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Risks and its management strategies in small onion in Perambalur District of Tamil Nadu

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Abstract

The main purpose of this study is to provide sufficient understanding on various sources of risks associated with production and marketing of small onion in Perambalur District of Tamil Nadu. Sample farmers were randomly selected for this study. Well structured interview schedule were prepared to conduct the survey. Results of study showed that when the farmers stored the produce for more than 3 months, the storage loss was higher which accounted for 36 per cent of their produce. Majority of the farmers expressed that higher post harvest losses was major source of risk which accounted for 94.29 per cent followed by damage by pest and disease accounted for 82.86 per cent. Majority of the farmers expressed that perishability of the produce was the major source of risk which accounted for 94.29 per cent followed by low price for the produce accounted for 91.43 per cent of the respondents. Risk management strategies were adopted by the sample farmers to mitigate the risks in production and marketing of small onion.

Keywords: Risks, production risks, market risks, management strategies

Introduction

Tamil Nadu is the major producer of small onion (shallot) accounting for nearly 70 per cent of total area under small onion in India in 2014-15. Shallot is mainly cultivated in Tamil Nadu, Karnataka and Andhra Pradesh and major export destination are Malaysia, Indonesia, Sri Lanka and Maldives. In Tamil Nadu, Perambalur (7948 ha), Trichy (3500 ha), Dindigul (2990 ha), Tirunelveli (1828 ha), Tiruppur (1036 ha), Thoothukudi (1300 ha), Namakkal (1988 ha), Virudhunagar (1242 ha) and Coimbatore (1131.5 ha) are the major small onion growing districts in 2014-15. These districts accounted for 85 per cent of total small onion cultivated area in Tamil Nadu. At present, fresh arrivals from Dharapuram, Palladam, Udumalpet, Madurai and Dindigul and stored arrivals from Namakkal, Trichy and Ottanchathiram are arriving to the market. Mysore arrivals will start from July, 2015 onwards. At present, farm gate price of good quality small onion is ruling around Rs. 30 per kg in Dindigul market. The demand for seed onion for sowing is also increased with the current level of price. Further price changes will depend upon, export demand as well as the normally of South-West Monsoon in the small onion growing districts of Tamil Nadu.

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 is 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 exporters of onion. The important onion producing states are Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Bihar etc. 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. The onion production and prices vary and unpredictable bringing difficulties to the farmers. In order to understand the specific constraints experienced by the farmers.

Indian economies are increasingly confronted with changing food and commodity markets, due to globalization, economic liberalization and urbanization (Hoeffler, 2005). As a result, consumer preferences change. This poses new opportunities but also challenges to small scale producers, traders and processors along agricultural value chains. To address this situation, development agencies, donors and NGOs are placing more emphasis on enabling farmers to increase their level of competitiveness, to produce for an identified market, rather than trying

to sell what they have already produced and also seeking new market opportunities that offer higher levels of income. Such goals can be achieved through better economic coordination and institutional linkages. Farmer organizations can play a key role of organizing economic activities beyond local boundaries. They can build up relationships with various chain actors and securing commitments from various actors to co-operate on mutually beneficial actions and investments and thus create value chains.

The value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use" (Kaplinsky & Morris, 2001). The product reaches the final customer having passed through the hands of a number of intermediaries, each of whom adds value to the final product (Kaplinsky, 2004). There are basically two types of value chain governance: one is "producer driven" and the other "buyer-driven" (Gereffi, 1999). Value chain has been implied as a strategic evaluation tool used for distinguishing the strengths and weaknesses in value adding processes (Audrestsch, 1995).

Concerns about the impact of the food on health, social and environmental consequences, have led to major changes in all steps of the food chain including all the agents from the producer to the retailer (Falguera *et al.*, 2012). Small Onion value chains encompass activities including input supply, handling, processing, storage, packaging, and distribution. As products moving through the fore mentioned stages, transactions takes place between multiple chain stakeholders, money changes hands, information is exchanged and value is progressively added (UNIDO, 2009).

It is understood that price is fixed on the basis of demand and supply of onion in the given market. To receive the fair prices out of sale proceeds of onion one should wait for the higher price in the market which requires a very good storage system. Therefore the present study made an attempt to throw light various sources of risks associated with production and marketing of small onion in the study area.

