AtLEA4-1	MQSAKQKISDMASTAKEKMVICQAKADEKAERAMARTKEEKEIAHQRRKAKEAEANMDMH
AtLEA4-2	MQSAKEKISDMASTAKEKLNIGGAKAQGHAEKTMARTKKEKKLAQEREKSKEAQAKADLH
AtLEA4-5	MQSMKETASNIAASAKSGMDKTKATLEEKAEKMKTRDPVQKQMATQVKEDKINQAEMHKR
	*** *:. *::*::**. : *. : :**: :* :*::* : .: * :*: . :
AtLEA4-1	MAKAAHAEDKLMAKQSHYHVTDHGPHVPQQAPVPAPAPVMGHGYGHNPT
AtLEA4-2	QSKAEHAADAQVT
AtLEA4-5	ETRQHNAAMKEAAGAGTGLGLGTGTHSTTGQVGHGTGTHQMSALPGHGTGQLTD
	:: :* ** :. *
AtLEA4-1	GVTSVPPQTYHPTYPPTGHHNHHHY
AtLEA4-2	GANYPPGQI
AtLEA4-5	RVVEGTAVTDPIGRNTGTGRTTAHNTHVGGGGATGYGTGGGYTG

В

Α



**Supplemental Figure S1.** Sequence similarity between group 4 LEA proteins in Arabidopsis and prediction of coiled-coil regions in these proteins. A) Sequence alignment of group 4 LEA proteins showing the high conservation among the three members at their amino portion. The highest similarity was found between AtLEA4-1 and AtLEA4-2 proteins. Identities are marked with asterisks (\*) and similarities with dots (.) (:). Sequences were obtained from the Swissprot database for previously reported LEA4 proteins (listed as LEA\_1, PFAM 03760) B) Predicted coiled-coil regions of group 4 LEA proteins are present in the conserved N-terminal region, while the predicted C-terminal (which varies in length 20-70 residues) is predicted to be unstructured or "random-coil" (Lupas et al., 1991). The "y" axis represents the confidence on the coiled-coil prediction, using different lengths of the coiled-coil (14, 21, 28 residues).



**Supplemental Figure S2**. Phenotypic analysis of plants overexpressing AtLEA4-5 protein. A) Wild type (WT) plants and five homozygous transgenic lines were germinated *in vitro* and transplanted to a low-water-retention substrate, kept under optimal irrigation conditions with nutrient solution until they reached the flowering stage; watering was stopped at this point. B) A representative image of Arabidopsis plants after 14 days of dehydration ( $\Psi_{substrate} = -6.45 (\pm 0.57)$  MPa). C) Graph showing the water loss rate from the substrate (±SD) as a percentage of the initial water content in each pot during the course of the drought experiment. D) Detail of floral buds, inflorescences and leaves to denote severe dehydration in all the aerial tissues and senescence of some rosette leaves. Plants were rehydrated with nutrient solution at this point. E) Arabidopsis plants after 10 days of rehydration showing that transgenic plants were capable not only of leaf recovery, but also bud maintenance and recovery, while WT plants were only able to recover some rosette leaves but the floral axis became senescent and could not maintain their reproductive tissues.



Supplemental Figure S3. Description of the transposon insertion mutant (dSpm 4-5) in the AtLEA4-5 gene. A) Construct used to select stable dSpm transpositions in the SLAT mutant collection from the John Innes Centre (image reproduced from Tissier et al. Plant Cell 11:1841-1852, 1999). An Enhancer/Suppressor-mutator (En/Spm) element was introduced into Arabidopsis in a single T-DNA construct, which carried a non-autonomous defective Spm (dSpm) element with a phosphinothricin herbicide resistance (BAR) gene, a transposase expression cassette, and a counter-selectable gene. B) Location of the stable dSpm insertion in the promoter region of AtLEA4-5 gene (208 bp from the ATG codon) and restriction sites used for Southern blot analysis. Mutant seeds were obtained from the NASC European Arabidopsis Stock Centre (N122943). Plants were grown from each seed and its progeny was collected separately from each plant. C) Southern blot analysis using a specific probe to detect the insertion of dSpm in the expected region of AtLEA4-5 gene promoter and genomic DNA (40  $\mu$ g) extracted from wild type (WT) and mutant plants from two T<sub>4</sub> lines (dSpm 1, 2). Genomic DNA was digested with Clal or HindIII, which gave a restriction fragment in the expected size for WT plants and a higher fragment in the mutant lines, in agreement to the transposon size and orientation. Digestion with BamHI was used as negative control.

1) Search for a region of 22 nucleotides with maximal identity between AtLEA4-1 and AtLEA4-2 transcripts.

Atlea4-1 AUGCAAUCGGCGAAACAGAAGAUAAGCGAUAUGGCUAGUACAGCCAAGGA

2) Search for a region with the least number of unpairings with the microRNA template (ath-miR159a).

AtLEA4-1/2 mRNA	5′	GACAUGGCCAGUACAGCCAAG	3′
ath-miR159a	3′	AUCUCGAGGGAAGUUAGGUUU	5′

3) Introduce point mutations in the microRNA template (ath-miR159a) to eliminate unpaired sites.

AtLEA4-1/2 mRNA	5′	GACAUGGCCAGUACAGCCAAG 3'
a-miRLEA4-1/2	3′	<u>CUGUACC</u> GG <u>UC</u> A <u>UG</u> UCGGUUU5′

4) From the original stem-loop precursor sequence in ath-miR159,

Α

	AA
ath-miR159a* 5'-	- UAGAGCUCCUU AGUUCAAA
ath-miR159a 3'-	- AUCUCGAGGGA UUAGGUUUAG
	U G GCU UUA A U
ath-miR159a* 5'-	- A A CC A G UCAAA
a-miRLEA4-1/2 3'-	- U U GG U U GGUUU
	C G ACC UCA G C

5) restore the secondary structure with the corresponding changes in the sequence of ath-miR159\*.



## pART27-AtLEA4-5 (RNAi 4-5)

**Supplemental Figure S4.** Design of artificial microRNA to silence *AtLEA4-1* and *AtLEA4-2* genes and construction of RNAi-triggered silencing for *AtLEA4-5* gene. A) Point mutations were inserted into *ath-miR159a* precursor by PCR in order to target *AtLEA4-1* and *AtLEA4-2* genes as silencing targets of artificial microRNA (*a*-*miR 4-1/2*) as depicted in the diagram. B) RNAi silencing of *AtLEA4-5* gene was achieved by constitutively expressing the ORF as inverted repeats to trigger the specific silencing of the endogenous gene by siRNAs.



**Supplemental Figure S5**. Protein reduction levels in PTGS single, double and triple mutants of *AtLEA4* gene family subjected to drought. Western blot analysis using specific antibodies against each member of AtLEA4 protein family and total protein extracts (10  $\mu$ g) from adult plants under dehydration treatments to show the reduction in the accumulation levels of silenced mutants compared to wild type plants (WT). The homozygous transgenic lines used were: RNAi-directed silencing mutant for *AtLEA4-5* gene (RNAi 4-5), artificial microRNA-directed silencing double mutant for *AtLEA4-1* and *AtLEA4-2* transcripts (a-miR 4-1/2), triple silencing mutant described above (Triple mutant). Reversible stain after transfer is shown as loading reference. The arrowhead indicates the protein band ( $\approx$  30 kD) specifically detected by the antibodies against AtLEA4-2 protein.



**Supplemental Figure S6**. Phenotypic analysis of  $T_2$  homozygous plants expressing an RNAi to silence *AtLEA4-5* transcript after recovery from dehydration. Wild type (WT) and three silenced lines (transgenic lines 3 - 5 as in Fig. 8), which showed significant reduction of AtLEA4-5 protein levels under drought were used. Plants were grown in a greenhouse, watered until flowering and subjected to dehydration during a 12 d period ( $\Psi_{substrate} = -4.62$  (± 0.62) MPa). A) Average number of floral and axillary buds per plant were counted after 6 d of recovery. Bars indicate means (±SE, n=7), significant differences between groups were found with P = 0.0273, using one-way ANOVA. B) Rehydrated plants were kept under optimum irrigation with nutrient solution and seeds were harvested from each plant until senescence. Bars indicate means (±SE, n=3). Significant differences were found between groups with P = 0.0133, using one-way ANOVA. Different letters show significant differences between groups as indicated by Duncan's post-tests (P<0.05). C) Water loss rate from the substrate (±SD) during dehydration for mutant lines with reduced levels of AtLEA4 family members, shown as a percentage of the initial water content in each pot during the course of the drought experiment.

Supplemental Figure S7. Conserved
motifs and their arrangement in the LEA4
protein sequences from plants. Motifs
were found using MEME from 77 protein
sequences obtained from protein and
EST databases (Bailey and Gribskov,
1998). Based on the low e-value, the two
last sequences (RICCO and CYCPE)
were not used for further analysis.

