

RESEARCH ARTICLE

IMPLICATION OF MINIMUM SUPPORT PRICE AS A SUBSTANTIVE 'SUPPORT' TO PADDY FARMERS IN KANCHANPUR DISTRICT, NEPAL

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ABSTRACT

The Government of Nepal has implemented the Minimum Support Price (MSP) policy to ensure farmers a fair price for their produce, however, its efficacy in the case of paddy is questionable. Therefore, this study aims to assess the implications of the minimum support price as a support mechanism for paddy farmers in Kanchanpur district, Nepal. A total of 120 respondents were selected from the study area using the snowball sampling method and interviewed using a semi-structured questionnaire from July 15, 2023, to July 20, 2023. Descriptive statistics, an independent sample t-test, a chi-square test, and indexing were used to analyze the data. The study revealed that only 42% of farmers were aware of MSP, while an even lower proportion, just 26%, were aware of the FMTCL. The average FGP in the study area was found to be 2375 Nrs/quintal and 2811 Nrs/quintal for short-grain and long-grain paddy, respectively. The effectiveness of the policy was found to be staggering, with just 9% of surveyed farmers accessing MSP or higher prices. The respondents cited the late announcement of the minimum support price as the most severe obstacle to MSP implementation, followed by lack of awareness about MSP, non-availability of procurement companies nearby, middlemen or Galla's as price determinators, FMTCL being the sole procurement company, high supply at peak time, quality variation in paddy grain, and porous borders. The study therefore calls for timely announcement of MSP, proper awareness programs, and expansion of procurement services.

KEYWORDS

Minimum support price, Farm gate price, Paddy, FMTCL

1. INTRODUCTION

Ensuring a stable and rewarding price environment is seen as vital to enhancing agricultural productivity. Even when producers employ the best technology available and produce efficiently, they often suffer needless losses. This is due to the inherent unpredictability of agricultural product markets (Malam Suri et al., 2013). Consequently, price policies have been fundamental to the agriculture sector since the very beginning. The major underlying objective is to protect both producers and consumers. (Sudhakar and Wale, 2017). Given that Nepal is primarily an agrarian country, its agricultural and food security heavily rely on effective price policies.

Agriculture has been a central part of the Nepalese culture and economy for centuries. It continues to serve as the backbone of Nepal's economy, contributing 25.83% of GDP and providing employment to 60.4% of the total population (AITC, 2022). Since the formulation of the Fifth Five-Year Plan (1975–80), it has been the highest priority because economic growth was dependent on both increasing the productivity of existing crops and diversifying the agricultural base for use as industrial Inputs. This led to the introduction of various policies and subsidy schemes afterward. One such policy is the minimum support price (MSP) policy. It was introduced in Nepal in 1975 to encourage increased production and investment in agriculture.

The minimum support price is the price the government guarantees to pay farmers for their harvest if the bottom drops out of the market. The policy

aims to ensure that the market price of agricultural produce does not fall below the minimum price. It implies that the government would enter the market if the price of agricultural produce was lower than the MSP (Kumar, 2021). The major objectives are to support the farmers in distress sales and to procure food grains for public distribution. It seeks to procure food grains from food surplus states for distribution and maintain buffer stock, which will help to bridge the gap between demand and supply (Jha and Srinivasan, 2006). The policy currently covers three crops in Nepal, i.e., paddy, wheat, and sugarcane.

Paddy is the major staple food crop cultivated in Nepal, providing over two-thirds of agricultural households with a basic source of income and sustenance. It is also integral to a nation's culture (Poudel et al., 2021). According to AITC, rice alone provided more than 20% of AGDP and 7% of GDP in 2021. The altitude for paddy cultivation ranges from 60 meters to 3050 meters above sea level in Nepal (Devkota et al., 2022). It is distributed across three distinct agroecological regions, with Terai being the green basket, comprising about 73% of total production, while hills and high hills share 24% and 4%, respectively. The major producing areas of Terai include Morang, Sunsari, Chitwan, Kailali, Kanchanpur, etc.

