



# Increasing Productivity Of Vegetables Through Front-line Demonstrations

RS Suman

IARI Regional Station, Katrain (Kullu Valley) Himanchal Pradesh, India

## ABSTRACT

The highest yield (420 kg/ha) was recorded in the year 2011-12. In Front-Line Demonstration, it was 27.27 percent more over the farmers practice (320 kg/ha), however, the lowest yield (350 kg/ha) was recorded in the year 2010-11 under Front-Line Demonstration and 310 kg/ha in farmers' practice. Increase in the yield (27.27%) under Front-Line Demonstration over farmers practice was obtained during the year 2011-12. 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 Front-Line Demonstration programme was effective in changing attitude, skill and knowledge of improved / recommended practices of High Yielding Varieties of peas included adoption. This also improved the relationship between farmers and scientist and built confidence between them.

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Pea 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. Pulse crop occupies prominent place after food grains in agriculture economy of India (Singh *et al.*, 2013). Kullu district occupies 1300 hectare of land and 416 tons production with the average productivity of 320 kg/ha. Kullu district occupies 1300 ha of land and 416 tons production with average productivity of 320 kg/ha of Pea. Looking of fact front line demonstration were undertaken by the IARI R. S. Katrain, Kullu, H. P. on the improved package of practices of peas in the district for 5 consecutive years viz 2009-10, 2010-11, 2011-12, 2012-13 & 2013-14. 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 is called front line demonstration. The basic objectives of FLD are to speedy spread of the newly introduced high yielding variety of peas and acquaint extension functionaries and local farmers with front line varieties and management technologies (Singh *et al.*, 2008). The demonstration farmers acted also as source of information and pure seeds for wider

dissemination of the High Yielding Varieties of peas for other farmers (Suman and Parkash, 2014).

Front-Line Demonstration on peas was conducted by IARI, RS, Katrain during the period from 2009-10, 2010-11, 2011-12, 2012-13 & 2013-14 in five villages of two blocks, Naggar and Kullu. The total 50 number of farmers were associated under this programme. The demonstration of improved technology was taken in an area of 0.8 hectare of each farmer. Total 4.0 hectare area was covered in 5 years for demonstration of recommended improved practices of peas. 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 Front-Line Demonstration 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 (Eq.1).

$$\% \text{ increased yield} = \frac{\text{Demonstration yield} - \text{farmers yield}}{\text{Farmers yield}} \times 100 \quad [\text{Eq.1}]$$

**Table1: Difference between demonstration package and farmers practice under FLD on peas**

Particulars	Demonstration package	Farmers practices (Local check)
Variety	Lincoln	Azad Pea - 1
Seed rate	75 kg/ha	75 kg/ha
Sowing method	Line sowing (30x10cm)	Broad casting
Situation	Upland rainfed	Upland rainfed
Fertilizer dose	15:40:20 (N:P:K:kg/ha)	Nil
Plant protection	Need based insecticides & fungicides spray	No spray and insecticides & fungicides

\*Corresponding Author Email: [rssuman@hotmail.com](mailto:rssuman@hotmail.com)

The results obtained during five years are presented in Table 2. Total area covered under research was 4.0 hectare of 50 farmers' field. The result revealed that the highest yield in the Front-Line Demonstration plot and farmers plot was 420 kg/ha and 330 kg/ha, respectively during 2011-12 and lowest yield was 350 kg/ha in FLD and in the year 2010-11 and in farmers practice was 310 kg/ha in twice (2010-11 and 2013-14). The results clearly indicate that due to knowledge and adoption of appropriate production technology, the yield of peas could be increased by 27.27, 26.80 and 25.80 percent over the yield obtained under farmers practices of peas cultivation.

The above findings are in similarity with the finding of Singh (2002). The lowest increase in the yield in Front-Line Demonstration over farmers practice was 12.90 percent in the year 2010-11.

The FLD produced a signification positive result and 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. Similar findings were reported by Kiraret al. (2005).

**Table 2: Increasing the productivity of peas through front line demonstration.**

Year	Under FLD programme		Average yield (kg/ha)		% increase in the yield over farmers practices
	Total farmers	Total area ha.	FLD	Farmers practice	
2009-10	10	0.8	380	320	18.75
2010-11	10	0.8	350	310	12.90
2011-12	10	0.8	420	330	27.27
2012-13	10	0.8	400	320	20.00
2013-14	10	0.8	390	310	25.80
Total/Avg.	50	4.0	388	318	26.80

In Front-Line Demonstration, it was 27.27 percent more over the farmers practice (330 kg ha), however, the lowest yield (350 kg/ha) was recorded in the year 2010-11 under Front-Line Demonstration and 310 kg/ha in farmers' practice twice (2010-11 and 2013-14).

Increase in the yield (27.27%) under Front-Line Demonstration over farmers practice was obtained during the year 2011-12. The demonstration farmers acted also as source of information and pure seeds for wider dissemination of High Yielding Varieties of peas for other farmers.

## CONCLUSION

FLD programme was effective in changing attitude, skill and

knowledge of improved practices of High Yielding Varieties of peas including adoption. This also improved the relationship between farmers and scientists and built confidence between them. The highest yield (420 kg/ha) was recorded in the year 2011-12 under front line demonstrations. The productivity gain under Front-Line Demonstration over traditional practices of pea cultivation created greater awareness and motivated the other farmers to adopt appropriate production technology of peas 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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