

EFFECT OF FRONT LINE DEMONSTRATIONS ON SOYBEAN YIELD IN NORTHERN HILLS ZONE OF CHHATTISGARH

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Front line demonstrations on soybean were conducted by KVK. with an aim of enhancing the production potential of soybean crop in tribal district of Northern hills zone of Chhattishgarh. This KVK functioning under SAU, JNKVV, Jabalpur in ICAR Zonal coordinating unit zone-VII. Through full Package frontline demonstrations comprising newly released varieties, seed treatment with fungicides and bio-fertilizers, balance nutrient application including sulphur element, timely weeding to exploit their maximum potential in the existing real farming situation.

METHODOLOGY

The frontline demonstrations (105) were

conducted by KVK. Shahdol on area of 51.5 ha. at different adopted villages by krishi vigyan kendra during kharif season 1995 to 2002. These demonstrations were conducted at farmer's field with local check plot for comparative study. The agronomic practices were followed as per recommendation for soybean crop. The data were collected and analysis by using simple statistical tools.

Improved early varieties, Time of sowing, Seed treatment with fungicides and bio-fertilizers balance nutrient application (NPKS) timely weeding and need based plant protection.

Table 1. Result of front line demonstrations of Soybean conducted by KVK Shahdol in different years

Year	No. of demon.	Area (ha.)	Av. Yield (q/ha)		Increase In yield (%)	Over the Check Plot		Add.	IBCR Return
			Demon	Local check		Add. Cost of input (Rs/ha.)	Add. Yield (q/ha.)		
1	2	3	4	5	6	7	8	9	10
1995-96	6	5	11.92	6.5	83.38	1344	5.42	5420	4
1996-97	20	10	20.09	10.0	100.90	1300	10.09	10090	7.6
1997-98	24	10	20.21	10.20	98.13	1140	10.01	10010	8.7
1998-99	25	10	15.60	7.0	122.85	1300	8.6	8600	6.6
1999-00	10	5	17.93	8.3	116.02	1518	9.63	9630	6.3
2001-02	7	5	20.90	10.8	93.51	1210	10.1	10100	8.3
2002-03	13	6.5	18.16	10.9	66.60	1146	7.26	7260	6.3
Total/av.	105	51.5	17.83	9.10	97.34	1280	8.73	8730	6.8

RESULTS AND DISCUSSION

The data shows (table) frontline demonstration on soybean an average yield of

17.83qha-1 under demonstration plots and compare to local checks plot 9.10 qha-1.

The higher average grain yield in

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demonstration plots over the years compare to local check due to adoption of full package of practices. Similar results were reported by Singh *et al.*

Yield Increase in Percentage—It reveals from the table(1) that the soybean average yield increase by 96.34% over local check while the yearwise variation in yield to the tune of 66.60 to 122.85%. Similar finding reported by Singh *et al.*

Incremental Cost Benefit Ratio (IBCR)—Results indicated in (table-1) that the

average additional cost of Rs. 1280/-ha required to obtain additional yield of 8.73 qha⁻¹. The additional return of Rs. 8730/ha obtained with IBCR of 6.8 due to adoption of improved technology. Similar results have been reported by Singh *et al.*

Extension Activities—During crop season following extension has been carried out by KVK Shahdol for popularizing improved technology of soybean.

Table 2. Details of extension activities carried out by KVK under FLD on soybean

S.No	Activities Organized	Year						
		1995	1996	1997	1998	1999	2001	2002
1	Trainings	2	3	3	5	3	3	4
	Participants	40	62	67	96	45	24	73
2	Field days	2	1	2	2	2	1	1
	Participants	107	150	117	89	130	56	39
3	Kisan Sangosthis Participants	115	253	384	337	260	134	246
4	Radio Talk	—	1	2	2	3	1	2

Feed Back :

- Balance use of fertilizer are need for sustainable production.
- Seed treatment with fungicide and bio-fertilizers are need to protect soybean crop at seeding stage and effective nodulation.
- Avoid mono culture of soybean.
- Timely sowing, weeding and need based plant protection measures are important practice.

CONCLUSION

It is concluded that front line demonstra-

tions with full package of practices viz. improved high yielding varieties, seed treatment with fungicides and bio-fertilizers, balance nutrients application on soil test basis with sulphur, timely sowing and adoption of plant protection measures results in enhanced yield. This reveal that there is great scope for popularizing soybean cultivation in tribal belt of shahdol. The extension agencies could effectively communicate the improved technologies to farming community for better production.

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