Kanchanpur district is one of the major rice-producing districts, dedicating 48,749 hectares to rice cultivation, yielding 187,274 metric tons with a productivity rate of 3.84 metric tons per hectare. (MoALD, 2022). The district employs a rice-wheat cropping pattern and relies on subsistence and conventional farming methods. Rice farming in the district is one of the major sources of income for livelihood, and it contributes significantly to the nation's overall paddy production. However, despite subsequent

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production and MSP policy being in place, the living standards of farmers in the district remain low. This raises questions about the efficacy of the policy and whether it adequately supports farmers. So, there seems to be a need for research to comprehensively understand the significance of the minimum support price policy in the district. In these regards, the study was designed to analyze the awareness level alongside the implementation status of the policy. Furthermore, the study will aim to identify the constraints bridging the gap between farmer and procurement services while also finding major obstacles to its effective implementation. The research aims to offer actionable insights regarding policy's effectiveness and its associated gaps, to enlighten policymakers and facilitate effective management strategies.

2. MATERIALS AND METHODS

2.1 Study Area and Sample Size Determination

This study was conducted in four local government areas, namely Bhimdatta, Bedkot, Suklaphanta municipalities, and Beldandi rural municipality of Kanchanpur district of Sudurpaschim province. The area was purposefully selected based on the production record of the Prime Minister's Agriculture Modernization Project (PMAMP). The district is predominantly agricultural, with paddy being one of the major crops cultivated in the district, with 48749 ha of land devoted to it. (MOALD, 2022).

Purposive and snowball sampling methods were used to select the respondents. A total of 120 respondents from 3 municipalities and 1 rural municipality (@30 farmers/ municipality) were selected first by the purposive sampling method, and then snowball sampling was used to select the respondents inside municipalities. Before carrying out the study survey, a pilot survey was performed in Bhimdatta and Bedkot municipalities to analyze the questionnaire relevancy and improvise the questionnaires as per requirements.

2.2 Source of Data

We collected primary data from farmers using semi-structured survey questionnaires and key informant interviews. Additionally, a Focal Group Discussion (FGD) was also conducted to list out the major problems to be introduced in the questionnaire. The sources of secondary data were published and unpublished books, journals, newspapers, research papers, magazines, annual publications, reports, and related documents published by NARC, NGOs/INGOs, and universities, among others.

Particulars	Units	Mean	Standard deviation	Range
Age of respondents	Year	49.75	11.094	51(22-73)
Year of schooling by respondents	Year	8.61	5.545	18(0-18)
Family size of HH	Number	5.86	1.701	9(3-12)
Male number in HH	Number	2.92	1.096	6(1-7)
Female number in HH	Number	2.94	1.132	5(1-6)
Farm size	Kathha	19	22.647	196(4-200)
Total production	Quintals	25.03	24.858	192(8-200)
Consuming quantity	Quintals	12.77	13.301	120(0-120)
Selling quantity	Quintals	12.26	13.490	72(2-80)

Note: 1 ha: 30 kathha

3.2 Institutional Characteristics of Respondents

Characteristics	Description
Access to off farm income	Nearly half (47.5%) of the farmers surveyed had access to off-farm income, while the remaining 52.5% did not.
Co-operative membership	Approximately 58.33% were members of cooperatives, while the remaining 41.67% were not.
Contact with extension officer	Only a small percentage (26.67%) of rice farmers were in contact with extension services, indicating a low frequency of such contact.
Received training on Agri-marketing	Just 7.50% of rice farmers had received training related to agri-marketing, while the remaining 92.50% had not.

2.3 Data Analysis

The data collected from the survey was coded, and the local units of measurement were standardized into scientific measurement units. We used Microsoft Excel and the Statistical Package for Social Science (SPSS) to analyze the collected data using both descriptive and inferential statistics.

The Chi-square statistic is used to find the relationship between the socioeconomic characteristics of the respondents and their awareness of the minimum support price. Moreover, we used an independent sample t-test to determine the difference between the average farm gate price and the minimum support price of paddy.

The index of importance was determined using the following formula:

$$Iimp = \sum (Si \times Fi/N)$$

Where,

Iimp = Index of Importance

Si = Scale Value

Fi = Frequency of importance given by the respondent

N = Total number of respondents

3. RESULTS AND DISCUSSION

3.1 Sociodemographic Characteristics of Respondents

The mean age of the respondents was 49.75 years, with an average of 8.61 years of schooling (Table 1). The average household size was found to be 5.86 ranging from a minimum of 3 to a maximum of 12 members. Similarly, respondents had an average farm size of 19 kathha (0.63 ha), yielding an average production of 25.03 quintals (25.03/0.63 ha) and a productivity of 3.95 metric tons per hectare. Additionally, the average selling quantity was 12.26 quintals, while the average consuming quantity was 12.77 quintals.