Objectives

The main objective of this study is to provide sufficient understanding on various sources of risks associated with production and marketing of small onion.

The specific objectives are as follows

- i) To identify the sources of risks associated with production and marketing of small onion among sample farmers
- ii) To assess the risk management strategies adopted by the sample farmers.

Methodology

Since, the area under small onion was higher among the districts of Tamil Nadu; Perambalur District of Tamil Nadu was purposively selected for this research study. Sample farmers were randomly selected for this study. Sum of 35 farmers were surveyed to study the various sources of risks in small onion production and marketing. Well-structured interview schedule were prepared to conduct the survey. Simple percentage analysis was used to analyses the data collected from the sample farmers.

Results and Discussion

The data collected from the sample farmers on various sources of risks associated with production and marketing risks were tabulated and analysed and presented here under.

Reasons for Onion Cultivation

Farmers are the primary and most valued actor in the agriculture value chain. There are plenty of reasons that can be attributed to onion cultivation. Sometimes the soil types will be the deciding factor for onion cultivation. When compared to others, it might be remunerative. The following Table 1 gives reasons for carrying out onion production.

Table 1: Reasons for Onion Cultivation

S. No.	Reasons for onion cultivation	No. of farmers
1	Traditional practice	11 (31.42)
2	Village customs	8 (22.85)
3	Soluble soil type	6 (17.14)
4	Remunerative	5 (14.28)
5	Water availability	5 (14.28)

Figures in Parenthesis represent percentage to total

It is seen from Table 1, 31.42 per cent of sample farmers cultivate onion because it is traditional practice of the family. 22.85 per cent do cultivate because everybody in the village does so, another 17.14 per cent expressed, suitable soil type as a reason for cultivation and 14.28 per cent expressed remunerative as a reason and another 14.28 per cent expressed water availability as one of the reasons for cultivating onions. Three systems of planting were employed by the farmers (i) Direct seedling is preferred and gives excellent results where the season is sufficiently long to provide early pre bulbing growth. (ii). Transplants normally have three to five well - formed leaves at transplant time. Transplant leaves are pruned during growth prior to field setting, facilitating handling and increasing plant hardiness. (iii) Sets are used in some areas to ensure large bulb size and uniform maturity. Sets are small dry bulbs, approximately 12 mm in diameter, produced the previous season by seeding thickly or growing under conditions favoring rapid bulbing.

Information System

One should understand that it is the experience which makes and gives a complete knowledge of farm practices. There are plenty of sources to provide information to farmers. Media plays a major role in bridging this gap. Therefore the following table analyses the sources of information to the farmers.

Table 2: Sources of Information about Farm Practices

S. No.	Sources of Information about Farm Practices	Number of farmers
1	On my Own	12 (34.28)
2	Agri Officers	10 (28.57)
3	From Peer Group Relatives	7 (20.00)
4	Media/radio	6 (17.14)

Figures in Parenthesis represent percentage to total

It is inferred from the table 2 that among the sample farmers 34.28 per cent have been practicing operation on their own with rich experience in that line, 28.57 per cent follow guidance from agricultural officers, 20.57 per cent follow

guidance from relatives and peer groups, and 17.14 per cent get knowledge from media.

Duration of Storage Practices

In the study region, onions are cultivated by planting of bulbs rather than transplanting of seedlings because most of the farmers opined that transplanted onions not suitable for storage hence sample farmers resort to planting bulbs even though advantage in cost of cultivation.

After harvesting, onions are cured on farm and stored in bamboo based conventional structures. The width of the storage is about 8-10 feet. Conventional storage structures have many inherent problems and cause losses to the produce stored. They are built on the ground which leads to rotting of bulbs, which come in contact with the soil. Dampness during rains and sometimes direct water flow is among the other problems of conventional storage. around 40- 50% of Rabi/Summer onion is stored by farmers in on-farm bamboo based conventional storage structures. The Duration of Storage Practices are presented below.

