Int.J.Curr.Microbiol.App.Sci (2020) *9*(9): 3155-3161

International Journal of Current Microbiology and Applied Sciences
***ISSN: 2319-7706* Volume 9 Number 9 (2020)**
Journal homepage: http://www.ijcmas.com

Original Research Article https://doi.org/10.20546/ijcmas.2020.909.390

Constraints and Suggestions in Production and Marketing of Onion in Gadag District of Karnataka, India

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Keywords

Onion growers, Constraints, Production, Markets, Price

Article Info

Accepted:
20 August 2020
Available Online:
10 September 2020

A B S T R A C T

India is the largest producer of onion in the world after China. Karnataka is the third largest producer of onion in India after Maharashtra and Madya pradesh. Present study was conducted in Gadag district of Karnataka during 2017-18 using ex-post facto research design. Present study fully relies on the primary data collected by personal interview method using a pre-tested structured interview schedule. Major production related constraints expressed by onion growers were lack of knowledge about improved varieties, their seed/planting material, higher cost of fertilizers and pesticides, expensive labour wages and their non-availability, inadequate irrigation facilities, lack of suitable storage facilities and lack of capital. Major marketing related constraints expressed were low price/lack of remunerative prices, higher price fluctuation, involvement of middleman and commission agents, high commission charges, NAFED not purchasing onion regularly and lack of credit facilities. Major suggestions offered by onion growers were fixed rate/support price based on production cost, export of onion to foreign countries, crop demonstration about improved variety and on recent production technologies and subsidy on inputs like fertilizers, pesticides and electricity.

Introduction

A global review of area and production of major vegetables shows that onion ranks second in area and third in production of the total vegetables in the world. China is first in area and production while India occupied second position in the production. The Big onion produced in Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu are exported to Dubai, Kuwait, Saudi Arabia, Middle East, Malaysia, Singapore, Bangladesh, Sri Lanka etc. small onion produced in Karnataka and Andhra Pradesh are exported to Singapore and Malaysia *etc*.

Onion is one of the most important vegetable crops cultivated extensively throughout the country under a wide range of climatic conditions. It is very important in cookery; hence it is called the "Queen of kitchen" by Germans. Onion consumption is spread throughout the year and there is constant demand for onion bulb all around the year.

However, production of onion fluctuates from year to year. The low production results in hike of price which creates discomfort among consumers. The middlemen are taking undue advantage of this situation and exploiting both producers and consumers.

Onion share 11.90 per cent of the total vegetable production of India in 2014-15. India has the largest area under onion in the world through output wise it is second in the world after China. In India, onion is cultivated in Maharashtra, Bihar, Karnataka, Gujarat and Madhya Pradesh. The Nasik region of Maharashtra account for 30.00 per cent of the total crop, followed by Gujarat with 11-13 per cent, Karnataka 10 per cent and Uttar Pradesh 8 to 10 per cent. India is the second largest exporter of onion after the china.

Onion accounts for 90.00 per cent of the exports of vegetables from India in the forms of value. In the year 2016-17, 30.69 lakh million tonnes of onion was exported which valued to the tune of Rs.4195.29 cores. In India, the area under onion is 1320.13 thousand hectares and annual production of 20,931.25 thousand tonnes with productivity 15.86 tonnes / ha. (Source:www.indiaagristat.com).

Maharashtra is the leading onion producing state in India. Karnataka, which is the second largest onion producer in the country with 16.04 per cent share in the total onion production of 18,927.40 MT. In Karnataka, major growing districts are Dharwad which stands in first position with the production of 5,02,500 tonnes and area of 35,129 hectares followed by Chitradurga with the production of 3,31,612 tonnes with the area of 16,618 ha and Gadag district with the production of 2, 07,896 tonnes with the area of 37,043 ha. In Karnataka, onion is grown in all the three seasons. However, it is predominantly a winter crop. Generally, the onion growers bring their produce to market for sale immediately after the harvest, because of lack of storage facilities and financial problems of onion growers. This result in glut of onion in market and fall in market prices of the onion (Asmatoddin *et al.,* 2009). Sometimes, the market rate will reach are cord low as less than one rupee per kilogram. Then it becomes very difficult for onion growers even to meet the transportation charges. This situation is creating discontent among the farmers giving rise to their agitation for the fair market rice.

In spite, lot of efforts have been taken by extension agencies and scientists to materialize the potential of onion, the productivity of onion was stagnate over a period of time. The major reasons were traditional way of cultivation, dominance of local varieties, lack of supporting facilities and wide fluctuation in market price of onion which make onion cultivation unprofitable. In the light of these above facts, the present study was undertaken to know the Constraints and Suggestions in Production and Marketing of Onion in Gadag district of Karnataka**.**

Materials and Methods

The study was conducted in Gadag district of Karnataka state during 2017-18. Four taluks of Gadag district Gadag, Ron, Shirahatti, Naragund were selected. Taluka wise list of onion growing villages was obtained from concerned village based authorities and two villages were selected randomly from each taluka. Thus, in total, eight villages were selected for the study and 15 respondents were selected from each village by adopting random sampling method. Thus, a total of 120 respondents constituted the sample for the study. A pre-tested interview schedule was used to collect the data through personal interview method. The data collected were tabulated and analyzed by using suitable statistical measures.

