

Original Research Article

<https://doi.org/10.20546/ijcmas.2020.911.187>

## Factor Influencing Marketable and Marketed Surplus of Major Crops in Morena District

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### ABSTRACT

#### Keywords

Marketable surplus  
crops,  
Morena District

#### Article Info

##### Accepted:

12 October 2020

##### Available Online:

10 November 2020

The present study entitled Factor Influencing Marketable and Marketed Surplus of Major Crops in Morena District was undertaken to calculate the predictable regression parameters in factor of mustard, wheat, pigeonpea and bajra was found to be less than marketable surplus in different crops. Marketed surplus of pigeonpea was found to be more than marketable surplus. Marketable surplus of mustard, wheat, pigeonpea and bajra was initiated to be highest in wheat followed by mustard, pigeonpea and bajra. Marketed surplus of mustard, wheat, pigeonpea and bajra was initiated to be highest in pigeonpea followed by wheat, mustard and bajra. The study is based on data collected from 320 farmers (an 80 Mustard growers, 80 Wheat growers, 80 Pigeonpea and 80 Bajra growers) were selected through proportionate random sampling. To calculate the compound growth rates by exponential function was fitted to the indices of area, production and productivity.

### Introduction

The agricultural marketing system plays a dual role in economic development of India where resources are primarily agricultural. Increasing demands for money with which to purchase other goods leads to increasing sensitivity to relative prices on the part of the producer and specialization in the cultivation of those crops on which the profits are the maximum, subject to socio – cultural, ecological and economic constraints. The marketing system transmits the crucial price signals. An efficient agricultural marketing system leads to the optimization of resources

use and output management. An efficient marketing system can also contribute to an increase in the marketable surplus by scaling down the losses arising out of inefficient processing, storage and transportation. As well, designed system of marketing can effectively distribute the available stock of modern inputs and thereby sustain a faster rate of growth in the agricultural sector. An efficient marketing system also ensures higher level of income for the farmers by reducing the number of middlemen or by restricting the commission on marketing services and the malpractice adopted by them in marketing of farm products. The need for providing

adequate incentives for increased production is, therefore, very, important and this can be made possible only by stream lining the marketing system.

## **Materials and Methods**

### **Selection of the study area**

The present study is confined to Morena district only. This area is purposively selected by the researcher because of his residence and also the ease of collecting appropriate and reliable data within the time and financial constraints. Mustard, Wheat, Pigeonpea and Bajra crops was selected purposively crops are the major crops in Morena district.

### **Sampling procedure**

For the selection of the sample, multistage sampling technique namely, selection of blocks, villages and farmers was followed

### **Selection of blocks**

Morena district comprises of 7 blocks i.e. Morena, Porsa, Jaura, Ambah, Kailaras, Sabalgarh and Pahargarh. In the first stage of sampling Morena, Porsa, Jaura and Ambah block was selected because of highest production of Mustard in Morena block, Wheat in Porsa block, Pigeonpea in Jaura block and Bajra in Ambah block.

### **Selection of villages**

At the second stage, block wise list of villages was prepared. Five villages from each block were selected randomly (total 20 villages).

### **Selection of farmers**

At the third stage, village wise list of selected crop growers was prepared from each selected village. Among these prepared lists, total 320

farmers (an 80 Mustard growers, 80 Wheat growers, 80 Peogenpea and 80 Bajra growers) were selected through proportionate random sampling.

### **Collection of data**

Depending upon the objectives of the study, primary data was used the primary data were collected from selected major crops growers (respondents) using pre-tested questionnaire, through survey method. Each selected respondents were approached personally for recording relevant data.

### **Factors influencing marketable surplus and marketed surplus**

The Marketable Surplus differs from region to region, within the same region, and even from crop to crop. Some of the factors affecting marketable surplus on a particular farm are:

**Size of Holding:** There is a positive relationship between the size of the holding and marketable surplus.

**Production:** The higher the production, the larger will be the marketable surplus.

**Price of the Commodity:** There exists both positive and negative relation between both, depending upon whether one considers short run or long run.

**Size of Family:** There is a negative relationship between family size and marketable surplus.

**Requirement of Seed and Feed:** The higher the requirement for seed and feed, the smaller the marketable surplus.

**Nature of the Commodity:** The marketable surplus of non-food crops is generally higher than that of for food crops, as in case of former family consumption is either very small part of the total output or is negligible. Among various food crops, consumption of sugarcane, spices and oilseeds etc., require some kind of processing before final

consumption; so marketable surplus as a proportion of total output is larger for such crops than for other food crops.

