

Research Paper :

Improvement in livelihood security through front line demonstrations for small and marginal farmers on Abhishek variety of rice in Ranchi

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ABSTRACT

Rice is the main crop of Jharkhand and Ranchi district as well. Therefore, accelerated progress in enhancing productivity, profitability, stability, and sustainability of the major farming systems would be the best safety net against hunger and poverty. To overcome this situation, one of the components of crop production *i.e.* rice production was taken into account. Keeping in view the low yield of rice, it was decided to conduct Front Line Demonstrations on a suitable variety of rice which may be conducive to the local farming situation. For this purpose, Abhishek variety was selected out of several promising varieties. The objectives of Front Line Demonstration on Abhishek variety of rice was to demonstrate its productivity potentials through use of related improved practices and test its adoptability in terms of bio-physical and socio-economic condition of the farmers. Farmers reactions and feed back of rice Abhishek varieties showed that the highest increase in yield was recorded to be 68.66 per cent. The enhanced yield achieved through adoption of improved production technologies in rice, significantly improves livelihood security of the farmers.

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Rice is a supreme commodity to mankind, because rice is truly related to life, culture, tradition and a means of livelihoods to millions. Paddy is the main crop of Jharkhand and also of Ranchi district as well. Rice is mainly grown during rainy season (*Kharif*) and in few pockets during summer season in the low land areas. Rice in general is the major crop in Jharkhand and is entirely dependent on rainfall. Front Line Demonstration (FLD) is one of the extension methods to evaluate performance of technology under on-farm conditions, technology adoption by the participating farmers and its diffusion to non-participating farmers. Scientific, suitable and location specific crop production technology supply holds the key to improve the crop production and sustaining livelihoods. Modern crop management practices have been developed, but in most of the cases, farmers are not applying these technologies. There is certainly a gap between recommended and farmers' practices. This gap is responsible for the low productivity and lower returns. Small and marginal farmers have tremendous scope for increasing productivity because the natural capital – the soil, the water, the biodiversity, can be enhanced through conservation and rejuvenation. Keeping in view, the contribution of rice production to the livelihoods of majority of small and marginal farmers, specially the tribal. Abhishek variety of rice was selected out of several promising varieties for front line demonstrations.

METHODOLOGY

One of the mandates of KVK is to conduct front line demonstrations to show the production potentialities of modern varieties and their package of practices. Front line demonstration (FLD) on Abhishek variety of rice was conducted in *Kharif* 2008 in different adopted villages of Ramakrishna Mission Ashrama, Divyayan Krishi Vigyan Kendra Ranchi, Jharkhand. The rationale behind selection of this variety was its yield potential as it was found highly satisfactory (76 qha⁻¹) on the farm of the Divyayan KVK. It was a full package demonstration with seed rate of 40 kg per hectare, line transplanting, balanced fertilizers 80:40:20:: N:P₂O₅:K₂O kg. per ha. The demonstrations were conducted in three adopted villages *i.e.* Bhuiyadih in Tamar block, Kokre in Bero Block and Obar in Angara block of Ranchi district. A total number of 78 farmers were selected for the demonstration *i.e.* 28 farmers from Bhuyadih, 33 from Kokre and 17 from Obar village in 15.7 hectare. Special features of Abhishek variety are semi dwarf, of 125-130 day duration, short bold grains, moderately resistant to brown spot and sheath rot, highly resistant to gall-midge (biotype – 4), and resistant to stem borer and leaf folder. Local check (Farmers practice) variety was IR-36. Fertilizers dose and agricultural practices of local check (IR-36) was also same as Abhishek variety.