The male respondents (67%) were found to be dominant over the female respondents (33%) in the study area. Similarly, Agriculture was found to be dominant, with 72.50% of respondents being involved in agriculture as a primary occupation, followed by business (15.83%) and the service sector (11.67%).

3.3 Awareness Level of the Minimum Support Price

The awareness level of the Minimum Support Price (MSP) among farmers was found to be quite low. Only 41.67% of farmers were aware of the MSP, while the remaining 58.33% were unaware (Figure 1). Among the aware respondents, 38.81% got information on MSP from television, and 34.33% got it from the internet, followed by radio and conversational sharing (Figure 2).

3.4 Association of Sociodemographic and Institutional Characteristics with Awareness of MSP

A chi-square test showed that the majority of variables, including gender, educational background, access to off-farm income, cooperative membership, contact with an extension officer, and access to training, showed significant associations with awareness of the minimum support price except for paddy marketing experience (Table 3: p-value < 0.05 for all the variables and P > 0.05 for paddy marketing experience).

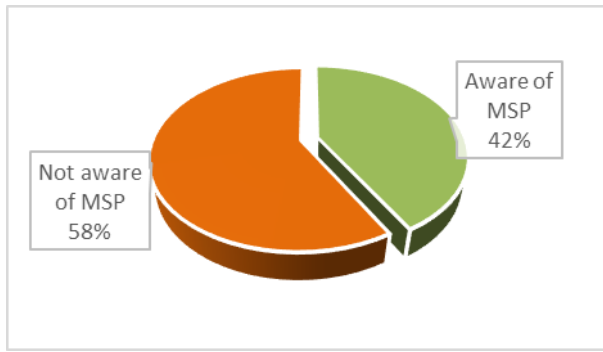


Figure 1: Awareness of MSP

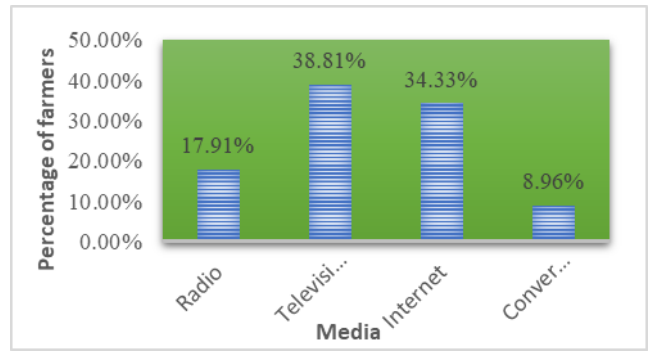


Figure 2: Media for Awareness

Table 3: Association of sociodemographic and institutional characteristics with awareness of MSP				
Socioeconomic and institutional characteristics	Paddy farmers		Chi-square	p-value
	Not Aware	Aware		
Gender of household head				
Male	36	48	27.592	0.000**
Female	34	2		
Educational background				
Illiterate	21	2	36.828	0.000**
Primary	33	12		
Secondary	13	15		
Above Secondary	3	21		
Paddy marketing experience				
0-10 years	12	2	8.784	0.32
10-20 years	12	4		
20-30 years	12	15		
30 above years	34	29		
Access to off farm income				
Access	22	35	17.401	0.000**
No-access	48	15		
Cooperative membership				
Member	28	42	23.232	0.000**
Non-member	42	8		
Contact with extension officer				
In-contact	6	26	28.130	0.000**
No-contact	64	24		
Received training on agri-marketing				
Received	0	9	13.622	0.000**
Not-received	70	41		

3.5 Awareness of FMTCL

The Food Management and Trading Company Limited (FMTCL) is responsible for purchasing paddy at the minimum support price in Nepal. It operates under the Ministry of Industry, Commerce, and Supplies and consists of one central department, seven provincial departments, five main branches, 25 sub-branches, and 27 godown offices. The company has one of its warehouses in Bhimdatta municipality, Kanchanpur district, with a capacity of storing 2000 mt. of paddy in 3 blocks. The majority of farmers (73.33%) in the study area were not aware of FMTCL, the study revealed. Only 26.67% of farmers were found to be aware of the FMTCL and its responsibilities.

