RESPONSE OF INTERCROPPED SORGHUM AND SOYBEAN TO LEVELS OF PHOSPHORUS AND VAM FUNGAL SPECIES[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.

The response of intercropped grain sorghum and soybeans to vesicular-arbuscular mycorrhizal (VAM) fungi and levels of P, and the identification of the best combination of VAM fungi and P level were the objectives of this study. Three VAM fungi; *Glomus etunicatum, Glomus clarum, and Gigaspora margarida* and five phosphorus level (0,25,50,100, 200 ppm) were utilized in this experiment. Grain sorghum and soybeans inoculated with VAM fungi had significantly (p=0.05) higher plant dry weight (PDW) and grain dry weight (GDW). Grain sorghum PDW was correlated with VAM colonization (r=0.91**). GDW was also correlated with VAM colonization (r=0.88**). P levels significantly (p=0.05) affected VAM colonization, PDW, and GDW. A significant interaction (p=0.05) between P levels and mycorrhizal species was observed for colonization, PDW, and GDW. *G. etunicatum* was the most effective VAM fungi at all levels of P, while plants inoculated with *G. clarum* did not differ significantly from the control. These data demonstrated that inoculation with effective VAM fungi can enhance plant growth and biomass production of intercropped sorghum and soybeans.

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