**Consumption Habits:** Marketable surplus is inversely related to the consumption habits of people.

## Results and Discussion

### Factors influencing marketable surplus

The predictable regression parameters of the marketed surplus model are shown in Table 1. As estimated, variables like size of family (no.), size of land holding, size of area under crops, price of the commodity (Rs/qtl), consumption habit (qtl), total production, Nature of commodity and Requirements for seed/feed/wages as independent variable by using multiple regression model (Fig. 1).

It is analysis from the data that the fitted function for mustard was found to be good fit as the coefficient of multiple R value was 7 per cent discovered that the fitted function able to explain more identified independent variable. Amongst all the independent variables i.e. total production were found to be positive and significant. The independent variables like price of the commodity (Rs/qtl) were found to be negative and significant. The independent variables like size of land holding, size of area under crops, consumption habit (qtl) and Requirements for seed/feed/wages were also found non-significant and size of family (no.) were found to be negative and non-significant.

It is analysis from the data that the fitted function for wheat was found to be good fit as the coefficient of multiple R value was 64 per cent discovered that the fitted function able to explain more identified independent variable. Amongst all the independent variables i.e. size of family (no.), size of land holding, size of area under crops, consumption habit (qtl), total production and Requirements for

seed/feed/wages were also found positive and significant. The price of the commodity (Rs/qtl) were found to be non significant.

It is analysis from the data that the fitted function for pigeonpea was found to be good fit as the coefficient of multiple R value was 46 per cent discovered that the fitted function able to explain more identified independent variable. Amongst all the independent variables like size of family (no.), size of land holding, size of area under crops, consumption habit (qtl), total production and requirements for seed/feed/wages were also found positive and non-significant. The independent variables like price of the commodity (Rs/qtl) were also found non-significant.

It is analysis from the data that the fitted function for bajra was found to be good fit as the coefficient of multiple R value was 52 per cent discovered that the fitted function able to explain more identified independent variable. Amongst all the independent variables i.e. size of family (no.), size of land holding, size of area under crops, total production and Requirements for seed/feed/wages were also found positive and significant. The independent variables like consumption habit (qtl) were found to be non significant and price of the commodity (Rs/qtl) were found to be negative and non significant.

### Factors influencing marketable surplus

Factors influencing marketable surplus related to selected crops (mustard, wheat, pigeonpea and bajra) has been analysis and show in table 2. Marketable surplus is total requirement of the farmers. It is analysis from the data that the maximum average total production 317.56 quintal, family consumption 11.90 quintals, seed 12.69 quintals, feed 1.83 quintals, total requirement 26.42 quintals and no wages (Table 2).

