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Performance of *kharif* maize (*Zea mays* L.) based legume intercropping systems under different weed control methods

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ABSTRACT : A three year field study was conducted to assess the productivity of maize-legume intercropping systems under different weed control methods on Crop Research Farm, Department of Agronomy, SHIATS, Allahabad. The intercrop systems namely, sole maize, maize intercropped with blackgram, greengram, cowpea and soybean and different weed control namely, control, hand-weeding, pendimethalin 1 kg/ha, Alachlor 2 kg/ha and metolachlor 1 kg/ha. Results showed that maize plant height, dry weight, no. leaves, no cobs/plant, cob length, grain rows/cob, grains/ row, grains/ cob, test weight and grain weight per plant were significantly higher in sole maize than intercropping of maize with blackgram, greengram and cowpea. The highest of these parameters obtained from hand weeding than application of metolachlor. Soybean intercropped in maize gave the significantly higher grain yield of 12.18 q/ha than cowpea intercropped in maize. The highest legumes grain yield of 9.28 q/ha was obtained when application of metolachlor than hand weeding and alachlor, respectively.

Key Words: Growth, yield attributes and yield of Maize, intercrops, legumes and weed control.