

IDENTIFICATION AND CHARACTERIZATION OF HIGH YIELDING QUALITY TRADITIONAL AROMATIC NON- BASMATI RICE (*Oryza sativa* L.) VARIETIES UNDER ORGANIC FARMING CONDITION

Akhilesh Kumar Lakra, Shrikant Chitale and Pradeep Kumar Lakra

Department of Agronomy, Indira Gandhi Krishi Vishwavidyalaya, Raipur (CG), India

*E-mail: akhilesh.igkv@gmail.com

Abstracts: The present investigation was carried out at the Research cum Instructional Farm, IGKV, Raipur (C.G.) during *kharif* season of 2011. A Field experiment was laid out in randomized block design with 30 treatments.

The results revealed that among the varieties, Dubraj, Vasumati, Mahsuri, Indira Maheshwari and Mahamaya gave the higher grain yield and net profit and B:C ratio among all the varieties under organic farming condition. However, improved non-aromatic non- basmati type 'Indira Maheshwari' produced the maximum yield (46.90 q ha⁻¹). The lowest grain yield was produced by Jaldubi (32.84 qha⁻¹) an improved non-aromatic non- basmati type. The less variation was observed in grain yield of improved aromatic varieties.

Substantial variation was observed in the elongation ratio under the group of improved aromatic varieties with the highest in Gopal Bhog. The fine grain varieties have lower values of head rice recovery as compared to bold grain rice varieties irrespective of different groups. Rice variety 'Pusa Basmati' gave the highest amylose percent among different rice varieties.

Keywords: Organic Farming, Varieties, Rice

REFERENCES

- Agrawal, P.** (2000). Effect of scheduling of nitrogen, potassium and harvesting time on growth and yield, N uptake and quality of grain and seed of rice. M.Sc.(Ag.) Thesis submitted to IGAU, Raipur (C.G.).
- Anonymous** (2011). Department of Agriculture, *Production, Supply, & Distribution*, electronic database.
- Anonymous**, (2011). Directorate of Economics and Statistics, Department of Agriculture and Cooperation. New Delhi.
- Cruz, N.D. and Khus, G.S.** (2000). Rice grain quality evaluation procedures. In *Aromatic Rices*. Edt by R.K. Singh, U.S. Singh and G.S. Khush. Pub. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
- Duta, R.K., Baset Mia, M.A. and Khanam, S.**, (2002). Plant architecture and growth characteristics of fine grain and aromatic rices and their relation with grain yield. *IRC Newselett.*, 51:51-56.
- Krishna, A., Diradarpatil, N.K., Manjappa, K. and Channappagoudar, B.B.**, (2006). Influence of SRI cultivation on seed yield, quality in short duration rice variety. In: National symposium on System of Rice Intensification (SRI)- present status and future prospects November 17-18, 2006, ANGARU, Hyderabad. pp.105.
- Kusutani, A., Tovata, M., Asanuma, K. and Cui, J.** (2000). Studies on the varietal differences of harvest index and morphological characteristics of rice. *Japanese J. Crop Sci.*, 69: 359-364.
- Miah, M.N.H., Yoshida, T., Yamamoto, Y. and Nitta, Y.** (1996). Characteristics of dry matter production and partitioning of dry matter to panicles in high yielding semidwarf indica and japonica indica hybrid rice varieties. *Japanese J. Crop Sci.*, 65: 672-685.
- Rao, P.R., Kumar, R.M., Ram Prasad, A.S. and Ravichandaran, S.**, (2006). System of Rice Intensification (SRI) versus Traditional method of Rice Cultivation (TRC). In: National symposium on System of Rice Intensification (SRI)- present status and future prospects November 17-18, 2006, ANGARU, Hyderabad. pp.79.
- Richharia, R.H. and Govindswamy, S.** (1962). Hulling quality in rice. Paper presented in the second All India Rice Research Workers Conference.
- Sharma, N.** (2002). Quality characteristics of non-aromatic and aromatic rice varieties of Punjab. *RRRS, Punjab Agril. Uni., Kapurthala, Punjab*.72 (7): 408-410.
- Wu, G., Wilson, L.T. and McClung, A.M.** (1998). Contribution of rice tillers to dry matter accumulation and yield. *Agron. J.*, 90: 317-323.