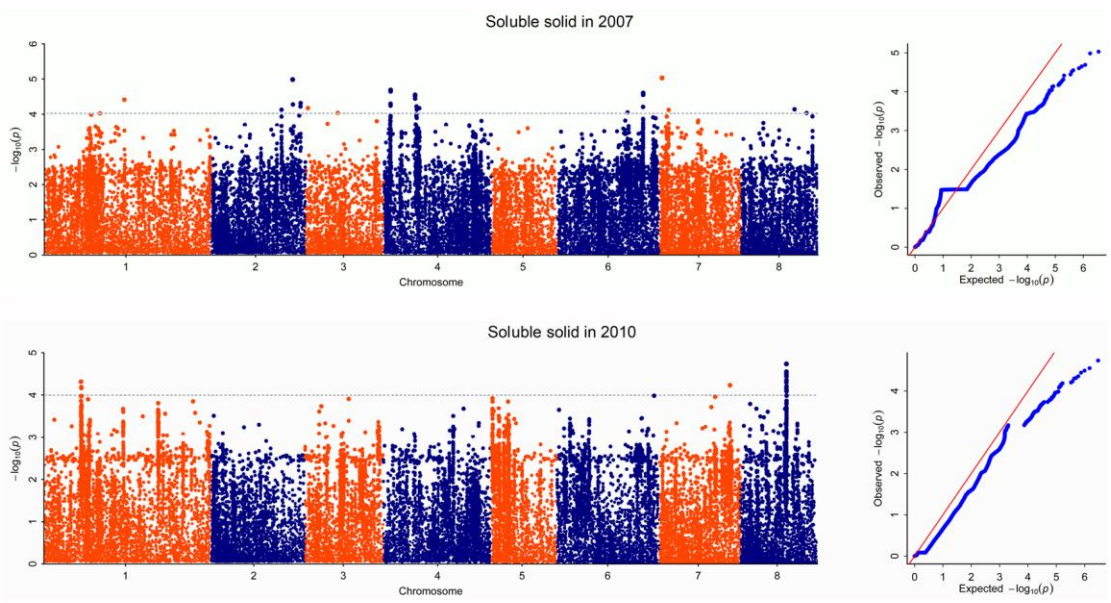
Supplementary Figure 13: Manhattan and quantile-quantile plots for Genome-wide association studies of flower shape-DoubleF trait in 129 peach accessions using three analysis models.



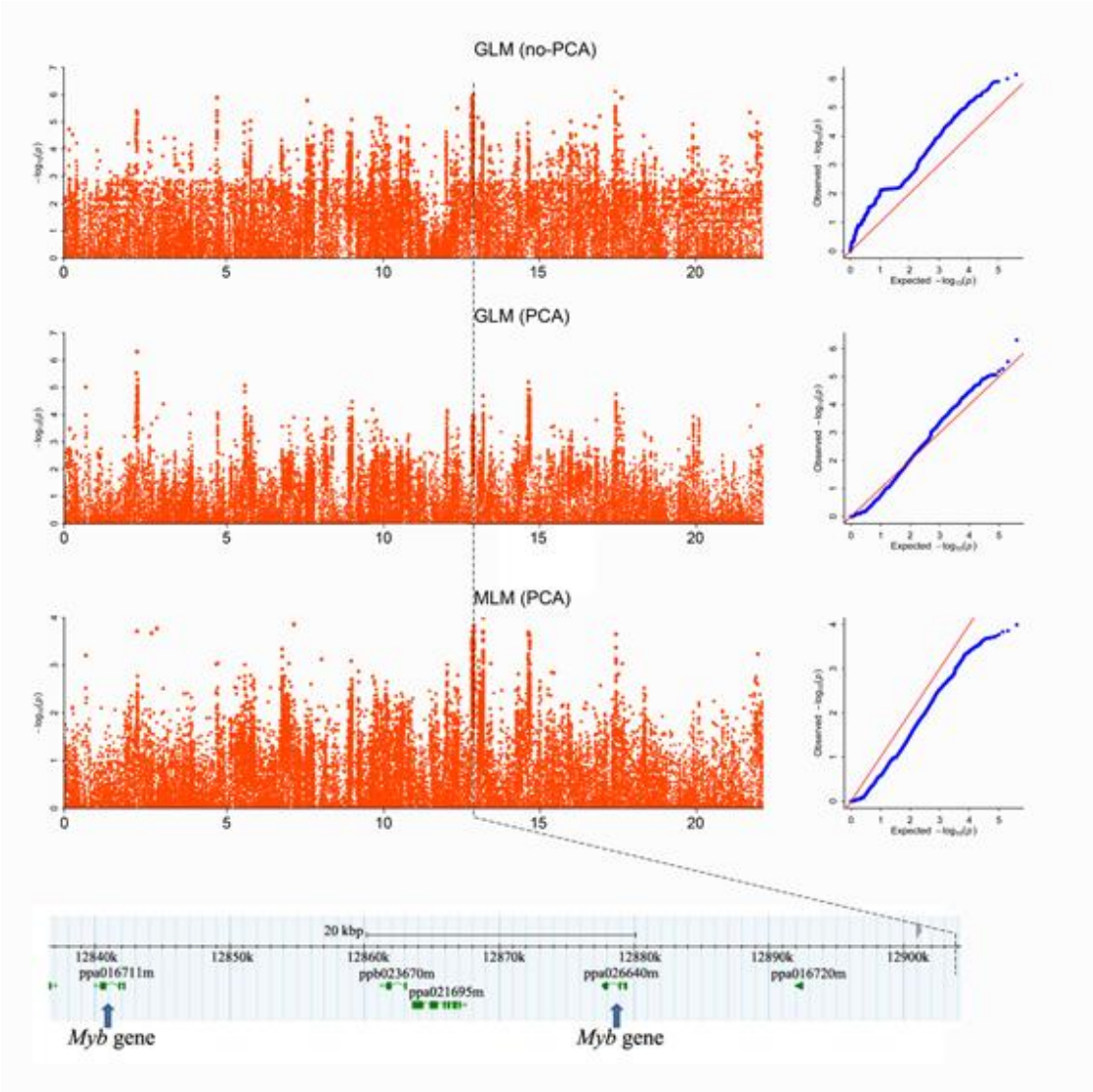
Supplementary Figure 14: Manhattan and quantile-quantile plots for Genome-wide association studies of flower shape-showyF trait in 129 peach accessions using three analysis models.



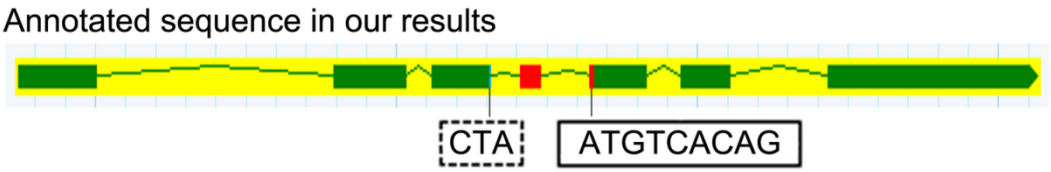
Supplementary Figure 15: Manhattan and quantile-quantile plots for Genome-wide association studies of fruit weight trait in 2007 and 2010 in 129 peach accessions using three analysis models. Negative $\log_{10}$-transformed P values from the genome-wide scan were plotted against SNPs position on each of the eight chromosomes.



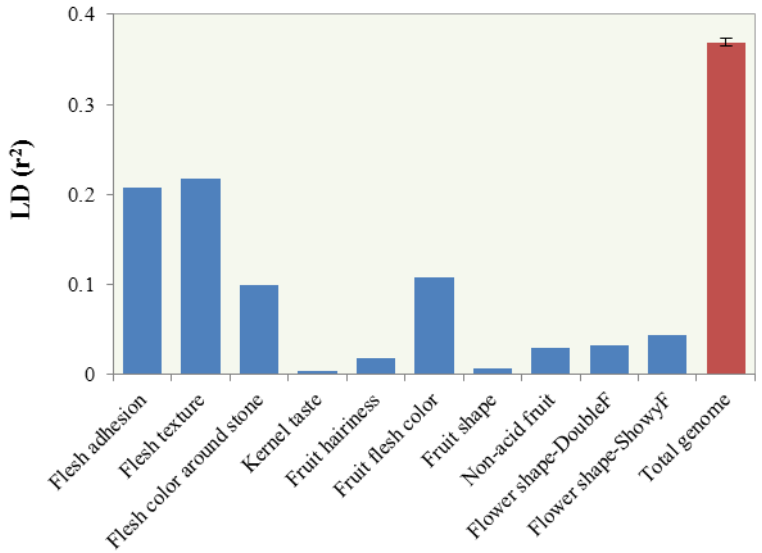
Supplementary Figure 16: Manhattan and quantile-quantile plots for Genome-wide association studies of soluble solid trait in 2007 and 2010 in 129 peach accessions using three analysis models. Negative $\log_{10}$-transformed P values from the genome-wide scan were plotted against SNPs position on each of the eight chromosomes.



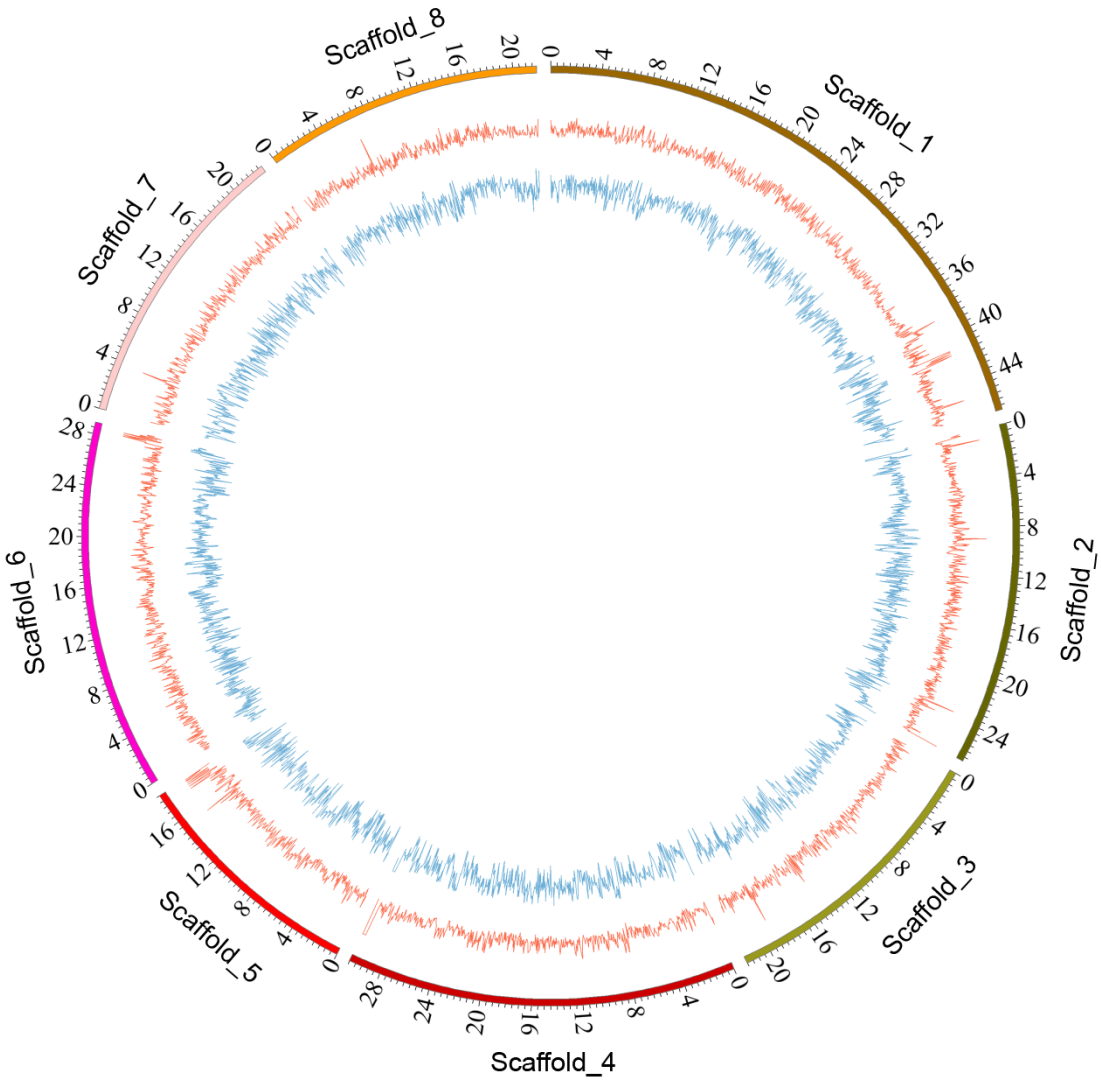
Supplementary Figure 17: Genome-wide association study of the flesh color around the stone trait in 129 peach accessions using the SNPs detected on scaffold_3. Although the highest association signal for this trait was found in chromosome 6 (Supplementary Fig. 10), its *P* value was lower than genome-wide levels ($-\log_{10} P = 8$) and this region was not reported in previous research. A SNP association peak was also found on scaffold_3: 12,902,851 bp, near two *MYB* genes (*ppa016711m* and *ppa026640m*). One of these genes (*ppa016711m*) was reported by Wang[26] as a key regulator of anthocyanin content in peach.



