**Table S10** - Top 100 differential gene expression between Leaf vs Unripe fruit in red morphotype

| Cluster     | Unigenes       | Annotation                                                                 | log2FoldChange | padj              |
|-------------|----------------|-----------------------------------------------------------------------------|----------------|-------------------|
| Cluster-2958.24561 | Psi-rd-240469  | expansin 4 family                                                          | -12,31783639   | 3.46048551E-167   |
| Cluster-882.1   | Psi-rd-268889  | probable 9-cis-epoxycarotenoid dioxygenase chloroplastic                    | -12,18251971   | 3.88190940E-173   |
| Cluster-2958.21568 | Psi-rd-271456  | DNA-damage-repair tolerance DRT100-like                                      | -12,05944698   | 3.93428684E-88    |
| Cluster-4091.4   | Psi-rd-269454  | No recognize                                                                | -11,74630668   | 7.38180137E-92    |
| Cluster-2741.0   | Psi-rd-88462   | transcription factor PRE5-like                                              | -11,51975755   | 4.27785672E-103   |
| Cluster-2958.24538 | Psi-rd-226252  | expansin-A8-like precursor                                                  | -10,94576202   | 7.57789992E-157   |
| Cluster-19403.3  | Psi-rd-239217  | Gibberellin regulated protein                                                | -10,85338187   | 1.15476122E-109   |
| Cluster-6780.1   | Psi-rd-106864  | No recognize                                                                | -10,82925718   | 6.59439361E-146   |
| Cluster-8773.0   | Psi-rd-172243  | No recognize                                                                | -10,78914208   | 3.57604596E-84    |
| Cluster-899.1    | Psi-rd-268423  | 21 kDa                                                                      | -10,77077531   | 3.33384524E-91    |
| Cluster-2794.2   | Psi-rd-284208  | No recognize                                                                | -10,68678503   | 1.53471852E-112   |
| Cluster-1376.7   | Psi-rd-236924  | dof zinc finger                                                              | -10,67247771   | 2.34058778E-96    |
| Cluster-4208.18  | Psi-rd-234652  | plasma membrane-associated cation-binding protein 2                         | -10,63176776   | 2.64181358E-84    |
|               |                | Plant protein 1589 of unknown function (A_thal_3526)                        | -10,62931385   | 2.60304575E-100   |
| Cluster-693.17   | Psi-rd-272882  | isoflavone 3 -hydroxylase                                                    | -10,62514037   | 6.74736129E-132   |
| Cluster-2958.24274 | Psi-rd-294600  | expansin 3                                                                  | -10,50421451   | 2.22797693E-195   |
| Cluster-972.4    | Psi-rd-283089  | polygalacturonase                                                           | -10,46034888   | 8.45054214E-105   |
| Cluster-2958.24239 | Psi-rd-115441  | Pollen allergen / Rare lipoprotein A (RlpA)-like double-psi beta-barrel      | -10,34217304   | 4.13813015E-99    |
| Cluster-899.4    | Psi-rd-76839   | 21 kDa                                                                      | -10,23517487   | 2.82987602E-127   |
| Cluster          | Unigenes                  | Annotation                              | log2FoldChange | padj        |
|------------------|---------------------------|-----------------------------------------|----------------|-------------|
| Cluster-2210.11  | Psi-rd-254768             | Pectate lyase                           | -10.23356558  | 3.48708267E-143 |
| Cluster-2958.2139| Psi-rd-270950             | (R,S)-reticuline 7-O-methyltransferase  | -10.1743965   | 1.02802602E-128 |
| Cluster-899.16   | Psi-rd-268420             | 21 kDa                                  | -10.14912292  | 1.79119078E-228 |
| Cluster-2958.9678| Psi-rd-270096             | probable RNA-binding ARP1 isoform X2    | -10.04989602  | 9.51368527E-92  |
