



Cluster Front Line Demonstration on Pulses (Lentil) in Rabi 2023-24: A Success Story

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Lentil (*Lens culinaris*) is a small annual legume of the pea family (Fabaceae) and seed is edible. Pulses are main source of protein and commonly known as poor man's meat by Reddy *et al.* (2007). Lentil is a premier legume crop of Fabaceae family. It is one of the major rabi season crop of the Ratlam district.

The Cluster front line Demonstration (CFLD) is an approach to speed the extension of proven technologies at farmers' fields in a participatory mode with the objective to find out the maximum available resources for crop production and also to bridge the productivity gaps by increasing production (Kumar and Jakhar, 2020). Most of the farmers of Ratlam district grow only a confined variety of lentil, which gives low yields and high susceptible to wilt, in this regard, to increase the productivity, the Department of Agricultural, Cooperative and Farmers Welfare had sanctioned the project "Cluster Frontline Demonstration on Pulses" to ATARI, Jabalpur, Zone IX, through national food security mission (NFSM). KVK Ratlam was selected by ATARI, Jabalpur to implement this project with an objective to promote the production and productivity of lentil through CFLDs with latest and specific technologies viz- large seeded high yielding varieties and resistance to *fusarium* wilt (IPL-316) lentil variety under best package of practices.

Farmers Background

Shri Sunil Patidar s/o Shri Mohan Lal Patidar is a 30 years old young progressive farmer from Mundlirasulpur village, Jaora block, Ratlam district of Madhya Pradesh state. His completed high school education at Venogoapl higher Secondary School, Jaora, Ratlam Madhya Pradesh. Subsequently, he dedicated himself to farming and established a small dairy operation on his 2.5 ha property to support his family. During the Rabi season, he primarily cultivates wheat, Lentil, Chickpea, Garlic and mustard, while in the Kharif season, he grows Soybean and maize crops.

Shri Patidar cultivate generally lentil variety IPL-316 in rabi season particularly because of its varietal characteristic – short duration variety (102–112 days), resistance to wilt and rust. Seed brown with red cotyledons and large (3.1g/100 seed wt.)

Institutional Involvement for the farmers

Provide Seed Input, Seed treatment chemical, Training about latest crop production technology and timely farmers field visit.

The Pulses Farmer and a group of local farmers approached KVK Ratlam, expressing their interest in utilizing the area for lentil crop production. Krishi Vigyan Kendra, Ratlam, demonstrated the high yielding IPL-316 during Rabi 2023-24 under CFLD on Pulses. Subsequently, a team of scientists from KVK Ratlam visited the area, conducted discussions with the farmers, and carried out a survey. Based on their findings, KVK organized a training

program for the farmers. Following this, they provided seeds of the high-yielding lentil variety IPL-316 along with other critical inputs for demonstration purposes. The crop was sown in the Fourth week of October 2023 and harvested in the last week of February 2024. The farmers achieved a commendable yield of 14.7 quintals per hectare and realized a substantial net income of Rs. 80583 per hectare.

Table: 1 Performance of technology vis-a-vis Local check (Increase in productivity and returns):

Practice	Yield (q/ha)	Cost of Cultivation	Gross income	Net income	B:C Ratio	% increase of income
Farmer	12.30	18700	85027	66327	3.54	21%
Demonstration	14.7	19859	100446	80583	4.05	

Following the successful implementation of the technology, the farmers in the village were greatly impressed and motivated by the performance of the new lentil variety (IPL-316) and the improved cultivation practices, which resulted in significant net profits. Shri Patidar has become a role model not only in his own village but also for the broader farming community in neighbouring areas. His success has inspired farmers from other villages, who are now showing strong interest in pulses production programs using proven high-yield varieties. These advancements have the potential to significantly enhance pulse production in ratlam district, benefiting farmers on a large scale. Additionally, there is a growing demand among farmers for short duration variety (102–112 days), resistance to wilt and rust. Seed brown with red cotyledons and large (3.1g/100 seed wt.).



Fig:1 Farmers Training About the Improve Crop Production Techniques



Fig:2 KVK Provide critical Inputs to the Farmers



Fig:3 Scientist Visit the farmers field



Fig:4 Farmers Field Day Organized by KVK

Success Point

Higher production and productivity (19.5 % increase in yield and 21 % increase net profit) in comparison to traditional method. Increase in income per hectare by Rs. 14262 as compared to traditional method and use of other variety.

Farmer's Feedback

This improved variety IPL-316 as compared to other variety performs well and suitable for short duration variety (102 – 112 days), resistance to wilt and rust. Seed brown with red cotyledons and large (3.1g/100 seed wt.). Hence farmer's found this variety very suitable and ready to adopt this technology.

Conclusion

It can be concluded that newly introduced variety of lentil along with latest package of practices performed well in the Ratlam district of Madhya Pradesh and adoption is also appreciable among the farmers.

References

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