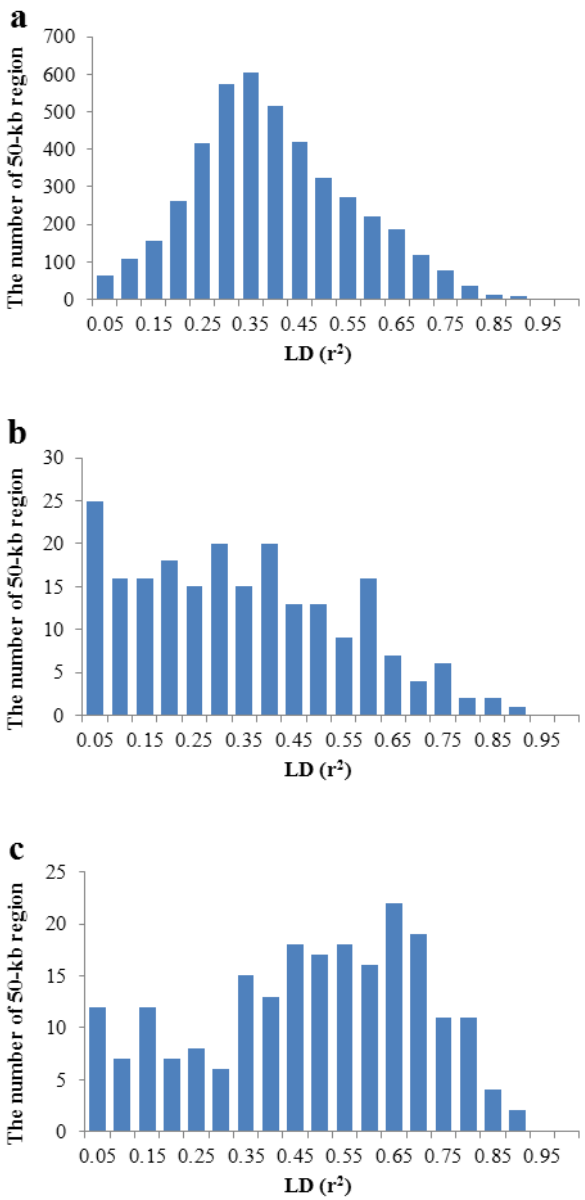
Supplementary Figure 18: The annotated transcriptional structure of the candidate gene *ppa003772m*. In our study, *ppa003772m* was considered a candidate gene for flat peach shape (Figure 1). After cloning the *ppa003772m* gene in flat and round peach accessions, their coding frames differed from those annotated in the peach genome (www.rosaceae.org). A new exon (shown in red) was present in the area corresponding to the third intron of all sampled materials. And three bases (CTA) in the tail of the original third exon (in green) were absent in the new annotated sequence. In addition to this, nine new bases (ATGTCACAG) were present in the head of the fifth exon of the new annotated gene. Moreover, the original annotated mRNA sequence was not found in peach tissues, indicating that the previous gene annotation might be incorrect.



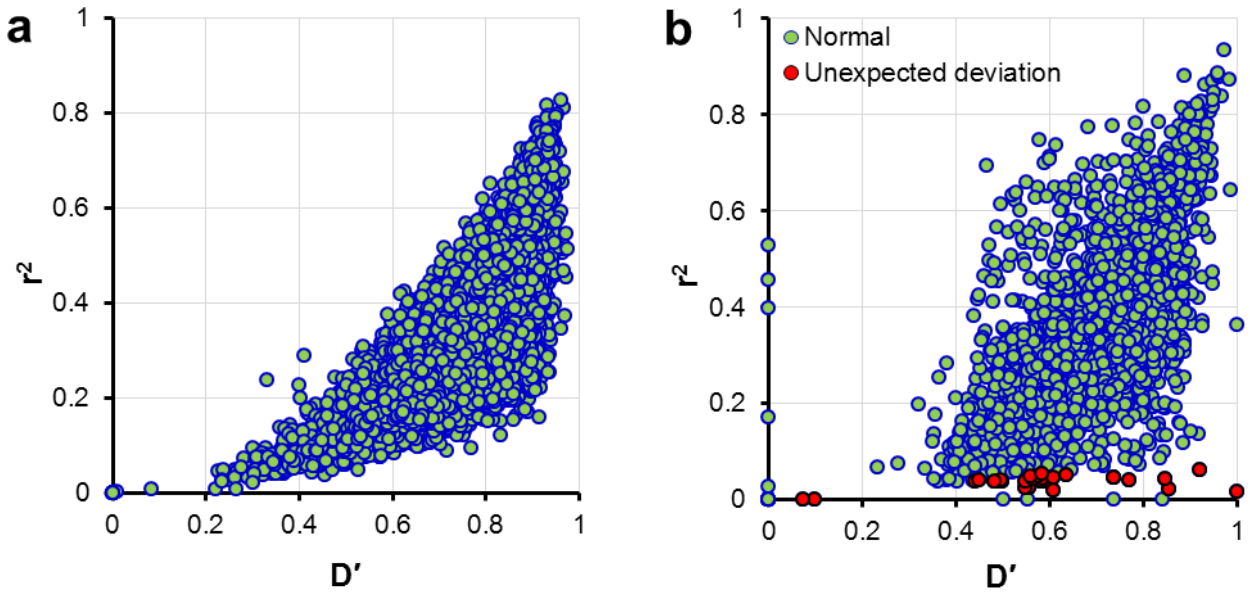
Supplementary Figure 19: The average linkage disequilibrium (LD, r^2) of peak association signal of 10 qualitative characters with each SNP during surrounding 50-kb region and the average r^2 in contiguous 50-kb windows across the peach pseudo-chromosomes. Peak association signals are listed in Table 1 and the LD across the chromosomes is shown in Supplementary Figure 20. This figure shows that the average LD of peak association signals of 10 qualitative characters with each SNP during surrounding 50-kb region (blue columns) were lower than the average LD across the eight peach chromosomes (red column), particularly those of kernel taste and fruit shape. Error bars indicate s.d.



Supplementary Figure 20: Linkage disequilibrium (LD) in contiguous 50-kb windows across peach chromosomes. The outer rings indicate individual chromosomes and the numbers indicate physical locations in Mb. r^2 values are displayed in the inner blue circle and D′ in the middle red circle.



Supplementary Figure 21: Distribution of a LD value (r^2) in contiguous 50-kb windows across total (a), domestication (b), and improvement selection (c) regions in peach chromosomes.



Supplementary Figure 22: The relationship between two parameters (r^2 and D') for estimating linkage disequilibrium (LD) in contiguous 50-kb genomic windows in soybean and peach. LD values (D′ and r^2) vary from 0 to 1 lies along the X and Y axis. (**a**) Due to the lack of D' values from soybean, r^2 values presented in this plot were recalculated rely on data from previous study[43] and the relationships between D′ and r^2 are shown as light green dots. In general, r^2 was lower than D′ in each given interval. (**b**) Regions with low r^2 and high D′ in peach were considered as normal and are also shown as light green dots, whereas regions with extraordinary low r^2 are shown as red dots. These regions are under domestication or improved selection.

Peach burst into Nectarine

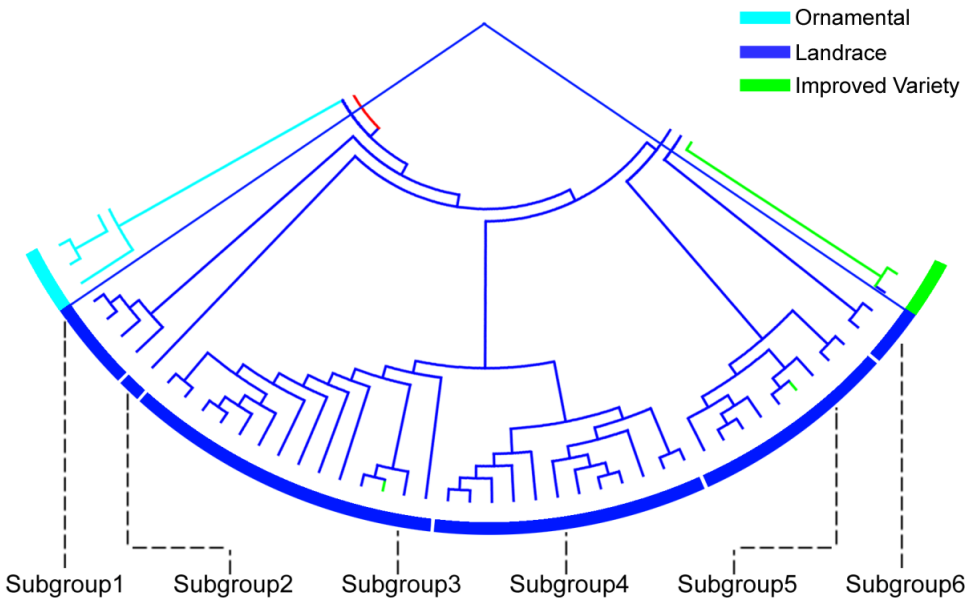
Late mature burst into early mature fruit

White flesh burst into red flesh in suture line of fruit

White flesh burst into yellow flesh

Red leaf burst into green leaf

Supplementary Figure 23: Peach mutation.



Supplementary Figure 24: Edible landraces subgroups as defined by the phylogenetic analysis based on total SNPs. This is an enlarged section of Supplementary Fig. 3a, only focusing on the edible landrace group. According to the phylogenetic tree, the edible landrace group (blue lines in the above figure) can be divided into six subgroups. Ornamental (cyan lines) and Improved varieties (green line) are not considered in this figure.