3.6 Access to The Minimum Support Price

The frequency of framers being able to sell at MSP or higher was miserable. The study revealed that only 9% (11) of farmers were able to sell their produce at the minimum support price or higher (Figure 3). The remaining 91% (109) of farmers were unable to sell their produce at a government-fixed MSP or higher. The result is slightly higher than the results reported by researchers in 2020. who documented just 6.25% of farmers accessing MSP in West Bengal (Hazra and Santra, 2020). The reason might be the popularity of local purchasers in study area.

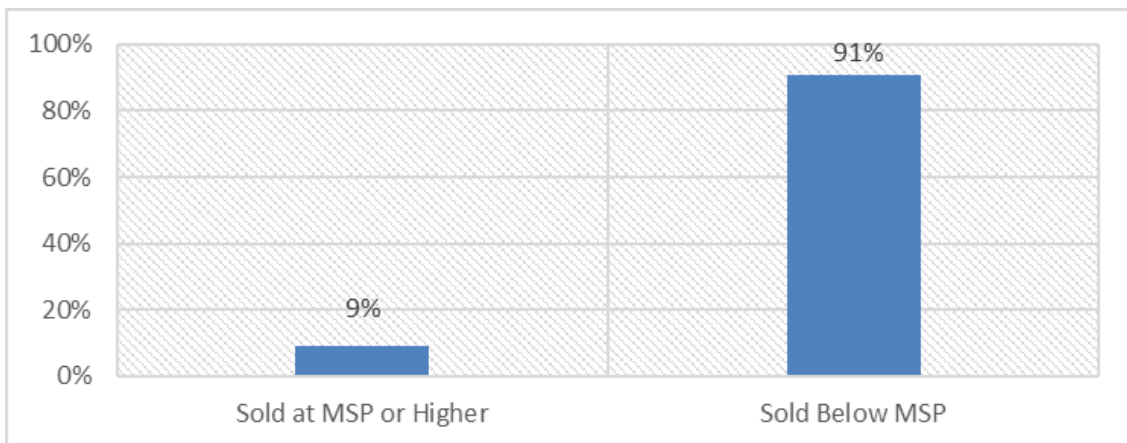


Figure 3: Access to the minimum support price

3.7 Market Outlet for Paddy

Wholesalers were the most common market outlet, with 55.83% of farmers selling their paddy to them, followed by millers, with 35% of farmers selling their paddy at the mill (Table 4). Only 7.50% of farmers had sold their produce to Food Management and Trading Company Limited. The remaining 1.67% sold their paddy directly to consumers.

Direct selling to consumers was the most profitable, as farmers received an average of Nrs 3050 and Nrs 3300 for short grain and long grain, respectively. Wholesalers purchased paddy from farmers at an average amount of Nrs 2328 and Nrs 2870 for short and long grain, respectively, followed by millers with Nrs 2309 and Nrs 2696 (Table 4). The Food Management and Trading Company Limited purchased paddy at the minimum support price.

Market outlet	Frequency	Mean price (Nrs)		Minimum (Nrs)		Maximum (Nrs)	
		Short grain	Long grain	Short grain	Long grain	Short grain	Long grain
Wholesaler	67(55.83 %)	2328	2870	2100	2700	2900	3000
Miller	42(35.00 %)	2309	2696	2000	2600	2800	3100
FMTCL	9(7.50 %)	2967	3158	2967	3158	2967	3158
Directly to consumers	2(1.67 %)	3050	3300	3000	3200	3100	3400

(Nrs: Nepali rupees)

3.8 Farm Gate Price

The Government of Nepal fixes the minimum support price for two types of paddies, i.e., short grain and long grain. In the study area, the FGP for short-grain paddy was found to be Nrs 2375/quintal, whereas its MSP was Nrs 2967/quintal (Table 5). Similarly, the FGP for long-grain paddy was found to be Nrs 2811/quintal, whereas its MSP was Nrs 3128/quintal.