| Cluster-2958.23328| Psi-rd-294597           | expansin 3                              | -9.99975758   | 1.48066264E-108 |
| Cluster-2958.1631| Psi-rd-231317             | omega-hydroxypalmitate O-feruloyl transferase | -9.993971061 | 2.78606159E-87  |
| Cluster-2958.26748| Psi-rd-208895              | Pectate lyase                           | -9.752205413  | 5.33275638E-127 |
| Cluster-2958.12264| Psi-rd-280031              | Glycosyl transferase family group 2     | -9.671549573  | 1.59770151E-86  |
| Cluster-2958.1894| Psi-rd-180356             | MADS-box CMB1-like                      | -9.6181734    | 1.46972769E-112 |
| Cluster-2958.18045| Psi-rd-124004              | endoglucanase 6                         | -8.513199006  | 7.38459096E-99  |
| Cluster-1441.0   | Psi-rd-108391             | aluminum-activated malate transporter 4 | -9.098025009  | 5.51859331E-95  |
| Cluster-1105.6   | Psi-rd-159479             | lipid transfer                          | -8.579556506  | 1.24867355E-83  |
| Cluster-2958.26252| Psi-rd-274141              | Pectate lyase                           | -8.513199006  | 2.05030929E-200 |
| Cluster-1806.5   | Psi-rd-265758             | protein E6                              | -8.300287494  | 3.05041555E-98 |
| Cluster-1105.2   | Psi-rd-162061             | lipid transfer precursor                | -8.156088731  | 9.35982135E-123 |
| Cluster-1244.5   | Psi-rd-173010             | hypothetical protein EUGRSUZ_E00515     | -8.113438731  | 1.24746270E-103 |
| Cluster-18407.6  | Psi-rd-195692             | ABC transporter G family member 25      | -7.883235201  | 3.46803968E-99 |
| Cluster-1105.18  | Psi-rd-162059             | lipid transfer                          | -7.846215194  | 1.66909736E-112 |
| Cluster-1105.25  | Psi-rd-270793             | lipid transfer precursor                | -7.69592614  | 3.23454939E-93 |
| Cluster-593.12   | Psi-rd-294992             | hydroxymethylglutarlyl- reductase       | -7.695689114  | 4.29900424E-109 |
| Cluster-3828.2   | Psi-rd-265670             | Senescence regulator                    | -7.62419266  | 5.81240241E-90 |
| Cluster-18407.11 | Psi-rd-247775             | ABC transporter G family member 25      | -7.474958785  | 2.57418639E-133 |
| Cluster-2958.497 | Psi-rd-88373              | zinc-finger of the FCS-type, C2-C2      | -7.356994848  | 2.57608529E-84 |
| Cluster-1806.7   | Psi-rd-61236              | protein E6                              | -7.356659452  | 4.26935290E-123 |
| Cluster-1105.8   | Psi-rd-270792             | non-specific lipid-transfer              | -7.165070235  | 1.11259518E-127 |
| Cluster-8355.0   | Psi-rd-47473              | nematode resistance -like HSPRO2        | -7.135581384  | 1.33204918E-116 |
| Cluster-8045.23  | Psi-rd-114518             | No recognize                            | -6.863220266  | 1.26080075E-105 |
| Cluster-8560.2   | Psi-rd-262398             | Pathogenesis-related protein Bet v I family | -6.663089616  | 2.15845652E-86 |
| Cluster-1821.2   | Psi-rd-238979             | monosaccharide-sensing 2                | -6.575125629  | 6.72166972E-100 |
| Cluster         | Unigenes          | Annotation                                                                 | log2FoldChange | padj          |
|-----------------|-------------------|-----------------------------------------------------------------------------|----------------|---------------|
| Cluster-3631.9  | Psi-rd-294650     | omega-3 fatty acid chloroplastic-like                                       | -6.16261457    | 1.68572221E-95|
| Cluster-8045.8  | Psi-rd-58876      | neurofilament medium polypeptide                                            | -6.088116653   | 3.01802203E-83|
| Cluster-9704.0  | Psi-rd-247199     | ferredoxin-dependent glutamate chloroplastic                               | 5.97034313      | 2.40889878E-106|
| Cluster-2958.29918 | Psi-rd-157112   | glycine dehydrogenase (decarboxylating) mitochondrial                     | 6.582468717     | 1.24746270E-103|
