**Table S2 Detailed information about the dominant 50 OTUs in heat map.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| OTU name | WL\_1 | WL\_2 | WL\_3 | F\_1 | F\_2 | F\_3 | BW\_1 | BW\_2 | BW\_3 | W1\_1 | W1\_2 | W1\_3 | OTUsize | Taxonomy |
| OTU\_2 | 623 | 281 | 126 | 0 | 3 | 0 | 3622 | 4855 | 4279 | 6647 | 5348 | 4102 | 29886 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_0904-1; |
| OTU\_6 | 3742 | 1734 | 3254 | 4168 | 4655 | 3688 | 2644 | 2091 | 2143 | 139 | 151 | 29 | 28438 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_M01; |
| OTU\_4 | 648 | 1323 | 1739 | 309 | 396 | 161 | 1914 | 2434 | 1892 | 1733 | 2863 | 11550 | 26962 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;unclassified\_Glomeromycota;s\_\_Glomeromycota\_sp.\_AB-2014; |
| OTU\_7 | 1485 | 2046 | 1588 | 3363 | 3979 | 2870 | 790 | 535 | 539 | 742 | 905 | 516 | 19358 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_C\_2-25; |
| OTU\_5 | 431 | 254 | 132 | 1 | 1 | 1 | 2395 | 2708 | 2563 | 3247 | 2399 | 774 | 14906 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo9; |
| OTU\_8 | 1204 | 1503 | 1079 | 773 | 630 | 499 | 1167 | 1811 | 947 | 1912 | 1750 | 1469 | 14744 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_MO-G6; |
| OTU\_420 | 469 | 1417 | 794 | 657 | 907 | 483 | 2078 | 2657 | 2013 | 129 | 157 | 143 | 11904 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_MO-G8; |
| OTU\_16 | 2462 | 3113 | 1729 | 549 | 179 | 187 | 214 | 402 | 195 | 116 | 1215 | 804 | 11165 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;unclassified\_Glomeromycota;s\_\_Glomeromycota\_sp.\_AB-2014; |
| OTU\_9 | 2416 | 1659 | 3269 | 378 | 483 | 338 | 203 | 312 | 308 | 1 | 86 | 228 | 9681 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo38; |
| OTU\_17 | 231 | 165 | 163 | 157 | 193 | 0 | 1256 | 2347 | 2094 | 125 | 209 | 34 | 6974 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_VeGlo18; |
| OTU\_389 | 1193 | 749 | 773 | 19 | 3 | 0 | 1092 | 1315 | 1561 | 67 | 36 | 20 | 6828 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo7; |
| OTU\_20 | 76 | 0 | 76 | 1 | 0 | 1 | 805 | 523 | 967 | 1725 | 838 | 593 | 5605 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_0904-1; |
| OTU\_30 | 326 | 1019 | 461 | 148 | 97 | 463 | 3 | 84 | 68 | 1167 | 1201 | 363 | 5400 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Claroideoglomeraceae;g\_\_Claroideoglomus;s\_\_Claroideoglomus\_sp.\_2\_GS-2015; |
| OTU\_49 | 494 | 210 | 296 | 899 | 1332 | 1035 | 255 | 200 | 0 | 96 | 216 | 154 | 5187 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Septoglomus;s\_\_Septoglomus\_constrictum; |
| OTU\_32 | 218 | 70 | 37 | 205 | 110 | 181 | 1196 | 761 | 892 | 678 | 348 | 283 | 4979 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_perpusillum; |
| OTU\_21 | 929 | 1482 | 1010 | 120 | 73 | 136 | 270 | 93 | 352 | 165 | 67 | 272 | 4969 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Septoglomus;s\_\_Septoglomus\_viscosum; |
| OTU\_43 | 1163 | 153 | 957 | 0 | 0 | 0 | 164 | 140 | 194 | 1008 | 765 | 74 | 4618 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_MS\_Appelhans\_246; |
| OTU\_33 | 593 | 659 | 538 | 44 | 25 | 14 | 737 | 84 | 404 | 234 | 526 | 518 | 4376 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Funneliformis;s\_\_Funneliformis\_sp.\_MAY-2012b; |
| OTU\_70 | 173 | 154 | 232 | 0 | 0 | 0 | 753 | 527 | 819 | 589 | 435 | 443 | 4125 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_0904-1; |
| OTU\_202 | 44 | 75 | 257 | 83 | 379 | 221 | 401 | 425 | 626 | 624 | 317 | 573 | 4025 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_perpusillum; |
| OTU\_35 | 556 | 1652 | 859 | 0 | 0 | 0 | 434 | 267 | 235 | 0 | 0 | 0 | 4003 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_MSLA-8; |
| OTU\_102 | 0 | 39 | 0 | 1 | 0 | 4 | 426 | 723 | 410 | 476 | 818 | 1082 | 3979 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;unclassified\_Glomeromycota;s\_\_Glomeromycota\_sp.\_MIB\_8856; |
| OTU\_18 | 456 | 197 | 577 | 503 | 596 | 941 | 228 | 186 | 245 | 1 | 30 | 1 | 3961 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo45; |
