

PERFORMANCE OF BIO AND CHEMICALS SEED TREATMENT OF BROAD BEAN (*VECIA FABIA* L.) VARIETIES IN CENTRAL UTTAR PRADESH

Ram Pyare, Gautam Veer Chauhan, Ram Ashish Yadav, Harshita Sharma
and Vivek Kumar Trivedi*

Department of Agronomy, *Department of Soil Science and Agricultural Chemistry,
Chandra Shekhar Azad University of Agriculture & Technology, Kanpur- 208002 (UP)

Email: rampyare2012@rediffmail.com

Received-24.03.2018, Revised-17.04.2018

Abstracts: A field experiments was conducted at Students' Instructional Farm of Chandra Shekhar Azad University of Agriculture and Technology, Kanpur-208002 (UP) during Rabi season of 2016-17. The experiment comprising of twelve treatments was laid out in a Factorial Randomized Block Design with three replications. Treatment comprised three varieties of Bakla (*Vicia faba*) viz., Pant Nagar local, Pusa Palam (Samridhi) and Kanpur local and four bio & chemical seed treatments viz., Malathion @ 3.0 g/kg seed Carbendazim @ 3.0 g/kg seed, Neem Powder @ 250 g/kg seed and Control (water) each treated seed soaked in four hours. The soil of the experimental field was sandy laom in texture with pH of 7.5 and EC of 0.20 mmhos/cm at 25°C. Seed rate of Faba bean @80 kg/ha was row to row spacing 30cm and plant to plant 20cm was sown by country plough on dated: 30.11.2016. Remaining practices were applied as per recommendation. Crop was harvested on March 03, 2017. The results indicated that all observed growth parameters in respect of seed germination, plant height and maximum flowering at all stages were significantly higher under the variety of Pant Nagar local along with bio & chemical seed treatments of Carbendazim in present experiment. The yield attributing characters viz., pods/ plant, pod weight/ plant and seed/ biomass weight/ plant were significantly higher in variety of Pant Nagar local with bio & chemical seed treatments of Carbendazim in present trail. The Pant Nagar local variety gave higher yield (10.64 q/ha) and straw yield (19.41 q/ha) in comparison to all other varieties. Among the bio & chemicals seed treated the significantly higher seed (11.14 q/ha) and straw yield (16.87 q/ha) was recorded under seed treatments with Carbendazim than malathion, neem powder and control seed treatment, respectively.

Keywords: Neem Powder, Carbendazim, Malathian, Varieties of Faba bean

REFERENCES

Abido, W.A.E. and Seadh, S.E. (2014). Rate of variations between field bean cultivars due to sowing dates and foliar spraying treatments. *Science International, Egypt* Vol. 2 issue 1.

Demissie, Shiferaw, Muleta, Diriba and Berecha, Gezahegn (2013). Effect of phosphate solubilizing bacteria on seed germination and seedling growth of faba bean (*Vicia faba* L.) *International J. of Agril. Rech*, 8:123-136.

Gemechu, K., Mussa, J. and Tezera, W. (2006). Faba bean (*Vicia faba* L) Genetics and Breeding Research in Ethiopia: A Review. In: Ali K, Kenneni G, Ahmed S, Malhotra R, Beniwal S, Makkouk K, Halila MH(eds.) Food and Forage legumes of Ethiopia: *Progress and prospects. Proceedings of the workshop on Food and Forage Legume, Addis Ababa, Ethiopia.*

Hussein, A.H.A., EL-Deeb, M.A. and EL-Yamani, K.H. (2002). Response of new faba bean genotypes to different sowing dates and plant densities in the newly reclaimed land in upper Egypt. *Proceedings of the National Annual Coordination Meeting*, pp 70-74.

Kandil, A.A., Sharief, A.E. and Mahmoud, A.S.A. (2011). Reduction of flower dropping in some faba bean cultivars by growth regulators foliar application. *J. Appl. Sci. Res.*, 7:1883-1889.

Khafaga, H.S., Faefafa, A.H., Hala, M.M. and Alaa, S.A. (2009). Response of two faba bean cultivars to application of certain growth regulators under salinity stress condition at Siwa Oasis: 1- Growth traits, yield and yield components. *Proceedings of the 4th Conference on Recent Technologies in Agriculture, Cairo, Giza, Egypt*, pp: 236-249.

Kubure, T.E., Raghavaiah, C. V. and Hamza, I. (2016). Production Potential of Faba Bean (*Vicia faba* L.) Genotypes in Relation to Plant Densities and Phosphorus Nutrition on Vertisols of Central Highlands of West Showa Zone, Ethiopia, East, Africa, *Adv Crop Sci Tech* 4:214.

Mohamed, A.A. (2003). Effect of planting date on growth and yield of some faba bean varieties. *M.Sc. Thesis, Faculty of Agriculture, Cairo University, Egypt.*

Mohamed, M.R. and E.El-Abbas (2005). Response of three faba bean cultivars (*Vicia faba* L.) to different nitrogen sources under P-biofertilizer and micronutrients addition. *J. Agri. Sci. Mansoura Univ.* 30: 8277-8292.

Rekha, M.K.A. and El-Said, M. (2013). Growth and yield of broad bean (*vicia faba* L.) as affected by chemical and/or natural phosphorus with different biofertilizer. *Plant Production, Mansoura Univ.*, 4(12): 1857-1869.

Salama, S.M. and Awaad, S.S. (2005). Performance and phenotypic stability of some faba bean (*vicia*

*Corresponding Author

faba, L.) genotypes under two sowing dates *J. Agric. Sci.*, 30: 2945-2950.

Shafeek, M.R., Ali, Aisha, H. and Asmaa, R. M. (2016). Foliar application of amino acids and bio fertilizer promote execution of broad bean plant (*Vicia faba* L.) under newly reclaimed land

conditions. *International J. of Pharm Tech Research Coden (USA)*: Vol 9, No. 5 pp 100-109.

Soliman, H., Mona, Rawan, S., Al-Juhani, Mawaddah, A., Hashash and FATimah M., Al-Juhani (2016). *Intentional Journal of Agricultural Technology* 12(6):1125-1138.