Supplementary Material

Tab. S1 - Sequences numbers and derived OTUs in the present study.

| Taxonomy                                      | Sequences | OTUs |
|-----------------------------------------------|-----------|------|
| Archaeosporales; Archaeosporaceae; *Archaeospora* | 7         | 2    |
| Archaeosporales; Archaeosporaceae; unclassified | 592       | 7    |
| Diversisporales; Acaulosporaceae; *Acaulospora* | 57689     | 14   |
| Diversisporales; Diversisporaceae; *Redeckera*  | 4         | 1    |
| Diversisporales; Gigasporaceae; *Scutellospora* | 283       | 1    |
| Diversisporales; Gigasporaceae; unclassified   | 1729      | 2    |
| Diversisporales; Gigasporaceae; *Gigaspora*     | 2276      | 2    |
| Glomerales; Glomeraceae; *Glomus*              | 206219    | 71   |
| Paraglomerales; Paraglomeraceae; *Paraglomus*  | 83        | 3    |
| unclassified Glomeromycetes                    | 248       | 16   |
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Tab. S2 - Numbers of sequences (A) and derived OTUs (B) in the genus of Glomeromycota in different study plots.

(A) Taxonomy (Sequences)

| Taxonomy (Sequences) | P2 | P3 | P4 | P5 | P2/3 | P2/4 | P2/5 | P3/4 | P3/5 | P4/5 | N1 | N2 | N3 | N4 | N5 |
|----------------------|----|----|----|----|------|------|------|------|------|------|----|----|----|----|----|
| Archaeosporales; Archaeosporaceae; Archaeospora | 6  | 0  | 0  | 0  | 0    | 1    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 0  |
| Archaeosporales; Archaeosporaceae; unclassified | 27 | 19 | 54 | 143| 0    | 28   | 27   | 44   | 48   | 28   | 61 | 11 | 91 | 11 | 0  |
| Diversisporales; Acaulosporaceae; Acaulospora | 4881| 1553| 712 | 2000| 732  | 841  | 1424 | 2812 | 1661 | 2387 | 4030| 2050| 15965| 6245| 10396|
| Diversisporales; Diversisporaceae; Red Eckera | 0  | 0  | 0  | 0  | 0    | 0    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 0  |
| Diversisporales; Gigasporaceae; Scutellospora | 0  | 0  | 0  | 0  | 8    | 0    | 0    | 0    | 18   | 257  | 0  | 0  | 0  | 0  | 0  |
| Diversisporales; Gigasporaceae; unclassified | 163 | 0  | 0  | 0  | 0    | 100  | 1065 | 106  | 38   | 2    | 26  | 198 | 0  | 31  | 0  |
| Diversisporales; Gigasporaceae; Gigaspora | 736 | 0  | 26 | 0  | 133  | 0    | 192  | 39   | 17   | 4    | 0   | 46  | 0  | 88  | 995|
| Glomerales; Glomerales; Glomus | 12109| 16244| 17118| 15789| 17069| 16972| 15234| 14930| 16155| 15260| 13745| 15637| 1886| 11537| 6534|
| Paraglomerales; Paraglomeraceae; Paraglomus | 0   | 75 | 0  | 1  | 0    | 0    | 0    | 7    | 0    | 0    | 0   | 0   | 0   | 0   | 0   |
| unclassified Glomeromyctes | 20  | 51 | 32 | 9  | 0    | 0    | 0    | 4    | 5    | 0    | 80  | 0   | 0   | 30  | 17  |
| **Sum** | **17942** | 17942| 17942| 17942| 17942| 17942| 17942| 17942| 17942| 17942| 17942| 17942| 17942| 17942| 17942|

(B) Taxonomy (OTUs)

| Taxonomy (OTUs) | P2 | P3 | P4 | P5 | P2/3 | P2/4 | P2/5 | P3/4 | P3/5 | P4/5 | N1 | N2 | N3 | N4 | N5 |
|------------------|----|----|----|----|------|------|------|------|------|------|----|----|----|----|----|
| Archaeosporales; Archaeosporaceae; Archaeospora | 2  | 0  | 0  | 0  | 0    | 1    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 0  |
| Archaeosporales; Archaeosporaceae; unclassified | 2  | 4  | 4  | 7  | 0    | 3    | 4    | 5    | 5    | 4    | 3  | 1  | 3  | 3  | 0  |
| Diversisporales; Acaulosporaceae; Acaulospora | 8  | 2  | 4  | 6  | 6    | 2    | 7    | 4    | 7    | 8    | 7  | 4  | 5  | 6  | 5  |
| Diversisporales; Diversisporaceae; Red Eckera | 0  | 0  | 0  | 0  | 0    | 0    | 0    | 0    | 1    | 0    | 0  | 0  | 0  | 0  | 0  |
| Diversisporales; Gigasporaceae; Scutellospora | 0  | 0  | 0  | 0  | 1    | 0    | 0    | 1    | 1    | 0    | 0  | 0  | 0  | 0  | 0  |
| Diversisporales; Gigasporaceae; unclassified | 2  | 0  | 0  | 0  | 0    | 1    | 1    | 1    | 1    | 1    | 1  | 1  | 1  | 1  | 0  |
| Diversisporales; Gigasporaceae; Gigaspora | 2  | 0  | 1  | 0  | 1    | 0    | 1    | 1    | 1    | 1    | 0  | 0  | 1  | 1  | 1  |
| Glomerales; Glomerales; Glomus | 28 | 37 | 22 | 20 | 41   | 33   | 30   | 44   | 43   | 46   | 28 | 37 | 4  | 26 | 14 |
| Paraglomerales; Paraglomeraceae; Paraglomus | 0  | 1  | 0  | 1  | 0    | 0    | 0    | 1    | 0    | 0    | 0  | 0  | 0  | 0  | 0  |
| unclassified Glomeromyctes | 1  | 4  | 5  | 2  | 0    | 0    | 0    | 1    | 2    | 0    | 2  | 0  | 0  | 0  | 2  |
| **Sum** | **45** | 48 | 36 | 36 | 49   | 40   | 43   | 57   | 60   | 62   | 41 | 44 | 12 | 39 | 22 |
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**Tab. S3** - Permutation test for adonis under reduced model.

| Variable             | Factor    | df  | Sum of Squares | R²   | F         | Pr (>F) |
|----------------------|-----------|-----|----------------|------|-----------|---------|
| RA of morphospecies  | year      | 1   | 0.2758         | 0.1320 | 1.9775   | 0.1480  |
|                      | Residual  | 13  | 1.8134         | 0.8680 |           |         |
|                      | Total     | 14  | 2.0892         | 1.0000 |           |         |
| OTUs abundance       | year      | 1   | 1.3424         | 0.3586 | 7.2688   | <0.001 *** |
|                      | Residual  | 13  | 2.4009         | 0.6414 |           |         |
|                      | Total     | 14  | 3.7433         | 1.0000 |           |         |

s3
Fig. S1 - Rarefaction curve of Sobs OTU index for different study stands.