SISIR2	1.5	e-111	4 1 2 7 - 9 3 10 · 5 ·
CICIDI	1.6.	. 111	
SISIKI	1.56	e-III	<b>4 1 2 7 9 3 10 • 3</b> •
THEH.	A 3.2e	e-108	4 1 2 7 <mark>- 9 3</mark> 10 • 5 •
PDAN	A 1.	107	
DKAN	A	e-107	+ 1 2 7 <b>3</b> 10 <b>3</b>
ARAT	H1 8.2e	e-102	4 1 2 7 • 9 3 10 • 5 •
PHAV	11 63	76-91	4 1 2 7 3 10 5
I IIA V	0 0	10-51	
MEDT	R2 1.5	5e-89	4 <mark>- 1 2 7 - 5 3 • 10 • 5</mark>
LACS	A1 5.9	9e-88	4 1 2 6 8 5 -
-			
LACS	A3 2.1	le-87	<mark>4   2 6 - 8 5 -</mark>
SOYB	N1 2.6	6e-86	4 1 2 7 5 3 10
LACS	A2 4	4e-85	
CITSI	7.4	4e-76	4 1 2 7 3 10 - 5
CI VT	~ 7	1 - 60	
GLII	0 7.1	1e-08	
PHYP	A1 1.1	1e-61	
POPT	VI 1.1	16-53	4 1 2 7 9 3 5
PETSP	·   1	le-42	<b>4 1 2 7 -</b> 10 <b> 5 -</b>
POPTI	V2 5.8	8e-41	4 1 2 6 5
FUDE		7- 41	
EUPES	5 0	/e-41	
HELA	N I	1e-40	4 - 1 2 7
TOPA	C 12	70.40	
TOBA	C 1	/e-40	
ALLC	E1 1	1e-39	4 1 2 7 9
PHYP	A2 2 9	9e-39	4 - 1 2 7 -
-		37	
PHYP	A3 4.1	7e-39	
ARAH	Y1 5.3	2e-39	4 1 2 6 5 -
VITVI	2 5.0	be-39	
ARAT	H2 1.9	9e-38	4 1 2 6 5
DE :		5 a 2 a	
PEA	2.:	5e-38	4 1 2 7
SOYB	N2 3.4	4e-38	4 1 2 6 5
VITW	1 7	80.20	4 1 2 7 5 5
v11Vl	1 7.8	00-38	
IPONI	1.3	3e-37	4 1 2 6 — 5 <del>-</del>
LYCE	5 5	46-37	
- ETCE	5 5.4	-c-57	
FESAF	R 9.7	7e-37	4 <u>1</u> <u>2</u> <u>6</u> <u>5</u> <u>-</u>
MEDS	A2 1	2e-36	
	1.2		
ANTM	IA 4.3	7e-36	4 2 7
ARAH	Y2 1.1	le-35	4 - 1 2 7 -
- In-			
IPOBA	1.1	1e-34	
BARN	A 1.5	5e-34	4 1 2 6 - 5 - 5 -
CADE	N	00.24	
CAPA	IN 7.9	9e-34	
MEDS	A1 1.3	3e-33	4 1 2 6 5
-			
ILICAN	1 1 4	6	
JUGNI	1.0	6e-33	4 1 2 5 -
JUGNI	1 1.0 .2 4.2	6e-33 2e-33	4 1 2 5 - 4 1 2 6 5
JUGNI PINTA GOSH	I 1.6 .2 4.2 I 8.4	6e-33 2e-33 4e-33	4         1         2         5           4         1         2         6         5
JUGNI PINTA GOSH	1 1.6 .2 4.2 I 8.4	6e-33 2e-33 4e-33	4         1         2         5           4         1         2         6         5           1         2         7         -         -
JUGNI PINTA GOSH SESIN	1 1.6 .2 4.2 1 8.4 2	6e-33 2e-33 4e-33 2e-32	4     1     2     5       4     1     2     7       4     1     2
JUGNI PINTA GOSH SESIN	1 1.6 .2 4.2 I 8.4 A4 1.5	6e-33 2e-33 4e-33 2e-32 7e-31	4     1     2     5       4     1     2     6       4     1     2     7
JUGNI PINTA GOSH SESIN ORYS	I 1.6 .2 4.2 I 8.4 A4 1.7	6e-33 2e-33 4e-33 2e-32 7e-31	4     1     2     5       4     1     2     6       4     1     2     7       4     1     2     -       4     1     2     -
JUGNI PINTA GOSH SESIN ORYS PICGL	I     1.0       .2     4.2       I     8.4       .2     2.2       A4     1.7       .2     2.2	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31	4     1     2     5       4     1     2     6       5     5       1     2     7       4     1     2       5     6       4     1       2     6       4     1       2     6
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC	I 1.6 .2 4.2 I 8.4 A4 1.7 .2 2.2 R 4	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     7
JUGNI PINTA GOSH SESIN ORYS PICGL MESC	I 1.6 .2 4.2 I 8.4 A4 1.7 .2 2.2 R 4 A2 77	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31 3e-31	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS	I 1.6 .2 4.2 I 8.4 A4 1.7 .2 2.2 R 4 A2 7.3	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 2e-31 4e-31 3e-31	4     1     2     5       4     1     2     6       5     5       4     1     2       4     1     2       6     -       4     1     2       7     10         4     1         7     3         5
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS	I 1.0 2 4.2 I 8.4 A4 1.7 2 2.2 R 4 A2 7.3 U3 2.7	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31 3e-31 7e-30	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       5     3     5
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV	I 1.6 2 4.2 I 8.4 2 A4 1.7 2 2.2 R 2 A2 7.2 I 1.6 I 1.6 I 1.6 I 1.6 I 1.6 I 1.6 I I 1.6 I I 1.6 I I I I I I I I I I I I I I I I I I I	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31 3e-31 7e-30 9e-29	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     6       4     1     2     7       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV	I 1.6 2 4.2 I 8.4 2 A4 1.7 2 2.2 R 2 A2 7.2 I 1.8 I 1.8	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31 3e-31 7e-30 9e-29	4     1     2     5       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV PANV TRIMO	I         1.6           A2         4.2           I         8.4           A4         1.7           A4         1.7           A2         2.2           A2         7.2           IU3         2.7           I         1.5           D         3	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31 3e-31 7e-30 9e-29 3e-29	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS HORV PANV TRIMO SACO	I 1.6 A 4.1 A 4 1.7 A 4 1.7 A 4 1.7 A 2 2.2 R 2 A 2 7.2 U 3 2.7 I 1.5 D 2 F 6.1	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31 3e-31 7e-30 9e-29 3e-29 1e-29	4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       6         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS HORV PANV TRIMO	I         1.0           I         1.0           I         8.4           I         8.4           I         2.2           A4         1.7           .2         2.0           R         2           A2         7.3           I         1.8           O         2           F         6.1           T         7.2	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 2e-31 4e-31 3e-31 7e-30 9e-29 3e-29 1e-29	4     1     2     5       4     1     2     7       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV PANV TRIMC SACO AGRS'	I         1.6           1         8.4           1         8.4           1         8.4           1         2.2           A.4         1.7           .2         2.2           R         2           A.2         7.3           I         1.5           D         5           F         6.1           T         2.6	6e-33 2e-33 4e-33 2e-32 7e-31 2e-31 4e-31 3e-31 7e-30 9e-29 3e-29 1e-29 6e-28	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV PANV TRIMO SACO AGRS <sup>2</sup>	I         1.0           I         1.0           I         8.4           I         2           A4         1.7           2         2.2           R         2           A2         7.3           I         1.8           O         2           F         6.1           T         2.6           H3         2	2e-33         2e-32           2e-32         2e-32           7e-31         2e-31           4e-31         3e-31           7e-30         99e-29           99e-29         3e-29           1e-29         1e-29           1e-28         3e-28	4     1     2     5       4     1     2     7       4     1     2     7       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7
JUGNI PINTA GOSH SESIN PICGL MESC ORYS HORV PANV TRIMO SACO AGRS <sup>2</sup>	I         1.6           I         8.4           I         8.4           I         2           A4         1.7           2         2.2           R         4           A2         7.3           IU3         2.7           I         1.5           D         2           F         6.1           T         2.6           H3         3	2e-33           4e-33           4e-33           4e-33           4e-32           2e-32           7e-31           2e-31           4e-33           3e-31           7e-30           9e-29           3e-29           1e-29           6e-28           3e-28           5e-28	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         5       -       4         4       1       2       6         5       -       <
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS HORV PANV TRIMO SACO AGRS <sup>2</sup> ARAT	I         1.6           .2         4.2           I         8.4           .2         2.2           A4         1.7           .2         2.2           R         4           A2         7.5           U3         2.7           I         1.5           D         2           F         6.1           T         2.6           H3         2           Z         6.5	2e-33 4e-33 2e-32 2e-32 7e-31 2e-31 4e-31 3e-31 4e-31 3e-31 9e-29 3e-29 9e-29 1e-29 1e-29 6e-28 3e-28	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV PANV TRIMO SACO AGRS <sup>-</sup> ARAT PSEM2 PINTA	I         1.6           I         8.4           I         8.4           I         2.2           R         2           A4         1.7           I         1.8           I         2.2           R         2           A2         7.3           I         1.5           D         2           F         6.1           T         2.6           H3         3           Z         6.5           I         2.3	2e-33           4e-33           2e-32           7e-31           2e-31           4e-31           3b-31           7e-30           99-29           3a-29           1e-29           66e-28           3a-28           5e-28           3a-27	4     1     2     5       4     1     2     7       4     1     2     7       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV PANV TRIMC SACO AGRS' ARAT PSEM2 PINTA PHYP.	I         1.6           I         1.6           I         8.4           I         2           A4         1.7           I         2.2           R         2           A42         7.3           I         1.5           D         2           F         6.1           T         2.6           H3         3           Z         6.5           I         2.5	2e-33           4e-33           4e-33           7e-31           2e-32           7e-31           3a-31           7e-30           99-29           99-29           11e-29           66e-28           3a-28           56-28           3a-27           99-27	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS HORV PANV TRIMC SACO AGRS ARAT PSEM2 PINTA PHYP, CDAT	I         1.6           I         1.6           I         8.4           I         8.4           I         2.2           AA4         1.7           .2         2.2           R         4           AA2         7.5           II         1.5           D         2           F         6.1           T         2.6           H3         5           Z         6.5           II         2.5           AA4         6.5	2e-33 4e-33 7e-31 2e-31 2e-31 3e-31 3e-31 3e-31 7e-30 99e-29 99e-29 1e-29 1e-29 1e-29 8e-28 8e-28 8e-28 8e-28 8e-28 8e-28	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     6
JUGNI PINTA GOSH SESIN PICGL MESC ORYS HORV PANV TRIMO SACO AGRS' ARAT PSEM2 PINTA PHYP, CRAPI	I         1.6           I         8.4           I         8.4           I         2.2           I         8.4           I         2.2           R         4           A4         1.7           I         1.5           I         1.5           D         5           F         6.1           T         2.6           H3         5           Z         6.5           I         2.5           H3         5           Z         6.5           L         1.2	33         34           4e-33         4e-33           2e-32         37           77e-31         2e-31           2e-31         38-31           77e-30         399-29           99e-29         38-29           91e-29         38-29           91e-29         38-29           95e-28         38-28           56-28         38-27           99e-27         99e-27	4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       <
JUGNI PINTA GOSH SESIN ORYS PICGLE ORYS FARV CRYS AGRS A AGRS A RAT PSEM PINTA PINTA PHYP, CRAPI ALLCC	i         1.0.0           i         1.0.1           i         1.0.2           i         1.0.2           i         8.4           i         2.2           i         2.2           i         2.2           i         1.0.1	2e-33           4e-33           4e-32           2e-32           7e-31           2e-32           3a-31           7e-30           3a-29           3a-29           3a-29           1e-29           3a-29           3a-29 </td <td>4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     6</td>	4     1     2     5       4     1     2     6       4     1     2     6       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     7       4     1     2     6
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORV PANV PANV TRIMC SACO AGRS ARAT PINTA PHYP, CRAPI ALLCI	i         1.0.1           i         1.0.2           4.2.2         4.2.4           i         8.4           1.0.2         2.2.4           2.2         2.2.2           2.2         2.2.2           1.1         1.9.2           2.2         2.2.2           3.2         7.7.1           1.1         1.9.2           2.2         6.3.1           2.2         6.3.1           2.2         6.3.1           2.2         6.3.2           4.4         6.3.2           2.2         2.2.2	6e-33           2e-33           4e-32           2e-32           7e-31           2e-31           4e-31           3e-31           7e-30           90-29           3e-29           1e-29           3e-28           3e-28           5e-28           3e-27           90-27           2e-25           3e-25	4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS PICGL ORYS PICGL ORYS SACO AGRS' ARAT PSEMJ PINTA PHYP, CRAPI ALLCI MEDT	i         1.0.1           i         1.0.2           i         4.2           i         8.8           i         2           i         1.3           i         1.2           i         2.2           i         2.2           i         2.2           i         1.3           i         1.3           i         1.5           i         1.5           i         1.5           i         1.5           i         1.5           i         1.5           i         2.2           i         1.5           i         1.5           i         2.2           i         1.5           i         2.2           i         1.2           i         1.2           i         1.1           i         1.1           i         1.1           i         1.2           i         1.2           i         1.2	33         34e-33           2e-33         34e-33           2e-32         37e-31           2e-31         3e-31           2e-31         3e-31           7fe-30         99-29           3a-29         99-29           3a-29         3e-29           3a-29         3a-29           3a-29 </td <td>4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       &lt;</td>	4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       <
