

Agricultural Price Policy and Farm Profitability of Onion in Satara District of Maharashtra

A. J. BARAKADE

Associate Professor

Department of Geography

Karmaveer Bhaurao Patil Mahavidyalaya

Pandharpur

India

Abstract:

Agricultural price policy an important role in achieving growth and inequity in Indian economy, in general and agriculture sector in particular. Variability of onion prices and monthly onion prices during the year 1991 to 2010 estimated by using different methods. A yearly prices variation, i.e. price change in given relative to the price in the annual average price, S.D. and Coefficient of variation. The present study is carried out into March-April 2010 determine the economic of onion cultivation, price spread, marketing channels and marketing efficiency of onion in Satara district. Satara district is leading in onion production it covers 12.38 per cent of total in the State. A study was conducted in western part of the Satara district. A sample of 180 onion growers was selected randomly from 20 villages in ten tahsils of Satara district of Maharashtra State. Onion cultivation is concentrated in the eastern part of the Satara district. The selected cultivators were classified into three categories i.e. small (below 2 ha.), medium (2-4 ha.) and large (above 4 ha.) based on land holding size of the farmers. The primary data were collected by survey method with the help of pre-tested schedule of questionnaire through personal interview. In view of this, an attempt in this study is made to study profitability and resource productivity in onion production in Satara district.

Key words: Agricultural, Policy, Price, Market, Economics, Cost,

Cultivation, Production

Introduction:

Agricultural price policy an important role in achieving growth and equity in Indian economy, in general and agriculture sector in particular. The major understanding objective of the Indian government price policy is to protect both producers and consumers. Achieving food security at both national level and household level is one of challenges in Indian today. Post Independence, while Indian agriculture has struggled, it achieved a lot as well. Today, the objective of achieving food security has been combined with environmental sustainability. With concern present-day concerns of changing climate, it has become all the more important to have policies which not only secure the food supply, but also preserve our environmental and natural resources.

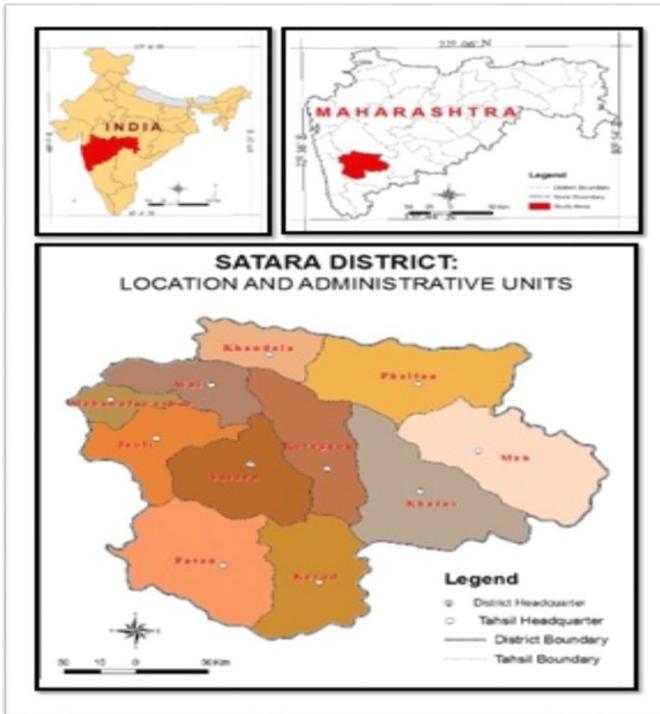
The price support policy was initiated by the Government to provide protection to agricultural producers against any sharp drop in farm prices. If there is a good harvest and market prices tend to dip, the government guarantees and minimum support price to farmers, which covers not only the cost of production, but also ensures a reasonable profit margin for the producers. A minimum support price are announced each year and is fixed after taking into account the recommendation of the commission for Agricultural Cost and Prices. Procurement prices are the prices of Kharif and rabbi crops at which the grain is to be domestically procured by the public agencies FCI (Food Corporation of India) for release through PDS (Public Distribution Services). Normally, the procurement price is lower than the open market price and higher than minimum support price.

In the case of onion there were many complications in formulating standard price, which could be summarized as. (a) day to day variation of price (b) grade difference (c) Price

variation over the season (d) Price differences in consumption and production area. Such problems have been collected have been resolved by collecting prices. This may cover most of above conditions. The principal onion growing districts in the Maharashtra State are Satara, Nashik, Jalgaon, Pune, Solapur and Ahmednagar occupying about 94.68 per cent of area under onion cultivation in the State. Particularly in eastern part of the State Kharif and rabi onion is highest grown by cultivators in certain pocket only.

