

## INFLUENCE OF *CLADONIA SALZMANNII* ON ARBUSCULAR MYCORRHIZAL FUNGI AND GROWTH OF *GENIPA AMERICANA* SEEDLINGS

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A greenhouse experiment was carried out to evaluate the potential allelopathic effects of lichen substances on arbuscular mycorrhizal fungi (AMF) of soil. The experiment design was completely randomized, in 2 (presence or absence of the lichen) x2 (presence or absence of the AMF), with 6 replications. The seedlings were transplanted and inoculated with 300 spores of AMF placed on the root, and 20 days later received 33g de *Cladonia salzmannii* (lichen). The plants were harvested 4 months after transplanted, and the following parameters were analyzed: growth, stem diameter, dry weight axis and root, number of spore and mycorrhizal colonization. All the samples (lichen and soil) were measured using thin-layer chromatography for detection of lichen substances. The lichen/mycorrhiza treatment had number of spores 3 times higher than others treatments, but slightly lower mycorrhizal colonization. The parameters stem diameter and growth were similar to treatments lichen (alt.10,7cm, dc1,05cm) and mycorrhiza (alt.11cm,dc.1,07cm) but higher in the lichen/mycorrhiza. In this treatment was observed higher values of both dry weight axis and root. Barbatic acid (lichen substance) was detected in the soil samples. This way, the difference sporulation was probably due to the presence this substance.

**Key words:** arbuscular mycorrhizal fungi, *Cladonia salzmannii*, barbatic acid, allelopathy.

**Supported by:** CNPq