

# Summary

This study was carried out to evaluate under greenhouse conditions the effect of four species of vesicular-arbuscular mycorrhiza and phosphate fertilization (rates: 0 and 22 kg/ha of P) on growth and nitrogen and phosphorus content of centro (*Centrosema brasilianum* (L.) Benth). The plants were inoculated with *Glomus etunicatum*, *Acaulospora muricata*, *Gigaspora margarita*, and *Gigaspora heterogama*. The experiment was conducted in a Yellow Latosol from Porto Velho, Rondônia, Brazil. Vesicular-arbuscular mycorrhizal (VAM) plants presented more efficient nutrient assimilation and growth. The *Acaulospora* fungus was the most efficient. Response to VAM inoculation was enhanced in the presence of phosphate fertilization.