

## Assessment of Adoption Pattern of Vegetable Growers of Doda District (J&K)

Bharat Bhushan<sup>1</sup>, A. Jasortia<sup>2</sup>, S. Khajuria,<sup>3</sup> M. Sharma<sup>4</sup> and S. Sethi<sup>5</sup>

<sup>1 to 4</sup> Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu, India

<sup>5</sup> Asstt. Prof. (Sociology), R.S.D. College, Ferozpur, India

### Abstract

Agriculture is the backbone of India's economic activity and our experience during the last 50 years has demonstrated the strong correlation between agricultural growth and economic prosperity. Due to advent of hybrid technology and general awareness of nutritional security among the people, vegetable production is getting the right momentum. The study was conducted in two blocks of Doda district of J&K namely, Assar and Bhaderwah. Three villages from each block were selected purposively. Twenty vegetable growers from each village were selected by random sampling technique and thus forming a total sample of 120 respondents. The result showed that the farmers from Assar were a bit more advanced than Bhaderwah block both in terms of knowledge level and adoption of improved practise of tomato and capsicum.

**Keywords:** Knowledge, adoption and vegetable cultivation

Vegetables are a vital source of minerals, vitamins and dietary fibres and thus play an important role in human nutrition in supplying adequate quantity of free radicals, anti-oxidants and micro-nutrients. The vegetable production of our country was very low, less than 20 million during 1947 at the time of independence, and till 1961-65, it was about 23.45 million tonnes, which increased to 28.36 million tonnes in 1967-71 and to 39.99 million tonnes in 1986. Due to advent of hybrid technology and general awareness of nutritional security among the people, vegetable production is getting the right momentum. Interestingly, during the last decade, the increase in area under vegetable crops was merely 0.42 percent while production has increased by 78.91 per cent. The credit for this vertical expansion in vegetable production goes to improved varieties/hybrids and advance production and protection technologies. Doda district of Jammu and Kashmir state comprises of high altitude areas on the southern aspect of Pir-Punjal trap spreads over an area of 4500sq km. The river Chenab and its tributaries constitute the major drainage basin of this district and presents appreciable contrast in relief features. Altitude ranges between 1400m to more than 3400m mean sea level. The intensity of irrigation is low in the district with average annual rainfall of 1478mm. The total cultivable area of the had

little or less access to credit, information or resources. Keeping all the above facts, a study on "Assessment adoption pattern of Vegetable Growers of Doda District (J&K)" was undertaken.

### METHODOLOGY

The study was conducted in two blocks of Doda district of J&K namely, Assar and Bhaderwah. Three villages from each block were selected purposively. Twenty vegetable growers from each village were selected by random sampling technique and thus forming a total sample of 120 respondents. These selected farmers were personally interviewed using a pre-tested survey schedule to collect data on the recommended package of practices being adopted in cultivation of tomato and Capsicum. To understand the process and level of adoption, farm size, participation in extension programmes of various departments, contact with extension personnel and other subject matter specialist, exposure to mass media and social participation were considered as independent variables, and knowledge of farmers about latest technologies, adoption level, consultancy pattern and other possible reasons of non-adoption were considered as dependent variables. The variables were scored according to the

scales already developed and in-use in the extension research studies. The data were analysed and interpreted in terms of frequencies, percentage and score values.

## RESULTS AND DISCUSSION

### Knowledge of farmers about improved technologies in cultivation of vegetable crops

The result showed that majority of the farmers were having medium to high level of knowledge about improved technologies for tomato cultivation. It was found that 38.3, 46.66 and 15 per cent farmers fell in high, medium and low knowledge level category in Assar Block while 23.33, 48.33 and 28.33 percent farmers fell in high, medium and low level in Bhaderwah block respectively (Table-1). In contrast to improved Capsicum technologies, majority of the farmers showed low knowledge level of improved Capsicum cultivation technologies. Only 56.66 percent of the total farmers were in medium to high level of knowledge categories while

53.33 percent of them were having low level of knowledge about improved Capsicum technologies (Table 2). The farmers from Assar were a bit more advanced than Bhaderwah block in terms of knowledge level. 36.66 percent of the farmers from Assar showed low knowledge of improved Capsicum level as compared to 53.33 per cent in Block.

However, the two blocks differed significantly in terms of distribution of farmers in a knowledge category. 38.3 percent of the farmers from Assar showed high level of knowledge about improved tomato technologies as against only 23.33 per cent in Bhaderwah. The numbers of farmers having medium level of knowledge were almost similar in both the blocks. Whereas 156 percent in Assar block were having low level of knowledge in comparison to 28.33 per cent farmers of Bhaerwah. In contrast to improved tomato technologies, majority of the farmers showed low knowledge level of improved Capsicum cultivation technologies.

