

Constraints Experienced by Onion Growers from Gulbarga District of Karnataka, India.

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ABSTRACT

A field survey was carried out to study the constraints experienced by the onion growers from Gulbarga District of Karnataka during 2008-2011. The primary data was collected through personal survey of farmers from seven villages covering three taluks. The survey revealed that onion growing area and onion growers are increasing in Gulbarga district, but onion growers are facing many constraints like poor quality seeds, high cost of branded seeds, costly seedlings, shortage and costly labourers, shortage of water, erratic load shedding, heavy weed infestation, costly manures, no idea of fertilizers and chemicals, their dosages and time of application, lack of knowledge of diseases, pests and their control measures, low yield, poor storage facilities and negligible market information. Awareness, training programs and active participation of horticultural department are needed to overcome these constraints.

Key words : Onion cultivation; Farmers constraints.

The onion is believed to have originated in Asia. The ancient Egyptians worshipped the onion believing that its spherical shape and concentric rings symbolized eternity. Onions are used in variety of dishes and rank sixth among the world's leading vegetable crops. Onion is a very common crop grown all over the India and is consumed by every family either as raw in the salad or as cooked along other spices and vegetables, sometimes flowering shoot 'scape' is also used vegetable. Onion not only provide flavor they also rich in nutrients like phosphorus, calcium and carbohydrates. It also contains proteins, vitamin-C and has some useful medicinal properties. The production and demand for onion are relatively high. India is one of the exporter of onion. The important onion producing states are Maharashtra, Tamil Nadu, Karnataka, Andra Pradesh, Bihar etc. Gulbarga is situated in northern part of Karnataka and is one of the major onion growing Districts of the state. The other major onion growing districts are Dharwad, Haveri, Davengere, Chitradurga, Raichur and Koppal. The onion crops are grown by farmers during Kharif as well as rabi seasons. Very few farmers could grow onion during summer. The quality, production and price of kharif grown onion is lesser than those grown in rabi season. All onion growers of entire Karnataka are facing more or less same problems. The onion production and prices vary and unpredictable bringing difficulties to the farmers. In order to understand the specific constraints experienced by the farmers, the present survey was undertaken and the results are discussed in the present paper.

METHODOLOGY

In all 45 onion growers belonging to villages namely Nandikoor, Aurad (B), Navadgi, Pattan, Kalgi, Farhatabad and NagIdlai of Gulbarga district were contacted in the survey. Personal interviews were held with farmers of all the above villages. The location of the villages involved in the study is given in Fig-1. A

pre planned survey data sheet was prepared and used in present survey to record various aspects regarding the seeds used, seed treatment if any, details of manure and synthetic fertilizers application, weeding, weedicides used availability of labourers, irrigation facilities and storage facility if any and market information.



Fig-1: Map of Gulbarga district and seven taluks and selected seven villages (Numbers) for study

RESULTS AND DISCUSSION

Table- 1 : Land holding, devoted area for onion, yield, expenditure and income data based

(N = 45)

	Land holding Acres	Devotion for onion Acres	Yield Qui.	Expen- diture Rs.	Income Rs.
Total	303.75	48.75	2574	494000	1730470
Average	06.75	01.08	57.2	10977	38454

Arable area is dwindling year after year due to conversion of agricultural land for various non agricultural purposes. The average arable land holding by each farmer is 6.75 acres in which 30 to 40 per cent land is irrigated. The average land devoted for onion cultivation by a farmer was only 1.08 acres and onion was grown only in irrigated land during both kharif and rabi seasons (Table-1).

Table- 2. Seed varieties and type of fertilizers used. (N = 45)

Varieties cultivated	No. of Farmers	Percentage	Fertilizers used	No. of farmers	Percentage
Yellow	12	27.00	DAP	18	40.00
Red	10	22.00	Urea	03	07.00
Local	15	34.00	DAP and Urea	09	20.00
Jindal red	02	04.00	NPK (17:17:17)	06	13.00
Mahyco yellow	01	02.00	MOP	01	02.00
Karanja red	02	05.00	Setright	02	04.00
Jwala light red	01	02.00	Poshak	01	02.00
Unicorn choice red	01	02.00	Organic	01	02.00
Jindal Fursungi red	01	02.00	No of fertilizer used	04	10.00
Total No. of farmers	45	100.00		45	100.00

The 69 per cent of farmers of this area produced their own seeds or bought local seeds or seedlings from neighboring farmers without knowing variety and quality. 31 per cent farmers purchased branded company seeds (Table-3). Among company seeds users, Four per cent farmers used Jindal company seeds, Two per cent farmers used Mahyco company seeds, Two per cent onion growers used Jwala light red seeds, Two per cent farmers used Unicorn choice seeds, Five per cent farmers used Karanja red seeds and Two per cent farmers used Jindal Fursungi red seeds (Table-2). Due to heavy incessant rains during kharif season in 2010 about 40 per cent seedlings were destroyed in the nursery beds, as a result, there was an acute shortage of seedlings. Hence the rate of onion seeds increased up to Rs. 1300-00 per kg which is about 2.5 times above the normal price of the previous year and seedling nursery plots sold for Rs. 700 to Rs. 900/- per plot of 2.75 square meter hence farmers even purchased seedlings from neighboring district (Bagalkot) which is 240 KM from Gulbarga.

