```
OG_100003_150_before
                  Eudicots_VIT_214s0128g00990.1
                  Eudicots_VIT_214s0128g00970.1
                 Eudicots_VIT_214s0060g02760.1
                 Eudicots_VIT_214s0128g01030.1
                 Eudicots VIT 214s0128g00980.1
                                                                     OG 100003 150 after
                                                                                       Eudicots_VIT_214s0128g00990.1
                 Eudicots_VIT_214s0060g02750.1
                 Eudicots_VIT_214s0128g01020.1
                                                                                       Eudicots_VIT_214s0128g00970.1
                 -Eudicots_VIT_214s0128g01010.1
                                                                                       Eudicots_VIT_214s0060g02760.1
                Eudicots_VIT_214s0060g02710.1
                                                                                       Eudicots_VIT_214s0128g01030.1
                _Eudicots_VIT_214s0128g00920.1
                                                                                       Eudicots_VIT_214s0128g00980.1
                 <sup>L</sup>Eudicots_VIT_214s0128g01000.1
                                                                                      Eudicots_VIT_214s0060g02750.1
Eudicots_VIT_214s0128g01020.1
                    Eudicots_VIT_214s0128g00540.1
                    Eudicots_VIT_214s0128g00570.1
                                                                                       -Eudicots_VIT_214s0128g01010.1
                   Eudicots_VIT_214s0128g00600.1
                                                                                      -Eudicots_VIT_214s0060g02710.1
                                                                                      Eudicots_VIT_214s0128g00920.1
Eudicots_VIT_214s0128g01000.1
                  -Eudicots_VIT_214s0128g00640.1
                  Eudicots_VIT_214s0128g00650.1
                 Eudicots_VIT_214s0128g00610.3
                                                                                          Eudicots_VIT_214s0128g00540.1
                 <sup>L</sup>Eudicots_VIT_214s0128g00660.1
                                                                                          Eudicots_VIT_214s0128g00570.1
                                                                                         Eudicots_VIT_214s0128g00600.1
                  -Eudicots_VIT_214s0128g00680.1
                                                                                       Eudicots VIT 214s0128g00640.1
                  -Eudicots_VIT_214s0060g02730.1
                 -Eudicots_VIT_214s0128g00690.1
                                                                                       Eudicots_VIT_214s0128g00650.1
              Eudicots_VIT_214s0060g02700.1
Eudicots_VIT_214s0060g02690.1
                                                                                       Eudicots_VIT_214s0128g00610.3
                                                                                       Eudicots_VIT_214s0128g00660.1
                 Eudicots VIT 214s0006q02350.1
                                                                                       -Eudicots_VIT_214s0128g00680.1
                                                                                      lueEudicots_VIT_214s0060g02730.1
                 Eudicots_VIT_214s0006g02390.1
                  Eudicots_VIT_214s0006g02380.1
Eudicots_VIT_214s0006g02430.1
                                                                                       Eudicots_VIT_214s0128g00690.1
                                                                                   _Eudicots_VIT_214s0060g02700.1
                  Eudicots_VIT_214s0006g02360.1
                                                                                    Eudicots_VIT_214s0060g02690.1
                 Eudicots_VIT_214s0006g02370.1
                                                                                       Eudicots_VIT_214s0006g02350.1
                  Eudicots_VIT_214s0006g02420.1
Eudicots_VIT_214s0006g02400.1
                                                                                       Eudicots_VIT_214s0006g02390.1
Eudicots_VIT_214s0006g02380.1
                  Eudicots_VIT_214s0006g02440.1
                                                                                       Eudicots_VIT_214s0006g02430.1
                  -Eudicots_VIT_214s0006g02435.1
                                                                                       Eudicots_VIT_214s0006g02360.1
                 Eudicots_VIT_214s0006g02330.1
                                                                                       Eudicots_VIT_214s0006g02370.1
                 Eudicots_VIT_216s0039g02900.1
                                                                                       Eudicots_VIT_214s0006g02400.1
                 Eudicots_VIT_216s0013g00072.1
                                                                                       Eudicots_VIT_214s0006g02440.1
                 Eudicots_VIT_216s0013g00096.1
                                                                                       Eudicots_VIT_214s0006g02330.1
                 Eudicots_VIT_216s0013g00078.1
                                                                                       Eudicots_VIT_216s0039g02900.1
                 Eudicots_VIT_216s0013g00010.1
                                                                                       Eudicots_VIT_216s0013g00072.1
