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Impact of front line demonstrations on yield and economics of onion

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ABSTRACT

Problems of onion crop production and their solutions at farming situations were studied with the participation of farmers. In this regard, under technology development and refinement, front line demonstrations for three years on onion was conducted at different locations in Haveri district. These demonstrations focused on increased productivity of onion per unit area and to get the feed back from farmers on the performances of improved onion variety. The study revealed that over the years Arka Kalyan variety has performed superior over local check. The gross returns, net returns and B:C ratio recorded were highest in Arka Kalyan compared to local check.

KEW WORDS : Frontline demonstrations, Technology gap, Extension gap, B: C ratio

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INTRODUCTION

Onion consumption is spread throughout the year and there is constant demand for onion bulb around the year. However, production of onion fluctuates from year to year. The low production results in hike of prices which creates discomfort among consumers. The middlemen are taking undue advantage of this situation and exploiting both producers and consumers.

Onion (*Allium cepa* L.), belongs to family Alliaceae. The synonymous are *Earulli, Ulladaddi, Piyaz, Kanda.* It is one of the important commercial vegetable crops produced in India for both domestic consumption and export. It is used both in green and mature stage for salad and spice in a variety of flavoured dishes and soups. It is very important in cooking; hence it is called the "Queen of kitchen" by Germans.

India is in second position after China in production. Karnataka contributes a major area in South India. Onion is produced in the states of Maharashtra, Karnataka, Andra Pradesh, Gujarat, Orissa, Tamil Nadu, Madhya Pradesh, Uttar Pradesh, Bihar and Rajasthan. The productivity of onion is much low in India than the world average (Pandey, 2000; Lawande, 2005). Haveri district in north Karnataka is an important onion growing district. Even in Haveri district yield levels are lower than the state average (Anonymous, 2008). However, the technological break through has no doubt recorded greater strides in augmenting onion production and productivity. But the insufficient and improper extension activities are the major factors resulting in non-adoption of improved package developed at research institutions. Further, the replacement ratio of traditional varieties with improved varieties and non-availability of sufficient quantity of quality seeds of improved variety in time, are the major constraints in onion cultivation. Hence, with these views in mind the present investigation was undertaken to evaluate the performance of onion variety Arka Kalyan with local variety through front line demonstrations.

METHODS

The study was conducted in Haveri district of north Karnataka (Under large scale demonstrations). Improved onion variety, Arka Kalyan was introduced through front line demonstrations project of Krishi Vigyan Kendra, Hanumanamatti from 2005-06 to 2007-08 in different locations of Haveri district. Each demonstration was conducted in an area of 0.4 ha. Adjacent to this the local variety was also grown for comparison. The data were

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collected from 45 demonstrations and 30 non-demonstrations farmers. All the recommended package of practices were followed for both the varieties. The technology gap and extension gaps were worked out using the following formulas (Eswaraprasad *et al.*, 1993).

– Technology gap=(Potential yield)**-** (Demonstration yield)

– Extension gap = (Demonstration yield) **-** (Farmers yield)

OBSERVATIONS AND ANALYSIS

The data presented in Table 1 deals with the technology and extension gap of *Kharif* onion. Yields of the front line demonstration trials and potential yield of the varieties were compared to estimate yield gap, which were further categorized into technology and extension gaps. The average technology and extension gap were 26.43 and 4.17 per cent, respectively. This could be due to the lack of awareness about the improved variety and its seed availability. This has to be highlighted to educate the farmers about the improved variety and its seed production activities for further multiplication.

The data show that on an average, Arka Kalyan variety of onion yield was 18.57 t/ha. Whereas the yield in local variety of onion was 14.40 t/ha. The higher average onion yield in demonstration plots compared to local variety over the years is due to superior variety only.

The data presented in Table 2 reveal the yield and economics related information of Arak Kalyan in comparison to local variety. It is clear from the table that the Arka Kalyan variety gave increased yield over local check which was to the tune of 28.90 per cent and the average yield increase over the years varied between 25.80 to 32.20 per cent.

Table 2 further indicates that additional average net returns over local check was Rs. 14961 and the average ANR over local was in the range of Rs. 11,041 to Rs. 15,015. The data also revel that the average B:C ratio was 2.90 and 2.38, respectively for Arka Kalyan and local varieties, respectively. Highest B:C ratio was noticed during the year 2005-06. During the cropping season, various extension activities like trainings, field days, group meetings, field visits were carried out to popularize Arka Kalyan variety among farmers.

