



Constraints in Adoption of Price Forecasts and Suggestions for its Improvement: A Study in Chilli Farming

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ABSTRACT

The present study was conducted in Guntur district of Andhra Pradesh, India, to study the constraints faced by chilli farmers in adopting price forecasts and various suggestions given by them to improve the forecasts. Fluctuation in chilli prices and less reliability of the forecasted price were major constraints faced by adopters of price forecasts. Lack of awareness was the major constraint in case of non-adopters of price forecasts. Important suggestions as given by farmers were forecasted price consistent with market temperature and consideration of storage problem and market rush during the recommended month of sale.

Key words: Chilli farming, Constraints, Price forecasts, Suggestions.

Price volatility of cash crops is found to have severely inhibited investment in the sector and destabilized the earning of small holders (Rangachary, 2006). Thus in order to bring about price stabilization in these crops and benefit the farmers with regard to farm income, price forecasting has been carried out as one of the mechanisms of price stabilization by the government.

Farmers receive the information on forecasted price from the commission agents, market yard, cold storage units, marketing commissions, input dealers and also from processing plants. The price forecast thus received by farmers helps them in decision making regarding several farm activities. This study is being carried out to know the constraints faced by adopters and non-adopters of price forecasts and also to examine the suggestions of farmers to overcome those constraints and improve price forecasts.

MATERIALS AND METHODS

SAMPLE SELECTION

Multistage stratified random sampling technique was used for the study as detailed below.

Selection of study area

Guntur district was purposively selected as it was having the highest area under chilli and also highest production and productivity of chilli in Andhra Pradesh. It contributes 25.45 per cent to

overall chilli production in India, during of the year out of 57 mandals in Guntur district, two mandals - Sattenapalle and Medikonduru – were selected purposively as they were having highest area under chilli and also nearer to the district headquarter, where the chilli market yard located and also maximum number of cold storages observed. From each mandal, two villages which were having maximum area under chilli were selected.

Selection of respondents

Chilli farmers, who were progressive and adopted price forecasts, identified from data available with various institutes such as regional research station, AMIC of State Agricultural University. Thus, list of adopters and non-adopters for selected villages was prepared and for each village 15 adopters and 15 non-adopters were selected in random from the list. Total 120 farmers were selected for the study which pertains to agricultural year 2014-15.

CONSTRAINTS ANALYSIS

To capture comprehensively the constraints faced by the farmers Garret ranking technique was used. Some major prevailing constraints were highlighted during preliminary survey and the order of the merit given in ascending order was converted into ranks by using the formula. Accordingly these ranks were converted to scores by referring to Garret and Woodworth (1969) table. Garrett's

formula for converting ranks into per cent was given by

$$\text{Percentage position} = 100 \times (R_{ij} - 0.5) / N_j$$

Where, R_{ij} is the rank given for i^{th} item by j^{th} farmer and N_j is the number of items ranked by j^{th} farmer.

RESULTS AND DISCUSSION

Constraints faced by chilli farmers in following price forecasts

Farmers have revealed the constraints faced by them in adopting price forecasts during the survey. Table 1 shows the constraints faced by adopters of price forecasts. The major constraints faced by the farmers in adopting price forecasts were frequent price fluctuation (80 per cent) and non-reliability of price forecasts (75 per cent) which makes farmers reluctant to follow price forecasts.

Another major constraint told was price reduction due to market rush during recommended month of sale in expectance of forecasted price (65 per cent). Difficulty in storage of produce at farm/house was revealed as major constraint by 56.67 per cent farmers. It was opined by 51.67 per cent farmers that information regarding price forecasts was not available at convenience.

Various constraints faced by non-adopters of price forecasts is shown in Table 2. Lack of awareness was the major constraint in case of non-adopters of price forecasts (51.67 per cent). Convenience to sell the produce in village to known

intermediaries was opined as major constraint by 45 per cent. Another major constraint was non-reliability of price forecasts followed by frequent price fluctuation and non-timeliness of the forecasts information.

Garrett ranking method

There are various constraints faced by farmers while adopting weather price forecasts. For these constraints respondents are allowed to rank their preferences and this was explained by Garrett Ranking Method.

$$\text{Percent Position} = 100 (R_{ij} - 0.5) / N_j$$

R_{ij} = Rank given for i^{th} item by the j^{th} sample respondents.