JUGNI PINTA GOSH SESIN ORYS. PICGL MESC ORYS. HORVY PANV TRIMO AGRS' ARAT PEMA PINTA PEMA PINTA CRAPI ALLCI MEDT	i         1.0.1           i         1.0.2           i         1.0.2           i         8.2           i         2.2           i         2.2           i         2.2           i         2.2           i         1.0.1           i         2.2           i         1.0.1           i         1.0	3         3           2e-33         4e-33           3         2e-32           7e-31         2e-32           2e-32         3           3         3           3         3           3         3           3         3           9         9           9 <td>4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       &lt;</td>	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV TRIMC SACO AGRS' PANV TRIMC SACO AGRS' CRAPI ALLCI MEDT HORV	I         1.0.1           I         1.0.2           4.2         4.2           I         8.8           2         2.2           2.2         2.2           2.1         1.1           1.1         1.2.2           2.2         2.2           2.1         1.2.2           2.2         2.2           2.1         1.1           1.1         1.1.1           2.1         1.1           2.2         1.1           2.2         2.2           2.3         1.1           2.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.1         1.2           2.2         2.2           2.3         1.2           2.4         1.2           2.3         1.2           2.4         1.2           2.3         1.2           2.4         1.2           2.4         1.2           2.4         1.2           2.4         1.2	66-33           2e-33           2e-32           3re-32           2re-32           2re-32           3re-32           2re-32           3re-31           44-33           3e-31           44-31           3e-31           3e-31           7re-30           98-29           3e-28           3e-28           3e-28           3e-28           3e-27           99-27           2e-25           3e-25           6e-25           3e-24           6e-24	4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS HORV TRIMC SACO AGRS' ARAT PSEMJ PINTA PHYP, CRAPI ALLC MEDT LOLM HORV	1         1.0.1           1         1.0.2           4.2         4.2           4.4         1.7           8.8         2.2           2.2         2.2.2           2.2         2.2.2           2.2         2.2.2           2.2         2.2.2           2.2         2.2.2           2.2         2.2.2           2.2         2.2.2           2.3         7.3           2.4         7.5           5.7         6.1           2.2         6.3           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.1         2.2           4.2         2.2           4.3         1.2           4.4         6.5           4.5         1.2           4.6         1.2           4.7         1.2           4.8         1.2           4.9         1.2           4.1         2.2           4.2         2.2           4.3         2.2	66-33           2e-33           2e-33           2e-32           7e-31           2e-32           7e-31           2e-31           4e-33           3a-31           7e-30           9e-29           9e-29           9e-29           8a-29           1e-29           66-28           3a-27           9e-27           9e-25           9a-25           9a-25           9a-25           9a-25           9a-25           9a-25	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV PANV PANV TRIMC AGRS ARAT PSEMA PINTA PHTPA CRAPI CRAPI CRAPI LOLM	1         1.0.1           1.2         4.2           1.1         8.4           1.1         8.4           1.1         8.4           1.1         8.4           1.1         8.4           1.1         8.4           1.1         1.1           2.2         2.2           R         4           1.1         1.1           1.1         1.1           1.1         1.1           1.1         1.1           1.2         2.6           1.1         2.1           1.1         2.1           1.1         2.2           2.2         2.2           2.3         6.5           3.4         6.3           4.4         6.3           4.4         1.1           2.2         2.2           2.4         1.4           4.4         1.4           4.4         1.4           4.4         1.4	66-33           2e-33           2e-33           2e-32           7e-31           2e-32           3a-31           7e-30           3e-29           3e-24           3e-24           3e-24	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         5       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS PICGL ORYS PICGL ORYS TRIMC SACO AGRS' ARAT PHYP, CRAPI ALLCC MEDT LOLM HORV CRYJJ HORV	I         1.0.1           I         1.0.2           4.2         2.2           4.3         1.1           8.44         1.1.2           2         2.2           2.1         2           2.2         2.2           2.1         2           2.2         2.2           2.1         1.1.2           2.2         2.2           2.1         1.2           2.2         2.2           2.1         1.1.2           2.2         2.2           2.3         1.2           3         2           2.5         6.5           1.1         2.2           2.4         6.5           4.4         6.5           4.4         6.5           4.1         2.2           2.1.1         2.2           2.2         2.2           2.3         1.2           2.4         4.5           4.4         6.5           4.4         6.5           4.4         6.4           4.2         4.4           4.1         1.2           4.2	66-33           2e-33           2e-32           2e-32           2e-32           2e-32           2e-32           2e-31           2e-31           2e-31           2e-32           2e-31           2e-32           3e-31           7e-30           90-29           90-29           90-29           90-29           90-29           90-29           90-27 </td <td>4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         1       &lt;</td>	4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         1       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS PICGL ORYS HORV TRIMC SACO AGRS' ARAT PSEMU PINTA PHYP, CRAPI ALLC CRAPI ALLC CRAPI HORV CRYJJ HORV	1         1.0.1           1.2         4.2           2.2         4.2           4.4         1.7           8.8         2.2           2.2         2.2           2.2         2.2           2.4         1.7           1.7         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           1.1         1.3           2.2         2           4.4         6.5           1.1         2.2           2.4         4           4.4         6.5           1.1         2.2           2.3         2           2.4         2           2.4         2           2.4         2           2.4         2           2.4         2           2.4         2           2.4         2	66-33           2e-33           2e-33           2e-33           2e-32           7e-31           3a-31           7e-30           3a-31           7e-30           3a-29           3a-29           3a-29           3a-29           3a-28           3a-27           9e-27           2e-25           3a-25           5a-25           6a-25           6a-25           6a-21           4a-22           6a-21	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7       5         <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV PANV PANV PANV PANV TRIMC SACO AGRS ARAT PINTA PHYP, CRAPL CRAPL CRAPL HORV HORV MAIZE	1         1.0.1           1.2         4.2           2.2         4.2           3.4         1.3           4.4         1.3           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.4           1         1.5           2         2.6           3         2           4         4           4         4           4         4           4         4           4         4           4         4           4         4           4         4           4         4           4         4	66-33           2e-33           4e-33           2e-32           7e-31           2e-31           2e-32           7e-31           2e-31           3e-31           7e-30           9e-29           3e-29           1e-29           6e-28           3e-27           9e-27           2e-25           3e-25           6e-28           3e-24           6e-22           4e-22           6e-21           8e-21	4       1       2       5         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       7       3         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS PICGL ORYS PICGL ORYS PICGL ORYS TRIMC SACO AGRS' ARAT PIYP, CRAPI ALLCI MEDT LOLM HORV CRYJJ HORV MAIZI WHEA	1         1.0.1           1.2         4.2           2.2         4.2           1         8.4           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           1         1.9           2         6.3           1.1         2.2           2.4         6.5           1.1         2.2           2.4         6.5           1.1         2.2           2.4         6.5           1.1         2.2           2.4         6.5           2.7         7.7           2.4         6.5           2.2         2.2           2.4         7.4           1.0         1.2           1.0         1.2           1.0         1.2           1.0         1.2           1.0         1.2           1.0         1.2           1.0         1.2           1.1	56e-33           2e-33           2e-32           2e-32           2e-32           2e-31           2e-31           2e-31           2e-31           2e-31           2e-31           3e-31           2e-31           3e-31           3e-31           7e-30           3e-24           3e-25           3e-25           3e-25           3e-25           3e-26           3e-27           9e-29           9e-27           2e-25           3e-26           3e-27           9e-27           2e-25           3e-26           3e-27           9e-27           2e-25           3e-26           3e-27           9e-27           9e-27<	4       1       2       5         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         5       <
JUGNI PINTA GOSH SESIN ORYSS HORV PANV PANV PANV PANV TRIMC SACO AGRS' ARAT PINTA PINTA PINTA PHYP, CRAPI ALLCI MEDT LOLM HORV WHEA	1         1.0.1           1.2         4.2           1.1         8.4           1.2         2.2           2.2         2.2           R         4           4.4         1.1           8.4         1.2           2.2         2.2           R         4           4.4         1.2           2.2         2.2           R         4           4.3         7.3           1.1         1.3           1.1         1.3           1.1         1.3           1.2         2.6           1.4         6.6           1.1         1.2           1.2         2.6           1.4         6.6           1.2         2.6           2.4         6.6           1.1         2.2           2.4         4           1.1         2.2           2.4         4           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6 </td <td>56-33           2e-33           2e-32           2e-32           2e-32           7e-31           2e-32           7e-31           2e-31           2e-32           7e-31           2e-31           3e-31           7e-30           3e-31           7e-30           9e-29           3e-24           3e-28           3e-28           3e-26           3e-27           9e-29           3e-27           9e-27           2e-25           3e-24           6e-25           3e-24           6e-22           4e-22           6e-21           8e-21           2e-200           5e-20</td> <td>4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7       3         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6      </td>	56-33           2e-33           2e-32           2e-32           2e-32           7e-31           2e-32           7e-31           2e-31           2e-32           7e-31           2e-31           3e-31           7e-30           3e-31           7e-30           9e-29           3e-24           3e-28           3e-28           3e-26           3e-27           9e-29           3e-27           9e-27           2e-25           3e-24           6e-25           3e-24           6e-22           4e-22           6e-21           8e-21           2e-200           5e-20	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7       3         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV PANV TRIMC SACO AGRS ARAT PSEM2 PINTA ALCO CRAP PINTA ALLCO LOLM HORV CRYJ/ HORV MAIZI WHEA	1         1.0.1           1.2         4.2           2.2         4.2           3.4         1.1           8.4         1.1           8.4         1.1           1.1         8.4           1.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.8           2.2         2.8           2.2         2.8           2.2         2.8           2.2         2.8           2.2         2.8	56-33           22-33           22-32           22-32           22-32           22-32           22-32           22-32           22-32           22-32           22-31           22-32           32-31           32-31           32-31           32-31           32-31           32-32           33-23           32-24           32-25 </td <td>4       1       2       5         4       1       2       6       5         4       1       2       6       6         4       1       2       6       6         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6       6       6         4       1       2       6       6       6       6         4       1       2       6       6       6       6       6       6         4       1       2       6</td>	4       1       2       5         4       1       2       6       5         4       1       2       6       6         4       1       2       6       6         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6       6       6         4       1       2       6       6       6       6         4       1       2       6       6       6       6       6       6         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS PICGL ORYS PICGL ORYS PANV TRIMC SACO AGRS ARAT PINTA PSEML PINTA PSEML PINTA PSEML CRAPJ HORV MAIZI ORYS	I         1.0.1           I         1.0.2           I         2.2           I         8.4           I         2.2           I         2.2           I         1.1           I         1.2.2           I         1.1.2           I         1.1.2           I         1.1.3           I         1.1.3           I         1.1.1           I         1	56-33           22-33           44-33           22-32           22-32           22-32           22-32           22-32           32-31           22-32           33-31           72-31           34-31           72-30           99-22           33-22           34-22           99-22           33-22           34-22           36-22           38-22           38-22           38-22           38-22           38-22           38-22           38-22           38-22           38-22           38-22           38-22           38-22           38-24           44-22           56-21           58-21           58-22           58-22           58-22           58-21           58-22           58-22           58-22           58-22           58-22           58-22           58-22           58-22 </td <td>4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       <td< td=""></td<></td>	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2 <td< td=""></td<>