Study Area:

The Satara district is situated in west part in Maharashtra State. This district consists eleven tahsils covering 1739 villages. The total area extend is of 10,480 sq. km. extending from 17° 5' to 18° 11' north latitudes and 73° 33' to 74° 54' east longitudes. The climate ranges from the rainiest in the Mahabaleshwar region which has an average annual rainfall of over 6000 mm. to the driest in Man, Phaltan, Khandala and Khatav tahsils where the average annual rainfall is about 500 mm. (Fig. No 1).



Objectives:

The present study was undertaken with the following objectives.

1. To find out onion prices in Lonand onion market in 1991 to 2010.
2. To estimate the variation of price spread of onion in the marketing of onion.

Data Base and Methodology:

The study was conducted in Satara district of Maharashtra. The Lonand APMC onion market collected prices over the period 1991 to 2010. Variability in prices estimated by using different methods. A yearly, monthly price variation changes in given relative to the price in the annual average price, monthly average price, S.D. and Coefficient of variation. The selection of

district and tahsils was based on certain criteria. Stratified random sampling procedure was adopted for the selection of villages and onion cultivation. A sample of 20 villages was selected for the study of onion cultivation. Further, it was decided to select a sample of 180 onion respondents from these selected onion growing villages. A list of all the onion producing farmers from each selected villages was prepared and classified in three groups i.e. small (below 2 ha.), medium (2-4 ha.) and (above 4 ha.) based on land holding size of the farmers. The primary data were collected by survey method with the help of pretested schedule of questionnaire through personal interview. The required primary data pertaining to cost, yield, prices and expenditure for the year 2010-11 were collected from selected onion growers.

Fluctuations in onion prices:

Table: 1 Trends in price realized by farmers (1991 to 2010)

Sr.No	Year	Mean	S.D.	Coefficient of variation %
1	1991	182.55	90.011	49.30
2	1992	182.50	43.419	23.79
3	1993	343.33	216.57	63.08
4	1994	330.83	158.50	47.91
5	1995	360.00	161.70	44.92
6	1996	242.91	55.91	23.02
7	1997	302.08	230.94	76.45
8	1998	866.22	432.13	49.89
9	1999	359.16	82.55	22.98
10	2000	264.91	140.52	53.04
11	2001	366.50	156.21	42.62
12	2002	294.16	139.08	47.28
13	2003	421.66	196.88	46.29
14	2004	362.08	178.91	49.41
15	2005	442.91	284.75	64.29
16	2006	267.58	58.41	21.83
17	2007	793.16	235.80	29.73
18	2008	480.50	239.65	49.88
19	2009	898.58	295.99	32.94
20	2010	1216.08	787.20	64.73

Source: APMC, Lonand Onion Market

Compiled by Researcher

Table: 2 Variability in monthly prices in Lonand onion market (1991 to 2010)

Sr.No	Months	Mean
1	January	514.50
2	February	380.35
3	March	274.55
4	April	246.55
5	May	266.95
6	June	336.35
7	July	373.65
8	August	467.05
9	September	552.25
10	October	622.15
11	November	655.45
12	December	669.25