Farmers of this area prefer local seeds than company seeds. The 83 per cent of farmers opted for local seeds including red and yellow bulb varieties. 17 per cent farmers for company seeds. Onion growers chosen yellow varieties (27 % farmers used yellow and 22 % used red varieties). The 67 per cent of farmers have got cattle population (oxen and cow) and 33 per cent onion growers were without cattle population and they depend on tractors for the field work. As they have got very little live stock, they were unable to produce their own manure. Because the manures are costly and non-available 51 per cent experienced difficulties in applying manures. Lal, et al. (2002) suggested the application of farmyard manure (FYM) and showed its role in the improvement of growth, bulb development and yield of onion. Purewal (1954) suggested a dose of 24.70 to 49.40 tons / hectare of FYM along with 5.5 quintals/hectare of ammonium sulphate for onion. In Gulbarga area 41 per cent farmers used only chemical fertilizers which had resulted in decreased yield. Chatto, et al. (2010) have shown that application of organic manure and chemical fertilizers in equal proportion was superior to sole application of either organic or inorganic. Similar findings were reported by

Anburani and Gayathiri (2010) where the use of FYM, Vermicompost, Humic acid and VAM separately and in combination gave good yield. As for as usage of inorganic fertilizers is concerned 40 per cent farmers used DAP, 7 per cent farmers used Urea, 13 per cent farmers used NPK (17:17:17), 40 per cent onion growers used both DAP and Urea. Only Two per cent farmers used MOP and Four per cent used Setright fertilizers (Table-2).

During transplantation sufficient spacing between the plants was not maintained. The plantation was very dense with 10-12 plants per square feet. Incidence of thrips was more due to this dense plantation. Malik and Muhammed Faheem (2005) from Pakistan found an inverse relation between increased row spacing and thrips density.

Onion crop suffers heavily from weed infestation, the findings of the survey are similar with the findings of the Patel (1983), and the rainy season was very conducive for weed emergence, their growth and development. Mani, et al. (1968) observed 67 per cent loss in yield of rabi onion due to weed infestation. Yield losses in kharif onion due to weeds have been reported to the extent of 10-70 per cent (Phogat, et al. 1989). The success of weed control depends upon the timings and its implementation (Forcella 2000). Hussain, et al. (2007) suggested integrated weed management for better weed control. In Gulbarga area only 20 per cent onion growers used weedicides. Singh and Singh (1993) observed weedicide application once followed by manual weeding is more effective in the bulb yield.

Use of local seeds, non- availability or high cost of manures, improper dosages of chemical fertilizers, non-application of micro nutrients, very low percentage of weedicide users and heavy infestation of weeds are the reasons for the low average yield of onion which is only 57.2 quintals per acre which is much lower than international average of 81 quintals per acre.

20 per cent farmers were capable to store the onion in their own store sheds made of cotton or red gram plants parts. 80 per cent farmers had sent their produce to market for want of money. Even 40 per cent farmers hired empty plastic bags for transport their goods from fields to market @ Rs. 5/- per bag from commission agents. Majority respondents had faced constraints while marketing. 60 per cent of the farmers sold their produce in Hyderabad market which is 220 KM from Gulbarga. For transportation farmers had to pay Rs. 40/- per bag and Rs. 06/- for loading and unloading. The average expenditure incurred by farmers was Rs. 10977/- per acre and the average income from onion cultivation was Rs. 38455/- and net income was Rs. 27477/- per acre (Table1) under normal conditions.

Table -3. Percentage of respondents according to constraints experienced by them

Sr. No.	Constraints	Respondents (N=45)	
		Number	Percentage
1.	Seeds		
	a) Own / local seeds	31	69.00
	b) Purchased company seeds	14	31.00
2.	Seed treatment		
	Lack of knowledge	45	100.00
	Costly labour charges	40	89.00
3.	Variety used		
	Yellow	24	53.00
	Red	21	47.00
4.	Live stock		
	Oxen and cow	30	67.00
	No cattle population	15	33.00
5.	Lack of knowledge about spacing between seedlings	45	100.00
6.	Manures		
	Applied	23	51.00
	Not applied	22	49.00
7.	Application of only fertilizers	22	49.00
8.	Plant protection		
	Lack of knowledge of quantity of chemicals to be used	45	100.00
9.	Weedicides		
	Used	09	20.00
	No idea of weedicides	36	80.00
10.	Shortage of water	45	100.00
11.	Erratic load shedding	45	100.00
12.	Storage of onion		
	Capable to store	09	20.00
	Incapable of storage	36	80.00

CONCLUSION

It is evident from the survey that, high cost of branded onion seeds forces the farmers to buy local poor quality seeds / seedlings from other farmers. The main weakness of farmers is they never approached the horticultural department for information and unable to adopt the recommendations of the research. Though the

literature of onion cultivation practices is available, no farmer read that literature and they rely on the advices of agro-chemical shop keepers. Disease severity during dew days not only reduces the yield, but also increases the cost of production. Hence there is a need to organize

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