

## Improvement of productivity of coriander (*Coriandrum sativum* L.) through front line demonstrations

Ramakant Sharma, Dinesh Arora, P. C. Choudhary and R. Porwal

Krishi Vigyan Kendra, Tabiji, Ajmer

### ABSTRACT

A total 10 Front Line Demonstrations (FLDs) on leaf production of coriander were organized on the farmer's fields in adopted village of Krishi Vigyan Kendra, Ajmer during *rabi* season 2007-08. The results of these demonstrations revealed that the variety RCr-41 yielded 28.60 per cent higher yield than local variety sown under farmer's practice. An average yield of 45.00 qt/ha was recorded for RCr-41 whereas it was only 35.00 qt/ha from the local varieties in practice by the farmers. The economic analysis of yield performance in FLDs trails gave higher average net return (Rs. 45000/ha) with average additional return (Rs. 10000/ha) with higher cost benefit ratio of 2.61 as compared to local check.

**Key words :** Krishi Vigyan Kendra; frontline demonstration

### INTRODUCTION

Front-Line Demonstrations (FLDs) is the new concept of field demonstration evolved by the Indian Council of Agricultural Research with the inception of the Technology Mission on Oilseed Crops during mid-eighties. The field demonstrations conducted under the close supervision of scientists of the National Agriculture Research System are called FLDs because the technologies are demonstrated for the first time by the scientists themselves before being fed into the main extension system of the State Department of Agriculture. The main objective of FLDs is to demonstrate newly released crop production and protection technologies and its management practices in the farmers' field under different agro-climatic regions and farming situations. While demonstrating the technologies in the farmers' field, the scientist are required to study the factors contributing higher crop production, field constrains of production and thereby generate production data and feedback information. FLDs are conducted in a block of two or four hectares land in order to have better impact of the demonstrated technologies on the farmers and field level extension functionaries. Seed spices are primarily used for flavouring, seasoning and imparting aroma in variety of food items and beverages. Seed spices are important export oriented commodities and about ten per cent of the production is exported in raw as well as value added products realizing foreign exchange worth of rupees 275 corers. The usage of spices by consumers is increasing worldwide because they are completely natural, rather than artificial additives for seasoning and flavouring of foods. Coriander generally known as "*Dhania*" (*Coriandrum sativum* L.) is cultivated in

Rajasthan, Gujarat, Madhya Pradesh, Tamil Nadu, U.P., etc. It is mainly used as a condiment for its medicinal properties as well as for culinary purposes as spice. Green leaves of coriander are also extensively used for culinary purposes. The average productivity of coriander variety is far below the potential yield so efforts were made to increase the adoption of technologies through FLDs. FLDs were undertaken by Krishi Vigyan Kendra, Ajmer on the improved technology of coriander in the Ajmer district during 2007-08. An attempt has been made to know the productivity of FLDs as well as farmers' practice.

The study was conducted in adopted village of Krishi Vigyan Kendra, Ajmer. Ten adopted farmers were selected which have earlier been selected and had undertaken demonstration trails on their fields and data were collected with the help of personal contact and observation. Yield data was also recorded at the time of separate harvesting. The yield of each demonstration was recorded in a systematic manner and the yield of farmers' practices was also recorded at the same time. The collected data were calculated and analysed to draw inferences.

Total 10 FLDs were conducted at farmers' field in their farming situation during 2007-08. The average yield (green leaves) 45 q/ha was obtained from the variety RCr-41 in demonstration plots during the 2007-08 while control plot with local variety yielded 35 q/ha. The average yield fluctuated and ranged from 41 to 48 q/ha in demonstration plots. Table 1, also revealed that variety RCr-41 yielded 28.60% higher than the farmers practice (local check). The finding is in line with Rao *et. al.* (2) who found that the variety TCGS-320 with improved package

**Table1.** Performance of coriander variety under frontline demonstration

Year	Variety	Area (ha.)	No. of demo.	Avg. Yield (qt/ha)				% increase in yield over control
				Demo		Control		
				Min.	Max.	Average	Average	
2007-08	Rcr-41	5	10	41.00	48.00	45.00	35.00	28.60

**Table 2.** Economics of frontline demonstration on coriander

Treatments	Cost of critical input (Rs./ha)	Cost of cultivation (Rs./ha)	Additional expn. (Rs.)	Net return (Rs./ha)	Additional return (Rs.)	BC ratio
Farmers' practice	2700	16275	-	35000	-	2.16
Demonstration	3425	17000	725	45000	10000	2.61
Sale price of coriander leaves - Rs. 10 per kg						

of practices in groundnut gave 22.80% to 44.39% increase in yield over local variety with an average improvement of 35.03%. Similar results were also reported by Pradhan *et al.* (1). Table 2, revealed that the total cost of demonstrations was Rs. 17,000 per hectare while the cost of farmers practices (FP) was Rs.16, 275 per hectare. Results also indicated that the net return from demonstration was Rs. 45,000 per hectare from the variety RCr-41, while net return from farmers adopted variety and practice was Rs. 35,000 per hectare. It means that the net return from demonstration was higher than farmer's practices. The additional cost Rs.725 gave an additional net return of Rs. 10000 per hectare. Singh *et al*(3) supported that the net return from demonstration was higher than farmer's practices and the additional cost of Rs. 2085 to 3262 gave additional net return, which ranged from Rs. 6725 to 11201 per hectare. Table 2, also indicated that incremental benefit: cost ratio calculated ranged from 1:2.16 to 1:2.61. Similar findings were also reported by Rao *et al* (2) and Pradhan *et al* (1). Thus, it is clear that from demonstration trails of coriander variety RCr-41 with seed treatment of *Trichoderma* 6 gm/kg seed gave better return than the locally adopted variety and practice by farmer's of Ajmer district.

Thus, it can be concluded that FLDs is an effective mode disseminating improved practices for increasing the productivity of coriander. Improved technologies

in FLDs gave an enhanced yield of 42.47 q/ha to 49.22 q/ha. with an average productivity of 45.99 q/ha. The farmers appreciated the performance of coriander variety RCr-41 and liked its good aroma, taste and keeping quality, it also gave 28.6 % higher yield with additional net return of Rs. 10,000 per ha over locally adopted variety and practice by farmers. This has created greater curiosity and motivation among other farmers who have not adopted the improved practices of coriander cultivation. These demonstrations also built a strong relationship and confidence between KVK, Scientists and farmers.

#### REFERENCES

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