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV PANV PANV TRIMC SACO AGRS ARAT PSEMA PINTA CRAP! ALLCI MEDT LOLM HORV CRAP! HORV MAIZI WHEA MAIZI	I         1.0.1           1.2         4.2           2.2         4.2           3.4         1.3           4.4         1.3           8.4         1.3           8.4         1.3           1.2         2.2           2.2         2.2           R         4           4.3         1.3           1.1         1.5           1.1         1.1           1.2         2.6           1.1         1.1           2.2         2.4           1.1         2.5           2.6         6.5           1.1         2.2           1.1         2.2           1.1         2.2           1.1         2.2           1.1         2.2           1.1         2.2           1.1         2.2           1.1         2.2           1.2         2.4           1.3         2.2           1.4         2.1           1.1         2.2           1.2         2.4           1.3         2.1           1.4         2.1           1.5	56-33           26-33           22-33           44-33           22-32           22-32           22-32           22-32           22-32           22-31           22-32           22-31           22-31           22-32           32-31           72-30           99-29           33-29           11-29           36-29           36-29           36-29           36-22           36-25           36-25           36-25           36-25           36-25           36-25           36-25           36-25           36-25           36-25           36-25           36-25           36-25           36-21           46-22           46-22           42-22           56-23           36-24           56-23           36-24           36-27           36-27           36-27           36-27           36-27 </td <td>4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7       3         4       1       2       7      </td>	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       7       3         4       1       2       7
JUGNI PINTA GOSH SESIN ORYS PICGL MESC ORYS HORV PANV TRIMC SACO AGRS' PANV TRIMC SACO AGRS' PINTA PINTA PINTA PHYP, CRAPI ALLCI CCAPI HORV CRYJJ HORV CRYJJ HORV SACO CRYJJ	1         1.0.1           1         1.0.2           4.2         4.2           1         8.4           1.1         8.4           1.1         8.4           1.1         1.1           1.2         2.2           2.2         2.2           2.1         1.1           1.1         1.1.1           1.1         1.1.1           2.2         5.2           3.1         1.1.1           1.1         1.1.1           2.2         5.2           4.1         1.1.1           2.2         6.5           4.4         6.5           4.5         6.5           4.4         6.5           4.4         6.5           4.1         1.4           4.1         1.4           4.1         2.2           4.1         2.2           4.1         2.2           4.1         2.1           5.2         2.2           5.1         6.5           5.1         6.5	56-33           56-33           22-33           42-32           22-32           76-31           33-31           34-31           34-31           36-31           36-32           90-29           90-29           90-29           91-29           92-28           36-27           90-27           20-25           36-25           36-22           46-22           46-22           46-22           42-26           12-27           20-25           33-24           46-22           46-22           12-25           32-24           46-22           12-25           33-24           46-22           12-22           12-22           12-22           12-22           12-22           12-22           12-22           12-22           12-22           12-23           13-24           14-27           12-24 </td <td>4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       &lt;</td>	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS PICGL ORYS PANV PANV TRIM SACO AGRS ARAT PSEM PINTA PSEM CRAPI ALLCI MEDT LOLM HORV CRAPI ALLCI MEDT TRIM ORYS SACO CRAPI ALLCI CRAPI ALCI ALCI ALCI ALCI ALCI ALCI ALCI ALC	I         1.0.1           1.2         4.1           1.2         4.2           1.1         8.4           1.2         2.2           2.4         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           1.1         1.1           2.2         2.2           1.1         2.2           2.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           4.4         6.5           5.2         7.2           5.2         7.2           5.2	56-33           22-33           22-32           22-32           22-32           22-31           22-31           22-31           22-31           22-32           33-23           34-31           36-31           72-30           36-25           36-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-28           38-27           99-27           22-25           38-24           46-22           46-22           46-22           28-20           29-20           20-20           20           20           20           20           20	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV PANV PANV TRIMC SACO AGRS ARAT PSEM2 PINTA PHTPA CRAPI CRAP	I         1.0.1           1.2         4.2           2.2         4.2           1.1         8.4           1.3.1         8.4           1.4.1         8.4           1.1         8.4           1.2         2.2           R         4           1.1         1.1           1.1         1.1           1.1         1.1           1.1         1.1           2.2         2.2           R         4           7.3.1         1.1           2.1         1.1           2.2         1.1           2.2         2.2           2.3         1.1           2.4         4.4           6.3.5         1.4           6.3.6         1.1           2.2         2.3.4           6.3         1.4           6.3         1.4           6.3         1.4           6.3         1.4           6.3         1.2           7.4         1.5	56-33           56-33           22-33           44-33           22-32           22-31           44-33           32-33           44-31           33-31           76-31           32-31           44-31           34-31           76-30           99-229           36-23           36-24           36-25<	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7       3         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV TRIMC SACO ORYS ARAT PHYP, CRAPI ALLCI MEDT LOLM HORV CRYJJ HORV MAIZI ORYS SORBI	1         1.0.1           1         1.0.2           1.2         4.2           2.2         4.2           3.2         4.1           1.3         1.4           1.1         8.4           1.1         8.4           1.1         1.1           1.1         1.1           1.1         1.1           1.1         1.1           1.1         1.1           2.0         2.2           2.1         1.1           2.2         1.1           2.2         1.1           2.2         1.1           2.2         2.2           2.2         2.2           2.2         2.2           2.1         1.2           2.2         2.2           2.1         2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.3         1.4           2.4         1.4           2.4         1.4           2.4         1.4           3.2	56-33           56-33           22-33           42-32           22-32           22-31           32-32           22-31           34-31           34-31           35-31           72-30           99-229           33-23           34-32           35-24           36-25           33-24           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-21           46-22           46-22           46-21           46-21           46-21           46-21           46-21           46-21	4       1       2       5         4       1       2       6       5         4       1       2       6       6         4       1       2       6       6         4       1       2       6       5         4       1       2       7       3       5         4       1       2       6       7       6         4       1       2       6       6       7         4       1       2       6       7       7       7         4       1       2       6       7       7       7       7         4       1       2       6       7       7       7       7       7         4       1       2       6       7       7       7       7       7         4       1       2       7       7       5       7       7       7       7         4       1       2       7       5       7       7       7       7       7       7         4       1       2       7       5       7       7 <t< td=""></t<>
JUGNI PINTA GOSH SESIN ORYS PANV PANV PANV PANV PANV TRIMC SACO AGRS' ARAT PSEMU ALLCI MEDT LOLM HORV MAIZI HORV MAIZI ORYS SORBI HEDC	I         1.0.1           1.2         4.2.4           1.1         8.4           1.2         4.2.4           1.4         8.4           1.2         2.2           2.2         2.2           R         4           1.3         1.3           2.2         2.2           R         4           4.4         1.1           2.1         1.3           2.5         6.6           1.1         1.3           2.5         7           2.6         1.1           2.7         2.6           3.4         6.6           4.1         1.1           2.2         2.4           4.4         6.6           4.1         1.1           2.2         2.4           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6           4.4         6.6           4.1         2.2           2.3	56-33           56-33           22-33           42-33           22-32           22-31           42-31           22-31           42-31           22-31           42-31           32-31           22-31           34-31           32-31           32-32           32-32           32-23           33-23           33-23           34-23           34-23           32-24           32-25           33-226           33-227           32-28           33-228           33-229           32-29           32-29           33-228           33-228           33-227           32-27           32-27           32-27           32-27           32-27           32-27           32-27           32-27           32-27           33-27           33-27           33-27           33-27           33-27	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV PANV PANV TRIMC SACO ORYS PANV TRIMC SACO AGRS' ARAT PHYP, CRAPY CRAPY HORV CRYJ/ HORV CRYJ/ HORV SACO CRYJ/ HORV CRYJ/ HORV SORS SORS	1         1.0.1           1.2         4.2           2.2         4.2           4.4         1.3           4.4         1.3           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           1         1.5           1         1.5           1         1.2           1.1         2.2           2.2         2.2           2.4         4.3           2.2         2.2           2.4         4.4           1.2         1.4           1.1         2.2           2.4         4.4           2.5         1.4           2.4         1.4	56-33           56-33           22-32           22-32           22-31           32-32           22-31           34-32           34-32           35-22           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           33-227           34-22	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7       3         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV TRIMC SACO AGRS' PANV TRIMC SACO AGRS' PINTA PHYP, CRAPI ALLCI MEDT LOLM HORV MAIZI ORYS SORBI HEDC PICGL	1         1.0.1           1.2         4.2           2.2         4.