Source: APMC Lonand Onion Market

Compiled by Researcher

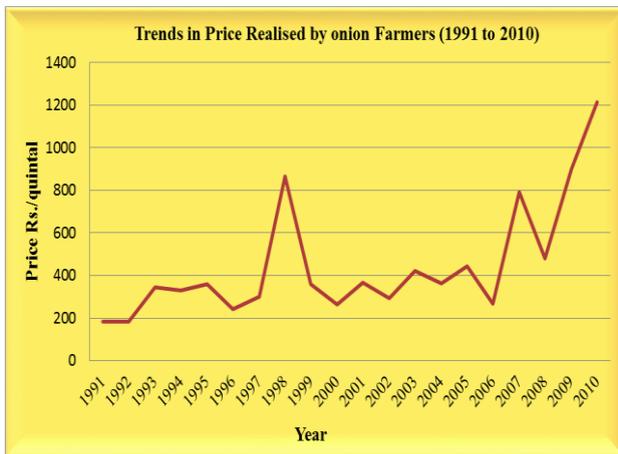


Fig.2

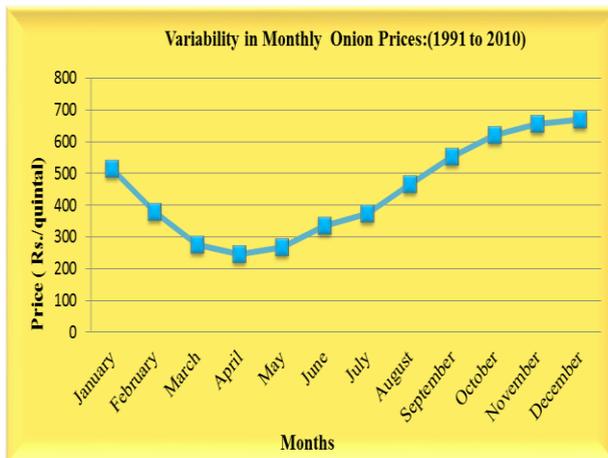


Fig.3

To study the market variability in prices can be estimated by using different methods. A yearly prices variation, i. e. price change in given relative to the price in the annual average price, S.D. and coefficient of variation techniques were used. The coefficient of variation (CV) was computed to find out the extent of fluctuations in market prices of onion in Lonand market.

Formula:

$$C.V. = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

The extent of divergence of the lowest price from the highest price of Lonand onion market is presented in Table 1 and Fig.2 shows that on an average price in the case of Lonand onion market has come down in the during the year 1991 to 1997. Minimum price of onion produced realized Rs 182.55 to 302.08. The average standard deviation of the lowest price from the highest price fell slightly in the 1991 to 1997 (from 90.011 to 230.94).The co-efficient of variation in prices of onion was found

to be higher in Lonand onion market (76.45%).during the year 1997-98. The lowest prices of co-efficient of variation (21.83%, 22.98%, 23.02% and 23.79%) during the year 2006, 1999, 1996 and 1992 respectively. This is also reflected in the decrease in the co-efficient of variation The lowest price months in the case of onion generally occurred during the peak marketing season. The highest price occurred mostly in the lean season months of November to December. The highest price was only two exception during the year of 1998 and 2010.The co-efficient of variation in prices of Lonand market was found to be higher (49.89% and 64.73%) respectively. This two years onion price realized for producers of onion Rs 866.22 and Rs 1216.08.

The price value during the last 20 years fluctuated from Rs246.55, Rs 266.95 and Rs274.55 in the month of May, April and March respectively. The decline of onion prices in this month. Normal prices realized to the farmers Rs336.35, Rs373.65 and Rs380.35 in the month of June, July and February Table 2 and Fig.3. This is tremendous variation is something which is unexplainable with respect to normal rules of demand and supply. From the year 1998-99 and 2010-11 the onion prices all over India the fluctuations were increasing onion prices, maximum price was Rs1500 and Rs3398 per quintal in November and December month. The comes 20 years average price October, November and December Rs622.15, Rs655.45 and Rs669.25 respectively. The bad weather, low yield, untimely rainfall, excess of rainfall, diseases attack on onion crop, climate change, scarcity of rainfall, normal monsoon, drought, vagaries of monsoon, uneven distribution various reasons low yield of onion producers. Analysis of the lowest price month and the highest price of month shows that the January to July is the onion prices are generally low because these months coincide peak season. This clearly indicates that although there was a steady increase in the arrivals and prices over a period of time, their fluctuations from year to year were very high. Similar results were observed for

vegetables by Sharma and Sharma (1996), Mali et al. (1999) and Nawadkar et al. (1999). The higher fluctuations in arrivals might have resulted in wide variations in prices of onion.

Cost and return per hectare of onion production:

Cost of production means the expenses incurred per unit of output. The items of cost that go into the cost of production are both fixed cost remains fixed in the short run, it is in the variable cost or operation cost that the farmers have some scope to make economy.

Kumbhar (2000) studied economics of production and marketing of rabbi onion in Pune district. The major items cost of cultivation were seeds, hired human labour, manure, bullock charges, fertilizer and rental value of land. Mohaptra and Romeo (2007) studied that the average per hectare cost of cultivation of onion in Bolangir district of Orissa. Shah (1999) conducted was study on an economic evaluation of onion production and its marketing in Maharashtra. The analysis of cost structure revealed that total cost of onion production was found much higher in rabbi season compared to that during Kharif season. This find true for all categories of onion producers.

Market price of input that was prevailing at the time of their use was considered for working out of cost of cultivation. The gross return was calculated on the basis of market price of the produce at the time when the produce is ready for sale. Net returns Rs49800.41 ha. was calculated by deducting the cost of cultivation from the gross income.

$$\text{Benefit Cost Ratio} = \frac{\text{Net Returns (Rs./ ha)}}{\text{Cost of Cultivation (Rs./ ha)}}$$

It is seen from Table 3 and Fig. 4 and 5 shows that at the overall level in Satara district Man, Phaltan, Khandala,

Khatav, Koregaon, Wai, Satara, Patan, Jaoli, and Karad tahsils the per hectare cost of cultivation of onion. It is evident percentage share of the total variable cost is Rs. 93500.19 (i.e. 91.09%) and fixed cost of production is Rs.9136.85 (i.e.8.90%) to total cost of production.