Results and Discussion

Production problems experienced by the onion growers

From the Table 1, it indicated that 70.83 per cent of the respondents were having lack of knowledge about improved varieties, followed by lack of knowledge about seed treatment (54.16%), high cost of seed (20.83%) and non-availability of seeds and planting material in time (8.33%). These are the problems expressed by the growers regarding seeds and seed treatment.

Majority (94.16%) of the respondents said the problem of high cost of fertilizers followed by lack of knowledge about recommended fertilizer doses (80.83%), difficulty in designing doses of fertilizers with different soil types (70.00%)and 5.83 per cent of the respondents were having problems of non-availability of fertilizers in time. In case of water management, 78.33 per cent of the respondents felt that inadequate irrigation facilities where as 63.33 per cent of the respondents felt water shortage in summer were the main problem expressed in water management. With regard to weed management, 93.33 per cent of the respondents said that hand weeding in time, labour consuming and expensive labour wages, followed by non- availability labour for weeding (55.83%) and ineffective and costly weedicides (80.83%).

In case of diseases and pest management 94.16 per cent of the respondents were having a problem of high cost of pesticides, followed by lack of knowledge about the control measures for various pest and diseases (75.83%), difficulty in identifying the pests and diseases (65.83%), whereas 20.00 per cent of the respondents having a problem of non-curable nature of onion diseases with pesticide. It might be due to the fact that there was hike in the prices of inputs every year. Therefore, suitable policy is needs to be framed to take care of this problem.

In case of harvesting of onion, 85 per cent of the respondents were having labor problem during harvesting, followed by lack of knowledge about improved method of harvesting (80.00%), lack of knowledge about proper harvesting time (15.83 %) and 4.16 per cent of respondents were having other problems in harvesting.

With regard to storage, 52.50 per cent of the respondents had lack of knowledge about improved storage structures, followed by costly storage facilities (38.33%), lack of knowledge about curing and drying (27.50%), lack of knowledge about handling or care during storage of onion produce (10.83%), lack of knowledge about grading (10.00%). One third of the respondents were expressed costly storage facilities as a problem. As most of growers creating temporary structure for storage every year might be the probable reason of problem. The subsidy scheme for construction of onion storage structure needs to extend to cover all onion growers. Shortage of labour and high wage rate was the problems associated with weed management and harvesting operation of crop. It might be due to the fact that majority of farmershavingsmalllandholdinginthestate.Itisquitenaturalthattheywilldooperationfirst on their own farm rather than wages which led to labour shortage. So there is need to develop suitable labour saving technique.

In case of other problems, majority (77.50%) of the respondents faced the problem of lack of capital, followed by electricity problem (72.50%), inadequate availability of FYM (21.66%), and 15.00 per cent of the respondents experienced problem of heavy rains and fog lead to incidence of pest and diseases. Haile *et al.,* (2016), Vinayak and Patil (2013)

Table.1 Production problems experienced by the onion growers (n=120)

Sl. No.	Problems	Respondents	
		Frequency	Percentage
I	Seed and seed treatment		
	a. Lack of knowledge about improved varieties, their seed/planting material	85	70.83
	b. Lack of knowledge about/ seed/seedling treatment	65	54.16
	c. Non-availability of seed and planting material in time	10	8.33
	d. High cost of seed	25	20.83
II	Fertilizer application		
	a. High cost of fertilizers	113	94.16
	b. Non-availability to fertilizer in time	07	05.83
	c. Lack of knowledge about recommended fertilizer doses for onion crop	97	80.83
	d. Difficulty in designing doses of fertilizer with different soil types	84	70.00
III	Water management		
	a. Inadequate irrigation facilities	94	78.33
	b. Water shortage in summer	76	63.33
IV	Weed management		
	a. Hand weeding in time, labour consuming and expensive	112	93.33
	b. Labour problem for weeding	67	55.83
	c. Ineffective and costly weedicides	97	80.83
V	Disease and pest management		
	a) Difficulty in identifying the pests and diseases	79	65.83
	b) Lack of knowledge about the control measures for various pests and diseases	91	75.83
	c) Non-curable nature of onion diseases	24	20.00
	d) High cost of pesticides	113	94.16
VI	Harvesting of onion		
	a) Lack of knowledge about proper harvesting time	19	15.83
	b) Labour problem during harvesting	102	85.00
	c) Lack of knowledge about improved method of harvesting	96	80.00
VII	Storage of onion		
	a) Lack of knowledge about curing and drying of onion	33	27.50
	b) Lack of knowledge about grading	12	10.00
	c) Lack of knowledge about improved storage structure	63	52.50
	d) Costly storage facilities	46	38.33
	e) Lack of knowledge about handling or care during storage of onion produce	13	10.83
VIII	Other problems		
	a) Electricity problem	87	72.50
	b) Lack of capital	93	77.50
	c) Due to rainfall and fog leads to incidence of pest and diseases	18	15.00
	d) Inadequate availability of FYM	26	21.66