149 **Supplementary Table 1: Peach samples added in this study compared to a**

150 **previous one[7].**

Name	Scientific name	Description and origin
07-1-11	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
07-2-24	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
07-4-33	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
08-X-77	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
09-12 west-5	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Bailey	*P. persica* (L.) Batsch.	Improved variety from crosses, USA
Da Guo Hei Tao	*P. persica* (L.) Batsch.	Landrace, edible, Shandong, PRC
Da Lian 4-35	*P. persica* (L.) Batsch.	Improved variety from crosses, Liaoning, PRC
Dan Bei Ti	*P. persica* (L.) Batsch.	Improved variety from mutation, Henan, PRC
Elberta (Non-showy flower)	*P. persica* (L.) Batsch.	Improved variety from crosses, USA
Fen Shou Xing	*P. persica* (L.) Batsch.	Landrace, Ornamental, Hebei, PRC
Harrow Blood	*P. persica* (L.) Batsch.	Improved variety from crosses, Canada
Hong Hua Bi Tao	*P. persica* (L.) Batsch.	Landrace, edible, Beijing, PRC
Hong Shan Hu	*P. persica* (L.) Batsch.	Improved variety from crosses, Beijing, PRC
Hong Ye Tao	*P. persica* (L.) Batsch.	Landrace, edible, Henan, PRC
Hong Ye Tao Ya Bian	*P. persica* (L.) Batsch.	Improved variety from mutation, Henan, PRC
Huang Jin Pan Tao	*P. persica* (L.) Batsch.	Landrace, edible, Shanghai, PRC
Legrand	*P. persica* (L.) Batsch.	Improved variety from crosses, USA
Mai Huang Pan Tao	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Mao Tao (2-1-55)	*P. persica* (L.) Batsch.	Improved variety from mutation, Henan, PRC
Maria Serena	*P. persica* (L.) Batsch.	Improved variety from crosses, Italy
NJC77	*P. persica* (L.) Batsch.	Improved variety from crosses, USA
Nonpareil	*P. communis* (L.) Fritsch.	Wild, USA
Phillips	*P. persica* (L.) Batsch.	Improved variety from crosses, USA
Ping Ding You Pan Tao	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Redhaven	*P. persica* (L.) Batsch.	Improved variety from crosses, USA
Rui Guang 3	*P. persica* (L.) Batsch.	Improved variety from crosses, Beijing, PRC
Shu Guang Hong Xian Ya Bian	*P. persica* (L.) Batsch.	Improved variety from mutation, Henan, PRC
Wu Han 2	*P. persica* (L.) Batsch.	Improved variety from crosses, Shaanxi, PRC
Xi Kang Bian Tao 1	*P. tangutica* (L.) Batal.	Wild, Sichuan, PRC
Xin Jiang Pan Tao	*P. ferganensis* Kost.et Riab.	Landrace, edible, Sinkiang, PRC
Yang Zhou 3	*P. persica* (L.) Batsch.	Improved variety from crosses, Jiangsu, PRC
Ying Zui Tao	*P. persica* (L.) Batsch.	Landrace, edible, Anhui, PRC
Zao Huang Pan Tao	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Zao Shu Xia Ye Tao	*P. persica* (L.) Batsch.	Improved variety from mutation, Henan, PRC
Zhong You Pan Tao 2	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Zhong You Pan Tao 4	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Zhong You Tao 4	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Zhong You Tao 4 Zao Shu Ya Bian	*P. persica* (L.) Batsch.	Improved variety from mutation, Anhui, PRC

Zhong You Tao 5	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Zhong You Tao 5 Zao Shu Ya Bian	*P. persica* (L.) Batsch.	Improved variety from mutation, Guangxi, PRC
Zhong You Tao 9	*P. persica* (L.) Batsch.	Improved variety from crosses, Henan, PRC
Zhong You Tao 9 Hei Xian Bai Rou Ya Bian	*P. persica* (L.) Batsch.	Improved variety from mutation, Anhui, PRC
Zhong You Tao 9 Huang Rou Ya Bian	*P. persica* (L.) Batsch.	Improved variety from mutation, Anhui, PRC
Zhong You Tao 9 Wang Shu Ya Bian	*P. persica* (L.) Batsch.	Improved variety from mutation, Henan, PRC

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Supplementary Table 2: Agronomic traits of peach samples used in this study.

Name	Fruit hairiness	Fruit shape	Fruit flesh color	Flesh adhesion	Flesh texture	Flesh color around stone	Non-acid fruit	Flower shape-DoubleF	Flower shape-ShowyF	Kernel taste	Fruit weight in 2007 (g)	Fruit weight in 2010 (g)	Soluble solid in 2007 (%)	Soluble solid in 2010 (%)
07-1-11	No	Round	White	Clingstone	Melting	Yes	No	Single	NA	Bitter	NA	130	NA	13
07-2-24	Yes	Round	White	Clingstone	Melting	Yes	Yes	Single	Showy	Bitter	NA	170	NA	12
07-4-33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
08-X-77	NA	NA	NA	NA	NA	NA	NA	Single	NA	Bitter	NA	NA	NA	NA
09-12 west-5	Yes	Flat	White	Clingstone	Melting	NA	No	Single	NA	Bitter	NA	110	NA	NA
Bailey	Yes	Round	White	Freestone	Melting	Yes	No	Single	Showy	Bitter	65.2	79	11	NA
Da Guo Hei Tao	Yes	Round	White	Freestone	Melting	Yes	No	Single	Showy	Bitter	187	146	12	NA
Da Lian 4-35	Yes	Flat	Yellow	Freestone	Melting	No	Yes	Single	Showy	Bitter	100	128.9	11	NA
Dan Bei Ti	No	Round	Yellow	Clingstone	Melting	NA	NA	Single	Non-showy	NA	NA	NA	NA	NA
Elberta (Non-showy flower)	Yes	Round	Yellow	Freestone	Melting	Yes	No	Single	Non-showy	Bitter	198	142.5	10	8
Fen Shou Xing	Yes	Round	White	Freestone	Melting	Yes	No	Single	Showy	Bitter	79.4	89	7	NA
Harrow Blood	Yes	Round	White	Freestone	Melting	Yes	No	Single	Showy	Bitter	NA	47	NA	18
Hong Hua Bi Tao	Yes	Round	White	Freestone	Melting	No	No	Multiple	Showy	Bitter	25	NA	11	NA
Hong Shan Hu	No	Round	White	Clingstone	Melting	No	Yes	Single	Non-showy	Bitter	148	151	13	NA
Hong Ye Tao	Yes	Round	White	NA	Melting	No	No	Multiple	Showy	Bitter	81.9	76	14	NA
Hong Ye Tao Ya Bian	Yes	Round	White	NA	Melting	No	No	Multiple	Showy	Bitter	NA	96	10	NA
Huang Jin Pan Tao	Yes	Flat	Yellow	Clingstone	Melting	Yes	Yes	Single	Showy	Bitter	112	97.7	12.5	11.5
Legrand	No	Round	Yellow	Freestone	Melting	Yes	No	Single	Showy	Sweet	151	126.7	11.5	11
Mai Huang Pan Tao	Yes	Flat	Yellow	Clingstone	Melting	No	Yes	Single	Showy	Bitter	89.6	70	NA	11
Mao Tao (2-1-55)	Yes	Round	Yellow	Clingstone	Melting	Yes	Yes	Single	Showy	Bitter	78	NA	11	NA
Maria Serena	Yes	Round	Yellow	Clingstone	Non-melting	No	No	Single	Showy	Bitter	130	113.7	7.6	7

NJC77	Yes	Round	Yellow	Clingstone	Non-melting	No	No	Single	Non-showy	Bitter	157.3	112.3	12.6	10
Nonpareil	Yes	Round	NA	Freestone	Melting	NA	NA	NA	Showy	Sweet	NA	NA	NA	NA
Phillips	Yes	Round	Yellow	Clingstone	Non-melting	No	No	Single	Non-showy	Bitter	135	116.5	12.9	12.5
Ping Ding You Pan Tao	No	Flat	Yellow	Freestone	Melting	No	No	Single	Showy	Bitter	82	78.9	10	NA
Redhaven	Yes	Round	Yellow	Freestone	Melting	Yes	No	Single	Non-showy	Bitter	124.1	130	10	9
Rui Guang 3	No	Round	White	Freestone	Melting	Yes	Yes	Single	Non-showy	Bitter	123.8	144.5	12	7
Shu Guang Hong Xian Ya Bian	No	Round	Yellow	NA	Melting	Yes	Yes	Single	Showy	Bitter	NA	102	13.5	NA
Wu Han 2	Yes	Round	White	Freestone	Melting	Yes	Yes	Single	Showy	Bitter	96	90	12.6	11
Xi Kang Bian Tao 1	Yes	Round	White	Freestone	Melting	NA	NA	NA	Showy	Bitter	NA	5	NA	NA
Xin Jiang Pan Tao	Yes	Flat	White	Freestone	Melting	No	No	Single	Showy	Bitter	52	NA	13	NA
Yang Zhou 3	Yes	Round	White	Freestone	Melting	No	No	Single	Showy	Bitter	150	80	12.6	10
Ying Zui	Yes	Round	White	Clingstone	Non-melting	Yes	No	Single	Showy	Bitter	257	160	11	10
Zao Huang Pan Tao	Yes	Flat	Yellow	Freestone	Melting	No	Yes	Single	Showy	Bitter	116.7	88	NA	11
Zao Shu Xia Ye Tao	NA	NA	NA	NA	NA	NA	NA	Single	NA	NA	NA	NA	NA	NA
Zhong You Pan Tao 2	No	Flat	Yellow	Clingstone	Melting	No	Yes	Single	Non-showy	Bitter	80	83.5	18	NA
Zhong You Pan Tao 4	No	Flat	Yellow	Clingstone	Non-melting	Yes	Yes	Single	Non-showy	Bitter	120	NA	18	NA
Zhong You Tao 4	No	Round	Yellow	Clingstone	Melting	Yes	Yes	Single	Non-showy	Bitter	NA	150	NA	11
Zhong You Tao 4 Zao Shu Ya Bian	No	Round	Yellow	NA	Melting	Yes	Yes	Single	Non-showy	Bitter	NA	150	NA	11
Zhong You Tao 5	No	Round	White	Clingstone	Melting	No	Yes	Single	Non-showy	Bitter	110.1	150	NA	8
Zhong You Tao 5 Zao Shu Ya Bian	No	Round	White	NA	Melting	No	Yes	Single	Non-showy	Bitter	133	125.1	10	NA
Zhong You Tao 9	No	Round	White	Clingstone	Melting	No	Yes	Single	Non-showy	Bitter	143.1	161	10	NA
Zhong You Tao 9 Hei Xian Bai Rou Ya Bian	No	Round	White	NA	Melting	Yes	Yes	Single	Non-showy	Bitter	NA	216	NA	15

Zhong You Tao 9 Huang Rou Ya Bian	No	Round	Yellow	NA	Melting	NA	Yes	Single	Non-showy	NA	NA	161	NA	10
Zhong You Tao 9 Wang Shu Ya Bian	No	Round	White	NA	Melting	No	Yes	Single	Non-showy	Bitter	NA	161	NA	10

153 NA means the data is missing.

Supplementary Table 3: Geographic origin of the edible landraces and the coverage, mean depth, and heterozygosity rate of all samples.

Name	Coverage (%)	Mean depth (×)	Missing rate (%)	Heterozygosity rate [before imputed] (%)	Missing rate [imputed] (%)	Heterozygosity rate [imputed] (%)	The geographic region of the edible landraces
2007-1-11	96.96	7.77	1.7	6.45	9.08	2.63	
2007-2-24	95.27	5.48	2.93	5.37	8	2.63	
07-4-33	95.21	5.23	3.75	4.91	7.54	2.63	
08-X-77	96.53	7.01	1.85	6.74	9.57	2.83	
09-12 west-5	96.07	6.21	2.53	6.95	10.16	3.21	
Bai Gen Gan Su Tao	Ref. 7	Ref. 7	18.75	1.05	2.76	1.7	
Bai Hua	Ref. 7	Ref. 7	19.67	1.81	4.65	2.84	MLCJ
Bai Hua Shan Bi Tao	Ref. 7	Ref. 7	20.67	8.43	22.32	13.89	
Bai Hua Shan Tao	Ref. 7	Ref. 7	16.07	4.79	9.23	4.45	
Bai Shu 55 Bian Yi	Ref. 7	Ref. 7	15.78	2.06	4.99	2.93	
Bai Wu 8	Ref. 7	Ref. 7	17.02	2.93	7.69	4.76	
Bailey	94.9	5.41	4.71	3.63	5.7	2.07	
Bi Nan I	Ref. 7	Ref. 7	10.63	0.58	1.02	0.43	NWC
Bian Tao	Ref. 7	Ref. 7	16.11	2.66	6.53	3.87	NC
Chinese Cling	Ref. 7	Ref. 7	17.69	2.28	5.7	3.41	MLCJ
Chong Ban Xiao Hua Xing	Ref. 7	Ref. 7	19.62	2.02	5.48	3.46	
Da Guo Hei Tao	93.64	6.36	3.48	1.03	1.66	0.63	NC
Da Hong Pao	Ref. 7	Ref. 7	18.75	2.36	6.25	3.89	MLCJ
Da Lian 4-35	95.42	6.99	2.56	4.14	5.99	1.85	
Da Xue Tao	Ref. 7	Ref. 7	11.79	1.7	3.25	1.55	NC
Dan Bei Ti	92.06	5.14	5.88	0.96	1.53	0.56	
Diao Zhi Bai	Ref. 7	Ref. 7	9.99	3.97	7.38	3.4	MLCJ
Elberta (Non-showy flower)	97.52	6.01	1.49	7.62	10.92	3.3	
Fei Cheng Bai Li 10	Ref. 7	Ref. 7	3.84	3.23	4.98	1.75	NC
Fei Cheng Hong Li 6	Ref. 7	Ref. 7	19.1	2.31	5.96	3.65	NC
Feng Shou Xing	84.2	2.54	16.1	0.83	1.8	0.97	
Ge Gu	Ref. 7	Ref. 7	16.11	2.25	5.17	2.92	NC
Guang He Tao (A Ba)	Ref. 7	Ref. 7	11.66	2.81	4.98	2.17	
Guang He Tao (Ri Ka Ze)	Ref. 7	Ref. 7	18.47	1.67	4.07	2.4	
Hakuho	Ref. 7	Ref. 7	18.44	2.34	6.08	3.75	
Harrow Blood	97.84	8.39	1.02	0.75	1.05	0.3	
Hei Bu Dai	Ref. 7	Ref. 7	16.06	2.88	6.53	3.65	MLCJ
Hong Chui Zhi	Ref. 7	Ref. 7	21.33	1.17	3.16	1.99	
Hong Gen Gan Su Tao	Ref. 7	Ref. 7	9.67	2.1	3.6	1.5	
Hong Hua Bi Tao	93.4	4.73	6.07	3.23	5.28	2.04	NC
Hong Hua Shan Tao	Ref. 7	Ref. 7	11.33	5.48	8.85	3.37	
Hong Li Guang	Ref. 7	Ref. 7	9.94	0.91	1.61	0.71	NWC
Hong Rou Guang He Tao	Ref. 7	Ref. 7	17.9	2.72	5.97	3.25	

