



RESEARCH PAPER

Yield and yield attributes of safflower in integrated nutrient management in black gram (*Vigna mungo* L.) - Safflower (*Carthamus tinctorius* L.) crop sequence

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Abstract : An experiment on integrated nutrient management in black gram - safflower crop sequence was conducted at DFRS, Solapur for four years (1910-11 to 1913-14) with the objective to integrate the different sources of plant nutrients for safflower based cropping system to economize fertilizer use and sustain productivity. The fertilizer dose of 100 per cent NP to both the crops in sequence recorded significantly higher seed equivalent yield (2456 kg ha⁻¹). Whereas, treatment with 100 % N+ 50 % P +PSB to blackgram followed by 100 per cent NP to safflower was at par with it (2285 kg ha⁻¹). Plant height (103.4 cm) and total dry matter (53.41 g plant⁻¹) were reported significantly superior under 100 % N + 50 % P + PSB to blackgram and 100 per cent NP to safflower. Number of branches and number of capitulas per plant were noticed higher in treatment with 100 per cent NP to both the crops. Higher volume weight (755 g) was noticed under 100 per cent NP to blackgram and 50 % N + *Azotobacter* + 100 % P to safflower. Higher net returns of Rs. 43683/ha and B:C ratio of 2.33 were recorded under 100 % N+ 50% P +PSB to blackgram followed by 100 per cent NP to safflower. Second in order were under 100 % N + 50 % P + PSB to blackgram and 50 % NP + *Azotobacter* + PSB to safflower with Rs. 41871 and 2.27 net returns and BC ratio, respectively.

Key Words : *Azotobacter*, Crop sequence, Equivalent yield, INM, PSB

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