| OTU\_45 | 397 | 136 | 397 | 943 | 437 | 405 | 138 | 461 | 314 | 254 | 58 | 0 | 3940 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_indicum; |
| OTU\_55 | 207 | 141 | 404 | 0 | 43 | 0 | 457 | 649 | 653 | 265 | 403 | 708 | 3930 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo3b; |
| OTU\_41 | 700 | 526 | 757 | 369 | 211 | 46 | 237 | 180 | 322 | 85 | 174 | 187 | 3794 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo16; |
| OTU\_34 | 369 | 336 | 523 | 646 | 677 | 705 | 48 | 16 | 298 | 1 | 7 | 52 | 3678 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Rhizophagus;s\_\_Rhizophagus\_intraradices; |
| OTU\_28 | 0 | 101 | 0 | 0 | 1 | 0 | 407 | 423 | 888 | 776 | 576 | 169 | 3341 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo9; |
| OTU\_22 | 1448 | 18 | 135 | 662 | 1005 | 5 | 0 | 1 | 0 | 1 | 0 | 0 | 3275 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Funneliformis;s\_\_Funneliformis\_mosseae; |
| OTU\_24 | 194 | 658 | 53 | 76 | 37 | 22 | 0 | 149 | 16 | 765 | 945 | 299 | 3214 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_BSLA-7; |
| OTU\_683 | 46 | 2 | 104 | 90 | 122 | 118 | 973 | 686 | 639 | 80 | 122 | 195 | 3177 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_MO-G6; |
| OTU\_37 | 466 | 159 | 280 | 0 | 1 | 0 | 73 | 0 | 201 | 315 | 1009 | 629 | 3133 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo3b; |
| OTU\_80 | 617 | 568 | 823 | 0 | 0 | 0 | 422 | 314 | 188 | 0 | 18 | 123 | 3073 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo2; |
| OTU\_154 | 95 | 155 | 1 | 0 | 0 | 0 | 222 | 694 | 502 | 607 | 415 | 188 | 2879 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo9; |
| OTU\_31 | 212 | 258 | 304 | 640 | 404 | 574 | 97 | 39 | 166 | 107 | 43 | 2 | 2846 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Septoglomus;s\_\_Septoglomus\_viscosum; |
| OTU\_51 | 0 | 0 | 0 | 0 | 1 | 0 | 939 | 1229 | 597 | 0 | 0 | 0 | 2766 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo38; |
| OTU\_76 | 306 | 134 | 239 | 411 | 669 | 568 | 52 | 49 | 0 | 34 | 206 | 0 | 2668 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_C\_2-2; |
| OTU\_39 | 457 | 408 | 461 | 316 | 26 | 49 | 90 | 431 | 235 | 12 | 0 | 117 | 2602 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo14; |
| OTU\_732 | 456 | 296 | 250 | 273 | 169 | 142 | 2 | 0 | 0 | 233 | 89 | 40 | 1950 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Septoglomus;s\_\_Septoglomus\_viscosum; |
| OTU\_139 | 11 | 40 | 35 | 0 | 0 | 0 | 414 | 455 | 325 | 122 | 381 | 95 | 1878 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Septoglomus;s\_\_Septoglomus\_viscosum; |
| OTU\_94 | 239 | 108 | 9 | 197 | 286 | 198 | 119 | 147 | 270 | 57 | 86 | 7 | 1723 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_indicum; |
| OTU\_702 | 278 | 440 | 463 | 65 | 74 | 46 | 191 | 0 | 0 | 0 | 123 | 0 | 1680 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo38; |
| OTU\_615 | 171 | 392 | 80 | 61 | 76 | 79 | 201 | 241 | 245 | 45 | 58 | 15 | 1664 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_MO-G8; |
| OTU\_619 | 15 | 16 | 69 | 1 | 36 | 68 | 357 | 493 | 180 | 2 | 2 | 287 | 1526 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_VeGlo10; |
| OTU\_57 | 0 | 0 | 0 | 0 | 0 | 0 | 476 | 486 | 378 | 37 | 37 | 108 | 1522 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_Glo50; |
| OTU\_552 | 133 | 748 | 195 | 57 | 48 | 20 | 163 | 10 | 93 | 0 | 34 | 0 | 1501 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Septoglomus;s\_\_Septoglomus\_viscosum; |
| OTU\_64 | 86 | 70 | 65 | 0 | 45 | 0 | 1 | 0 | 0 | 388 | 489 | 154 | 1298 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;unclassified\_Glomeromycota;s\_\_Glomeromycota\_sp.\_MIB\_8859; |
| OTU\_68 | 370 | 163 | 261 | 0 | 1 | 0 | 6 | 100 | 66 | 73 | 158 | 0 | 1198 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_C\_2-2; |
| OTU\_77 | 121 | 213 | 89 | 313 | 139 | 116 | 1 | 0 | 0 | 97 | 66 | 16 | 1171 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Septoglomus;s\_\_Septoglomus\_viscosum; |
| OTU\_83 | 1 | 1 | 27 | 0 | 0 | 0 | 423 | 308 | 361 | 0 | 1 | 34 | 1156 | sk\_\_Eukaryota;Opisthokonta;k\_\_Fungi;p\_\_Glomeromycota;c\_\_Glomeromycetes;o\_\_Glomerales;f\_\_Glomeraceae;g\_\_Glomus;s\_\_Glomus\_sp.\_VeGloB; |