The adoption of improved variety in front line demonstration trials on onion have shown increased yield over local (Table 2). These findings are in line with the results of Hiremath *et al.* (2007). The increment in yield ranged between 25.80 to 32.20 per cent. The per cent increase in yield over local check was highest (32.20) during 2005-06 compared to local. The comparative profitability of onion crop has been studied by estimating the additional benefit cost ratio. Highest gross returns, net returns and additional returns were recorded in improved variety over local check. Further improved variety recorded higher benefit cost ratio showing its higher profitability.

From the study it is clear that increased yield was due to the adoption of improved variety and in addition to this Arka Kalyan was shorter in duration by 10-15 days over local. Hence, variety can be grown in rainfed situation

Table 1: Technology and extension gaps of *Kharif* onion (n=75)

Years	Yield (t/ha.)			Technology gap	Extension gap
	Potential	Arka Kalyan	Local		
2005-06	45.00	20.90	15.80	24.10	05.10
2006-07	45.00	15.60	12.40	29.40	03.20
2007-08	45.00	19.20	15.00	25.80	04.20
Average	45.00	18.57	14.40	26.43	4.17

Table 2: Impact of improved variety on yield and economics of onion (n=75)

Years	Variety	Yield (t/ha)	Yield increase over local (%)	Cost of cultivation (Rs./ha)	Additional cost of cultivation over local	Grass return (Rs./ha)	Net returns (Rs./ha)	Additional net returns over local (Rs./ha)	B:C ratio
2005-06	Arka Kalyan	20.90	32.20	18885	1985	83600	64715	15015	3.42
	Local	15.80	-	16900	-	63200	49700	-	2.73
2006-07	Arka Kalyan	15.60	25.80	19159	1759	62400	43241	11041	2.25
	Local	12.40	-	17400	-	49600	32200	-	1.85
2007-08	Arka Kalyan	19.20	28.00	18972	2272	76800	57828	14528	3.04
	Local	15.00	-	16700	-	60000	43300	-	2.50
Average	Arka Kalyan	18.57	28.90	19005	2005	74266	55561	14961	2.90
	Local	14.40		17000		57600	40600		2.38

with limited soil moisture condition.

Conclusion:

It can be concluded from the study that improved variety of onion Arka Kalyan gave more yield and additional returns compared to local onion variety. The data revealed that there is a greater scope for popularizing the Arka Kalyan variety among the farmers of North Karnataka especially in the onion growing districts. Greater emphasis has to be given on transfer of technology of Arka Kalyan among the onion growing farmers.

LITERATURE CITED

Anonymous (2007). Package of practices for horticultural crops, Department of Horticulture, University of Agricultural Sciences, Dharwad, University of Agricultural Sciences, BANGALORE, KARNATAKA (India).

Anonymous (2008). Potential linked credit plan 2009-10 of Haveri district. Published by National Bank for Agriculture and Rural Development, Karnataka Regional Office, Bangalore. 5 pp.

Hiremanth, S.M., Nagaraju, M.V. and Shashidar, K.K. (2007). Impact of frontline demonstrations on onion productivity in farmer's field. In : National seminar on appropriate extension strategies for management of rurl resources, held at University of Agricultural Sciences, Dharwad during 18-20 December, 2007, 100 pp.

Lawande, K.E. (2005). Onion improvement- present status and future thrust. In : National symposium on current trends in onion, garlic and seed spices- production, marketing and utilization, held at NRCOG, Rajagurunagar, Pune during 25-27 November, 2005, pp.1-11.

Pandey, U.B. (2000). Seed production of onion and garlic, constraints and strategies. In : National symposium on onion and garlic, production and post harvest management challenges and strategies, held at NRCOG, Rajagurunagar, Pune, during 19-21 November, 2000, pp.43-48.

Eswaraprasad, Y., Manohar Rao, M. and Vijayabhindana, B. (1993). Analysis of on farm and level of technology on oilseed and pulse crop in Northern Telengana Zone of Andhra Pradesh. *Indian J. Agric. Econ.*, **48** :351-356.