Table.2 Marketing problems expressed by onion farmers (n=120)

Sl. No.	Problems	Respondents	
		Frequency	Percentage
1	Low price/lack of remunerative price	116	96.66
2	Fluctuation in market price	112	93.33
3	Without involvement of middleman commission agents it is very difficult to sell the onion in market	98	81.66
4	Commission agents charge heavy commission	86	71.66
5	NAFED do not purchase onion regularly	76	63.33
6	Onion price depends upon NAFED purchase	76	63.33
7	Lack of credit facilities	39	32.50
8	High charges on transportation	23	19.16
9	Mal practices adopted in market	20	16.66
10	Inadequate transportation facilities	19	15.83
11	Non-availability of market information	18	15.00
12	Open auction sale fetches low price for onion produce	14	11.66
13	Commission agents not maintaining the proper records of sale and rate	07	05.83

Table.3 Suggestions offered by the onion growers (n=120)

Sl. No.	Problems	Respondents	
		Frequency	Percentage
1	Fix rate/support price based on production cost	104	86.66
2	Export of onion to foreign countries	103	85.83
3	Crop demonstration about improved variety and on recent production	74	61.66
4	Subsidy on inputs like fertilizers, pesticides and electricity	73	60.83
5	Subsidy on construction of onion storage	51	42.50
6	Establish onion processing industry	46	38.33
7	Extend crop insurance scheme to onion	42	35.00
8	Declare onion zones and restrict cultivation in the zone only	36	30.00
9	Provide community godown or public godowns on rental basis	33	27.50
10	NAFED should purchase onion regularly	33	27.50
11	Provide loan for construction of onion storage structure	32	26.66
12	Withdrawal of onion from essential commodity act	30	25.00

Marketing problems experienced by the onion growers

From the contents of Table 2, it is indicated that majority (96.66%) of the respondents faced the problem of low price/lack of remunerative price, followed by fluctuation in market price (93.33%), without involvement of middleman and commission agents it is very difficult to sell the onion in market (81.66%), heavy commission charge by commission agents (71.66%), 63.33 per cent of the respondents expressed their problems that NAFED do not purchase onion and regularly onion price depends upon NAFED purchase, lack of credit facilities (32.50), high charges on transportation(19.16%), mal practices adopted in market(16.66%), inadequate transportation facilities (15.83%), non-availability of market information (15.00%), low price due to open auction sale (11.66%) and 5.83% per cent of the respondents said that commission agents not maintaining the proper records of sale and rate.

It might be due to the fact that majority of growers were selling their produce through middlemen, who determine the price of onion. Moreover, prices are dependent on produce arrival in the market at a time and demand from consumers.

A suitable marketing method need to be evolved which estimate middlemen by bringing producer direct contact with consumers with right vested in the hand of farmers to determine the price. Findings of the study are in line with the Mishra and Singh (2009) and Ram *et al.,* (2009)

Suggestions in onion production as perceived by the onion growers

The data presented in Table 3 revealed that majority of the respondents (86.66%) had suggested fix rate or support price based on production cost followed by export of onion to foreign countries (85.83%), organization of crop demonstration about improved variety and on recent production technology (61.66%), subsidy on inputs like fertilizers, pesticides and electricity (60.83%), subsidy on construction of onion storage structure (42.50%), establish onion processing industry (38.33%), crop insurance scheme to onion (35.00%), 30 per cent of the respondents gave suggestion that declare onion Zones and restrict cultivation in that zone only, and provide community go down or public go downs on rental basis and NAFED should purchase onion regularly (27.50%), provide loan for construction of onion storage structure (26.66%) and withdrawal of onion from essential commodity act (25.00%) were the remedies to overcome problems in production and marketing of onion. Similar findings were reported by Yashodara (2011)

In conclusion the study found that the production constraints faced by onion growers, ranked from more serious to less serious were high cost of fertilizers and pesticides, weeding, expensive wage rates, and non-availability of labours and lack of knowledge about improved varieties. Under marketing constraints, it was found that, low price/lack of remunerative price, fluctuation in market price, involvement of middleman and commission agents, heavy commission charges were the most serious constraints perceived by large percentage of respondents. Fixed rate/support price based on production cost, export of onion to foreign countries, crop demonstration about improved variety and on recent production and subsidy on inputs like fertilizers, pesticides and electricity were the suggestions offered by onion growers.

The government should set up efficient marketing system to reduce middlemen and

commission agents, ensure input availability at subsidized rate. Price fluctuation should be minimized through fixing of minimum support prices. Provision should be made for cold storage facilities to the farmers at the village level and concerned authorities should conduct demonstration, training and other extension interventions to overcome the perceived production constraints.

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How to cite this article:

Shashidhar K. Baraker, K. C. Lalitha, K. V. Manjunath and Dadimi Anilkumar Reddy. 2020. Constraints and Suggestions in Production and Marketing of Onion in Gadag District of Karnataka, India. *Int.J.Curr.Microbiol.App.Sci.* 9(09): 3155-3161.
doi: https://doi.org/10.20546/ijcmas.2020.909.390