                                                                                       Eudicots_VIT_216s0013g00096.1
                 Eudicots_VIT_216s0013g00060.1
                 Eudicots_VIT_216s0039g02860.1
-Eudicots_VIT_216s0013g00102.1
                                                                                       Eudicots_VIT_216s0013g00078.1
Eudicots_VIT_216s0013g00010.1
                 -Eudicots_VIT_216s0013g00090.1
                                                                                      Eudicots_VIT_216s0013g00060.1
                                                                                      Eudicots_VIT_216s0039g02860.1
                                                                                       Eudicots_VIT_216s0013g00102.1
                                                                                       -Eudicots_VIT_216s0013g00090.1
                        Malvids_AT5G39110.1
                         -Malvids_AT5G39100.1
                                                                                              Malvids_AT5G39150.1
                                                                                              Malvids_AT5G39110.1
                                                                                             └─Malvids_AT5G39100.1
                         Malvids_AT5G39130.1
                           Malvids_AT5G38940.2
Malvids_AT5G38930.1
                                                                                                 Malvids_AT5G38940.2
Malvids_AT5G38930.1
                              -Malvids_AT5G38960.1
                             -Malvids_AT5G38910.1
                                                                                                   -Malvids_AT5G38960.1
                                                                                                   -Malvids_AT5G38910.1
                                Malvids_AT3G04190.1
                                                                                                     _{\Gamma}Malvids_AT3G04190.1
                               -Malvids_AT3G04180.1
                               -Malvids_AT3G04170.1
                                                                                                     -Malvids_AT3G04180.1
                                -Malvids_AT3G04150.2
                                                                                                      -Malvids_AT3G04170.1
                            -Malvids_AT3G04200.1
                                                                                                      -Malvids_AT3G04150.2
                        -Malvids_AT3G05950.1
                                                                                                  -Malvids_AT3G04200.1
                      Asterids_Solyc01g102910.4.1
                                                                                               -Malvids_AT3G05950.1
                     Asterids_Solyc01g102890.4.1
                                                                                            Asterids_Solyc01g102910.4.1
                      Asterids_Solyc01g102895.1.1
                                                                                            Asterids_Solyc01g102890.4.1
                           Asterids_Solyc09g089990.3.1
                                                                                            Asterids_Solyc01g102895.1.1
                                                                                                -Asterids_Solyc09g089990.3.1
                             Asterids Solyc09q090040.3.1
                                                                                                  -Asterids_Solyc09g090040.3.1
                    Fabids_Glyma.19G058900.1
                    Fabids_Glyma.19G059000.2
                                                                                          Fabids_Glyma.16G060800.1
                                                                                         Fabids_Glyma.16G060901.1
                    Fabids_Glyma.19G059200.1
                                                                                         Fabids_Glyma.19G058900.1
                    Fabids_Glyma.19G059700.1
                                                                                         Fabids_Glyma.19G059000.2
                    Fabids_Glyma.16G060800.1
                                                                                         Fabids_Glyma.19G059200.1
                    Fabids_Glyma.16G060901.1
                   Fabids_Glyma.19G086100.1
                                                                                         Fabids_Glyma.19G086100.1
                   Fabids Glyma.19G086400.1
                                                                                         Fabids_Glyma.19G086400.1
                   Fabids_Glyma.19G086200.1
                                                                                         Fabids_Glyma.19G086200.1
                   -Fabids_Glyma.16G060900.1
                                                                                        -Fabids_Glyma.16G060900.1
                   –Fabids_Glyma.16G060700.1
                                                                                         -Fabids_Glyma.16G060700.1
                   -Fabids_Glyma.16G061300.1
                                                                                         -Fabids_Glyma.16G061300.1