| Cluster-19010.0 | Psi-rd-23827      | phosphatase 2C 57                                                          | 6.714045108     | 4.97923902E-107|
| Cluster-18535.0 | Psi-rd-159317     | cytochrome b6-f complex iron-sulfur                                         | 6.927457808     | 9.99983987E-103|
| Cluster-14933.2 | Psi-rd-184768     | TSS isoform X1                                                              | 6.993401056     | 4.21510919E-110|
| Cluster-2632.26 | Psi-rd-224535     | ATPase family associated with various cellular activities (AAA)             | 7.182848387     | 4.12818675E-95|
| Cluster-7678.21 | Psi-rd-229589     | chlorophyll a-b binding chloroplastic                                       | 7.314252593     | 1.21667036E-88|
| Cluster-9704.1  | Psi-rd-247198     | ferredoxin-dependent glutamate chloroplastic                               | 7.524315009     | 1.81789708E-167|
| Cluster-19308.2 | Psi-rd-54431      | hypothetical protein EUGRSUZ_D01944                                        | 7.606151835     | 2.31560515E-102|
| Cluster-10033.18| Psi-rd-157349     | chlorophyll a-b binding chloroplastic                                       | 7.806347245     | 9.60858835E-104|
| Cluster-851.23  | Psi-rd-84311      | pentatricopeptide repeat-containing At5g65560-like isoform XI               | 7.851253671     | 3.05713712E-94|
| Cluster-2958.23966 | Psi-rd-248607   | hypothetical protein EUGRSUZ_B030602, partial                               | 7.890936676     | 1.12384631E-101|
| Cluster-20354.1 | Psi-rd-5023       | Serine mitochondrial                                                        | 7.910810046     | 8.34031746E-89|
| Cluster-2958.10533 | Psi-rd-124196    | LOV domain-containing                                                       | 7.920031999     | 1.76911124E-88|
| Cluster-7678.25 | Psi-rd-297112     | chlorophyll a-b-binding type                                                | 7.947540413     | 5.47089526E-104|
| Cluster-20015.1 | Psi-rd-58957      | serine–glyoxylate aminotransferase                                          | 8.01332383      | 5.27411746E-116|
| Cluster-10033.15| Psi-rd-128444     | chlorophyll a-b binding chloroplastic                                       | 8.225995295     | 1.00095184E-94|
| Cluster-9704.3  | Psi-rd-81784      | ferredoxin-dependent glutamate chloroplastic                               | 8.266981598     | 1.69291096E-93|
| Cluster-20015.3 | Psi-rd-58954      | serine–glyoxylate aminotransferase                                          | 8.300934497     | 2.31630510E-94|
| Cluster-19605.0 | Psi-rd-5165       | plastocyanin                                                                | 8.305917824     | 1.03672914E-148|
| Cluster-11305.10| Psi-rd-230442     | photosystem I reaction center subunit chloroplastic                         | 8.326175965     | 3.81433056E-85|
| Cluster-579.4   | Psi-rd-15870      | chlorophyll a-b binding chloroplastic                                       | 8.34239226      | 1.04757637E-122|
| Cluster-18935.2 | Psi-rd-88284      | ferric reduction oxidase chloroplastic                                       | 8.505512766     | 6.66936520E-83|
| Cluster    | Unigenes       | Annotation                                                                 | log2FoldChange | padj        |
|------------|----------------|-----------------------------------------------------------------------------|----------------|-------------|
| Cluster-14952.3 | Psi-rd-175825  | Ribulose bisphosphate carboxylase, small chain / Ribulose-1,5-bisphosphate carboxylase small subunit | 8.56441859     | 4.57972025E-117 |
| Cluster-20015.2 | Psi-rd-288823  | serine--glyoxylate aminotransferase                                           | 8.60039372     | 2.61654631E-87 |
| Cluster-15858.8 | Psi-rd-258635  | probable carotenoid cleavage dioxygenase chloroplast                           | 8.616687764    | 1.48574305E-134 |