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.1         1.1           1.1         1.9           1.1         1.9           1.1         1.9           2.7         2.2           2.3         2.2           2.2         2.2           2.2         2.2           2.1         1.1           2.2         2.2           2.3         1.2           1.1         2.2           2.3         1.2           4.4         6.5           4.4         6.5           4.4         4.5           4.4         4.5           4.4         4.4           5.2         2.2           2.4         1.4           4.4         2           4.4         2           4.4         2           4.4         2           4.4         1.4           4.5         <	56-33           22-33           42-32           22-32           22-32           34-31           35-31           72-30           36-22           36-23           36-24           36-25           36-27           90-29           36-22           36-23           36-24           36-25           36-25           36-24           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-22           46-21           10-18           88-21           11-18           44-17           46-16           99-16           99-16           99-16           99-16	4       1       2       5         4       2       6       5         4       2       7       5         4       2       7       6         4       2       6       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV TRIMC SACO AGRS' HORV TRIMC SACO CRYS PINTA CRAPI ALLCI MEDT LOLM HORV MAIZI HORV MAIZI ORYS SORBI HEDC PITCGL POPT	1         1.0.1           1.2         4.1           1.2         4.2           1.1         8.4           1.2         2.2           2.2         2.2           R         4           1.3         1.2           R         4           AA         1.1           1.1         1.3           2.5         7.5           6.6.1         1.1           2.2         2.2           R         4           A.2         7.2           P.1         6.6.1           T         2.0.2           HB         1.2           C         6.3.1           L         1.1.1           2.6         2.3.2           RRI         2.0.2           2.4         6.4           C         2.3.2           C         2.3.2           C         2.3.2           C         2.3.3           C         2.3.4           C         2.3.4           C         2.3.4           C         2.3.4           C         2.3.4           C         <	56-33           26-33           22-33           46-33           22-32           22-32           22-31           42-31           22-31           44-31           32-31           22-31           32-31           32-31           32-31           32-32           32-32           32-23           33-229           32-23           33-229           32-23           33-229           32-23           33-229           32-23           33-23           33-23           33-23           33-23           33-23           33-23           33-23           33-23           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-24           33-	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       <
JUGNI PINTA GOSH SESIN ORYS PICGLI ORYS HORV PANV PANV TRIMC SACO AGRS ARAT PSEM2 PINTA PHYP, CRAPJ HORV CRYJ/ HORV CRYJ/ HORV CRYJ/ HORV CRYJ/ HORV SACO CRYJ/ HORV CRYJ/ HORV CRYJ/ HORV SORS SORS SORS	I         1.0.1           1.2         4.2           2.2         4.2           4.4         1.3           4.4         1.3           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.2           2         2.4           1.1         1.1           2         2.4           1.1         2           2.2         2.2           2.4         4           1.1         2           2.2         2.4           2.4         4           1.4         2           2.4         4           1.1         2           2.4         1.4 <td< td=""><td>56-33           22-33           42-33           42-33           42-33           22-32           22-31           34-32           35-22           36-23           36-24           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22<!--</td--><td>4       1       2       5         4       1       2       6       5         4       1       2       6       6         4       1       2       6       6         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6       6       6         4       1       2       6       6       6       6         4       1       2       6       6       6       6       6         4       1       2       6       6       6       6       6       6         4       1       2       7       5       5       6       6       6       6       7       6       7       7       7       6       7       7       6       7</td></td></td<>	56-33           22-33           42-33           42-33           42-33           22-32           22-31           34-32           35-22           36-23           36-24           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22           36-22 </td <td>4       1       2       5         4       1       2       6       5         4       1       2       6       6         4       1       2       6       6         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6       6       6         4       1       2       6       6       6       6         4       1       2       6       6       6       6       6         4       1       2       6       6       6       6       6       6         4       1       2       7       5       5       6       6       6       6       7       6       7       7       7       6       7       7       6       7</td>	4       1       2       5         4       1       2       6       5         4       1       2       6       6         4       1       2       6       6         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       7       3       5         4       1       2       6       6       6         4       1       2       6       6       6       6         4       1       2       6       6       6       6       6         4       1       2       6       6       6       6       6       6         4       1       2       7       5       5       6       6       6       6       7       6       7       7       7       6       7       7       6       7
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV TRIMC SACO AGRS' PANV TRIMC SACO AGRS' PINTA PHYP, CRAPI ALLCI MEDT CRAPI ALLCI WHEA HORV MAIZI ORYS SORBI HEDC PICGL FICTO	I         1.0.1           1         1.0.2           1.2         4.2           2.2         4.2           2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.1         1.1           1.1         1.1.2           2.2         2.2           2.2         2.2           2.2         2.2           2.1         1.1           1.1         1.1.2           2.2         2.2           2.1         1.2           2.2         2.2           2.2         2.2           2.1         1.2           2.2         2.2           2.1         1.2           2.2         2.2           2.1         1.2           2.2         2.2           2.3         1.4           2.2         2.2           2.3         1.2           3.2         2.2           3.3         2.2           4.43         2.1           4.5         1.4           3.1         5.5           4.3 <td>56-33           26-33           22-33           42-33           22-32           22-32           22-31           12-31           22-31           12-31           22-32           33-31           76-30           99-29           33-29           16-29           36-28           36-28           36-28           36-28           36-28           36-28           36-28           36-28           36-27           90-28           90-28           90-28   </td> <td>4       1       2       5         4       1       2       6       5         4       1       2       6      </td>	56-33           26-33           22-33           42-33           22-32           22-32           22-31           12-31           22-31           12-31           22-32           33-31           76-30           99-29           33-29           16-29           36-28           36-28           36-28           36-28           36-28           36-28           36-28           36-28           36-27           90-28           90-28           90-28	4       1       2       5         4       1       2       6       5         4       1       2       6
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV PANV PANV TRIMC SACO AGRS ARAT PSEMA PITA PORV PITA PORV ALLCI MEDT LOLM HORV CRAPI ALLCI MEDT HORV MAIZI WHEA MAIZI ORYS SORBI HEDC PICGL POTTI MALD	1         1.0.1           1.2         4.1           1.2         4.2           1.1         8.4           1.2         2.2           2.2         2.2           R         4           1.1         1.3           2.2         2.2           R         4           1.1         1.3           2.2         2.2           R         4           4.3         1.1           2.1         1.1           2.2         2.2           R         4           1.1         1.1           2.2         2.6           R.1         2.1.1           2.2         2.3           A.4         6.8           C         2.3           S.2         2.4           C         2.5           C         2.4           C         2.5           C         3.2           C         3.2           C         3.3           C         3.4           C         3.4           C         3.4           C         3.4 <t< td=""><td>56-33           22-33           22-33           22-32           22-32           22-31           12-31           22-31           44-33           22-31           32-31           22-31           32-31           32-31           32-31           32-31           32-32           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-20           32-21           32-22           33-22           32-24           42-22           56-21           58-20           58-21           56-16           59-21           56-16           59-21<!--</td--><td>4       1       2       5         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         <td< td=""></td<></td></td></t<>	56-33           22-33           22-33           22-32           22-32           22-31           12-31           22-31           44-33           22-31           32-31           22-31           32-31           32-31           32-31           32-31           32-32           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-29           32-20           32-21           32-22           33-22           32-24           42-22           56-21           58-20           58-21           56-16           59-21           56-16           59-21 </td <td>4       1       2       5         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         <td< td=""></td<></td>	4       1       2       5         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5         4       1       2       7       5 <td< td=""></td<>
JUGNI PINTA GOSH SESIN ORYS. PICGL ORYS. HORV PANV TRIMC SACO AGRS: ARAT PEEM2 PINTA ALCC CRYJ/ HORV CONS CRYS CRYS CRYS CRYS CRYS CRYS CRYS CRY	1         1.0.1           1.2         4.2           2.2         4.2           3.1         8.4           1.3         2.2           2.2         2.2           2.3         2.3           1.1         1.1           1.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.3         2.1           1.1         1.1.5           2.2         2.2           2.3         7.7           1.1         1.2           1.1         2.2           2.2         2.2           2.2         2.2           2.2         2.2           2.4         4.6           1.1         2.2           2.2         2.4           2.4         4.4           3.2         2.2           2.4         4.4           4.5         1.4           5.5         1.4           5.5         1.4           5.5         1.4           1.5	56-33           56-33           22-32           22-32           24-33           42-33           26-32           26-32           36-31           36-31           36-31           372-30           99-229           38-23           36-24           36-25           36-25           36-26           36-27           20-25           36-26           36-27           20-25           36-26           36-27           20-25           36-26           36-27           20-25           36-26           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-27           36-36	4       1       2       5         4       1       2       7       5         4       1       2       7       7         4       1       2       7       7         4       1       2       7       7         4       1       2       7       7         4       1       2       7       7         4       1       2       7       7         4       1       2       7       7         4       1       2       7       7         4       1       2       6       -         4       1       2       6       -         4       1       2       6       -         4       1       2       7       -       5         4       1       2       7       -       5         4       1       2       7       -       5         4       1       2       7       -       5         4       1       2       7       -       5         4       1       2       7       -
JUGNI PINTA GOSH SESIN ORYS PICGL ORYS HORV PANV TRIMC SACO AGRS' PANV TRIMC SACO AGRS' PINTA PHYP, CRAPI ALLCT MEDT CRAPI ALLCT MEDT ORYS SORBI HEDC PICGL PICT ORYS SORBI HEDC PICT PICT ORYS SORBI HEDC PICT PICT PICT PICT CRAPI	I         1.0.1           1.2         4.1           2.2         4.2           4.4         1.7           8.8         2.2           2.2         2.2           R         4           4.4         1.7           2.2         2.2           R         4           A4         1.7           A2         7.3           TI         1.8           5.0         5           6.6         6.1           2.2         6.3           4.4         6.5           1.1         2.2           4.4         6.5           1.1         2.2           4.4         6.5           4.4         6.5           1.1         2.2           4.4         6.5           1.4         2.2           2.2         5.3           1.4         2.2           2.2         2.3           2.3         1.4           2.2         1.4           2.2         1.4           2.2         1.4           2.3         1.4           2.4         5.	56-33           26-33           22-33           22-32           22-32           22-31           122-31           22-32           32-33           22-31           122-31           122-31           32-31           22-32           33-23           33-23           34-23           34-23           34-23           32-25           33-225           33-225           33-225           32-26           32-27           32-27           32-27           32-27           32-27           3	4       1       2       5         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       6         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       1       2       7         4       <

