Relations between Mycorrhizal Abundance and Biofuel Crop Yield

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Switchgrass is a perennial, native prairie grass with strong potential as a biofuel stock crop. This project studied the relationship between switchgrass, fertilizer, and arbuscular mycorrhizal fungi (AMF), which engage in mutualistic relationships with many plants. The hypothesis was that AMF would be abundant and diverse in fields with no response to added fertilizer. This was tested by comparing the spore presence and switchgrass yield of various experimental fields. The results showed a negative correlation between the abundance of spores and the switchgrass yield, contrary to the hypothesis. This could indicate that either AMF are parasitic to switchgrass, or that spore abundance could gauge soil quality.

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