RESEARCH ARTICLE

STUDY OF DIFFERENT GENOTYPE, PLANTING GEOMETRY AND NUTRIENT STATUS IN PIGEON PEA DURING RABI SEASON

B. Tigga, S. Bhagat, D.K. Chandrakar, Akhilesh K. Lakra* and T. R. Banjara

Department of Agronomy, College of Agriculture, IGKV, Raipur (Chhattisgarh)
E-mail Author: biruamb15@gmail.com

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Abstract: A field experiment was conducted during winter season of to study the performance of pigeonpea genotypes to planting geometry. The genotype and planting geometry significantly influenced the seed yield, stalk yield, harvest index, availability of nutrient in soil, nutrient % in seed and Stover. Among the six genotypes (Asha, Rajeevlochan, RPS- 2007-106, Laxmi, RPS-2008-4 and RPS-2007-10) tested, genotype Asha (1281 kg ha^{-1}) recorded significantly highest seed yield over the other genotype. In the two planting geometry significantly maximum seed yield of 1235 kg ha^{-1} was realized with spacing of 45 cm x 10 cm and was higher yield than the yield recorded with spacing of 60 cm x 10 cm (1085 kg ha^{-1}). In genotype Asha (227.722 kg ha^{-1}) availability of nitrogen and nutrient (NPK) % of seed and Stover are significance. In narrow spacing significantly maximum availability of nitrogen and nutrient (NPK) % of seed and Stover was significance over the wild spacing.

Keyword: Genotype, Geometric, Nutrient, Energy, Seed and Plant

REFERENCES

Asaduzzaman, M., Sultana, S., Roy, T.S. and Masum, S.M. (2010).Weeding and pant spacing effects on the growth and yield of black gram. *Bangladesh Research Publications Journal* **4(1):**62-68.

Davi, D., Kumar,R. and Khippal,A. (1995).Effect of different intra-row spacing on the growth of pigeon pea and urdbean intercropping. *Discovery and Innovation*, **9(1-2):** 47-51.

Goswami, J.,Borah, U.K. and Deka, N. (1998). Performance of blackgram (*Phaseolus mungo* L.) varieties under different row spacing. *Haryana Journal of Agronomy* **14(1):** 44-47.

Kashyap, T.L.,Shrivastava, G.K., Lakpale, R. and Choubey, N.K. (2003). Productivity potential of pigeonpea (*Cajanus cajan L. Millsp*) genotypes in response to growth regulators under Vertisols of Chhattisgarh plains. *Annals of Agril. Research*, **24(2):** 449-452.

Kumar, S.G., Gomathinayajam,P.andRathnaswmy,R.(1997).Effect of row spacing on a dry matter accumulation of black gram. *Madras Agric. J.*, 84(3): 160-162.

Mishra, M.and A.Mishra. (1995).Effect of fertilizers, weed control and row spacing on summer black gram (*Phaseolus mungo*). *Indian J. Agron*, **40(3):** 434-438.

Nagaraju, A.P., Shivanandah,N.P. and Shambulingappa,K.G.(1995). Response of urdbean genotype to row spacing. *Indian J. Pulses Res.*, **8(2):** 190-191.

Nandan, R. and Kumar, D. (2005).Response of mungbean genotypes to varying plant populations. *Indian Journal of Pulses Research* **18(1):** 81-83.

Panwar, J.D.S. and Sirohi,G.S.(1987).Studies on effect of plant population on grain yield and its components on mungbean (*Vigna radiate* L.). *Ind. J. Plant Physiol.* **30(4):** 412-415.

Subbalah and Sudhakar Rao.P.S.S. (1998).Effect of varying levels of phosphorus and nitrogen in combination with rhizobium on post rainy season pigeonpea [*Cajanus Cajan* (L.) Millsp.]. *Andhra Agric J.*, **45**:61-64.

Umesh, M.R., Shankar,M.A. and Ananda, N. (2013). Yield, nutrient uptake and economics of pigeonpea (*Cajanus cajan L.*) genotypes under nutrient supply levels in dryland Alfisols of Karnataka. *Indian J. of Agronomy*, **58(4):** 554-559.

*Corresponding Author