An independent sample t-test was employed to find the statistical difference between the average FGP and MSP of paddy. By analyzing the data collected from the survey, the calculated t-statistic was found to be (-25.95) and (-7.35) for short and long-grain paddy, respectively, while the tabulated t-value was (1.98) and (2.01) for short-grain and long-grain, respectively (Table 5). Since the absolute value of the calculated t-statistic is much greater than the critical t-value for both paddy types, this suggests a very strong and highly significant result. Therefore, there is indeed a significant difference between the farm gate price and the

minimum support price. The negative sign of the t-statistic suggests that the farm gate price is significantly lower than the minimum support price.

3.9 Influence of MSP on Production Decisions

The farmers who were able to sell their paddy at MSP or higher were asked about whether the MSP influenced their farm decisions or not. The result showed that around 82% of the farmers had their farm decisions influenced in response to MSP, while 18% of them said that MSP did not affect their farm decisions (Figure 4).

The ways MSP influenced farm decisions were: 82% of farmers opted to adjust their agricultural inputs, such as fertilizers, irrigation, plant protection measures, etc., in response to MSP. Additionally, 18% of farmers also chose to expand their paddy cultivation areas after having access to MSP. 9% of farmers switched to cultivating a hybrid variety of paddy after benefiting from MSP. Moreover, 27% of farmers sold a higher quantity of paddy than their consuming quantity after receiving MSP.

Paddy Type	Total observations	Mean		df	t- tabulated	t-calculated
		FGP	MSP			
Short Grain	119	2375.03	2967.00	118	1.98	-25.95
Long Grain	27	2811.33	3128.00	26	2.06	-7.36

Satisfaction level	Description
Highly Satisfied	No farmers were highly satisfied
Satisfied	13% of the farmers opted to be satisfied
Not Satisfied	87% of farmers were not satisfied with FGP they were receiving

3.10 Major constraints affecting farmers' access to FMTCL

Table 7 presents a ranking of the major constraints that impact farmers' access to Food Management and Trading Company Limited (FMTCL). The point scaling (1, 0.835, 0.668, 0.501, 0.334, and 0.167) technique was used to find the relative intensity or priority of the constraints. The value obtained from the ranking scale revealed that lack of awareness about FMTCL had the highest index value (0.74) and the lowest index value was for the quality issue (0.32). Similarly, the major constraints faced by the paddy farmers in reaching FMTCL followed a descending order of lack of awareness about FMTCL, limited production, distant procurement agency, lack of sufficient storage at home, pre-agreement with middlemen as they meet farmer's financials, and quality issues.

3.11 Major Obstacles to Effective Implementation of MSP

Table 8 presents the substantial obstacles cited by the farmers to the

effective implementation of the minimum support price policy. The points scaling (1, 0.875, 0.75, 0.625, 0.5, 0.375, 0.25, and 0.125) technique was used to find the relative intensity or priority of the obstacles. The value obtained from the ranking scale revealed that the late announcement of the minimum support price had the highest index value (0.77) and porous borders got the lowest (0.23) (Table 8). Similarly, the priority for the major obstacles followed the descending order of the late announcement of the minimum support price, lack of awareness about MSP, non-availability of a procurement agency nearby, middlemen or galla's as price determinators, FMTCL being the sole procurement company, high supply at peak time, quality variation in paddy grain, and porous border.

The result is supported by researchers in 2020, who cite the declaration of MSP after the harvest as a significant obstacle to MSP implementation (Bhattarai and GC, 2020). The author further states that a lack of infrastructure and human resources within FMTCL critically impacts the operation of MSP throughout the country. This aligns with our finding that the non-availability of a procurement agency nearby is a notable obstacle to the policy's success. The porous border acts as a barrier to effective policy implementation in Nepal, as also corroborated by a group of researchers in 2013, who proclaim that the permeability of the Nepal-India border has made agriculture policy-making in Nepal very difficult (Samaratunga et al., 2013).