Table.3 Cost and returns from onion production per quintal/ha.2010-11 (All cost considered).

Sr.No	Cost items	Total production cost Rs./ha.	Total production cost Rs./ ha. in%
A	Variable cost	93500.19	91.09
1	Land preparation	3177.72	3.09
2	Seeds	6318.17	6.15
3	Nursery raising	1165.15	1.13
4	Manures	7500.47	7.30
5	Fertilizers	7619.02	7.42
6	Pesticides	5800.17	5.65
7	Irrigation	4900.92	4.77
8	Transplanting	5200.25	5.06
9	Weeding and hoeing	3950.55	3.84
10	Harvesting and curing	6850.20	6.67
11	Repairs and maintaince	1760.10	1.71
12	Interest on variable cost @ 10% for six months	3855.90	3.75
13	Transportation and marketing cost	35401.57	34.49
B	Fixed cost	9136.85	8.90
1	Depreciations	1160.80	1.13
2	Rental value of land	6874.73	6.69
3	Land revenue	69.80	0.06
4	Interest on fixed costs @ 10% for six months	1031.52	1.00
C	Total cost of cultivation C= (A+ B)	102637.04	100.00
D	Returns Production in quintal / ha.	258.50	-
E	Gross Return @ Rs. 589.70	152437.45	-
F	Net Return ha.(E - C)	49800.41	-
G	Cost of production per quintal/ha. = (C ÷ D)	397.04	-
H	Profit per quintal (589.70 – 397.04)	192.66	-
I	Benefit cost Ratio (E ÷ C)	1: 1.48	-

Source: Based on Field work (2010-11)

Land preparation(3.09%), seeds (6.15%), nursery raising (1.13%), manures(7.30%), fertilizers(7.42%), pesticides(5.65%), irrigation (4.77%), transplanting (5.06%), weeding and hoeing (3.84%), harvesting and curing (6.67%), repair and maintained (1.71%), interest on variable cost (3.75%) and transportation and marketing cost (34.49%) cost of total production. Among the different items of cost, the rental value of land, bullock charges, machine charges, total hired human labor charges, seeds, manures, fertilizers, plant protection and irrigation cost were the major items of cost of cultivation in all small, medium and large farmers.

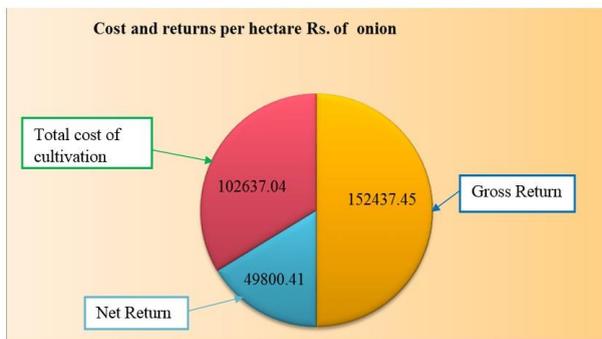


Fig.4

The average net returns obtained by onion growers amounted to Rs.49800.41 per hectare with gross returns of Rs. 152437.45 per hectare. The average yield per hectare onion production 258.50 quintal. The comes cost of production onion per quintal Rs.397.04 and net profit per quintal Rs.192.66. The Cost Benefit Ratio comes to about 1:1.48. It is definitely an encouraging return to the farmers only four to five months.

The farmers in groups were asked to estimate the cost depending on their practices and experiences and their net profits based on the price they generally received. Being are of farm profitability from practices, time and location of production and marketing and supply and demand situation in market. These finding are in conformity with the finding of Jat

and Jain (2008) and Nikam (2008).

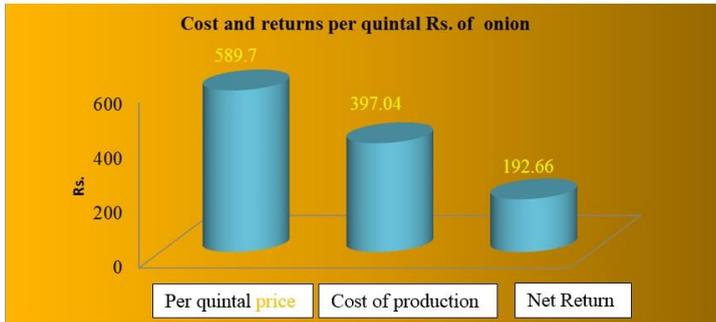


Fig.5

Price spread of onion incurred (Per quintal Rs.)

