

EFFECT OF FODDER BASED INTERCROPPING SYSTEMS ON YIELD AND QUALITY

Kuldeep^{1*}, Kuldeep², Rakesh Kumar³ and Dinesh Panwar⁴

^{1,3,4}Department of Agronomy, Rajasthan college of agriculture, Maharana Pratap University of Agriculture and Technology, Udaipur-313 001, Rajasthan, India.

²Department of Agronomy, College of Agriculture, Junagadh Agricultural University, Junagadh-362001, Gujarat.

Email: kasniya99@gmail.com

Received-05.02.2017, Revised-18.02.2017

Abstract: A field experiment was conducted at the Instructional Farm of Agronomy, Maharana Pratap University of Agriculture and Technology, Udaipur to evaluate the performance of sole as well intercropping of cereals (sorghum, maize and pearl millet) and legumes (cowpea and cluster bean) system. The results shows that in sole cropping system sole sorghum recorded significantly higher green fodder yield of main crop than other sole and intercropping treatments in different row ratios. Among intercropping treatments, sorghum + cowpea in 2:1 ratio outperformed in green fodder yield of main crop but variations were at par with sorghum + cluster bean in 2:1 row ratio.

Keywords: Cropping system, Maize, Sorghum, Fodder

REFERENCES

- Bishnoi, N.R.** (2002). Effect of plant population and nitrogen levels on productivity and quality of dual purpose sorghum genotypes. M.Sc. (Ag.) Thesis, Department of Agronomy, Rajasthan College of Agriculture, MPUAT, Udaipur.
- Chotiya, A.** (2005). Effect of graded levels of nitrogen and phosphorus on productivity and quality of sorghum fodder. M.Sc. Thesis, Department of Agronomy, Rajasthan College of Agriculture, MPUAT, Udaipur.
- Hand Book of Agriculture** (2010). ICAR, New Delhi. 1128-1129
- Kumar, P., Kher, S.K. and Dwivedi, S.** (2012). An analytical study of livestock in Jammu and Kashmir. *International Journal of plant, animal and environmental sciences*, **2**: 169-177.
- Livestock Census** (2007). Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agricultural, Government of India.
- Pathak, G., Tiwari, R.C., Jat, A.L., Singh, P. and Sumeriya, H. K.** (2013). Evaluation of fodder based cereal-legume intercropping systems for yield and quality. *Current advances in Agriculture Sciences*, **5**: 126-128.
- Rao, M.R. and Willey, R.W.** (1980). Preliminary studies of intercropping combinations based on pigeon pea or sorghum. *Experimental Agriculture*, **16**: 24-40.
- Sharma, R.P., Singh, A.K., Poddar, B.K. and Raman, K. R.** (2008). Forage production potential and economics of maize (*Zea mays*) with legumes intercropping under various row proportions. *Indian Journal of Agronomy*, **53**: 121-124.
- Sood, B.R. and Sharma, V.K.** (1992). Effect of nitrogen levels on the yield and quality of forage sorghum (*Sorghum bicolor*) intercropping with legumes. *Indian Journal of Agronomy*, **37**: 642-644.
- Surve, V.H. and Arvadia, M.K.** (2012). Performance of fodder sorghum (*Sorghum bicolor* L.), maize (*Zea mays* L.) and cowpea (*Vigna unguiculata* (L.) Walp.) under sole and intercropping systems. *International Journal of Agriculture: Research and Review*, **2**: 28-31.
- Tripathi, S.N.** (1989). Mixed cropping of forage species in relation to herbage yield and quality. *Indian journal of Dryland Agriculture Research and Development*, **4**: 68-72.
- Yilma, Z.** (2002). Effect of cropping systems, nitrogen levels and bacterial fertilization on yield and quality of fodder sorghum (*Sorghum bicolor* L. Moench.) Ph.D. Thesis, Department of Agronomy, Rajasthan College of Agriculture, MPUAT, Udaipur.

*Corresponding Author