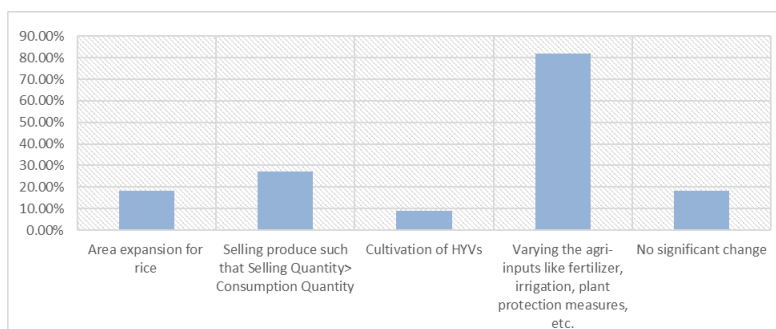


Figure 4: Influence of MSP on production decisions

Table 7: Major constraints affecting farmer's access to FMTCL

SN	Constraints	Index value	Rank	Description
1.	Lack of awareness about FMTCL	0.74	I	Out of the 120 farmers surveyed in the study area, only 26.67% were aware of Food Management and Trading Company Limited, while 73.33% were not. The lack of awareness limits the farmer's options for market outlets. As a result, they predominantly sell their produce to either Galla's or millers.
2.	Limited production	0.66	II	The majority of farmers (64%) in the study area were small farmers (landholdings below 0.5 ha). They use a significant portion of the harvest for their own consumption and only sell a small portion of paddy to cover the cost of fertilizer and machinery. The limited selling quantity makes it inconvenient for them to sell to FMTCL because of factors like distance, selection criteria, and documentation.
3.	Distant procurement agency	0.64	III	The proximity of the procurement company to the farmer's household remarkably affects their access to FMTCL. Farmers in the district have households situated at varying distances from the FMTCL, ranging from 1 to 60 kilometers. As the distance increases, farmers face difficulties in arranging transportation to transfer their marketable surplus to the procurement agency. Furthermore, the transportation expenses also increase with the increasing distance, creating an additional financial burden for these farmers.
4.	Lack of sufficient storage at home	0.59	IV	As the FMTCL opens its application late (after the paddy harvesting stage), farmers have already had their paddy sold by that stage. Only those farmers who had enough storage at home were able to sell their paddy to FMTCL, as they could store it after harvest until the company opened the application.
5.	Pre-agreement with middlemen's as they meet farmers financials	0.52	V	Many farmers in the Kanchanpur district struggle with low incomes that are often not enough to invest in the next sowing season. At the time, the middleman (known as Galla's) acted as a savior to them. Middlemen offers farmers the required fertilizers and credits they need. However, in exchange, farmers must sell their marketable surplus to them. If they don't, farmers won't receive fertilizer and credits in the future from them. Additionally, there's a fear that if the relationship with the middlemen or Galla's is broken, their paddy may remain unsold because Galla's typically refuses to buy once their relationship with farmers breaks down.
6.	Quality issue	0.32	VI	To be procured by FMTCL, the paddy must fall into the favored category of parameters like moisture content, foreign matter, inert matter, etc. set by the company. And if the quality fails to meet the standards, it gets rejected. And the farmers were left with no choice but to sell their harvest to other markets for lower prices. The deterioration in the quality of paddy grain occurs due to numerous factors like water logging, untimely rainfalls, pests, diseases, etc.

Table 8: Major obstacles to effective implementation of MSP

SN	Obstacles	Index value	Ranking
1.	Late announcement of the minimum support price	0.77	I
2.	Lack of awareness about the minimum support price	0.76	II
3.	Non-availability of a procurement agency nearby	0.67	III
4.	Middleman or Galla's as price determinators	0.66	IV
5.	FMTCL being the sole procurement agency	0.53	V
6.	High supply at peak time	0.45	VI
7.	Quality variation on paddy grain	0.39	VII
8.	Porous border	0.23	VIII

4. CONCLUSION

This study, titled 'Implication of minimum support price as a substantive 'support' to paddy farmers in Kanchanpur district, Nepal.' concludes that the minimum support price is significantly ineffective in the case of paddy. The awareness of both the minimum support price and food management and trading company Limited was found to be low, while the number of farmers receiving MSP or higher prices was particularly alarming.

The study indicated that a lack of awareness about the FMTCL and limited paddy production were significant constraints impeding farmers' access to the FMTCL. Additionally, the research identified that the distant location of procurement agencies and insufficient storage capacity at home acted as barriers preventing farmers from reaching the FMTCL. The study identified delayed announcement of minimum support price, limited awareness about MSP, and absence of a procurement agency nearby as the major obstacles obstructing the effective implementation of minimum support price.

For the effective implementation of the MSP, the government should announce the MSP before the crop established. Moreover, the procuring service of FMTCL needs to be expanded so as to reach out to small and marginal farmers.

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DECLARATION OF INTERESTS

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

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