Table 3: Duration of Storage Practices

S. No.	Details	No of farmers
1	Less than a month	12 (34.28)
2	1month-3 month	13 (37.14)
3	3month - 6 month	7 (20.00)
4	More than 6 months	4 (11.43)

Figures in Parenthesis represent percentage to total

The above table 3 reveals the duration of storage practices by the sample cultivators. Of the sample holdings 34 per cent sell their onions within one month. Nearly 12 per cent sample farmers store their onions up to six months. The farmer takes out the onion from storage when he has to sell it in the market. The produce is graded manually at farm level and packed in gunny bags of 70 kg each and brought to Trichy and Dindugal market in trucks or tractor trolleys by the farmers. In these markets, onions packed in gunny bags are traded while in case of Perambalur markets, onions are brought in loose condition.

Storage losses in Small Onion in study area

Table 4: Storage losses in Small Onion in Perambalur District

S. No	Period of storage	Per cent of loss
1	Less than 1 month	8
2	1 - 2 months	18
3	2-3 month	27
4	3 months and above	36

The above table 4 reveals the storage loss in small onion by the sample cultivators. When the farmers stored the produce for more than 3 months, the storage loss was higher which accounted for 36 per cent of their produce. Hence, it is concluded that the storage loss was higher when the duration of storage increases.

Major sources of Production Risks

The farmer's perception on major sources of risk was summarized as production and market risks. Major sources of production risk showed in Table 5. Majority of the farmers

expressed that higher post harvest losses was major source of risk which accounted for 94.29 per cent followed by damage by pest and disease accounted for 82.86 per cent, poor productivity accounted for 68.57 per cent. Other sources of risk in production were expensive inputs, high cost of production, lack of technical knowledge in production and processing, weather dependency which accounted for 60.00 per cent, 57.14 per cent, 42.86 per cent and 37.14 per cent respectively.

Table 5: Major sources of production risk among small onion growers

S. No.	Sources	Percentage*
1	Higher post harvest losses	94.29
2	Damage by pest and disease	82.86
3	Expensive inputs	60.00
4	High cost of production	57.14
5	Lack of technical knowledge in production and processing	42.86
6	Weather dependency	37.14

* Multiple responses

Major sources of market risks

Major sources of market risk were revealed in Table 6. Majority of the farmers expressed that perishability of the produce was the major source of risk which accounted for 94.29 per cent followed by low price for the produce accounted for 91.43 per cent of the respondents. Other market risks were high marketing cost, exploitation by middlemen, poor product handling and packaging, lack of market information and poor market linkages which accounted for 85.71 per cent, 80.00 per cent, 71.43 per cent, 62.86 per cent and 60.00 per cent, respectively.

Table 6: Major sources of market risk

S. No.	Sources	Percentage
1	Perishability of produce	94.29
2	Low price of produce	91.43
3	High marketing cost	85.71
4	Exploitation by middlemen	80.00
5	Poor product handling and packaging	71.43
6	Lack of market information	62.86
7	Poor market linkages	60.00

Risk management strategies adopted by the sample farmers

Risk management strategies adopted by the sample farmers were presented in Table 7. The table showed that majority of the farmers sold their produce at low prices due to perishability which accounted for 94.29 per cent. This was closely followed by adoption of new farming techniques accounted for 91.43 per cent.

Other risk management strategies adopted by the sample farmers were selling within their locality, crop planning, maintain good relations with traders, engage in crop diversification which accounted for 88.57 per cent, 85.71 per cent, 68.57 per cent, 62.86 per cent, respectively used as effective risk management strategies by the sample farmers. Farmers processed their produce before selling accounted for only 14.29 per cent which clearly indicated that lack of technical knowhow, and lack of infrastructure facilities for processing the produce.

Table 7: Risk management strategies adopted by the sample farmers

S. No.	Strategies	Per cent
1	Adoption of new farming techniques	91.43
2	Crop planning	85.71
3	Crop diversification	62.86
4	Processing of produce	14.29
5	Sell within their locality	88.57
6	Sell at low prices due to perishability	94.29
7	Maintain good relations with traders	68.57

Summary and Conclusion

The present study was carried out to find out the risks associated with production and marketing of small onion. Findings of the study were summarized as indicated below.

When the farmers stored the produce for more than 3 months, the storage loss was higher which accounted for 36 per cent of their produce. Majority of the farmers expressed that higher post harvest losses was major source of risk which accounted for 94.29 per cent followed by damage by pest and disease accounted for 82.86 per cent

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