Hong Shan Hu	96.82	6.22	1.77	5.56	7.97	2.41	
Hong Shou Xing	Ref. 7	Ref. 7	15.75	0.91	2.01	1.1	
Hong Ya Zui	Ref. 7	Ref. 7	10.35	3.64	6.97	3.32	NC
Hong Ye Tao	96.96	7.26	13.93	2.68	5.7	3.03	NC
Hong Ye Tao Ya Bian	86.8	2.95	1.7	5.01	7.12	2.1	
Hua Guang	Ref. 7	Ref. 7	7.48	3.36	6.16	2.8	
Hua Yu Lu	Ref. 7	Ref. 7	10.5	3.53	6.45	2.91	
Huang Jin Pan Tao	94.59	5.47	3.09	3.9	5.81	1.91	MLCJ
Hun Chun Tao	Ref. 7	Ref. 7	4.13	1.12	1.81	0.7	NEC
Huo Lian Jin Dan	Ref. 7	Ref. 7	3.55	3.65	5.53	1.88	YGC
Ji Lin 8903	Ref. 7	Ref. 7	16.19	2.27	5.52	3.25	NEC
Jin Feng	Ref. 7	Ref. 7	14.2	2.95	6.81	3.86	
Jin Mi Xia Ye	Ref. 7	Ref. 7	3.99	2.79	4.37	1.58	
Jin Ta You Pan Tao	Ref. 7	Ref. 7	12.04	1.55	3.08	1.53	NWC
Jing Yu	Ref. 7	Ref. 7	12.49	3.21	6.95	3.74	
Ju Hua Tao	Ref. 7	Ref. 7	17.4	1.09	2.53	1.44	
Ka Shi 1	Ref. 7	Ref. 7	15.12	0.86	1.8	0.95	NWC
Ka Shi Huang Rou Li Guang	Ref. 7	Ref. 7	2.8	4.21	6.31	2.1	NWC
Legrand	85.2	2.44	15.84	1.96	4.8	2.84	
Li He Tian Ren	Ref. 7	Ref. 7	2.48	1.14	1.72	0.58	NWC
Li-07-1-13	Ref. 7	Ref. 7	10.14	3.34	6.39	3.05	
Long 1-2-4	Ref. 7	Ref. 7	17.87	0.88	2.03	1.14	NWC
Mai Huang Pan Tao	97.36	7.64	1.33	6.11	8.55	2.44	
Mao Tao (2-1-55)	96.76	7.7	1.96	4.53	6.46	1.92	
Maria Serena	95.66	5.38	2.75	2.34	3.51	1.17	
May Fire	Ref. 7	Ref. 7	12.22	1.26	2.54	1.27	
Mei Gui Hong	Ref. 7	Ref. 7	13.14	3.38	7.56	4.18	
Nan Shan Tian Tao	Ref. 7	Ref. 7	5.89	3.4	5.55	2.14	SC
NJC77	92.45	5.63	6.66	2.23	3.55	1.32	
NJN76	Ref. 7	Ref. 7	10.75	1.62	3.1	1.48	
Nonpareil	73.52	5.34	13.82	2.57	4.43	1.86	
Okitsu	Ref. 7	Ref. 7	17.46	1.94	4.83	2.89	
Okubo	Ref. 7	Ref. 7	22.18	1.94	5.92	3.99	
Phillips	98	6.1	1.19	0.88	1.23	0.36	
Ping Bei Zi	Ref. 7	Ref. 7	12.06	3.38	6.82	3.44	MLCJ
Ping Ding You Pan Tao	96.02	7.82	2.3	4.19	5.97	1.78	
Qing Si	Ref. 7	Ref. 7	12.17	2.27	4.44	2.17	YGC
Qing Tao	Ref. 7	Ref. 7	15.96	3	7.34	4.34	YGC
Qing Zhou Bai Pi Mi Tao	Ref. 7	Ref. 7	3.75	1.41	2.22	0.82	NC
Redhaven	97.13	5.87	1.83	3.67	5.32	1.65	
Rou Pan Tao	Ref. 7	Ref. 7	15.25	0.91	1.9	0.99	NWC
Rui Guang 2	Ref. 7	Ref. 7	12.26	2.47	5.31	2.85	
Rui Guang 3	97.14	6.41	1.75	5.12	7.33	2.21	

Sa Hong Long Zhu Tao	Ref. 7	Ref. 7	15.37	0.68	1.41	0.73	
Sa Hong Tao	Ref. 7	Ref. 7	14.61	1.05	2.26	1.21	
Sa Hua Hong Pan Tao	Ref. 7	Ref. 7	4.06	4.71	7.25	2.54	MLCJ
Shan Dong Si Yue Ban	Ref. 7	Ref. 7	15.23	1.51	3.38	1.86	NC
Shan Gan Shan Tao	Ref. 7	Ref. 7	9.64	6.71	10.28	3.56	
Shen Zhou Shui Mi	Ref. 7	Ref. 7	16.98	2.22	5.43	3.21	NC
Shi Tou Tao	Ref. 7	Ref. 7	16.33	2.35	5.76	3.4	NC
Shi Wo Shui Mi	Ref. 7	Ref. 7	17	2.21	5.35	3.14	NC
Shou Bai	Ref. 7	Ref. 7	16.69	0.76	1.54	0.79	
Shu Guang	Ref. 7	Ref. 7	14.82	2.51	6.06	3.55	
Shu Guang Hong Xian Ya Bian	97.04	6.92	1.85	5.43	7.8	2.37	
Shuang Xi Hong	Ref. 7	Ref. 7	11.28	2.69	5.59	2.89	
Suan Tao	Ref. 7	Ref. 7	10.44	2.05	3.98	1.93	NC
Tian Jin Shui Mi	Ref. 7	Ref. 7	13.26	1.68	3.55	1.86	NC
Tian Ren Tao	Ref. 7	Ref. 7	4.43	1.04	1.69	0.66	NWC
Wu Han 2	95.32	6.27	2.76	5.55	8.07	2.52	
Wu Hei Ji Rou Tao	Ref. 7	Ref. 7	15.95	1.17	2.74	1.57	MLCJ
Wu Yue Xian	Ref. 7	Ref. 7	17.33	2.53	6.36	3.82	NC
Wu Yue Xian Bian Gan	Ref. 7	Ref. 7	15.25	2.48	5.75	3.27	NC
Xi Kang Bian Tao 1	77.25	4.48	11.43	2.72	4.66	1.94	
Xia Miao 1	Ref. 7	Ref. 7	15.23	1.8	4.09	2.29	NWC
Xian Tao	Ref. 7	Ref. 7	12.78	0.84	1.68	0.84	SC
Xin Jiang Huang Rou	Ref. 7	Ref. 7	9.99	1.27	2.36	1.09	NWC
Xin Jiang Pan Tao	Ref. 7	Ref. 7	14.72	2.65	6.33	3.68	NWC
Xin Jiang Pan Tao 1 (pollen sterility)	81.6	2.2	19.27	1.25	3.09	1.84	NWC
Yan Hong	Ref. 7	Ref. 7	10.06	3.47	6.9	3.43	
Yang Zhou 3	94.43	5.23	3.13	6.24	9.28	3.04	
Ying Ge Tao	Ref. 7	Ref. 7	12.59	3.95	8.68	4.73	SC
Ying Zui	84.2	2.42	16.73	2.26	5.54	3.28	MLCJ
Yu Bai	Ref. 7	Ref. 7	17.01	2.17	5.26	3.09	NC
Yuan Yang Chui Zhi	Ref. 7	Ref. 7	18.72	1.04	2.5	1.46	
Zao Huang Pan Tao	97.72	7.96	1.15	7.46	10.4	2.94	
Zao Shang Hai Shui Mi	Ref. 7	Ref. 7	2.95	6.25	9.75	3.5	MLCJ
Zao Shu Huang Gan	Ref. 7	Ref. 7	2.11	4.29	6.17	1.88	NWC
Zao Shu Xia Ye Tao	96.69	6.62	3.95	3.08	4.77	1.68	
Zhong Hua Shou Tao	Ref. 7	Ref. 7	3.11	1.14	1.75	0.61	NC
Zhong You Pan Tao 2	96.07	5.62	2.32	4.87	7.13	2.26	
Zhong You Pan Tao 4	97.24	6.91	1.29	5.83	8.18	2.35	
Zhong You Tao 4	95.66	7	2.87	5.32	7.83	2.51	
Zhong You Tao 4 Zao Shu Ya Bian	95.75	5.95	3.03	5.56	8.09	2.52	
Zhong You Tao 5	95.9	5.8	1.82	5.47	7.92	2.44	

Zhong You Tao 5 Zao Shu Ya Bian	96.75	5.66	2.88	5.16	7.63	2.46
Zhong You Tao 9	96.87	6.92	1.33	5.49	7.68	2.2
Zhong You Tao 9 Hei Xian Bai Rou Ya Bian	95.73	5.51	1.74	5.29	7.54	2.24
Zhong You Tao 9 Huang Rou Ya Bian	96.77	6.45	2.81	4.75	7.09	2.34
Zhong You Tao 9 Wang Shu Ya Bian	97.25	7.35	1.8	5.17	7.41	2.24
Zhou Xing Shan Tao	Ref. 7	Ref. 7	15.28	4.91	9.2	4.29
Zhu Fen Chui Zhi	Ref. 7	Ref. 7	18.21	1.17	2.77	1.6
Average	89.28	4.21	10.1	3.08	5.54	2.45

The codes for the six geographic regions are as follows: Northwest China (NWC), YunGui plateau (YGC), Northeast China (NEC), Northern China (NC), the middle and lower reaches of the Changjiang River (MLCJ), and Southern China (SC).

Supplementary Table 4: Validation of SNPs calling before imputation and after that using Sequenom MassARRAY platform.

	Resequencing data before imputation	Resequencing data after imputation
Untyped	303	57
Consistent homozygous loci with MassARRAY	2832	2921
Inconsistent homozygous loci with MassARRAY	194	193
Consistent heterozygous loci with MassARRAY	290	325
Inconsistent heterozygous loci with MassARRAY	56	74
Total	3675	3570
Percent of untyped loci	8.24%	1.60%
Percent of consistent homozygous loci with MassARRAY	93.59%	93.80%
Percent of consistent heterozygous loci with MassARRAY	83.82%	81.45%

Supplementary Table 5: Average heterozygosity rates of total imputed SNPs in the different sample groups.

Groups	Subgroups	Group capacity (n)	Heterozygosity rates [imputed] (%)
Wild related species	Almond	2	1.90%
	P. mira	3	2.61%
	P. davidiana	5	5.91%
	P. kansuensis	2	1.60%
	Total	12	3.61%
Landraces	Landraces, Ornamental	9	1.25%
	Landraces, edible	53	2.32%
	Total	62	2.17%
Improved varieties	Occidental	10	1.57%
	Oriental	45	2.71%
	Total	55	2.50%

In the table, the description of all accession derived from two Supplementary Table 1 in this and previous study[7].