For the marketing of onion the important channel were identified (1) Producers-consumer(2) producer-howcker-shopkeeper-consumer (3) producer-wholesaler-retailer-consumer.

It was observed Table.4 data presented reveals that producers share in consumers rupee 78.68 percent by selling fresh onion. The wholesalers and retailers are taking away the major share of 5.37 percent and 8.76 percent of consumer's price without investing any penny in the marketing process. The onion growers did not have any control over the market due to the absence of coordination and integration among themselves. All the expenses in the marketing process are incurred by the producers practically the retailers or buyer charges paid to mandi are also charged from the producer.

Table: 4 Price spread of onion

Sr. No	Particulars	Rs. quintal	% Share to consumer Rupee
A	Farmers sale price	-	-
1	Producers sale price	589.70	76.83
2	Marketing cost paid by producer	136.95	17.84
3	Net price received by producer	452.75	58.98

B	Marketing costs		
1	Wholesaler commission (@ Rs.7%)	41.27	5.37
2	Retailers / Buyers charges paid to the mandi (@Rs.2%)	11.79	1.53
3	Market fee and transportation	20.00	2.60
4	Hamali charges	10.00	1.30
C	Retailers purchase price	672.76	87.65
D	Retailers margin (@ Rs. 10%)	67.27	8.76
E	Miscellaneous charges (Packing, handling etc.)	27.50	3.58
E	Consumers purchase price or Retailers sale price	767.53	
F	Producers share in consumers rupee (Rs.767.53-Rs. 589.70)	177.83 per quintal	

Source: Based on field work 2010-11

Conclusion:

The agricultural prices commission was set up in January 1965 to advise the government on price policy of major commodities. The objective was to give due regard to the interest of the producer and consumer, while keeping in perspective the overall needs of the economy. The price support policy was initiated by the government to provide to agricultural producers any sharp drop in farm prices. If there is good harvest and market prices tend to dip the government guarantees in minimum support price to onion producers. This covers not only the cost of production. Unexpected in monthly changes in the price of onion export policy. Effort should, therefore, be made of its valued crop by enhancing its production volume.

REFERENCES

- Barakade, A.J. and Lokhande, T.N. 2011. "Problems of onion storage and marketing in Satara District of Maharashtra." *Hi-Tech Research Analysis Research Journal* 1(1): 80-88.
- Barakade, A. J. 2012. "Price Spread in Marketing of Kharif Onion in Satara District of Maharashtra." *Hi-Tech Research Analysis Research Journal* 1(8): 63-71.

- Barakade, A. J. 2011. "Trends in Area, Production and Productivity of Onion in Maharashtra." *Shodh Samiksha Aur Mulyankan*. 2(26): 7-9.
- Barakade, A. J., Kadam, A. S., and Sule, B. M. 2011. "Pattern of Sugarcane Concentration in Satara District of Maharashtra, India." *Journal of Crop Science*. 2(2): 45-50.
- Barakade, A. J. et al. 2011. "Agricultural Land Use Pattern in Satara District of Maharashtra." *Research Analysis and Evaluation*. 2(17): 12-15.
- Bhaha, S.S. 1995. *Economic Geography*.
- Deshpande, R.S. and Raveendra, N.T. 2002. "Impact of minimum support prices on Agricultural Economy: A Study in Karnataka."
- Government of India. "Agricultural prices in India", Directorate of Economics and Statistics, Department of Agriculture and Co-operation, Ministry of agriculture. New Delhi. Various issues.
- Kohls, R. and Uhl. 1980. *Marketing of Agricultural Products*. New York: Mc Millan Publishing Company U.S.A.
- Mali, B., Nawadkar, D.S., Sale, D.L., and Pagire, B.V. 1999. "Trends in arrivals and prices of fruit vegetables in Pune market of Maharashtra." *Indian Journal of Agricultural marketing* 13 (2): 32.
- Nadkarni, M.V. 1998. "Crises of increasing costs in agriculture: Is there a way out?" *Economic and Political Weekly*, 23 (39): 119-144.
- Nawadkar, D.S., Mali B.K. and Biradar, K.S. 1999. "Price and supply variabilities of code vegetables." *Indian Journal of Agricultural Marketing* 13 (2): 40-41.
- Patil, P.S. and Jadhav, D.V. 1987. "Adoption of cultivation practices of onion in North-West Maharashtra." *Extn*. 6: 153-157.
- Sidhu, D.S. 1990. "Some Aspects of Agricultural marketing and pricing policy in India." *Indian Journal of Agricultural*

Economics. 45(4).