N_j = Total ranks given by j^{th} sample respondents.

The constraints being faced by the adopters of price forecasts presented in table 3, shows the garrett ranking score and ranks given. The main constraints were frequent price fluctuation (Ravichandran and Banumathy, 2011) and forecasted price not reliable (Ferris and Robbins, 2004) followed by reduction in price due to market rush during recommended month of sale in expectance of forecasted price. It was opined that the price forecast information is not available at their convenience and there was difficulty in storing the produce at farm/house (Tologbonse *et al.*, 2008).

Table 1. Constraints faced by adopters of price forecasts.

S.No.	Constraints	Respondents
1	Information is not available at convenience	31 (51.67)
2	Forecasted price is not reliable	45 (75)
3	Difficulty in storage at farm/house	34 (56.67)
4	Cost of cold storage is more	17 (28.33)
5	Forecast information is not timely	20 (33.33)
6	Difficult to transport produce to market yard for sale	28 (46.67)
7	Forecasted price is not realized due to involvement of traders and middlemen	22 (36.67)
8	Frequent price fluctuation	48 (80)
9	Price reduce due to market rush during recommended month of sale in expectance of forecasted price	39 (65)
10	Personal need to sell produce before recommended month of sale	15 (25)
	Total	60 (100)

Note: Figures in parentheses indicate percentage to the total *Source: Field survey data*

Table 2. Constraints faced by non-adopters of price forecasts.

S.No.	Constraints	Respondents
1	Lack of awareness about price forecast	31 (51.67)
2	Information is not available at convenience	19 (31.67)
3	Forecasted price is not reliable	25 (41.67)
4	Difficulty in storage at farm/house	11 (18.33)
5	Cost of cold storage is more	8 (13.33)
6	Forecast information is not timely	21 (35)
7	Convenient to sell produce in village to the known intermediaries	27 (45)
8	Difficult to transport produce to market yard for sale	12 (20)
9	Forecasted price is not realized due to involvement of traders and middlemen	14 (23.33)
10	Frequent price fluctuation	22 (36.67)
11	Price reduce due to market rush during recommended month of sale in expectance of forecasted price	16 (26.67)
12	Personal need to sell produce before recommended month of sale	17 (28.33)
	Total	60 (100)

Note: Figures in parentheses indicate percentage to the total *Source: Field survey data*

Table 3. Garrett score of constraints faced by adopters of price forecasts.

S.No.	Constraints	Garrett score	Rank
1	Frequent price fluctuation	4780	1
2	Forecasted price is not reliable	4630	2
3	Price reduce due to market rush during recommended month of sale in expectance of forecasted price	4494	3
4	Information is not available at convenience	4078	4
5	Difficulty in storage at farm/house	4038	5
6	Difficult to transport produce to market yard for sale	3945	6
7	Forecasted price is not realized due to involvement of traders and middlemen	3802	7
8	Forecast information is not timely	3386	8
9	Cost of cold storage is more	2428	9
10	Personal need to sell produce before recommended month of sale	2251	10

Source: Field survey data

Some farmers felt difficulty in transporting produce to market yard (TNAU, 2014). Involvement of traders and middlemen were also the important constraint in adopting price forecast by farmers. The last ranks were given to timeliness of forecast and cost of cold storage godowns. Some farmers sold the produce before recommended month of sale due to personal need.

The garret scores and ranks for the constraints faced by non-adopters of price forecasts presented in table 4. Rank 1 was given to lack of

awareness on price forecasts and it was followed by convenient to sell the produce in village to known intermediaries. Non-adopters who were aware of price forecasts opined that it was not reliable and frequent price fluctuation prevail in market. They also revealed that lack of timeliness and forecasts not available at their convenience as constraints in adopting price forecasts.

Personal need to sell produce before recommended month of sale followed by price reduction due to market rush during recommended

Table 4. Garrett score of constraints faced by non-adopters of price forecasts.