Supplementary Table 6: The polymorphism and SNP count of total imputed SNPs in the different sample groups.

Group	Wild related species	Cultivated					
		Total	Ornamental	Edible landrace	Improved varieties		
					Total	Occidental	Oriental
Group capacity (n)	12	117	9	53	55	10	45
Polymorphism π (10-3)	5.74	1.83	1.47	1.86	1.55	1.38	1.55
SNP count ($\times 10^6$)	3.63	1.67	0.93	1.53	1.39	1.35	0.92

Differences in polymorphism indicate that peach edible landraces retain little nucleotide diversity and exhibit a clear genetic differentiation from their wild progenitor. The nucleotide diversity (π) of wild species (*P. davidiana*, *P. mira*, and *P. kansuensis*) is higher than that of peach edible landraces, highlighting the strong reduction of variability associated with domestication.

Supplementary Table 7: Association analysis of 10 qualitative traits in 129 peach accessions using different models.

Trait	GLM (no PCA)	-Log$_{10}$(p)	GLM (PCA)	-Log$_{10}$(p)	MLM	-Log$_{10}$(p)
Flesh adhesion	Chr4: 22696643	9.93	Chr4: 22695515	10.2	Chr4: 26142583	5.81
					Chr4: 22695515	5.33
					Chr4: 26945751	4.85
Flesh texture	Chr4: 22695495	18.12	Chr4: 22695495	14.22	Chr8: 2759375	6.49
					Chr1: 36970794	6.03
					Chr2: 11354439	5.53
Flesh color around stone	Chr6: 2183867	7.95	Chr8: 16905885	7.13	Chr8: 16795565	4.65
	Chr1: 45251328	7.83	Chr7: 12901845	6.89	Chr1: 31040363	4.62
	Chr7: 12901845	7.33	Chr6: 11954708	6.78	Chr4: 19678521	4.48
Flower shape-DoubleF	Chr2: 21480531	50.81	Chr2: 21480531	46.55	Chr6: 17602373	12.28
					Chr8: 4862362	12.02
					Chr2: 15719828	11.88
Flower shape-showyF	Chr8: 13740117	24.19	Chr8: 13740117	23.86	Chr8: 13740117	11.93
	Chr8: 16687764	23.87	Chr8: 16746058	15.62	Chr7: 21584843	8.61
	Chr8: 16746058	23.76	Chr8: 16807476	15.14		
Fruit flesh color	Chr1: 24820676	16.91	Chr1: 24968892	13.72	Chr1: 24968892	8.74
			Chr1: 24863116	12.98	Chr1: 24863116	8.13
Fruit hairiness	Chr5: 18238151	30.87	Chr5: 18238151	18.41	Chr5: 18238151	9.5
	Chr5: 17576893	27.11	Chr5: 16646429	16.01	Chr5: 16646429	9.06
	Chr5: 16646429	26.88	Chr5: 17576893	15.94	Chr7: 3304942	8.18
Fruit shape	Chr6: 25060196	27.13	Chr6: 25060196	26.04	Chr6: 25060196	12.46
	Chr6: 27109034	18.64	Chr6: 27109034	18.36	Chr6: 27109034	10.25
	Chr6: 25142326	15.26	Chr6: 25142326	15.31	Chr6: 25142326	9.62
Kernel taste	Chr2: 9680893	46	Chr2: 9820779	61.79	Chr2: 9820779	17.32
	Chr2: 9820626	41.44	Chr2: 9680893	48.37	Chr5: 12622852	16.81
	Chr4: 3179343	41.43	Chr5: 12622852	40.93		
Non-acid fruit	Chr5: 588359	33.68	Chr5: 588359	26.16	Chr5: 628407	10.5
	Chr5: 996915	31.16	Chr5: 996915	24.9	Chr5: 764830	10.01
	Chr5: 764830	28.18	Chr5: 541075	20.77		

In the different models, we selected only one peak association signal if it has a near physical distance with the next signal according to P value degree no more than 50 kb. And if the distance was longer than that threshold, another two signals were selected as candidate SNPs.

178 **Supplementary Table 8: Previously reported linkage results for several**

179 **qualitative traits in peach.**

Traits	Linkage group	Linkage map	The genetics distance in the T×E groups (cM)	The corresponding physical location estimated through linkage analysis (Mb)	Reference
Fruit hairiness	5	Peach-JF-F2-2006	81.4	14.7	GDR website
Fruit shape	6	Peach-JF-F2-2006	72.6	24.7	
Flesh adhesion	4	Prunus-TE-F2	52.0	22.6	
Flesh texture	4	Prunus-TE-F2	52.0	22.6	
Fruit flesh color	1	Prunus-TE-F2	31.0	16.7	
Flesh color around stone	3	Prunus-TE-F2	17.0	7.7	
Non-acid fruit	5	Prunus-TE-F2	6.0	0.9	
Flower shape-DoubleF	2	Peach-NJPKV77119-F2	7.2	/	
Flower shape-ShowyF	8	Peach-DG-F1-2009	34.4	8.3	
Kernel taste	5	Prunus-TE-F2	32.9	12.4	

180 GDR website: www.rosaceae.org.

181 **Supplementary Table 9: Agronomic traits of the additional 345 accessions.**

Accessions	Origin	Description	Fruit hairiness	Fruit shape	Fruit flesh color	Non-acid fruit	Flower shape-DoubleF	Flower shape-ShowyF	Flesh adhesion	Flesh texture
8501	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
8601	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
8701	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
8801	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
124 Pan Tao	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
21 Shi Ji	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
82-9	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
A Bu Bai Tao	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Akatsuki	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Amusiding	USA	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
An Nong Shui Mi	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Anlong Bai Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Asama Hakuto	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Baby Gold 5#	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Non-melting
Baby Gold 7#	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Non-melting
Baby Gold 8#	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Non-melting
Bai Chong Ban Chui Zhi	USA	Ornamental landrace	Peach	Round	White	Acid	Double	Showy	Clingstone	Melting
Bai Dan Ban	PRC	Ornamental landrace	Peach	Round	NA	NA	Single	Showy	NA	NA
Bai Dan Ban Chui Zhi Tao	PRC	Improved variety	Peach	Round	White	Acid	Single	NA	Freestone	Melting
Bai He Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Bai Li Hu	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Bai Mang Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting

Bai Nian He	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Bai Nian Hu	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Baisha	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Bao Chun	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	Showy	Clingstone	Melting
Bei Nong 2#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Bei Nong Zao Shu	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Beijing Wang Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Bi Tao	PRC	Ornamental landrace	Peach	Round	NA	NA	Double	NA	NA	NA
Bi Xia Pan Tao	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Chang Sheng Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Changling Zao Yu Lu	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Changze Hakuho	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Chen Pu Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Cheng Xiang	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Cheng Yan	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Chi Yuan Mi	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Chiycmarn	USA	Improved variety	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Chun Lei	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Compact Elberta	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Cullinan	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Da Bai Suan	PRC	Improved variety	Nectarine	Round	White	Acid	Single	Showy	Clingstone	Melting
Da Hong Pao (Hubei Gucheng)	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Da Jin Dan	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Da Li He Huang Rou	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Da Zhao Huang Tao	PRC	Edible landrace	Peach	Round	Yellow	Non-acid	Single	Showy	Freestone	Melting

Da Zhen Bao Chi Yue	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Dalian 22-6	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Dalian 22-8	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Dan Bai Ai You	PRC	Improved variety	Nectarine	Round	White	Non-acid	NA	NA	Clingstone	Melting
Dan Ban Zi Tao	PRC	Ornamental landrace	Peach	Round	White	Acid	Single	NA	Clingstone	Melting
Dan Mo	PRC	Improved variety	Nectarine	Round	Yellow	Non-acid	Single	Non-showy	Clingstone	Melting
Dawangzhuang Huang Tao	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Denjiulo	Japan	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Dicon	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Non-melting
Dixired	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Dunhuang Dong Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Durbin	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Dwarf Norman	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Early Red 2#	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Elberta (Showy)	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Er Jie Bai	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Er Zao Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Fantasia	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Favolate 2#	Italy	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Melting
Favolate 3#	Italy	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Fay Elberta	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Fayette	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Fei Cheng Bai Li 17#	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Fei Tao	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	NA	Clingstone	Melting
Fen Hong Bi Tao	PRC	Ornamental landrace	Peach	Round	NA	NA	Double	NA	NA	NA
Fen Ling Chong	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	Non-showy	Clingstone	Melting

Feng Bai	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Feng Huang	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Fenghua Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Flavortop	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Flordadown	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Flordagold	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Flordaking	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Melting
Gan Xuan 2#	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Gan Xuan 4#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Gaotai 1#	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
GF677	France	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Goldcrest	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Grand 1#	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Grand 2#	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Gu Ba Hong Tian Tao	Cuba	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Non-melting
Gu Cheng Chun Lei	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Gua Tao	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Guangyi Bai Hua Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Guangyi Wu Yue Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Guizhou Shui Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Ha Lu Hong Shi Sheng	PRC	Improved variety	Peach	Round	White	Acid	Single	Non-showy	Freestone	Melting
Hakuto	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Han Lu Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Hang Yu	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Hangzhou Zao Shui Mi	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Harmony	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting

Hatsukami	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Hefei Zao Tian Tao	PRC	Improved variety	Peach	Round	NA	NA	NA	NA	NA	NA
Hetian Huang Rou	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Hetian Wan You Tao	PRC	Edible landrace	Nectarine	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Heyang You Tao	PRC	Edible landrace	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Hong Gan Lu	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Hong Ling Chong	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	Non-showy	Clingstone	Melting
Hong Qing Shui	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Hong Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Hong Xian Shu Guang	PRC	Improved variety	Nectarine	Round	Yellow	Non-acid	NA	NA	Clingstone	Melting
Hu You 004#	PRC	Improved variety	Nectarine	Round	Yellow	Non-acid	Single	Showy	Freestone	Melting
Huang La Tao	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Huang Li Guang	PRC	Edible landrace	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Huang Nian He	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Huang Yan	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Hui Yu Lu	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Improved Flavor Crest	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Ji Zui Bai	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Jia Na Yan	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Jiang Tao	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	NA	Clingstone	Melting
Jiangcun 1#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Jiangcun 4#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Jiangcun 5#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Jiaqing Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Jie Tu Bai	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Jin Shuo	PRC	Improved variety	Nectarine	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting

Jin Xiu	PRC	Improved variety	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Jing Chun	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Jing Mi	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Jing Yan	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Jingmen Tao (Mao)	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Jingmen Tao (You)	PRC	Edible landrace	Nectarine	Round	NA	NA	Single	Showy	NA	NA
Jiu Yang Qing Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
June Gold	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
June prince	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Jushan Tong Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Kan Zhu Bai Tao	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Kanto 14#	Japan	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Non-melting
Kanto 5#	Japan	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Kashi 2#	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Kashi 3#	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Kashi 4#	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Kawanakajima Hakuto	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Kogetsu	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Kurakato Wase	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Lai Shan Mi	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Le Yuan	PRC	Ornamental landrace	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Li He Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Freestone	Melting
Lian Huang	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Lin Bai 10#	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Lin Bai 3#	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Non-melting
Lin Huang 1#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Melting

Lin Huang 9#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Lincheng Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Liquan 54#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Liu Yue Bai	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Liu Yue Kong	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Long 2-4-6	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Long You Pan Tao	PRC	Edible landrace	Nectarine	Flat	Yellow	Acid	Single	Showy	Clingstone	Melting
Longhua Shui Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Lu Xiang	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Lulin Shui Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Mai Xiang	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Man Tian Hong	PRC	Ornamental landrace	Peach	Round	White	Non-acid	Double	Showy	Clingstone	Melting
Maoshan Gong Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	NA	Showy	Clingstone	Melting
Maravilha	USA	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Marigold	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Matsumori	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
May Grand	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Mayglo	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Mcneely	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Mei Guo Pan Tao	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Mei Xiang	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Mi Yang Shan	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Moyu 8#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Nan Fang Zao Hong	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Nanshan 1#	PRC	Edible landrace	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Non-melting
Nemaguard	USA	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting

NJ271	USA	Improved variety	Peach	Round	Yellow	Non-acid	Double	NA	Freestone	Melting
NJC105	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Non-melting
NJC47	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Clingstone	Non-melting
NJF10	USA	Improved variety	Peach	Flat	Yellow	Acid	Single	Showy	Freestone	Melting
NJF7	USA	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Norman	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Nunome Wase	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Okayama 11#	Japan	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Okayama 3#	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Okayama Wase	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Okinawa	USA	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Pan Tao Huang Hou	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Pan Tao Wang	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Ping Ding Mao Pan Tao	PRC	Edible landrace	Peach	Flat	White	Acid	Single	Showy	Freestone	Melting
Ping Yong Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Qi Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Qian Nian Hong	PRC	Improved variety	Nectarine	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Qin Guang	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Showy	Freestone	Melting
Qin Guang 2#	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Showy	Freestone	Melting
Qin Wang	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Qinan 2#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Qing Feng	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Qing Mao Zi Bai Hua	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Qingzhou Hong Pi Mi Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Qinling Dong Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Qiu Bai Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting

Qiu Xiang	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Qiu Xiang Mi	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Red Diamond	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Non-showy	Clingstone	Melting
Regina	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Reliance	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Ren Mian Tao	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	NA	Freestone	Melting
Ri Ben Hong Tian Tao	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Robin	USA	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Rose prince	USA	Improved variety	Nectarine	Round	White	Acid	Single	Showy	Freestone	Melting
Rui Guang 18#	PRC	Improved variety	Nectarine	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Rui Guang 19#	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Showy	Freestone	Melting
Rui Pan 2#	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Rui Pan 4#	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Rutgers Redleaf	USA	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Saotome	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Saturn	USA	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Freestone	Melting
S-B	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
September free	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Sha Hong Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Sha Ji 2#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Shangshan Da Yu Lu	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Shenzhou Bai Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Shenzhou Li He Shui Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Shi Sheng 3#	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Shi Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Shou Fen	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	Showy	Clingstone	Melting

Shuho	Japan	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Silver Gem	USA	Improved variety	Nectarine	Round	White	Acid	Single	Showy	Freestone	Melting
Sirlo	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Southern pearl	USA	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Spring baby	USA	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Spring Crest	USA	Improved variety	Peach	Round	Yellow	Acid	NA	NA	Clingstone	Melting
Spring gold	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Spring prince	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Springtime	USA	Improved variety	Peach	Round	White	Acid	Single	Non-showy	Clingstone	Melting
Su Lian Pan Tao	Soviet	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Freestone	Melting
Suan Li Guang	PRC	Edible landrace	Nectarine	Round	White	Acid	Single	Showy	Freestone	Melting
Summergrand	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Summerset	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Sunago Wase	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Sunblaze	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Sundollar	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Sunraycer	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Non-showy	Freestone	Melting
Sunsplash	USA	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Tachibana Wase	Japan	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Tai Bai	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Taiyuan Shui Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Tan Chun	PRC	Ornamental landrace	Peach	Round	NA	NA	Double	Showy	NA	NA
Tian Hong	South Korea	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Tian Li Guang	PRC	Edible landrace	Nectarine	Round	White	Acid	Single	Showy	Freestone	Melting
Tie 4-1	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Trinmph	USA	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting

Tsukuba 85#	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Tsukuba 86#	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Tu-2	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Tugou 1#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Wan Bai Hua	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Wan Bai Mi	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Wan Huang Jin	Japan	Improved variety	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Wan Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Wangmo Xiao Mi Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Wanzhou Huang Tao	PRC	Edible landrace	Peach	Round	NA	NA	NA	NA	NA	NA
Wanzhou Xiang Tao	PRC	Edible landrace	Peach	Round	NA	NA	Single	NA	NA	NA
Wasesimizu	Japan	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Wei Yang 2#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Weinberger	Italy	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Wenzhou Shui Mi	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Wu Bao Tao	PRC	Ornamental landrace	Peach	Round	NA	NA	Double	NA	NA	NA
Wu Da Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Wu Yue Bai	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Wu Yue Jin	PRC	Improved variety	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Wuhan Da Hong Pao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Xi Jiao 1#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Xi Jiao 2#	PRC	Edible landrace	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Non-melting
Xi Jiao 3#	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Xi Mei 1#	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Xi Mei 2#	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Xi Nong 18#	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting

Xi Nong 19#	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Xi Nong Shui Mi	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Xi Nong Xia Mi	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Xi Nong Zao Mi	PRC	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Xi Wei Gold	South Korea	Improved variety	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Xia Hui 1#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Xiang Jiao Tao	PRC	Edible landrace	Peach	Round	Yellow	Non-acid	Single	Showy	Freestone	Melting
Xiao Bai Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Xiao Hong Hua	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Xiao Jin Dan	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Xiboliya C	Canada	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Xin Bai Hua	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Xin Hong Zao Pan Tao	PRC	Improved variety	Peach	Flat	White	Acid	Single	Showy	Freestone	Melting
Xiu Yu	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Xuancheng Tian Tao	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Yan Guang	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Non-showy	Clingstone	Melting
Yang Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Yangquan Rou Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Yangzhou 40#	PRC	Improved variety	Peach	Round	Yellow	Non-acid	Single	Showy	Clingstone	Melting
Yexian Dong Tao	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Yexian Huang Rou Tao	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Melting
Yi Xian Hong	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Yilixian Huang Rou Tao	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Ying Chun	PRC	Ornamental landrace	Peach	Round	White	Acid	Double	Showy	Clingstone	Melting
You Ming Bai Tao	South Korea	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Yu Hua Lu	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting

Yu Lu	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Yu Lu Pan Tao	PRC	Edible landrace	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Yu Tian	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Yuan Chun	PRC	Ornamental landrace	Peach	Round	White	Non-acid	Double	Showy	Clingstone	Melting
Yuan Dong Bai Tao	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Yun Shu 2#	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Bai Feng	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Zao Chun Tao	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Zao Feng	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Hong Xia	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Hong Yan	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Showy	Freestone	Melting
Zao Hong Zhu	PRC	Improved variety	Nectarine	Round	White	Non-acid	Single	Non-showy	Clingstone	Melting
Zao Huang Jin	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Freestone	Melting
Zao Jiu Bao	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Zao Kui	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Kui Mi	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Lu Pan Tao	PRC	Improved variety	Peach	Flat	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Mei	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Tian Tao	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting
Zao Xia Lu	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Zao Yan	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Freestone	Melting
Zhang Bai 2#	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Zhang Bai 5#	PRC	Edible landrace	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Non-melting
Zhang Bai Gan	PRC	Edible landrace	Peach	Round	White	Acid	Single	Showy	Clingstone	Non-melting
Zhang Huang 9#	PRC	Edible landrace	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Zhao Hui	PRC	Improved variety	Peach	Round	White	Non-acid	Single	Showy	Clingstone	Melting

Zhen Zhu Hong	PRC	Improved variety	Nectarine	Round	White	Acid	Single	Non-showy	Clingstone	Melting
Zheng Huang 2#	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Zheng Huang 3#	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Zheng Huang 4#	PRC	Improved variety	Peach	Round	Yellow	Acid	Single	Showy	Clingstone	Non-melting
Zhong You 7#	PRC	Improved variety	Nectarine	Round	NA	NA	Single	Non-showy	NA	NA
Zhong You 8#	PRC	Improved variety	Nectarine	Round	Yellow	Non-acid	Single	Non-showy	Clingstone	Melting
Zhong You Pan Tao 1#	PRC	Improved variety	Nectarine	Flat	White	Non-acid	Single	Non-showy	Clingstone	Melting
Zhu Bo 2#	Japan	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Zhu Bo 3#	Japan	Improved variety	Peach	Round	White	Acid	Single	Showy	Freestone	Melting
Zhu Bo 88#	Japan	Improved variety	Peach	Round	White	Non-acid	Single	Non-showy	Clingstone	Melting
Zhu Bo 89#	Japan	Improved variety	Peach	Round	White	Acid	Single	Showy	Clingstone	Melting
Zi Rou Tao	PRC	Improved variety	Nectarine	Round	Yellow	Acid	Single	Showy	Freestone	Melting

Supplementary Table 10: Significant association results for selected SNPs using Sequenom MassARRAY data in 345 peach accessions.

Trait	GLM	Associated SNP using GLM (no PCA), GLM (PCA) or MLM model	-Log_{10}(p)
Flower shape-DoubleF	Chr2: 21480531	GLM (no PCA), GLM (PCA)	20.64
	Chr6: 17602373	MLM	31.95
	Chr8: 4862362	MLM	8.97
	Chr2: 15719828	MLM	NA
Flower shape-showyF	Chr8: 13740117	GLM (no PCA), GLM (PCA), MLM	121.47
	Chr8: 16687764	GLM (no PCA)	2.3
	Chr8: 16746058	GLM (no PCA), GLM (PCA)	1.5
	Chr8: 16807476	GLM (PCA)	2.64
	Chr7: 21584843	MLM	7.57
Fruit flesh color	Chr1: 24820676	GLM (no PCA)	21.24
	Chr1: 24968892	GLM (PCA), MLM	25.43
	Chr1: 24863116	GLM (PCA), MLM	21.51
Fruit hairiness	Chr5: 18238151	GLM (no PCA), GLM (PCA), MLM	32.04
	Chr5: 17576893	GLM (no PCA), GLM (PCA)	121.92
	Chr5: 16646429	GLM (no PCA), GLM (PCA), MLM	98.34
	Chr7: 3304942	MLM	5.23
Fruit shape	Chr6: 25060196	GLM (no PCA), GLM (PCA), MLM	182.72
	Chr6: 27109034	GLM (no PCA), GLM (PCA), MLM	73.10
	Chr6: 25142326	GLM (no PCA), GLM (PCA), MLM	48.86
Non-acid fruit	Chr5: 588359	GLM, GLM (PCA)	51.57
	Chr5: 628407	MLM	62.47
	Chr5: 996915	GLM (no PCA), GLM (PCA)	70.75
	Chr5: 764830	GLM (no PCA), MLM	58.02
	Chr5: 541075	GLM (PCA)	89.42

185 **Supplementary Table 11: Significant association results for soluble solid content**

186 **and fruit weight in 129 peach accessions using MLM model.**

Trait	Loci	Years	Chr.	Position	-log10 (p)
Fruit weight	**FW-2007-1**	**2007**	1	43205141	6.26
	FW-2007-2	**2007**	2	16609769	6.74
	FW-2007-3	**2007**	3	6338918	5.97
	FW-2007-4	**2007**	4	10990743	7.14
	FW-2007-5	**2007**	5	4949487	6.30
	FW-2007-6	**2007**	5	13892312	5.96
	FW-2007-7	**2007**	5	15928967	6.21
	FW-2007-8	**2007**	6	13747142	6.07
	FW-2007-9	**2007**	7	14069835	6.17
	FW-2007-10	**2007**	8	168831	7.00
	FW-2010-1	**2010**	1	12392427	4.55
	FW-2010-2	**2010**	1	39241272	4.21
	FW-2010-3	**2010**	1	14050831	4.15
	FW-2010-4	**2010**	1	5879950	4.11
	FW-2010-5	**2010**	2	10388301	4.65
	FW-2010-6	**2010**	2	16602967	4.68
	FW-2010-7	**2010**	2	20032011	4.11
	FW-2010-8	**2010**	2	23069073	4.01
	FW-2010-9	**2010**	2	24271176	4.01
	FW-2010-10	**2010**	3	6281041	4.60
	FW-2010-11	**2010**	3	7768702	4.23
	FW-2010-12	**2010**	4	8634341	4.54
	FW-2010-13	**2010**	4	10888626	4.97
	FW-2010-14	**2010**	4	13194190	4.63
	FW-2010-15	**2010**	4	17625270	4.53
	FW-2010-16	**2010**	4	20500702	4.23
	FW-2010-17	**2010**	4	23281118	4.95
	FW-2010-18	**2010**	4	29527539	4.38
	FW-2010-19	**2010**	5	660217	4.45
	FW-2010-20	**2010**	5	9432987	4.77
	FW-2010-21	**2010**	6	20400960	4.10
	FW-2010-22	**2010**	7	19291656	4.16
	FW-2010-23	**2010**	8	18961633	4.09
Soluble solid content	**SSC-2007-1**	**2007**	1	15691351	4.02
	SSC-2007-2	**2007**	1	18146487	4.42
	SSC-2007-3	**2007**	1	20779945	4.42
	SSC-2007-4	**2007**	1	24175076	4.14
	SSC-2007-5	**2007**	2	20036936	4.13
	SSC-2007-6	**2007**	2	23174414	4.99
	SSC-2007-7	**2007**	2	25426115	4.32

	SSC-2007-8	**2007**	3	688273	4.17
	SSC-2007-9	**2007**	3	9101540	4.04
	SSC-2007-10	**2007**	3	11022073	4.14
	SSC-2007-11	**2007**	4	1968175	4.69
	SSC-2007-12	**2007**	4	5478311	4.14
	SSC-2007-13	**2007**	4	8873368	4.55
	SSC-2007-14	**2007**	4	17057020	4.14
	SSC-2007-15	**2007**	4	24462378	4.14
	SSC-2007-16	**2007**	6	19782877	4.05
	SSC-2007-17	**2007**	6	24180924	4.60
	SSC-2007-18	**2007**	7	597258	5.03
	SSC-2007-19	**2007**	7	2463182	4.12
	SSC-2007-20	**2007**	8	15176331	4.14
	SSC-2007-21	**2007**	8	18584579	4.03
	SSC-2010-1	**2010**	1	10477624	4.31
	SSC-2010-2	**2010**	7	19910443	4.23
	SSC-2010-3	**2010**	8	13010893	4.74

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Supplementary Table 12: Domestication and improvement sweep regions according to the polymorphisms identified in contiguous 50-kb windows across peach chromosomes.

