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Compatibility of Biocult *Trichoderma asperellum* and *Mycorrhizae* with Jochen polymer

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Aim

To determine compatibility of Jochen polymer with Biocult *Trichoderma asperellum* strains and *Mycorrhizae* species.

Materials and Methods

Compatibility was tested using two different methods.

Method 1:

Potato dextrose agar (PDA) was prepared according to manufacturer's recommendations. This was autoclaved at 121°C for 15 mins. The PDA was left to cool down to 55°C before pouring the media into 90 mm petri dishes in the laminar flow cabinet. Upon cooling and solidification, *Trichoderma* strains were plated out aseptically as demonstrated in figure 1. Forty microliters of the product being tested was placed in the middle of the petri dish as indicated in figure 1. Three replicas was done for each treatment.

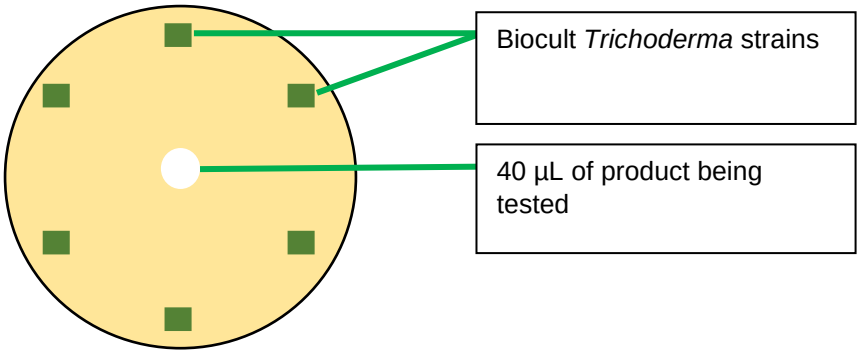

Figure 1: Method used to test compatibility between Jochen polymer and *Trichoderma* strains.

Compatibility was tested at different concentrations of the product as follows:

Jochen polymer

- Treatment 1: All *Trichoderma* strains were isolated on one plate and 40 µL of concentrated Jochen polymer was placed in the middle as demonstrated in figure 1.
- Treatment 2: All *Trichoderma* strains were isolated on one plate and 40 µL of diluted Jochen polymer (1 mL/ 9 mL) was placed in the middle as demonstrated in figure 1.
- Treatment 3: A control treatment, with all the *Trichoderma* strains isolated on one plate and 40 µL of sterile distilled water was placed in the middle.

Method 2:

Biocult *Mycorrhizae* and *Trichoderma* was mixed separately into Jochen polymer.

- Treatment 1: 4.5 mL of Jochen polymer and 0.5 g Biocult *Mycorrhizae*
- Treatment 2: 4.5 mL of Jochen polymer and 0.5 g Biocult *Trichoderma*

These *Mycorrhizae* and *Trichoderma* products were thoroughly mixed and left to stand for 3 days. After which a sample was taken and evaluated under a dissecting microscope.

Results

Method 2: The solution was thick and slimy. Water was used to dilute the product so visibility was easier. A few of the *Mycorrhizae* spores germinated. The *Trichoderma* treatment was too murky to see. No evaluation could be made. Therefore the results were inconclusive.

Discussion

Although sporulation was slightly delayed across treatments in Method 1, the control treatments also showed a delay in sporulation. This may be due to *Trichoderma* being exposed to variable temperatures during the growth stage. This is not indicative of sporulation inhibition especially because the control treatments showed the same delay. The growth of all the *Trichoderma* strains was not inhibited by the tested products at all the tested concentrations.

In conclusion, Jochen polymer is compatible with Biocult *Mycorrhizae* (see method 1) and *Trichoderma asperellum* strains at all concentrations (see method 2).