                     -Fabids_Glyma.19G102700.1
                                                                                           -Fabids_Glyma.19G102700.1
                      Fabids_Glyma.16G061400.1
                                                                                            Fabids_Glyma.16G061400.1
                  Fabids Glyma.20G220900.1
                                                                                        Fabids_Glyma.20G220900.1
                   -Fabids_Glyma.10G168800.1
                                                                                         -Fabids_Glyma.10G168800.1
                  Fabids_Glyma.10G168900.1
Fabids_Glyma.20G220800.1
                                                                                       Fabids_Glyma.10G168900.1
Fabids_Glyma.20G220800.1
                      Fabids_Glyma.05G126200.1
                                                                                            Fabids_Glyma.05G126200.1
                     Fabids_Glyma.08G081200.1
                                                                                          Fabids_Glyma.08G081200.1
                      Fabids_Glyma.15G132100.1
                                                                                           Fabids_Glyma.15G132100.1
                      -Fabids_Glyma.09G026000.1
                                                                                            -Fabids_Glyma.09G026000.1
                     Eudicots VIT 210s0003q05260.1
                                                                                          Eudicots VIT 210s0003q05260.1
                                                                                          Eudicots_VIT_210s0003g05250.1
                    Eudicots_VIT_210s0003g05250.1
                     -Eudicots_VIT_210s0003g05300.1
                                                                                           -Eudicots_VIT_210s0003g05300.1
                     Eudicots_VIT_210s0003g05310.1
                                                                                           Eudicots_VIT_210s0003g05310.1
                        [Eudicots_VIT_210s0003g05360.1
                                                                                             [Eudicots_VIT_210s0003g05360.1
                        Eudicots_VIT_210s0003g05340.1
                                                                                             Eudicots_VIT_210s0003g05340.1
                       Eudicots_VIT_210s0003g05336.1
                                                                                             -Eudicots_VIT_210s0003g05336.1
                        Asterids_Solyc10g078840.1.1
                                                                                             -Asterids_Solyc10g078840.1.1
                        -Asterids Solyc10g078850.1.1
                                                                                             -Asterids Solyc10g078850.1.1
                    Eudicots_VIT_212s0059g00730.1
                                                                                         Eudicots_VIT_212s0059g00730.1
                    Basal-Magnoliophyta _AMTR_s00089p00127600
                                                                                         _Basal-Magnoliophyta _AMTR_s00089p00127600
                     -Basal-Magnoliophyta _AMTR_s00089p00121240
                                                                                           -Basal-Magnoliophyta _AMTR_s00089p00121240
                    Basal-Magnoliophyta _AMTR_s00089p00119480
                                                                                         Basal-Magnoliophyta AMTR_s00089p00119480
                                                                                            -Basal-Magnoliophyta _AMTR_s00089p00120230
                      Basal-Magnoliophyta _AMTR_s00089p00120230
                   Basal-Magnoliophyta _AMTR_s00089p00119070
                                                                                         Basal-Magnoliophyta _AMTR_s00089p00119070
                      -Basal-Magnoliophyta AMTR s00154p00038890
                                                                                           -Basal-Magnoliophyta _AMTR_s00154p00038890
                      -Basal-Magnoliophyta _AMTR_s00154p00044150
                                                                                            —Basal-Magnoliophyta _AMTR_s00154p00044150
                                                                                          Basal-Magnoliophyta _AMTR_s00154p00039580
                    Basal-Magnoliophyta _AMTR_s00154p00039580
                   Basal-Magnoliophyta _AMTR_s00794p00001640
                                                                                         Basal-Magnoliophyta _AMTR_s00794p00001640
                  Basal-Magnoliophyta _AMTR_s00067p00014150
                                                                                        Basal-Magnoliophyta _AMTR_s00067p00014150
             -Monocots_Os08t0189900-01
                                                                                   -Monocots_Os08t0189900-01
             -Monocots_Os08t0189700-01
                                                                                   -Monocots_Os08t0189700-01
             -Monocots_Os08t0189600-01
                                                                                   -Monocots_Os08t0189600-01
             -Monocots_Os08t0189850-01