Scaffold	Start point (bp)	End point (bp)	Sweep regions		Scaffold	Start point (bp)	End point (bp)	Sweep regions	
1	200001	250000	Domestication		**4**	8850001	8900000	Domestication	
1	700001	850000		Improvement	**4**	11000001	11050000		Improvement
1	1000001	1050000	Domestication		**4**	11500001	11550000	Domestication	
1	2450001	2500000		Improvement	**4**	11750001	11850000	Domestication	
1	5600001	5650000	Domestication		**4**	15600001	15650000		Improvement
1	5950001	6100000		Improvement	**4**	15850001	15900000		Improvement
1	6400001	6450000		Improvement	**4**	16800001	16850000	Domestication	
1	6800001	6850000		Improvement	**4**	17750001	17800000	Domestication	
1	7200001	7250000	Domestication		**4**	18050001	18150000		Improvement
1	7950001	8000000	Domestication		**4**	18200001	18250000		Improvement
1	8050001	8100000	Domestication		**4**	20300001	20450000	Domestication	
1	8150001	8200000		Improvement	**5**	100001	200000		Improvement
1	9100001	9150000	Domestication		**5**	1600001	1650000		Improvement
1	9150001	9200000	Domestication	Improvement	**5**	1800001	2000000		Improvement
1	9450001	9500000		Improvement	**5**	2300001	2500000		Improvement
1	10400001	10450000	Domestication		**5**	2650001	2700000		Improvement
1	10900001	10950000		Improvement	**5**	2850001	2900000		Improvement
1	11000001	11050000		Improvement	**5**	3350001	3400000	Domestication	
1	14400001	14700000		Improvement	**5**	3850001	4050000		Improvement
1	14750001	14800000	Domestication		**5**	4150001	4200000		Improvement
1	16300001	16350000	Domestication		**5**	5400001	5450000	Domestication	
1	16800001	16850000		Improvement	**5**	7750001	7800000	Domestication	Improvement
1	17350001	17750000	Domestication		**5**	7850001	7950000		Improvement
1	17750001	17800000	Domestication	Improvement	**5**	8000001	8050000	Domestication	
1	17800001	18500000	Domestication		**5**	8800001	8850000	Domestication	
1	22000001	22050000	Domestication		**5**	10750001	10850000		Improvement
1	22650001	22800000	Domestication		**5**	12150001	12350000	Domestication	
1	23750001	23800000		Improvement	**5**	12450001	12500000	Domestication	
1	24100001	24150000	Domestication		**5**	12550001	12600000	Domestication	
1	25150001	25200000		Improvement	**5**	12700001	12800000		Improvement
1	25250001	25450000		Improvement	**5**	13150001	13200000	Domestication	
1	28800001	28850000	Domestication		**5**	13250001	13300000		Improvement
1	28950001	29000000	Domestication		**5**	13750001	13800000	Domestication	
1	29050001	29200000	Domestication		**5**	14650001	14700000	Domestication	
1	30450001	30500000		Improvement	**5**	14800001	14850000	Domestication	
1	30650001	30700000	Domestication		**5**	14950001	15200000		Improvement
1	30750001	30800000	Domestication		**5**	15250001	15350000	Domestication	Improvement
1	31350001	31400000	Domestication		**5**	15550001	15600000	Domestication	Improvement

1	31550001	31650000		Improvement	**5**	15700001	15800000	Domestication	
1	32950001	33000000	Domestication		**5**	15800001	15850000		Improvement
1	33200001	33300000	Domestication		**5**	15900001	16050000		Improvement
1	34400001	34450000	Domestication		**5**	16100001	16200000	Domestication	
1	35000001	35050000	Domestication		**5**	16200001	16250000		Improvement
1	35850001	35900000	Domestication		**5**	16300001	16400000		Improvement
1	36000001	36050000	Domestication		**5**	16400001	16450000	Domestication	Improvement
1	36150001	36250000	Domestication		**5**	16800001	16850000		Improvement
1	37650001	37700000	Domestication		**5**	17000001	17100000		Improvement
1	38150001	38350000		Improvement	**5**	17150001	17200000	Domestication	
1	38350001	38400000	Domestication	Improvement	**5**	17300001	17350000		Improvement
1	38450001	38500000		Improvement	**5**	17400001	17500000	Domestication	
1	39000001	39050000		Improvement	**5**	17550001	17600000		Improvement
1	39450001	39550000		Improvement	**5**	17600001	17750000	Domestication	
1	39650001	39900000		Improvement	**5**	17750001	17800000	Domestication	Improvement
1	39900001	39950000	Domestication	Improvement	**5**	17800001	17850000	Domestication	
1	39950001	40000000		Improvement	**5**	17900001	18000000		Improvement
1	40850001	40950000	Domestication		**5**	18050001	18100000	Domestication	Improvement
1	41050001	41100000	Domestication		**5**	18100001	18200000	Domestication	
1	41100001	41150000	Domestication	Improvement	**5**	18250001	18300000	Domestication	Improvement
1	41150001	41500000	Domestication		**5**	18300001	18350000	Domestication	
1	41500001	41550000	Domestication	Improvement	**5**	18350001	18450000	Domestication	Improvement
1	41550001	41700000	Domestication		**6**	2750001	2800000	Domestication	
1	45000001	45050000	Domestication		**6**	4050001	4100000	Domestication	
1	45300001	45350000	Domestication		**6**	4150001	4250000	Domestication	
1	46000001	46050000	Domestication		**6**	4850001	4900000		Improvement
1	46150001	46200000	Domestication		**6**	4950001	5000000	Domestication	
1	46350001	46400000	Domestication		**6**	5250001	5300000		Improvement
2	100001	150000	Domestication		**6**	5600001	5900000		Improvement
2	200001	250000	Domestication		**6**	6050001	6200000		Improvement
2	8950001	9050000	Domestication		**6**	6650001	6700000	Domestication	
2	9700001	9800000		Improvement	**6**	6850001	6900000		Improvement
2	10250001	10300000		Improvement	**6**	7400001	7450000	Domestication	
2	10400001	10550000		Improvement	**6**	8800001	8850000	Domestication	Improvement
2	11250001	11300000		Improvement	**6**	8850001	8900000		Improvement
2	11600001	11700000		Improvement	**6**	9700001	9900000		Improvement
2	12350001	12400000		Improvement	**6**	12800001	12850000	Domestication	
2	15100001	15150000		Improvement	**6**	15900001	15950000		Improvement
2	15450001	15500000	Domestication		**6**	16100001	16250000		Improvement
2	15750001	15800000	Domestication		**6**	16300001	16400000		Improvement
2	16600001	16900000		Improvement	**6**	16750001	16800000	Domestication	
2	16950001	17000000	Domestication		**6**	19850001	19900000		Improvement
2	22800001	22850000	Domestication		**6**	21250001	21400000	Domestication	
2	23600001	23700000	Domestication		**6**	24550001	24600000	Domestication	Improvement

2	23750001	24000000		Improvement	**6**	28250001	28300000	Domestication	
2	24050001	24100000	Domestication		**6**	28300001	28350000	Domestication	Improvement
2	24150001	24200000	Domestication		**6**	28400001	28450000		Improvement
2	24250001	24300000		Improvement	**6**	28550001	28900000	Domestication	
2	25100001	25150000	Domestication		**7**	3150001	3200000		Improvement
2	25700001	25750000	Domestication		**7**	8800001	8850000	Domestication	
2	26000001	26050000		Improvement	**7**	8950001	9050000		Improvement
3	1500001	1550000	Domestication	Improvement	**7**	12450001	12500000	Domestication	
3	2100001	2150000	Domestication		**7**	13500001	13600000	Domestication	
3	2850001	2900000	Domestication		**7**	13750001	13900000		Improvement
3	4550001	4600000	Domestication		**7**	14950001	15050000	Domestication	
3	4650001	4700000	Domestication		**7**	15400001	15450000	Domestication	
3	5200001	5300000		Improvement	**7**	15600001	15650000	Domestication	
3	5300001	5350000	Domestication		**7**	17050001	17100000	Domestication	
3	7500001	7550000	Domestication		**7**	17150001	17200000	Domestication	
3	8050001	8100000	Domestication		**7**	17300001	17350000	Domestication	
3	8550001	8600000	Domestication		**7**	17750001	17800000		Improvement
3	8650001	8750000	Domestication		**7**	17850001	17900000	Domestication	
3	8850001	8900000	Domestication		**7**	18900001	18950000	Domestication	
3	9100001	9200000	Domestication		**7**	19050001	19200000		Improvement
3	12450001	12500000	Domestication		**7**	19700001	19750000	Domestication	
3	12600001	12650000	Domestication		**7**	20450001	20500000	Domestication	
3	13000001	13050000		Improvement	**7**	20650001	20700000		Improvement
3	13100001	13150000		Improvement	**7**	20700001	20750000	Domestication	Improvement
3	13450001	13500000		Improvement	**7**	21850001	21950000		Improvement
3	13550001	13650000		Improvement	**7**	22000001	22050000	Domestication	Improvement
3	13850001	13900000	Domestication		**7**	22050001	22100000	Domestication	
3	14700001	14750000		Improvement	**7**	22100001	22250000		Improvement
3	16000001	16050000	Domestication		**8**	1050001	1100000		Improvement
3	16550001	16600000	Domestication		**8**	1900001	1950000		Improvement
3	18700001	18750000		Improvement	**8**	2600001	2700000		Improvement
3	18950001	19050000		Improvement	**8**	2750001	2900000		Improvement
3	19050001	19250000	Domestication		**8**	3350001	3400000		Improvement
3	19300001	19350000		Improvement	**8**	8200001	8250000		Improvement
3	19400001	19450000		Improvement	**8**	10450001	10500000		Improvement
3	20600001	20650000	Domestication		**8**	11700001	11750000	Domestication	
3	21200001	21300000		Improvement	**8**	12550001	12650000	Domestication	
3	21400001	21500000	Domestication		**8**	12850001	12900000	Domestication	
4	1650001	1950000		Improvement	**8**	13150001	13200000		Improvement
4	2000001	2300000		Improvement	**8**	14150001	14200000	Domestication	
4	3350001	3400000		Improvement	**8**	14450001	14500000	Domestication	
4	3700001	3750000	Domestication		**8**	14600001	14650000	Domestication	
4	6800001	6850000	Domestication		**8**	14700001	14750000	Domestication	
4	7600001	7650000	Domestication		**8**	15700001	15750000	Domestication	

4	7700001	7850000	Domestication	**8**	18300001	18400000	Domestication
4	7950001	8150000	Domestication	**8**	19800001	19850000	Domestication
4	8350001	8500000	Domestication	**8**	21550001	21800000	Domestication

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Supplementary Table 13: Candidate genes identified within the overlapping regions of domestication and improvement sweep and fruit weight or soluble solid content association analysis.