| Cluster-12155.3 | Psi-rd-233351  | glyceraldehyde-3-phosphate dehydrogenase chloroplast                          | 8.623504106    | 8.80996721E-130 |
| Cluster-19281.1 | Psi-rd-233963  | fructose-1,6- chloroplastic                                                   | 8.633433574    | 1.89235414E-87 |
| Cluster-15247.0 | Psi-rd-190214  | NAD dependent epimerase/dehydratase family                                   | 8.664598279    | 1.87379224E-87 |
| Cluster-2958.25046 | Psi-rd-6633   | protein CHUP1, chloroplastic                                                 | 8.669266749    | 6.92812348E-101 |
| Cluster-18541.0 | Psi-rd-255131  | fructose mitochondrial                                                       | 8.696979642    | 6.40863818E-115 |
| Cluster-7678.32 | Psi-rd-214041  | chlorophyll a-b binding chloroplastic                                        | 8.85928358     | 3.42059844E-127 |
| Cluster-14952.6 | Psi-rd-253002  | Ribulose bisphosphate carboxylase, small chain / Ribulose-1,5-bisphosphate carboxylase small subunit | 9.149457989    | 3.79627515E-89 |
| Cluster-14952.9 | Psi-rd-165461  | ribulose bisphosphate carboxylase small chain 4, chloroplastic-like         | 9.179685524    | 4.77274375E-100 |
| Cluster-20354.6 | Psi-rd-281054  | serine mitochondrial                                                         | 9.263285429    | 1.32070679E-97 |
| Cluster-7627.2  | Psi-rd-390     | fructose-bisphosphate aldolase chloroplastic                                 | 9.275752947    | 2.24050405E-111 |
| Cluster-21179.1 | Psi-rd-23215   | Light regulated protein Lir1                                                 | 9.557314557    | 3.72938554E-142 |
| Cluster-14952.40 | Psi-rd-165459  | Ribulose bisphosphate carboxylase, small chain / Ribulose-1,5-bisphosphate carboxylase small subunit | 9.812381949    | 1.41307112E-98 |
| Cluster-851.9   | Psi-rd-233630  | Phosphoribulokinase family                                                   | 9.845244241     | 2.32068364E-97 |
| Cluster-14952.35 | Psi-rd-139791  | Ribulose bisphosphate carboxylase, small chain / Ribulose-1,5-bisphosphate carboxylase small subunit | 9.954336143    | 9.14124226E-127 |
| Cluster-14952.21 | Psi-rd-211411  | Ribulose bisphosphate carboxylase, small chain / Ribulose-1,5-bisphosphate carboxylase small subunit | 9.973386096    | 8.26689552E-113 |
| Cluster-3996.3  | Psi-rd-46782   | peroxisomal (S)-2-hydroxy-acid oxidase                                       | 10.02536162     | 4.74570775E-112 |
| Cluster-3996.4  | Psi-rd-107889  | peroxisomal (S)-2-hydroxy-acid oxidase                                       | 10.86159821     | 2.18053805E-129 |
| Cluster        | Unigenes   | Annotation                                                                 | log2FoldChange | padj             |
|---------------|------------|----------------------------------------------------------------------------|----------------|------------------|
| Cluster-2632.22 | Psi-rd-280546 | ATPase family associated with various cellular activities (AAA)            | 10.87769674    | 7.06512958E-98   |
| Cluster-2958.20359 | Psi-rd-204515 | fructose-bisphosphate aldolase chloroplastic                               | 10.89042692    | 1.68773252E-154  |
| Cluster-2958.513  | Psi-rd-260002 | fructose-bisphosphate aldolase chloroplastic                               | 11.04587602    | 4.23898013E-101  |
| Cluster-2958.33205 | Psi-rd-54839  | fructose-bisphosphate aldolase chloroplastic                               | 11.06280365    | 1.16615446E-111  |
| Cluster-2632.36  | Psi-rd-145549 | ribulose bisphosphate carboxylase oxygenase chloroplastic                  | 11.49327991    | 1.59027817E-186  |
| Cluster-2632.32  | Psi-rd-153474 | ATPase family associated with various cellular activities (AAA)            | 11.49911835    | 6.97765583E-107  |
| Cluster-2632.37  | Psi-rd-280547 | ATPase family associated with various cellular activities (AAA)            | 11.83608591    | 4.42307272E-102  |