SHORT COMMUNICATION

SULPHUR MANAGEMENT IN URDBEAN (VIGNA MUNGO)-INDIAN MUSTARD (BRASSICA JUNCEA) CROPPING SYSTEM IN VERTISOLS

Baldev Ram1, S. S. Punia1, J. P. Tetarwal1, D. S. Meena1, R. S. Narolia1 and P. R. Raigar2

AICRP on MULLaRP, Agricultural Research Station (MPUAT), Ummedganj, Kota-324001(Rajasthan)

1 Email-baldev.ram@gmail.com

Abstract: A field experiment was conducted during two consecutive seasons of kharif and rabi (2005-06 & 2006-07) at Agricultural Research Station, Ummedganj, Kota to evaluate the optimum dose of sulphur for increasing the productivity and profitability of urdbean and mustard under urdbean-mustard cropping sequence. The experiment was comprised of 3 levels of sulphur (0, 20 and 40 kg/ha) to each urdbean and mustard and consisted of 9 treatment combinations (U0-M0, U0-M20, U0-M40, U20-M0, U20-M20, U20-M40, U40-M0, U40-M20 and U40-M40 kg/ha) were tested in randomized block design with four replications. Sulphur fertilization to urdbean 40 kg/ha significantly increased plant height/plant, branches/plant, nodules/plant, nodule dry weight, number of pods/plant, seeds/pod and test weight, seed yield, straw yield, net return and B: C ratio over no sulphur application while it remained statistically on par with 20 kg S/ha. The respective increase was in the magnitude of 7.7, 33.1, 39.5, 23.6, 35.6, 33.9, 8.4, 13.6, 16.2, 55.0 and 9.6 % over no sulphur. Maximum and significantly higher plant height, primary and secondary branches/plant, siliquae/plant, length of siliqua, seeds/siliqua, test weight, seed, stover yield, net return and B: C ratio were recorded in mustard with application of U40-M40 kg S/ha remained on par with U20-M40 and U40-M30 kg/ha over no sulphur, U20-M20, U0-M20, U20-M20 and U40-M20. Treatment U20-M40 kg S/ha recorded significantly higher urdbean equivalent yield to the tune of 1107 kg/ha, net return ₹ 16267/ha, total S uptake 14.21 kg/ha and higher buildup of S 7.49 kg/ha over U0-M0 (no sulphur).

Keywords: Cropping system, Mustard, Net return, Sulphur, Uptake, Urdbean, Yield

REFERENCES