	Biological process	Peach gene ID
The overlapping region of improvement sweep and fruit weight association siganls	Nitrogen compound metabolic process	ppa007510m, ppa002331m, ppa021345m, ppa012648m
	Catabolic process	ppa011112m, ppa004836m, ppa005453m
	Biosynthetic process	ppa007021m, ppa007023m, ppa021345m, ppa007510m, ppa014786m
	Macromolecule metabolic process	ppa002234m, ppa002331m, ppa004836m, ppa005453m, ppa011112m, ppa012641m, ppa014805m, ppa021345m, ppa024695m, ppa024757m
	Cellular metabolic process	ppa002234m, ppa002331m, ppa007021m, ppa007023m, ppa007510m, ppa011112m, ppa012641m, ppa012648m, ppa014786m, ppa014805m, ppa021345m, ppa024695m, ppa024757m
	Primary metabolic process	ppa002234m, ppa002331m, ppa002727m, ppa002732m, ppa004378m, ppa004836m, ppa005453m, ppa007021m, ppa007023m, ppa007510m, ppa009638m, ppa009641m, ppa009655m, ppa011112m, ppa012641m, ppa012648m, ppa014786m, ppa014805m, ppa021345m, ppa024695m, ppa024757m
	Oxidation reduction	ppa003219m, ppa004476m, ppa004495m, ppa004579m, ppa004947m, ppa014786m, ppa020113m, ppa026124m
	Cellular process	ppa000110m, ppa000314m, ppa001323m, ppa002234m, ppa002331m, ppa003476m, ppa004575m, ppa007021m, ppa007023m, ppa007510m, ppa011112m, ppa012641m, ppa012648m, ppa014786m, ppa014805m, ppa015394m, ppa015909m, ppa021345m, ppa021446m, ppa022308m, ppa024695m, ppa024757m, ppa027119m
	Cellular component organization	ppa000314m, ppa021446m, ppa022308m
	Pigmentation	ppa000110m, ppa004575m, ppa015394m
	Cellular component biogenesis	ppa003476m
	Response to stimulus	ppa002331m
	Localization	ppa027119m, ppa027119m
	Establishment of localization	ppa027119m, ppa015909m
	Biological regulation	ppa000110m, ppa004575m, ppa015394m, ppa021277m
	No terms assigned in this category	ppa000012m, ppa001708m, ppa002229m, ppa002451m, ppa003022m, ppa004401m, ppa004482m, ppa004671m, ppa005479m, ppa006158m, ppa006283m, ppa006728m, ppa010383m, ppa010699m, ppa010702m, ppa010703m, ppa011409m, ppa012185m, ppa012267m, ppa012348m, ppa012942m, ppa013169m, ppa013815m, ppa015556m, ppa015814m, ppa016961m, ppa017589m, ppa018285m, ppa018314m, ppa018337m, ppa018787m, ppa019578m, ppa019735m, ppa020139m, ppa020189m, ppa020346m, ppa021643m, ppa021765m, ppa022615m, ppa022622m, ppa023020m, ppa024416m, ppa025152m, ppa025538m, ppa025838m, ppa025855m, ppa026236m, ppa026854m, ppb021969m
The overlapping	Catabolic process	ppb021028m, ppa015079m, ppa015434m, ppa026388m, ppb019796m

region of domestication sweep and soluble solid content association siganls	Nitrogen compound metabolic process	ppa003404m, ppa024202m
	Biosynthetic process	ppa024202m, ppa014441m, ppa003251m, ppa003404m
	Macromolecule metabolic process	ppa001625m, ppa003651m, ppb021028m, ppa024202m, ppa014441m, ppa006217m, ppa015079m, ppa015434m, ppa026388m, ppb019796m
	Cellular metabolic process	ppa001625m, ppa003651m, ppa024202m, ppa014441m, ppa006217m, ppa003251m, ppa003404m
	Primary metabolic process	ppa001625m, ppa003651m, ppb021028m, ppa006217m, ppa014441m, ppa015079m, ppa015434m, ppa026388m, ppb019796m, ppb021028m, ppa003404m, ppa003251m
	Oxidation reduction	ppa007597m, ppa007600m, ppa014989m, ppa024861m, ppa002564m, ppa003251m
	Cellular process	ppa001625m, ppa003651m, ppa024202m, ppa014441m, ppa006217m, ppa003251m, ppa003404m
	Localization	ppa010017m
	Establishment of localization	ppa010017m
	No terms assigned in this category	ppa008169m, ppa009145m, ppa011448m, ppa018288m, ppa021260m, ppa021752m, ppa023132m, ppa023632m, ppa023728m, ppa025543m, ppb016181m, ppb022060m, ppb023061m, ppa001962m, ppa005637m, ppa007362m, ppa009249m, ppa010706m, ppa011619m, ppa014427m, ppa015483m, ppa015866m, ppa016251m, ppa018013m, ppa018087m, ppa018183m, ppa020146m, ppa020360m, ppa021260m, ppa021786m, ppa022180m, ppa024597m, ppa025357m, ppb019814m, ppa025795m, ppa000835m, ppa005874m, ppa005999m, ppa008497m, ppa010592m, ppa010704m, ppa017699m, ppa018881m

Supplementary Table 14: Agronomic variation of the soluble sugar content and titratable acid trait in 2014 in edible landraces and improved varieties of the 129 resequencing accessions.

Trait		Ornamental landrace	Edible landrace	Improved variety		
				Total	Occidental	Oriental
	Accession number	9	53	55	10	45
Soluble sugar content (%)	Minimum value	10.03	8.10	7.55	8.28	7.55
	Maximal value	14.71	15.55	20.28	12.50	20.28
	Average	12.57	11.39	11.32	10.43	11.66
	Standard deviation	2.24	1.72	2.51	1.37	2.78
Titratable acid (%)	Minimum value	0.57	0.16	0.14	0.51	0.14
	Maximal value	1.08	1.18	0.96	0.96	0.64
	Average	0.85	0.45	0.38	0.68	0.27
	Standard deviation	0.23	0.27	0.24	0.16	0.14

198 **Supplementary Table 15: Whether is the regions with abnormal low r^2 across**

199 **whole peach genome under domestication.**

Scaffold	Physical location		LD		D'/r^2	Under domestication
	Start point	End point	D’	r^2		
1	45300001	45350000	0.0981	0.0012	81.75	Yes
4	7600001	7650000	1	0.0173	57.80347	Yes
2	9000001	9050000	0.07421	0.00154	48.18831	Yes
8	13100001	13150000	0.8541	0.02204	38.75227	
4	14150001	14200000	0.60896	0.01818	33.49615	
5	18050001	18100000	0.55588	0.0234	23.75556	Yes
5	15600001	15650000	0.54655	0.02504	21.82708	
8	21450001	21500000	0.84545	0.04381	19.29811	
1	38850001	38900000	0.77029	0.04148	18.57015	
6	28600001	28650000	0.73592	0.04457	16.51155	Yes
1	38900001	38950000	0.59021	0.03697	15.96457	
1	38800001	38850000	0.58177	0.03651	15.93454	
4	24100001	24150000	0.73771	0.04673	15.78665	
4	2050001	2100000	0.91905	0.06189	14.84973	
4	16300001	16350000	0.54691	0.03787	14.44177	
1	16200001	16250000	0.58402	0.0432	13.51898	
4	17100001	17150000	0.60835	0.04538	13.40569	
5	12250001	12300000	0.48893	0.03689	13.25373	Yes
7	15050001	15100000	0.49892	0.03798	13.13639	
3	12850001	12900000	0.56495	0.04369	12.93088	
2	8200001	8250000	0.49557	0.03955	12.53021	
1	41300001	41350000	0.48248	0.03852	12.52544	Yes

Supplementary Table 16: Correlation between the geographic origin and the hierarchical cluster analysis of the landrace groups.

Geographic population	Total	Dendrogram based genetic similarity						χ^2
		Subgroup1	Subgroup2	Subgroup3	Subgroup4	Subgroup5	Subgroup6	
SC	2	2	0	0	0	0	0	χ^2=64.15
MLCJ	12	2	0	5	1	4	0	P＜0.01
NC	11	0	1	7	0	3	0	$\chi^2_{0.01,25}$ =
NWC	11	0	0	0	11	0	0	44.31
NEC	1	0	0	1	0	0	0	
YGC	3	0	0	0	0	1	2	
Total	40	4	1	13	12	8	2	

Supplementary Notes 1

Polymorphism change during peach domestication. Different with previous study which focused on genomic polymorphism, we mainly analyzed the heterozygosity rates of all accessions (Supplementary Table 3) and on how they differed between species groups to evaluate genomic variation. Within the wild species group, heterozygosity rates increased from almond (1.90%) to *P. mira* (2.61%), and increasing abruptly in *P. davidiana* (5.91%). As peach evolution continued, heterozygosity rates decreased, as can be determined from the values obtained for *P. kansuensis* (1.60%) and ornamental landraces (can be reckoned as wild *P. persica*, 1.25%) (Supplementary Table 5). This general decrease in heterozygosity rates during evolution might be due to peach's self-pollination system[1]. The abnormally high diversity found in *P. davidiana*, on the other hand, is in accordance with its wider geographical, climatic, and cultural range compared to the other *Prunus* species. Among the cultivated groups, the heterozygosity rate observed in the 55 improved varieties was higher than that of the 53 edible landraces (2.50% vs. 2.32%), suggesting that improved varieties tend to be more heterozygous than edible landraces (Supplementary Table 5). However, improved varieties had a lower number of SNPs than edible landraces (Supplementary Table 6). This trend might be explained by the outcross of most Chinese, European, and North American cultivars with a few founder parents, such as 'Chinese cling'[2]. And among improved varieties, we found a small reduction in the π value of all 10 occidental varieties (1.38×10^{-3}) in contrast to the other 45 oriental ones (1.55×10^{-3}) (Supplementary Table 6). The low polymorphism observed in occidental varieties is also in agreement with their low heterozygosity rate (1.57%) compared to oriental peach (2.71%) (Supplementary Table 5). However, the unbalanced sample number (10 vs. 45) might be contributing to the observed differences between these two groups. The relationships depicted here were consistent with the conclusions of the International Peach Genome Initiative[3], which suggested that a bottleneck existed between eastern and western varieties, related to the recent introduction of peach to the United States (16^{th} to 19^{th} century).

The evolution of different geographic subgroups in landraces. The edible landraces group were divided into six subgroups according to phylogenetic analysis (Supplementary Fig. 24).

Simultaneously, these landraces also can be clustered into six populations based on geographic origin (Supplementary Table 3): Northwest China (NWC), YunGui plateau (YGC), Northeast China (NEC), Northern China (NC), the middle and lower reaches of the Changjiang River (MLCJ), and Southern China (SC). Here we found that subgroup 1 should be considered as an admixed population as it contains accessions from the SC and MLCJ populations. Subgroup 2 consisted of only one accession from the NC population whereas subgroups 3 and 5 were mostly composed of NC and MLCJ populations' accessions. Subgroup 4 contained 12 accessions, all of which originated from the NWC population, and subgroup 6 included two accessions from the YGC population (Supplementary Fig. 3c). The correlation between the two classifications was analysed in all accessions, and the highly significant association ($\chi 2 = 64.15 \geq \chi_2^{0.01, 25} = 44.31$) between the hierarchical clusters (subgroups) based on geographic regions and the phylogenetic groups was found, revealing that peach evolution corresponded mirrored anthropogenic activity across geographic regions (Supplementary Table 16).

Meanwhile, although it was widely accepted that peach domestication originated in NWC[4] or NC[5], a recent archaeological study proposed that the lower Yangzi River valley (equivalent to MLCJ in this study) was the primary site of peach selection and domestication[6]. According to Supplementary Fig. 3a, subgroup 1 comprises the most primitive edible landraces, which is in agreement with the archaeological data[6] because SC and MLCJ populations are within the Yangtze and Pearl river valleys, respectively, being areas of ancient human activity. As domestication can be regarded as the first stage of plant breeding, and geographical differences among cultivated species are likely to result from migration and subsequent differential selection by local farmers[7], peach distribution in the SC and MLCJ regions may reflect the influence of human activity on the evolution of peach.

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