                                                                                  -Monocots_Os08t0189850-01
              -Monocots_Os08t0189500-01
                                                                                   -Monocots_Os08t0189500-01
              Monocots_Os08t0189400-01
                                                                                   -Monocots_Os08t0189400-01
             Monocots_Os08t0190100-01
                                                                                   Monocots_Os08t0190100-01
             Monocots_Os08t0189100-01
                                                                                  -Monocots_Os08t0189100-01
             Monocots_Os08t0188900-01
                                                                                   Monocots_Os08t0188900-01
              -Monocots_Os08t0189300-01
                                                                                    -Monocots_Os08t0189300-01
              -Monocots_Os08t0189200-01
                                                                                    -Monocots_Os08t0189200-01
              -Monocots_Os08t0231400-01
                                                                                   -Monocots_Os08t0231400-01
           Monocots_Os12t0154700-01
                                                                                 Monocots_Os12t0154700-01
            Monocots_Os12t0154800-01
                                                                                 <sup>L</sup>Monocots_Os12t0154800-01
            -Monocots_Os12t0155000-01
                                                                                  -Monocots_Os12t0155000-01
            -Monocots_Os12t0154900-00
                                                                                  -Monocots_Os12t0154900-00
          Monocots_Os02t0491800-00
                                                                               Monocots_Os02t0491800-00
          -Monocots_Os02t0491700-00
                                                                               -Monocots_Os02t0491700-00
         -Monocots_Os02t0491600-00
                                                                               -Monocots_Os02t0491600-00
                   Fabids_Glyma.03G227400.1
Fabids_Glyma.19G224300.1
                                                                                         Fabids_Glyma.03G227400.1
Fabids_Glyma.19G224300.1
                   Fabids_Glyma.10G141700.1
                                                                                         Fabids_Glyma.10G141700.1
                   -Fabids_Glyma.20G090200.1
                                                                                         -Fabids_Glyma.20G090200.1
                         Asterids_Solyc01g102400.3.1
Asterids_Solyc01g102390.4.1
                                                                                              Asterids_Solyc01g102400.3.1
Asterids_Solyc01g102390.4.1
                         Asterids_Solyc01g102380.5.1.1
                                                                                              Asterids_Solyc01g102380.5.1.1
                          -Malvids_AT5G26700.1
                                                                                                -Malvids_AT5G26700.1
                          -Malvids_AT3G05930.1
                                                                                                -Malvids_AT3G05930.1
                                                                                          -Malvids_AT1G09560.
                  Fabids_Glyma.10G139700.1
                                                                                       Fabids_Glyma.10G139700.1
                  Fabids_Glyma.10G139800.1
                                                                                        Fabids_Glyma.10G139800.1
                 Eudicots_VIT_207s0005g02380.1
                                                                                      Eudicots_VIT_207s0005g02380.1
                 -Eudicots_VIT_207s0005g02370.1
                                                                                       -Eudicots_VIT_207s0005g02370.1
                                                                                           -Malvids_AT1G02335.1
                     -Malvids_AT1G02335.1
                  Basal-Magnoliophyta _AMTR_s00045p00155350
                                                                                        Basal-Magnoliophyta _AMTR_s00045p00155350
                 -Monocots_Os01t0952000-02
                                                                                       -Monocots_Os01t0952000-02
                -Monocots_Os03t0651800-00
                                                                                      LMonocots_Os03t0651800-00
                  Monocots_Os01t0952100-00
                                                                                       Monocots_Os01t0952100-00
               -Monocots_Os01t0284500-01
                                                                                     -Monocots_Os01t0284500-01
             -Monocots_Os01t0249200-01
                                                                                   -Monocots_Os01t0249200-01
            -Monocots_Os05t0277500-01
                                                                                 -Monocots_Os05t0277500-01
                                                                     0.318759
0.318759
```