

PRODUCTION, PRODUCTIVITY AND PROFITABILITY OF MAIZE (*ZEA MAYS*) AS INFLUENCED BY DIFFERENT AGRONOMIC PRACTICES

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Received-03.01.2020, Revised-25.01.2020

Abstract: A field experiment was carried out during the *khari* season of 2018-19 at Research farm, Ambikapur, to study the effect of different agronomic management practices on production, productivity and profitability of maize. Different treatment combinations were included in the experiment viz. farmers' practice, ecological intensification (EI), EI- tillage practices, EI-nutrient management, EI- planting density, EI- water management, EI- weed management and EI- disease and insect management laid out in randomized block design and replicated thrice. The mean loss in kernel yield of maize due to EI- weed management was 28.76%. Ecological intensification recorded higher yield and yield attributes significantly higher over rest of the treatments. Ecological intensification recorded significantly minimum total weed density (7.94 m²) and weeds dry weight (3.98 g) as compared to all other treatments and recorded highest kernel and stover yield.

Keywords: Ecological intensification, Maize, Kernel yield, Weed management

REFERENCES

- Barod, N.K., Dhar, S. and Kumar, A.** (2012). Effect of nutrient sources and weed control method on yield and economics of baby corn (*Zea mays*) . *Indian Journal of Agronomy* 57(1): 96-99.
- Barua, S., Lakra, A. K., Bhagat, P. K. and Sinha, A. K.** (2017). "Weed dynamics and productivity of Maize (*Zea mays* L.) under pre and post emergence application of herbicide." *Journal of Plant Development Sciences* 11(7): 409-13 (July, 2019).
- Cassman, K. G.** (1999). Ecological intensification of cereal production system: Yield potential, soil quality, and precision agriculture. *Proceeding of the National Academy of Science of the United State of America*. Vol. 96 (11): 5952-5959.
- Gomez, K.A. and Gomez, A. A.** (1984). Statistical procedure for Agricultural Research., edn 2, John Wiley & Sons, New York pp. 241-271.
- Jeet, S., Singh, J.P., Kumar, R. and Om Hari** (2014). Response of nitrogen and sulphur levels on productivity and profitability of QPM hybrid (*Zea mays* L.) under dryland condition of Eastern Uttar Pradesh. *Indian J. Agri. Sci.*, 84(5): 589-594
- Mukherjee, D.** (2014). Influence of integrated nutrient management on productivity, nutrient uptake and economics of maize (*Zea mays*) – yellow sarson (*Brassica rapa*) cropping system under rainfed mid hill condition. *Indian Journal of Agronomy* 59(2): 221-228.
- Prasad, D., Rana, D.S., Rana, K.S. and Rajpoot, S.A.** (2014). Effect of tillage practices and diversification on productivity, resource – use efficiency and economics of maize (*Zea mays*)/soybean (*Glycin max*)-based cropping system. *Indian Journal of Agronomy* 59(4): 534-541.
- Pretty, J.** (1997). Sustainable intensification in agriculture system. *Annals of Botany* page 1-26
- Upasani, R.R., Barla, S. and Puran, A.N.** (2017). Effect of tillage and weed control method in maize (*Zea mays*) – wheat (*Triticum aestivum*) cropping system. *International Journal of Bio- resources and Sterss Management* .8(6): 758-766.

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