Biomass increase by 56%

GRAPE VINE

Staphyt, Lussac Saint-Émilion, France. 2006

OBJECTIVE

Evaluate the establishment success and growth of *Vitis vinicola* grape vinestock in response to inoculation with the mycorrhizal fungus *Glomus intraradices*.

METHODS

That experiment was conducted by Staphyt, Lussac Saint- Émilion, France, in 2006. Rows of vine stocks were planted in a clay calcitic soil. Each row comprised fifteen vine stocks. There were two treatments, Control and Mycorrhizal inoculation. For each treatment, three consecutive rows were selected and each plant received either one liter of a suspension of mycorrhizal fungi propagules in water for the treated ones or one liter of water for the control plants. There were four replicates of each treatment distributed according to a randomized complete block design. Data were taken on 13 plants from the middle row of each treatment.

RESULTS

Measurements were taken 53 and 120 days after planting. All inoculated plants survived during the trial, whereas 6% and 8% mortality were observed for the control plants after respectively 53 and 120 days. Although the number of new shoots was not different between treatments, the length and the vigor of the shoots, at 120 days, were significantly greater for the inoculated plants, by respectively 30 % and 17 % compared to the control plants. After ten months growth, the mycorrhizal inoculated plants had produced 56 % more biomass (significant at *p= 0,004*), as measured by the weight of the removed wood from pruning.