Dual host experiment set up

Leek: *Allium ampelorasum* (L.) and *Sorghum-Sudangrass*: Sorghum bicolor (L.)

Triple-compartment pots (TCP) were custom-made by using two T-shape PVC sewer (10.5 cm diameter, 20 cm height) attached in the middle with a cylindrical shape PVC sewer (11 cm diameter, 16 cm length). Each side of the cylindrical PVC sewer were fitted with a mesh (30 µm pore size). The middle cylinder was opened in the center top (5 cm in diameter) and three holes (1 cm dimeter) were made on the bottom side of the cylinder for drainage (Figure 1). All PVC sewers were sterilized by 1.5 % sodium hypochlorite before assembly.



Figure 1. A schematic illustration of triple-compartment pot with three PVC sewer. The dash lines represent mesh (35 μm pore size). The top of the middle PVC cylinder was opened (5 cm in diameter) and three holes were made in the bottom as drainage.

The host combinations, in six replicates, were: sorghum:sorghum, leak:leak, sorghum:leak, inoculated with *C. claroideum.* For the control, the same setup was used but without inoculum (Figure 2).



Figure 2. Experimental setup. T1-T3 refer to host combinations (sorghum:sorghum, leak:leak, sorghum:leak, respectively). *C. claroideum* was used as inoculum and orghum was used as a nursing plant, cut off after two months.

Soil (ref) and granule (1-3 mm) (Ikaros Claenteck AB, Malmö, Sweden) were autoclaved (121°C, 20 min) before mixing (1:3 soil: granule). The soil mixture had a phosphorus level of 6 ppm. The middle compartments were filled with 350 g of soil mixture and inoculated with 15 g *C. claroideum* inoculum (soil, spores and hyphae). Sorghum was used as a nursing plant planted in the middle compartment of TCP. Sorghum seeds were surface sterilized according to Selvakumar et al. (2018). This included immersing the seeds in 70% ethanol for 2 min before rinsing with 1% sodium hypochlorite for 3 min. This was followed by rinsing with sterile distilled water for 7-10 times. Sterile seeds were kept in Petri-dish containing sterile water for three days before being transferred to the middle pot. The nursing sorghum was watered with ionized water three timed per week. Every other week the nursing plants were watered with 50 ml M medium (Bécard & Fortin, 1998, without P, sucarose and Bacto agar).

During the first month, root samples were taken two times by core (1 cm width, 7 cm length) and were stained using ink and vinegar (Vierheilig et al., 1998). When colonization (hyphae and arbuscules) of *C*. *claroideum* was detected in the nursing roots, the outer pots were filled with 1 kg soil mixture and sterile sorghum and leak seeds were planted. This occurred at 40-day post planting the nursing sorghum. Sorghum seeds were sterilized as described above. To sterile leak seeds, we used the method of Monemi et al. (2014). Seeds were surface sterilized using 1.25% sodium hyper-chloride for 10 min followed by washing 5 times in sterile distilled water. Sterile leak seeds were kept in sterile distilled water before transfer. The TCPs were kept in a greenhouse under16/8 h light/dark. Daytime temperature was 23°C and light intensity was 120 µm m-2 s-1. The night temperature was 20°C. The relative humidity was 55%. TCPs were watered with ionized water three times per week and with phosphorous free M medium (Bécard & Fortin, 1998) every second week. Nursing plants were cut when they were two months old. Thereafter, the middle compartment of the TCP was watered with M medium (without sucarose and Bacto agar but with P) two times during five months.

RNA from leek and sorghum root samples (100 mg) is extracted using Qiagen plant RNA mini kit () and RNA quality is checked by Bioanalyzer. Sequencing is carried out on Illumina HiSeq2500 platform at Science for Life Laboratory (SciLifelab), Uppsala, Sweden. From all pots, root samples are also stained to check colonization rate.