**Table 1: Knowledge of farmers about improved technologies in cultivation of vegetable crops (N = 120)**

Knowledge level	Tomato		Capsicum	
	Assar (n=60)	Bhaderwah (n=60)	Assar (n=60)	Bhaderwah (n=60)
High	23(38.3)	14(23.33)	11(18.33)	8(13.33)
Medium	28(46.66)	29(48.33)	27(45.00)	20(33.33)
Low	9(15)	17(28.33)	22(36.66)	32(53.33)

**Note:** Figures within the parentheses are per cent to total farmers(n) from respective blocks.

**Table 2: Adoption of the improved technologies of Tomato and Capsicum by farmers**

Adoption level	Tomato		Capsicum	
	Assar (n=60)	Bhaderwah (n=60)	Assar (n=60)	Bhaderwah (n=60)
High	17(28.33)	8(13.33)	7(11.66)	3(05.00)
Medium	25(41.66)	28(46.66)	19(31.66)	11(18.33)
Low	18(30.00)	24(40.00)	34(56.66)	46(76.66)

**Table 3: Adoption of improved practices in Tomato and Capsicum by farmers in Assar block. (in number)**

Practices	Tomato			Capsicum		
	High	Medium	Low	High	Medium	Low
Soil	27(45.00)	22(36.66)	11(18.33)	10(16.66)	16(26.66)	34(56.66)
Seed and nursery preparation	36(60.00)	18(30.00)	6(10.00)	11(18.33)	22(36.66)	27(45.00)
Transplanting	17(28.33)	38(63.33)	5(08.33)	11(18.33)	36(60.00)	13(21.66)
Mannure and fertilizer	22(36.66)	31(51.66)	17(28.33)	8(13.33)	27(45.00)	15(25.00)
Intercultural and weed control	10(16.66)	35(58.33)	15(25.00)	5(08.00)	29(48.33)	26(43.33)
Plant Protection	17(28.33)	19(31.66)	24(40.00)	2(03.00)	13(21.66)	35(58.33)
Harvesting and marketing	11(18.33)	42(70.00)	7(11.66)	4(06.00)	24(40.00)	32(53.33)

The data in Table-2 showed that the adoption level of technologies among the farmers were more or less similar in trend as recorded in case of knowledge level. Seventy percent of the total farmers under study were in medium to high adoption categories in respect to improved tomato technologies in Assar Block. While 56.66 per cent of farmers were low adopters as far as improved technologies for Capsicum were concerned. In terms of distribution of farmers in different adoption categories, Assar block was slightly advanced than Bhadwerwah block. Considering the total responses recorded for tomato and Capsicum technologies, 28.33 per cent farmers of Assar were high adopters of tomato technologies as compared to 13.33 per cent in Bhaderwah, while 11.66 percent of farmer were high adopter than 5 percent in Bhaderwah. The results

suggested that strengthening of the extension facilities could increase the knowledge and adoption behaviour of farmers especially about improved french technologies in the study areas. A majority of the tomato cultivators in Assar were medium adopters of practices like suitable soil preparation, seed rate, fertilizer application, weed control, plant protection measures and disposal of produce (Table-3).

While a majority of the capsicum cultivating farmers were low adopters of these practices. It was observed that only the technology relating to transplanting of capsicum seedlings was adopted by majority of farmers. These findings are in line with *Horpar et al. (2006)*. This indicated that there was a need for strengthening the training and extension services for farmers at the village

**Table 4: Adoption of improved practices in Tomato and Capsicum farmers in Bhaderwah block.**

Practices	Tomato			Capsicum		
	High	Medium	Low	High	Medium	Low
Soil	14(23.33)	26(43.33)	10(16.66)	7(11.66)	25(41.66)	28(46.66)
Seed and nursery preparation	19(31.66)	33(55.00)	8(13.33)	13(21.66)	30(50.00)	17(28.33)
Transplanting	17(28.33)	34(56.66)	9(15.00)	8(13.33)	31(51.66)	21(35.00)
Mannure and fertilizer	9(15.00)	38(63.33)	13(21.66)	2(3.00)	42(70.00)	16(26.66)
Inter-culture and weed control	13(21.66)	35(58.33)	12(20.00)	6(10.00)	29(48.33)	25(41.66)
Plant Protection	4(6.66)	28(46.66)	28(46.66)	0(0.00)	18(30.00)	42(70.00)
Harvesting and marketing	8(13.33)	36(60.00)	16(26.66)	2(3.00)	23(38.33)	35(58.33)

**Table 5: Information consultancy pattern of vegetable growers**

S.no	Source of Information	Assar		Bhaderwah	
		Score	Rank	Score	Rank
1	Seed shop/Commission agent	83	I	60	II
2	KVK/SAU	54	II	74	I
3	ICAR Institute	23	III	5	VIII
4	AEO	46	IV	56	III
5	Line Department	38	V	21	V
6	T.V	26	VI	13	VII
7	Radio	15	VII	28	IV
8	Farm Magazine	8	VIII	17	VI

level especially in respect to the improved technologies for Capsicum production. More or less similar trend was noticed in regard to the adoption of improved tomato and capsicum technologies by the farmers of Bhaderwah block.

An attempt was also made to identify the knowledge source of farmers for growing vegetables. It was found that seed shop was the major preferred source of knowledge in both the blocks (Table 5). Horticulture/ Agriculture Officer and Extension personnel of State Agriculture University/ICAR Institute were the other major agents in providing knowledge to vegetable cultivators in the study area. Information consultancy pattern of vegetable growers revealed that mass media like radio and television were not the preferred sources of knowledge for these vegetable growers. It could be due to non-suitability of time to listen to the programs on vegetable production; and moreover programmes on vegetable production technologies are rarely broadcasted. The farmers appreciated the introduction of farm advisory services on T.V. and they are taking interest in watching the programme and getting solution of their problems using expert advice.

## CONCLUSION

The study concluded that Assar block was relatively more advanced than the Bhaderwah block in respect to both knowledge level as well as technology adoption. There was medium to high level of adoption of improved tomato cultivation technologies, but very poor adoption level was noticed in respect to capsicum cultivation technologies. It was expected that extensive extension activities at village level and; through radio and TV in respect to post harvest technology as well as development of marketing, storage and post processing facilities would remove the fear factor and thereby would increase the adoption of improved cultivation technologies for capsicum in the area studied.

## REFERENCES

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