

DEMONSTRATION : AN EFFECTIVE TOOL FOR INCREASING THE PRODUCTIVITY OF URD**B.S. Kirar¹, R. Nashine², A.K. Gupta³ and S.C. Mukherjee⁴****ABSTRACT**

Urd is an important food legume widely consumed in India. It also plays an important role in sustainable agriculture enriching the soil through biological nitrogen fixation. Bastar district occupies 16650 ha of land and 7326 tons production with average productivity of 440 kg ha⁻¹ of urd. Looking of fact front line demonstration were undertaken by the Krishi Vigyan Kendra, Jagdalpur; Bastar on the improved package of practices of urd in the district for 3 consecutive years viz 2002-03, 2003-04 & 2004-05. The highest seed yield (630 kg/ha-1) was recorded in the year 2002-03. In FLD, it was 40 percent more over the farmers practice (450 kg ha-1), however, the lowest yield (490 kg ha-1) was recorded in the year 2003-04 under FLD and 251 kg ha-1 in farmers' practice. Increase in the yield (99%) under FLD over farmers practice was obtained during the year 2004-05. The variation in the percent increase in the yield was found due to variation in agro climate parameter under rainfed condition. Under sustainable agricultural practices, with this study it is concluded that the FLD programme was effective in changing attitude, skill and knowledge of improved/ recommended practices of HYV of urd included adoption. This also improved the relationship between farmers and scientist and built confidence between them. The demonstration farmers acted also as source of information and pure seeds for wider dissemination of the HYV of urd for other farmers.

Key words: *Urd; Sustainable agriculture; Demonstration; FLD programme*

INTRODUCTION

Urd is an important food legume widely consumed in India. It also play an important role in sustainable agriculture enriching the soil through biological nitrogen fixation. Pulse crop occupies prominent place after food grains in agriculture economy of India Bastar district occupies 16650 ha. of land and 7326 tones production with the average productivity of 440 kg/ ha-1 of urd.

Front line demonstration is introduction by the Indian Council of Agricultural Research, New Delhi, with the inception of technology mission of pulse & oil seed crops during mid eighties. The field demonstrations conducted under the close supervision of scientist of the NARS/KVK are called front line demonstration. The basic objectives of FLD are to speedy spread of the newly introduced high yielding variety of urd and acquaint extension functionaries and local farmers with front line Varietals and management technologies.

METHODOLOGY

Front line demonstration on urd was conducted by Krishi Vigyan Kendra, Jagdalpur, during the period from 2002- 03, 2003-04 and 2004-05 in eight villages of three blocks, Bakawand, Bastar and Lohandiguda. The total 43 number of farmers were associated under this programme. The demonstration of improved technology was taken in an area of 0.5 to 1.00 acre of each farmers. Total 15 ha. area was covered in 3 years for demonstration of recommended improved practices of urd. In the demonstration, one control plot was also kept where farmer practices was carried out. The result was compared with the full package of practice.

The primary data was collected from the selected FLD

farmers with the help of interview schedule and interpreter and presented in term of percentage and the qualitative data was converted in to quantitative form and expressed in term of percent increased yield was calculated by using formula.

$$\% \text{ increased yield} = \frac{\text{Demonstration yield} - \text{farmers yield}}{\text{Farmers yield}} \times 100$$

RESULTS AND DISCUSSION

The results obtained during three years are presented in Table 2. The result revealed that the highest yield in the FLD plot and farmers plot was 630 kg/ha-1 and 450 kg/ha-1, respectively during 2002-03 and lowest yield was in the year 2003-04. The results clearly indicate that due to knowledge and adoption of appropriate production technology, the yield of urd could be increased by 40, 95 and 99 percent over the yield obtained under farmers practices of urd cultivation. The above findings are in similarity with the finding of Singh (2002).

Table 2. Increasing the productivity of urd through front line demonstration.

Year	Under FLD programme		Average yield (kg/ha-1)		% increase in the yield over farmers practices
	Total farmers	Total area ha.	FLD	Farmers practice	
2002-03	15	05	630	450	40
2003-04	14	05	490	251	95
2004-05	14	05	570	286	99
Total/Avg.	43	15	563	329	71

The FLD produced a signification positive result and

Table 1. Difference between demonstration package and farmers practice under FLD on urd

Particulars	Demonstration package	Farmers practices (Local check)
Variety	TAU-1 and PU-30	Local
Seed rate	20 kg/ h-1	30 kg/ ha-1
Sowing method	Line sowing (30x10cm)	Broad casting
Situation	Upland rainfed	Upland rainfed
Fertilizer dose	20:50:20 (N:P:K:kg/ha)	Nil
Plant protection	Need based insecticides & fungicides spray	No spray and insecticides & fungicides

provided the researcher an opportunity to demonstrate the productivity potential and profitability of the improved technology under real farm situation, which they have been advocating for a long time. This could circumvent some of the constraints in the existing transfer of technology system in the district. Similar findings were reported by Kirar et al (2005).

Table 3. Area & productivity of different Pulse crop in Bastar district during kharif 2004-05

Crop	Area (ha.)	Productivity (kg/ha)
Urd	16650	440
Horse gram	1600	350
Arhar	2150	750
Green gram	200	400

CONCLUSION

FLD programme was effective in changing attitude, skill and knowledge of improved practices of HYV of urd including adoption. This also improved the relationship between farmers and scientists and built confidence between them. The demonstration farmers acted also as source of information and pure seeds for wider dissemination of HYV of urd for other farmers.

The productivity gain under FLD over traditional practices of urd cultivation created greater awareness and motivated the other farmers to adopt appropriate production technology of urd in the district. The selection of critical input and participatory approach in planning and conducting the demonstration definitely help in the transfer of technology to the farmers.

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