**Table.1** Factors influencing marketed surplus

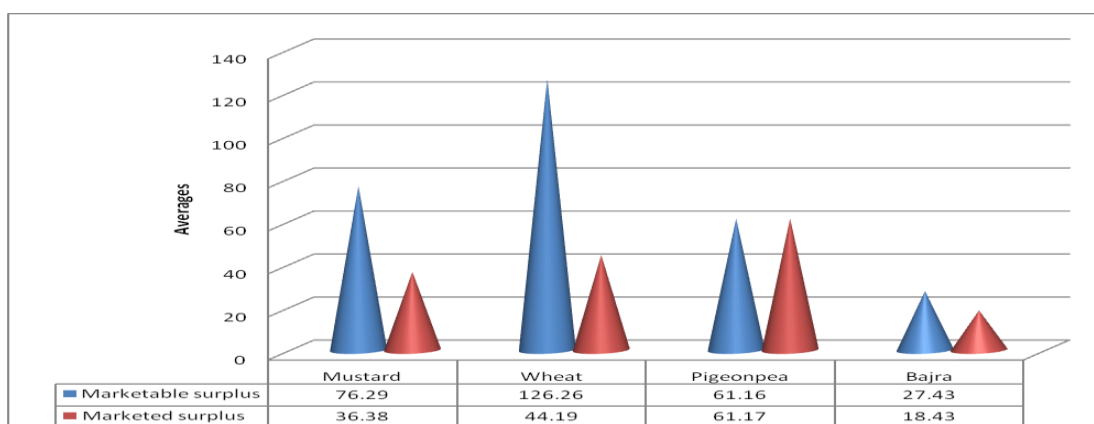
Variables	S. D.	Std. error	'r' value
<b>Mustard</b>			
Size of family (no.)	2.030	0.227	-0.061 <sup>NS</sup>
Size of land holding	4.621	0.517	0.054 <sup>NS</sup>
Size of area under crops	4.621	0.517	0.054 <sup>NS</sup>
Price of the commodity (Rs/qtl)	163.061	18.231	-0.309 <sup>**</sup>
Consumption habit (qtl)	1.147	0.128	0.103 <sup>NS</sup>
Total production	102.649	11.477	0.714 <sup>**</sup>
Requirements for seed/feed/wages	1.310	0.146	0.091 <sup>NS</sup>
<b>Multiple R</b>	<b>0.0786</b>		
<b>Wheat</b>			
Size of family (no.)	2.863	0.320	0.386 <sup>**</sup>
Size of land holding	3.956	0.442	0.582 <sup>**</sup>
Size of area under crops	3.956	0.442	0.582 <sup>**</sup>
Price of the commodity (Rs/qtl)	72.717	8.130	0.052 <sup>NS</sup>
Consumption habit (qtl)	3.058	0.342	0.411 <sup>**</sup>
Total production	158.978	17.774	0.600 <sup>**</sup>
Requirements for seed/feed/wages	5.310	0.594	0.395 <sup>**</sup>
<b>Multiple R</b>	<b>0.6437</b>		
<b>Pigeonpea</b>			
Size of family (no.)	3.183	0.356	0.543 <sup>**</sup>
Size of land holding	2.750	0.308	0.954 <sup>**</sup>
Size of area under crops	2.750	0.308	0.954 <sup>**</sup>
Price of the commodity (Rs/qtl)	68.413	7.649	0.092 <sup>NS</sup>
Consumption habit (qtl)	0.383	0.043	0.514 <sup>**</sup>
Total production	55.146	6.166	1.000 <sup>**</sup>
Requirements for seed/feed/wages	0.378	0.042	0.488 <sup>**</sup>
<b>Multiple R</b>	<b>0.4683</b>		
<b>Bajra</b>			
Size of family (no.)	2.506	0.280	0.414 <sup>**</sup>
Size of land holding	3.147	0.352	0.523 <sup>**</sup>
Size of area under crops	3.147	0.352	0.523 <sup>**</sup>
Price of the commodity (Rs/qtl)	70.117	7.839	-0.005 <sup>NS</sup>
Consumption habit (qtl)	0.525	0.059	0.198 <sup>NS</sup>
Total production	31.331	3.503	0.551 <sup>**</sup>
Requirements for seed/feed/wages	3.588	0.401	0.345 <sup>**</sup>
<b>Multiple R</b>	<b>0.5235</b>		

<sup>NS</sup> Non significant, <sup>\*\*</sup>Significant at 0.01 level of probability

**Table.2** Factors influencing marketable surplus

Total Production	Requirement				Total Requirement	Marketable Surplus	Marketed Surplus
	Family consumption	Seed	Feed	wages			
78.66	0.35	1.69	0.33	00	2.37	76.29	36.38
145.03	7.95	9.7	1.12	00	18.77	126.26	44.19
62.31	0.94	0.21	00	00	1.15	61.16	61.17
31.56	2.66	1.09	0.38	00	4.13	27.43	18.43
<b>317.56</b>	<b>11.90</b>	<b>12.69</b>	<b>1.83</b>	<b>00</b>	<b>26.42</b>	<b>291.14</b>	<b>160.17</b>

**Fig.1** Marketable and marketed surplus in different crops (Average)



It is evaluated from the data that marketed surplus of mustard, wheat and bajra was found to be less than marketable surplus in different crops. Marketed surplus of pigeonpea was found to be more than marketable surplus. Marketable surplus of mustard, wheat, pigeonpea and bajra was initiate to be maximum in wheat 126.26 quintals followed by mustard 76.29 quintals, pigeonpea 61.16 quintals and bajra 27.43 quintals. Marketed surplus of mustard, wheat, pigeonpea and bajra was initiate to be maximum in pigeonpea 61.17 quintals followed by wheat 44.19 quintals, mustard 36.38 quintals and bajra 18.43 quintals.

In conclusion factors influencing marketable surplus related to selected crops (mustard, wheat, pigeonpea and bajra) has been analysis. Marketable surplus is total requirement of the farmers. It is evaluated

from the data that marketed surplus of mustard, wheat and bajra was found to be less than marketable surplus in different crops. Marketed surplus of pigeonpea was found to be more than marketable surplus. Marketable surplus of mustard, wheat, pigeonpea and bajra was initiated to be highest in wheat followed by mustard, pigeonpea and bajra. Marketed surplus of mustard, wheat, pigeonpea and bajra was initiated to be highest in pigeonpea followed by wheat, mustard and bajra.

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**How to cite this article:**

Kiran Sharma, A. M. Jaulkar and Rahul Kumar. 2020. Factor Influencing Marketable and Marketed Surplus of Major Crops in Morena District. *Int.J.Curr.Microbiol.App.Sci*. 9(11): 1582-1587. doi: <https://doi.org/10.20546/ijcmas.2020.911.187>