**Supplemental Table S1**. Phenotypic analysis of T<sub>3</sub> homozygous adult plants overexpressing AtLEA4-5 protein (*35S::AtLEA4-5::NOS*) during drought and after recovery from stress. Plants were grown in greenhouse environment, watered with nutrient solution until flowering and subjected to severe dehydration ( $\Psi_{substrate} = -6.447 (\pm 0.574)$ ) MPa). At this point plants were rehydrated and recovered during 10-days. The number of floral and axillary buds per plant were counted after 10-days of recovery; dry weight of whole plants was also recorded. In separate experiments, the relative water content (RWC) was calculated in control (well-irrigated) plants and in dehydrated plants ( $\Psi_{substrate} = -3.851 (\pm 0.704)$ ) MPa).

	Dry biomass	Dry biomass	Number	Number	RWC of	RWC of plants
	of whole	of whole	of buds	of buds	plants kept	after 10 days
Genotyp e	plants kept	plants after	per plant	per plant	under	of withholding
	under	recovery	under	after	optimum	irrigation <sup>s</sup>
	optimum	from severe	optimum	recovery	irrigations	
	Irrigation	arought (gr)	irrigation	from		
	(gr) <sup>s</sup>			drought <sup>o</sup>		
WT	0.1457	0.03528	48.33	0	0.936	0.2771
(±SD)	(±0.00153)	(±0.00435)	(±3.215)		(±0.01669)	(±0.01034)
(lower 95% CI,	(0.1419,	(0.02448,	(40.35,		(0.8946,	(0.2514,
upper 95% CI)	0.1495)	0.04608)	56.32)		0.9775)	0.3027)
OE 4-5 (2)	0.1433	0.04278	55.67	4.375	0.9237	0.3856
(±SD)	(±0.01901)	(±0.002999)	(±3.786)	(±4.658)	(±0.02077)	(±0.02945)
(lower 95% CI,	(0.0961,	(0.03534,	(46.26,	(0.4808,	(0.8721,	(0.3125,
upper 95% CI)	0.1906)	0.05021)	65.07)	8.269)	0.9753)	0.4588)
OE 4-5 (3)	0.156	0.05233	37	5.875	0.948	0.3987
(±SD)	(±0.00361)	(±0.00808)	(±11.27)	(±5.643)	(±0.02254)	(±0.03116)
(lower 95% CI,	(0.147,	(0.03226,	(9.005,	(1.158,	(0.892,	(0.3213,
upper 95% CI)	0.165)	0.0724)	64.99)	10.59)	1.004)	0.4761)
OE 4-5 (4)	0.1332	0.05233	75.33	8.375	0.9454	0.3689
(±SD)	(±0.03435)	(±0.00351)	(±6.028)	(±8.331)	(±0.00055)	(±0.03419)
(lower 95% CI,	(0.04783,	(0.04361,	(60.36,	(1.41,	(0.9441,	(0.284,
upper 95% CI)	0.2185)	0.06106)	90.31)	15.34)	0.9468)	0.4539)
OE 4-5 (6)	0.1565	0.04767	66.33	6	0.9477	0.3629
(±SD)	(±0.00769)	(±0.00298)	(±8.737)	(±2.878)	(±0.02026)	(±0.04513)
(lower 95% CI,	(0.1374,	(0.04026,	(44.63,	(3.593,	(0.8974,	(0.2508,
upper 95% CI)	0.1756)	0.05508)	88.04)	8.407)	0.998)	0.475)
OE 4-5 (7)	0.1793	0.04414	30	5.125	0.9363	0.3315
(±SD)	(±0.00635)	(±0.00768)	(±7)	(±5.276)	(±0.01563)	(±0.03201)
(lower 95% CI,	(0.1636,	(0.02505,	(12.61,	(0.7139,	(0.8975,	(0.252,
upper 95% CI)	0.1951)	0.06323)	47.39)	9.536)	0.9751)	0.4111)

