



Research Article

Performance of *Rabi niger* [*Guizotia abyssinica* (L.) Cass] influenced by phosphorus management

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ABSTRACT : Field experiments were conducted at the College Farm, N.M. College of Agriculture, Navsari Agricultural University, Navsari during *Rabi* season of 2010-11 and 2011-12. The increase in *Rabi niger* yields with these treatments were the results of increased growth and yield attributes *viz.*, plant height, dry matter accumulation, capitula per plant and number of seeds per capitula, protein yield, oil content, the highest seed and straw yields of *niger* were recorded with 20 kg P₂O₅ ha⁻¹ from SSP with PSM (T₆) and was at par with 10 kg P₂O₅ ha⁻¹ from SSP + PSM (T₄), 10 kg P₂O₅ ha⁻¹ from SSP + 100 kg RP ha⁻¹ + PSM (T₈). These treatments were 43.87, 38.64 and 36.91 per cent higher than control (T₂) in respect of grain yield. Soil inoculation with PSM significantly increased the growth and yield attributes *viz.*, plant height, dry matter accumulation, capitula per plant and number of seeds per capitula, thereby increasing the seed and straw yields of *niger*. Increased the net realization and benefit to cost ratio from *niger* crop was recorded with 20 kg P₂O₅ ha⁻¹ from SSP with PSM (T₆).

KEY WORDS : Levels of phosphorus and different sources of phosphorus, Protein yield, Oil content, Seed and straw yield, Economics

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