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GRAIN YIELD AND PROTEIN CONTENT OF INTERCROPPED GRAIN SORGHUM AND SOYBEANS IN RESPONSE TO INOCULATION WITH VAM FUNGI[1].

W. Bressan[2]; J.O.Siqueira[3]; C.A.Vasconcellos[4]; A.A.C. Purcino[5]. 2,4,5. CNPMS/EMBRAPA, CP 151, 35701-970 Sete Lagoas, MG; 3. ESAL, Departamento de Ciencia do Solo, CP 37, 37200 Lavras, MG.

Intercropped grain sorghum and soybeans for silage production is an alternative practice to increase silage quality. The symbiosis between vesicular-arbuscular mycorrhizal (VAM) fungi and these crops can play a potential role in increasing the uptake of P and N by plants and thus favouring protein synthesis. In this study the effect of VAM fungi on grain yield and grain protein content of intercropped sorghum and soybeans was evaluated under greenhouse conditions. Three VAM fungi, *Glomus etunicatum, Glomus clarum, and Gigaspora margarida* were used as inoculum The hybrid sorghum BR304 and the soybean variety Garimpo were intercropped under greenhouse conditions. Mycorrhizal plants had significantly (p=0.05) higher grain yield and higher N and protein content in the grains than non-mycorrhizal plants. These parameters were positively correlated to percent VAM colonization. VAM fungal species differed significantly (p=0,05) in increasing grain yield and N and protein content of the grain. G. *etunicatum* had the greatest growth promoting effects, whereas *G. clarum* did not differ significantly (P=0.05) from control plants. The data show that inoculation with VAM fungi can lead to increases in mass production and protein content of the silage.

1. Trabalho realizado no CNPMS/EMBRAPA, Sete Lagoas, MG.