<sup>c</sup>Equivalent to  $\Psi_{substrate}$  = - 0.451 (± 0.212) MPa <sup>b</sup>Equivalent to  $\Psi_{substrate}$  = - 6.447 (± 0.574) MPa <sup>g</sup>Equivalent to  $\Psi_{substrate}$  = - 3.851 (± 0.704) MPa **Supplemental Table S2**. Phenotypic analysis of T<sub>4</sub> homozygous transposon insertion mutant in *AtLEA4-5* gene and of homozygous T<sub>2</sub> PTGS mutants in *AtLEA4* gene family during drought and after recovery from stress. Plants were grown in greenhouse environment and watered until flowering, subjected to dehydration ( $\Psi_{substrate} = -4.617 (\pm 0.619)$  MPa). At this point plants were rehydrated and recovered during 6-days. The number of floral and axillary buds per plant were counted after 6d of recovery; dry weight of whole plants was also recorded. In separate experiments, the relative water content (RWC) was calculated in control (well irrigated) plants and in dehydrated plants ( $\Psi_{substrate} = -5.415 (\pm 0.543)$  MPa).

Genotyp e	Dry biomass of whole plants kept under optimum irrigation (gr) <sup>5</sup>	Dry biomass of whole plants after recovery from drought (gr) <sup>¢</sup>	Number of buds per plant after recovery from drought <sup>¢</sup>	RWC of leaf discs from plants kept under optimum irrigation <sup>5</sup>	RWC of leaf discs from plants after 13 days of withholding irrigation <sup>S</sup>
WT 1	0.1021	0.03505	13.75	0.9019	0.17
(±SD)	(±0.02358)	(±0.008034)	(±2.486)	(±0.02323)	(±0.00674)
(lower 95% CI,	(0.07734,	(0.02833,	(12.42,	(0.8775,	(0.1593,
upper 95% CI)	0.1268)	0.04177)	15.58)	0.9263)	0.1808)
dSpm 4-5 (1)	0.1141	0.01826	7.58	0.8985	0.1552
(±SD)	(±0.01072)	(±0.00529)	(±3.059)	(±0.03627)	(±0.01283)
(lower 95% CI,	(0.1028,	(0.01384,	(5.64,	(0.8604,	(0.1347,
upper 95% CI)	0.1253)	0.02268)	9.527)	0.9365)	0.1756)
WT 2	0.1078	0.03485	16.25	0.9147	0.2164
(±SD)	$(\pm 0.0398)$	(±0.00798)	(±3.991)	$(\pm 0.03054)$	(±0.01408)
(lower 95% CI,	(0.06601,	(0.02818,	(12.91,	(0.8826,	(0.194,
upper 95% CI)	0.1496)	0.04152)	19.59)	0.9467)	0.2388)
RNAI 4-5 (3)	0.1224		6.5		0.1337
$(\pm SD)$	$(\pm 0.03627)$	$(\pm 0.00397)$	$(\pm 2.39)$	$(\pm 0.05177)$	$(\pm 0.0368)$
	(0.08434, 0.1605)		(4.502,		(0.07519,
	0.1005)	0.02148)	<u> </u>	0.9078)	0.1923)
(+SD)	(+0.0199)	$(\pm 0.03703)$	(+5,276)	(+0.02639)	(+0.02432)
(10wer 95% Cl	(10.0100)	(0.03436	$(\pm 0.270)$	(1 8978	(0.118
(10wer 35 % CI)	0 1269)	0.04102)	20 29)	0.9532)	0 1954)
a-miR 4-1/2 (4)	0.1088	0.02015	7.5	0.9138	0.1478
(±SD)	(±0.02774)	(±0.00420)	(±2.507)	(±0.01799)	(±0.03539)
(lower 95% CI,	(0.07968,	(0.01664,	(5.404,	(0.8949, <sup>′</sup>	(0.09152,
upper 95% CI)	0.1379)	0.02366)	9.596)	0.9327)	0.2041)
WT 4	0.1099	0.0342	16.38	0.9203	0.1883
(±SD)	(±0.02415)	(±0.00649)	(±4.897)	(±0.02924)	(±0.00859)
(lower 95% CI,	(0.07155,	(0.02877,	(12.28,	(0.8896,	(0.1746,
upper 95% CI)	0.1484)	0.03963)	20.47)	0.951)	0.202)
Triple mutant (1)	0.1236	0.0207	7.875	0.9247	0.1279
(±SD)	(±0.01129)	(±0.00538)	(±3.523)	(±0.01299)	(±0.01971)
(lower 95% Cl,	(0.1056,	(0.0162,	(4.93,	(0.911,	(0.0965,
upper 95% CI)	0.1415)	0.0252)	10.82)	0.9383)	0.1592)
	0.0967	0.03986	12.88	0.9019	0.1932
$(\pm SD)$	$(\pm 0.02718)$	$(\pm 0.00759)$	$(\pm 3.503)$	$(\pm 0.02323)$	$(\pm 0.01446)$
(IOWEI 95% CI,	(0.00013,	(0.03352,	(9.690,	(0.8775,	(0.1702,
Compl dSpm (1)	0.1232)	0.04021)	11 25	0.9203)	0.2102)
(+SD)	(+0.03298)	(+0.00547)	(+5.97)	(+0.02954)	(+0.03705)
(lower 95% Cl	(0.08381	(0.04115	(6 259	(0.8773	(0 1398
upper 95% CI)	0.1448)	0.0503)	16.24)	0.9393)	0.2577)
WT 6	0.1244	0.03721	11.88	0.9338	0.228
(±SD)	(±0.01351)	(±0.00811)	(±4.824)	(±0.02097)	(±0.007428)
(lower 95% Cl.	(0.08965.	(0.03044,	(7.842.	(0.9117,	(0.2162.
upper 95% CI)	0.1591)	0.04399)	15.91)	0.9558)	0.2398)
OE 4-5 (4)	0.1244	0.04755	14.38	0.9536	0.1971
(±SD)	(±0.01947)	(±0.00674)	(±4.438)	(±0.02697)	(±0.03261)
(lower 95% CI,	(0.104,	(0.04191,	(10.66,	(0.9253,	(0.1452,
upper 95% CI)	0.1448)	0.05319)	18.09)	0.9819)	0.249)