S.No.	Constraints	Garrett score	Rank
1	Lack of awareness about price forecast	4721	1
2	Convenient to sell produce in village to the known intermediaries	2414	2
3	Forecasted price is not reliable	2369	3
4	Frequent price fluctuation	2340	4
5	Forecast information is not timely	2329	5
6	Information is not available at convenience	2097	6
7	Personal need to sell produce before recommended month of sale	2084	7
8	Price reduce due to market rush during recommended month of sale in expectance of forecasted price	2036	8
9	Forecasted price is not realized due to involvement of traders and middlemen	1876	9
10	Difficult to transport produce to market yard for sale	1782	10
11	Difficulty in storage at farm/house	1650	11
12	Cost of cold storage is more	1360	12

Source: Field survey data

Table 5. Suggestions made by farmers for improving price forecasts.

S.No.	Suggestions for improving price forecasts	Frequency n=120	Response (%)
1	Forecasted price consistent with market temperature	104	86.67
2	Storage problem should be considered	91	75.83
3	Market rush during recommended month of sale should be considered	83	69.17
4	Transport problem should be addressed	74	61.67
5	Accessibility of price forecasts should be improved	66	55
6	Measures to avoid distress sale	54	45
7	Involvement of middlemen should be reduced	53	44.17
8	Price forecasts should be timely	47	39.17
9	Create awareness	42	35

Source: Field survey data

month of sale in expectance of forecasted price, involvement of traders and middlemen, difficulty in transporting produce to market yard for sale and difficulty in storage at farm/house were the other important constraints faced by non-adopters of price forecasts. The last rank was given to the cost of cold storage godowns by non-adopters.

Suggestions Given by Farmers for Improving Price Forecasts

Various suggestions given by farmers to overcome the constraints faced by them in following

price forecasts and for improving it are given in table 5. Majority of the farmers suggested that forecasted price should be consistent with market temperature (86.67 per cent) followed by consideration of storage problem (75.83 per cent).

Consideration of market rush during recommended month of sale was suggested by 69.17 per cent of farmers and 61.17 per cent suggested transport problem should be addressed whereas 55 per cent suggested improving accessibility of price forecasts. It was suggested by 45 per cent of farmers that measures should be

taken to avoid distress sale, 44.17 per cent suggested involvement of middlemen should be reduced, 39.17 per cent suggested price forecasts should be timely and 35 per cent suggested for creating awareness.

Frequent price fluctuation and non-reliability of price forecasts were opined as major constraints in following price forecasts by farmers and they suggested that forecasted price should be consistent with market temperature to overcome those constraints. Farmers suggested considering the storage problem as there was difficulty in storage of produce at farm/ house and cost of cold storage was more.

Consideration of market rush during recommended month of sale was suggested by the farmers to overcome the problem of price reduction due to market rush. It was suggested by the farmers to address the problems of transportation and accessibility of price forecasts to overcome the difficulty in transporting the produce to market yard for sale and the problem in accessing the price forecasts.

Measures to avoid distress sale was suggested by 45 per cent of farmers which was one of the important constraint in following price forecasts. It was opined by farmers that forecasted price was not realized due to involvement of traders and middlemen and they gave suggestion to reduce the involvement of middlemen during the process of marketing the produce. Timely forecasts and programs to create awareness on price forecasts were suggested by farmers as it was opined by them that forecast information was not timely and lack of awareness about price forecasts as constraints.

CONCLUSION

It was concluded from the study that the major constraints faced by adopters of price forecasts were frequent price fluctuation (80 per cent) and non-reliability of price forecasts (75 per cent) which makes farmers reluctant to follow price forecasts.

Another major constraint told was price reduction due to market rush during recommended month of sale in expectance of forecasted price (65 per cent). Difficulty in storage of produce at farm/house was revealed as major constraint by 56.67 per cent farmers. It was opined by 51.67 per

cent farmers that information regarding price forecasts was not available at convenience.

Lack of awareness was the major constraint in case of non-adopters of price forecasts (51.67 per cent). Convenience to sell the produce in village to known intermediaries was opined as major constraint by 45 per cent. Another major constraint was non-reliability of price forecasts followed by frequent price fluctuation and non-timeliness of the forecasts information.

Important suggestions given by sample chilli and to improve the forecasts were consistence of price forecasts with market temperature followed by consideration of storage problem and market rush during recommended month of sale. They also suggested that transport problem should be addressed and accessibility of price forecasts need to be improved.

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