<sup>5</sup>Equivalent to  $\Psi_{substrate}$  = - 0.451 (± 0.212) MPa <sup>6</sup>Equivalent to  $\Psi_{substrate}$  = - 4.617 (± 0.619) MPa <sup>5</sup>Equivalent to  $\Psi_{substrate}$  = - 5.415 (± 0.543) MPa **Supplemental Table S3**. Taxonomic classification of the sequences used for motif search, sequence number and sequence name depicted in Figure 9. Motifs are shown in ascendant order by the number assigned; however, this order does not represent the motif arrangement within the protein sequence (to see that refer to Supplemental Fig. S7). Seq\_25, Seq\_46 and Seq\_47 showed the worst e-value in MEME analysis and were therefore excluded from subsequent phylogenetic analysis.

shortName	nchiTax	CLASS	ORDER	FAMILY	GENUS	1	2 3	4	5	6 7	8	9 10	sequenceHeadim
AGRST	15297	monocots	Poales	Poaceae	Aarostis	x	X	×		x		0 10	policitari formania
ALL CE1	4678	monocots	Asparagales	Alliaceae	Allium	x	x	x	x	x		x	gipt room gipts room of the order of the second
ALLCE2	4678	monocots	Asparagales	Alliaceae	Allium	X	x >	X	~	~		~	EST686129 CE449784 ACACW17 onion frame +1
ANTMA	4150	dicots	Lamialos	Plantaginaceae	Antirrhinum	x	x	x		x			Santinhium maius A 1560/281 Frame = +3
ARAHY1	3817	dicots	Fabales	Fahaceae	Arachis	x	x	x	x	x			- Anamina mingar index index of the second
ARAHY2	3817	dicots	Fabales	Fabaceae	Arachis	x	x	x	~ .	X			Sei-22 Arachis hypogea Policitor of Totological Policitor Paralese Policitor
ARATH1	3701	dicots	Brassicales	Brassicaceae	Arabidonsis	x	x x	X	x	x		xx	>O962721096272 ARATH LFA D113 homologue type1 At5g06760
ARATH2	3701	dicots	Brassicales	Brassicaceae	Arabidopsis	x	x	X	x	x			-C39138(C39138, ARATH LEA ontein Le25 homolog Atta32560
ARATH3	3701	dicots	Brassicales	Brassicaceae	Arabidopsis	X	x	X	X	x			>096273(096273 ARATH LEA D113 homologue type2 At2o35300
BETMR	3554	dicots	Carvophyllales	Amaranthaceae	Beta		x	x					calize1164951pHBQ58511311 ED11827.024.002.PD5.SP6 MPIZ-ADIS-024-inflorescence Beta wildaris cDNA clone 024-002-P05 5-PRIME Frame = +3
BRANA	3705	dicots	Brassicales	Brassicaceae	Brassica	x	xx	x	x	x		x x	signer root gigging door in the root of the other in the root of the motion of the root in the root of the other in the r
BRANA	3705	dicots	Brassicales	Brassicaceae	Brassica	X	X	X	X	x			+83831777 CX2800001 Brassica napus 16ACDHDS Frame = +3
CAPAN	4071	dicots	Solanales	Solanaceae	Cansicum	x	x	X	x				>TC6258 ORE 39, 331 frame +3 peoper Capsicum applium
CITSI	2706	dicots	Sanindales	Rutaceae	Citrus	x	xx	x	x	x		×	- rotato or a construction of popport department and the construction of the construct
CRAPI	4152	dicots	Lamiales	Linderniaceae	Craterostigma	x	x	x	x	~		~	sporter ogging of som for and the and the source of the so
CRYIA	3368	Coniferonsida	Coniferales	Cupressaceae	Covotomeria	x	x	~	~	x			- adigade 2017/th/ill 1084224 11 At 1084224 Constantia inporta inper bark cDNA clone CC1106 5' mRNA sequence Frame = +3
CYCPE	59973	dicots	Ericales	Myrsinaceae	Cyclamen	~	~			x			spisotice high courses in the sequence from the population induced call and sometic embryos clone 3377 FD5 mRNA sequence Frame = +2
FUPES	3000	dicots	Malnichiales	Funhorbiaceae	Euphorbia	x	x	x	X	x			gip received and a sequence from a second and the second and a second and a second and a second and the second and a secon
FESAR	4605	monocots	Poales	Poaceae	Festuca	X	x	Ŷ	x	x			ginotozotoginov to otocovini anterio anterio a subjectiva anterio a contractor otocovini anterio adaletto e trance - 2
GLYTO	3846	dicote	Fabalas	Fabaceae	Glycine	x	x x	x	~ .	X		×	Sofe-MultiOgENW4 GLYTO Glyting through a state of the sta
COSHI	2622	dicots	Malvalor	Mahaceae	Gorgunium	Ŷ	~ ′	· ^	×	Ŷ		^	Sonotal EA12 COLL to approve approximate the second and a solution protein LEA4
HEDCE	58416	dicote	Gentianales	Rubiaceae	Hedvotis	^	Ŷ	×	Ŷ	×			Pro944 [LEATS_GOOTH_Late entry logerests abulicating protein brief and the state of the state
HEDGE	4221	dicots	Astorolog	Actoraceae	Holiopthus	v	2	Ŷ	^ .	^ v			- yij2/3/1444jgu/Cb00/2222.1] fij3000/3/1 Hetybus Centralitificides nower CDIVA Cone fij30007, intriva sequence Frame - +2
HODVUU	42.01	uicots	Deales	Asteraceae	Herdeum	~	0	÷	v	~			2P40010[LEAT_TEDAM Helialinius allifus 11 KDa
HORVUT	4012	monocots	Poales	Poaceae	Hordeum	A I	<u>.</u>	-	^ .	^			-Tordeumi vuigare bu/40127 var vuigare iranie +3
HORVUZ	4012	monocots	Poales	Poaceae	Hordeum	A .	~	~	-	~			FIGURE 1623 CHR 03.300 manife 12 molecular vulgare dansy billionali subcasting and a subcasting and a subcasting and the subcasting and a subcasting and a subcasting and a subcasting and a subcasting and a subcasting and a s
HORVU3	4512	monocots	Poales	Poaceae	Hordeum	X	^	X	1	A			-giji suo4-so ijgojp=ro-24-20-22 ji rusmitab0/13C05f Hordeum vulgare seeding shoot EST library HVCDNA0001 (Cold stress)HVSMEa0013C05f, frame = +2 - TCM14900 OPE 100 402 (cmrz) 0 pt+th
IPOBA	4119	dicots	Solanales	Convolvulaceae	Ipomoea	X	X			X			>1G11882 OKF 422.1b3 trame -2 Potato
IPONI	4119	dicots	Solanales	Convolvulaceae	Ipomoea	X	~	X	X	^			>2/200344[b3)787 to mixture of nower and flower bud ipomoea nil cDNA clone jm39c17 3', mRNA sequence Frame = -2
JUGNI	16718	dicots	Fagales	Juglandaceae	Juglans	X	X	X	X				>gi[52125110]gb[CV196273.1] CGF1003499_A05 Seed coat from mid-season walnut embryos Juglans regia cDNA clone WSC0008_IF_A05 5' Frame = +3
LACSA1	4235	dicots	Asterales	Asteraceae	Lactuca	X	X	X	Χ.	X	X		>gi 83876902 gb DW078982.1  CLPX14950.b1_L18.ab1 CLP(XYZ)Lactuca perennis dDNA clone CLPX14950, mRNA sequence Frame = +1
LACSA2	4235	dicots	Asterales	Asteraceae	Lactuca	X	X	X	X	X	X		>gi 84018004 gb DW155274.1  CLVX731.b1_F16.ab1 CLV(XYZ) Lactuca virosa cDNA clone CLVX731, mRNA sequence Frame = +3
LACSA3	4235	dicots	Asterales	Asteraceae	Lactuca	X	X	Х	X	X	х		>gi[83989100]gb[DW135209.1] CLSY2723.b1_E09.ab1 CLS(XYZ)Lactuca sativa cDNA clone CLSY2723, mRNA sequence Frame = +2
LOLMU	4520	monocots	Poales	Poaceae	Lolium	X	X			X			>gi 46504283 dbj AU247014.1  AU247014 CL Lolium multiflorum cDNA clone CL013G06-5, mRNA sequence Frame = +2
LYCES	4107	dicots	Solanales	Solanaceae	Solanum	X	X		х				>Q00747 LE25_LYCES Protein LE25 tomate
MAIZE1	4575	monocots	Poales	Poaceae	Zea	X	Х	Х	х				>Zea mays CD445945 Endosperm frame +1
MAIZE2	4575	monocots	Poales	Poaceae	Zea	X	X			Х			>zmrws48_0B20-011-e12.s3 CF633097 maiz frame -1
MALDO	3749	dicots	Rosales	Rosaceae	Malus		X	Х					>gil46614169[gb]CN493697.1] Mdfw2007i24.y1 Mdfw Malus x domestica cDNA clone Mdfw2007i24 5', mRNA sequence Frame = +3
MEDSA1	3877	dicots	Fabales	Fabaceae	Medicago	X	X	Х	X	X			>BF633170 NF046G12DT Alfalfa frame +2 similar a pm29
MEDSA2	3877	dicots	Fabales	Fabaceae	Medicago	X	Х			Х			>TC94509 ORF 83387 Alfalfa frame +2
MEDTR1	3877	dicots	Fabales	Fabaceae	Medicago	X	X >	X	х	Х			>TC94296 ORF 122597 ? frame +2
MEDTR2	3877	dicots	Fabales	Fabaceae	Medicago	X	XX	X	х	Х		X	>TC96465 ORF 91623 frame +1 Medicago truncatula alfalfa
MESCR	3543	dicots	Caryophyllales	Aizoaceae	Mesembryanthemum	X		X	X	X			>TC7047 Mesembryanthemum ORF 512220 frame -3
ORYSA1	4527	monocots	Poales	Poaceae	Orvza	X	x	X					>Q5Z771IQ5Z771 ORYSA Os06g0324400 Hypothetical protein P0421H01.27
ORYSA2	4527	monocots	Poales	Poaceae	Orvza	X	x >	X	х	X			>Q6Z010IQ6Z010_QRYSA Os08g0327700 Putative seed maturation protein
ORYSA3	4527	monocots	Poales	Poaceae	Orvza	X	x	X	X	X			>Q7XLZ7IQ7XLZ7_ORYSA 0s0400589800_QSJNBa0086006.12 protein
ORYSA4	4527	monocots	Poales	Poaceae	Orvza	X	X	X		X			>Q8H683 Q8H683_QRYSA Hypothetical protein Os06q0110200_QSJNBa0004I20.22
PANVI	4539	monocots	Poales	Poaceae	Panicum	X	X	X		x			>ail59873285lobIDN152434.11 5229 G10 M19 Switchgrass callus cDNA library Panicum virgatum cDNA clone 5229 G10 M19 5' Frame = +3
PEA	3887	dicots	Fabales	Fabaceae	Pisum	X	x			X			>Pisum satiyum CD859796 Frame +2
PETSP	4101	dicots	Solanales	Solanaceae	Petunia	X	X	X	x	X		X	>EST888206 CV300863 PetuniaRF-5-C02 frame +3
PHAVU	3883	dicots	Fabales	Fabaceae	Phaseolus	X	X >	X	x	X		X	>Phaseolus vulgaris EC911272 negro jamapa drought root frame +3
PHYPA1	3217	Bryopsida	Funariales	Funariaceae	Physcomitrella	X	x	(	x	X			>PP0140050268 FrameD:1:504:1
PHYPA2	3217	Bryopsida	Funariales	Funariaceae	Physcomitrella	X	X	x		X			PP0130030138 FrameD:49:348:1 PP_cl 22605 sindet
PHYPA3	3217	Bryonsida	Funariales	Funariaceae	Physcomitrella	X	x	X		X			>PP 22646 C1 FrameD:1336:1 nsec=2
PHYPA4	3217	Bryopsida	Funariales	Funariaceae	Physcomitrella		x	X		X			>PP_22605_C1_FrameD:196:486-2_neen=3
PHYPA5	3217	Bryopsida	Funariales	Funariaceae	Physcomitrella		x	~		X			>PP014002079B FrameD:208:333-2 PP_cl 22646 singlet
PICGL1	3328	Coniferonsida	Coniferales	Pinaceae	Picea		x		x	x			>Q40841[Q4084] PICGL Lea-like protein EMb14
PICGL2	3328	Coniferonsida	Coniferales	Pinaceae	Picea	x	x	×	1	x			>TC8884 ORE 141 394 Pices frame +3
PINTA1	3337	Coniferonsida	Coniferales	Pinaceae	Pinus	X	x	Ŷ		x			Pinus 2 taada DTK29371 frama +2
DINITAS	2227	Coniferensida	Coniferales	Pinaceae	Pinus	Ŷ	Ç.	Ŷ	V	Ŷ			STREEDAL OF 12507 Handle 12
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POPTNO	2009	dicots	Malpighiales	Caliaceae	Populus	Ŷ	<u>`</u>	• •	Ŷ	~		^	210 19900 OKF 34971 Inalite to Populos anito 2002 Alek DMA09424 IL 2002 (100 Explorate back a DNA likes). Desulta termula a DNA Escara e 12
POPTRZ	3009	dicots	Malpighiales	Salicaceae	Populus	^	2	Ŷ	^ :	~			- SeleCrateRate Provide a contraction of the select contraction of the
POPIK	0009	Caniformaida	Capiforniales	Disesses	Populus	v	2	-		~			- 2010/11840/guptiko/1030.11 Voltabili.2014 hale contra library Populos inclocarpa contra cione Voltabili.2014 acquerce France – +3
BICCO	4107	diaota	Solopalor	Colongeor	Selanum	^	~	^	v	v			r verovským to skoují o kunku Fostkološký diferitutelní (ubujidorili) poličegoti dobit 16 policius o pompunici o DNA debo paračeľa similar te Lucenského posujední posujední posujedn
RACOE	4107	dicots	Deales	Baasaas	Solanum	v	~	×	^	2			regiptoor reguji i touse, ij internes communis curva cone porsseo similar to Lycopersicon esculentum gene lezo protein, Frame = +2
SACOF	4040	monocots	Poales	Poaceae	Saccharum	×	~	×	-	^			- 2019000201 030000 10 05000 10 05000 10 00 000 10 00000 10 00000 10 00000 10 00000 10 00000 10 00000 10 000000
SESIN	4181	dicots	Lamiales	Pedallaceae	Sesamum	A .	<u>.</u>	X	v				Pageamum mucum budos90/ framer2
SISIR1	3/29	dicots	brassicales	Brassicaceae	Sisymbrum	X	× )	X	X	X		× X	Polisymorrum ino AAT 20119.1 Grood/20472
SISIR2	3/29	dicots	Brassicales	Brassicaceae	Sisymbrum	X	x )	X	X	X		XX	Polsymornum ind AAT 20119.1 Gtb302/2472
SORBI	4557	monocots	Poales	Poaceae	Sorghum	X	X	X	X	X		-	>Sorghum bicolor BG411045 EM1 trame +1
SOYBN1	3846	dicots	Fabales	Fabaceae	Glycine	X	x )	X	X	X		X	>Q541U1Q541U1_SOYBN Glycine max Seed maturation protein LEA 4
SOYBN2	3846	dicots	Fabales	Fabaceae	Glycine	X	X	X	X	X			>Q9XES9[Q9XES9_SOYBN Glycine max Seed maturation protein PM29
THEHA	72663	dicots	Brassicales	Brassicaceae	Thellungiella	X	X>	X	X	X		хх	>Thellungiella halophila ABY86896.1 GI:166359608
TOBAC	4085	dicots	Solanales	Solanaceae	Nicotiana	X	Х	Х	X	X			>gij76866494 gb DV157487.1  KG9B.001A12F.050628T7 KG9B Nicotiana tabacum cDNA clone KG9B.001A12 Frame = +3
TRIMO	4564	monocots	Poales	Poaceae	Triticum	X	X	Х		X			>gi/22016470/gb/BQ801501.1  WHE2815_B02_D03ZS Triticum monococcum vemalized apex cDNA library Frame = +2
VITVI1	3603	dicots	Vitales	Vitaceae	Vitis	X	Х	Х	Х	Х			>AN63334.1 GI:147806171 Vitis vinifera
VITVI2	3603	dicots	Vitales	Vitaceae	Vitis	X	X	Х	Х	Х			>TC45434 ORF 39415 frame +3 Vitis vinifera
WHEAT	4564	monocots	Poales	Poaceae	Triticum	X	X	X		X			>Triticum2 aestivum CJ641147 domant embrvo frame +1