

e-Kharid Portal: An Initiative of Haryana Government for Agricultural Digitalization

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Haryana is primarily an agricultural state. Agriculture and allied sector play a vital role in the development of the state economy. Haryana is the 2nd largest contributor in the central pool of food grains after Punjab. Approximately 2/3rd population of Haryana are directly or indirectly engaged in the agriculture and allied sector. Haryana government always come up with new schemes and programmes for the farmers for uplifting the status of Haryana's farmers. e-Kharid is also an initiative of the government for the farmers through which they can sell their crops on fair prices (MSP). In the present study, an attempt is made to examine the status of e-Kharid portal and discuss the linkage of Meri Fasal Mera Byora (MFMB) portal with e-Kharid portal. The secondary data is used in the study that has been taken from the various government reports, newspapers and government official websites etc. Descriptive statistics like tables and graphs are used for analyzing the results. The results of the study indicates that Wheat and Mustard is the major crops which grown in the Haryana state in Rabi season. The study also reveals that only Wheat is sold by the farmers on MSP and other crops are selling to the private agencies in the Rabi season for the year of 2020-21 because the price paid by private agencies is higher in comparison to MSP. As a policy implication, it is suggested that the policy maker should fix a fair MSP for the all crops and covered more crops under MSP so that it will be helpful in doubling the farmers' income.

Keywords: *Agriculture; Population; e-Kharid; MSP; MFMB; Haryana.*

1. INTRODUCTION

With the beginning of the 21st century; the worldwide agriculture area has seen a flow of technical advancements that are changing worth chains from farm area. According to Niti Ayog's report; to keep a yearly development pace of 8-10%; agriculture should develop at 4% or higher

rate from present (National Strategy for Artificial Intelligence; June 2018) [1]. To make this sort of progress; digitization is fundamentally significant. Web of Things; nanotechnology alongside computerized schooling are the three primary components that structure the establishment of digitization in farm area. The worldwide need to deliver 50 percent more food by 2050 can't be

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refined with just 12% of worldwide land region under development for farming crops [2].

In the era of information technology; digitalization of agriculture is needed for faster growth of farm sector. Government of India launched a campaign named as "Digital India" to provide all the benefits of the government schemes electronically to the Indian citizens. To achieve this target; Indian government starts to give more attention on the online infrastructure. On 1st July 2015; the Prime Minister launched the 'Digital India' program officially. Under this program; the government focused on connecting the rural areas with the high-speed internet connectivity. After that most of the government policies and schemes are being digitalized. The government of India itself is providing e-governance to its own people. To make the digital India program successful; Haryana government also focused on the promotion of information technology (IT) and e-governance projects. Haryana government introduced numerous schemes digitally through the government services are rendered to the citizens of Haryana electronically that save the time as well as the cost.

In this technical era; the government concerns more for the agriculture sector because agriculture plays a significant role in the growth of economy of any country especially in developing nations like India. Agriculture is still primary source of the employment and significantly contributing in the gross national product in India as well as in Haryana state also. Haryana is also an agrarian state and 65 percent of the population of Haryana lives in rural areas that is completely depending upon the agriculture for their livelihood [3]. To look the importance of agriculture in Haryana; the Haryana government started an initiative named as e-Kharid. The government is trying to uplift the status of the farmer in Haryana by increasing their income by providing a fair price of their crops. This is the revolutionary step taken by the Haryana government to make the digital India. An initiative of e-governance has undertaken by the Haryana government in the form of e-Kharid online trading portal for the procurement of the agricultural commodities. The portal has been launched by the Haryana government in 2016.

This revolutionary e-governance initiative has been taken by the Haryana government through the "e-Kharid" portal to bring the transparency at all the levels in the procurement process of the food grains. It will empower the farmers of

Haryana state by providing them real time information and timely payment of their crops. The "e-Kharid" portal is a joint initiative of the Haryana State Agricultural Marketing Board (HSAMB) and the Department of Food & Supplies; Govt. of Haryana (ekharid.nic.in). If the farmers of Haryana want to sell their crops on MSP; then they have to register themselves on the portal. The Haryana government has given the responsibility to the State Agricultural Marketing Board to give the Minimum Support Price (MSP) of their crops to the farmers.

2. WHAT ARE THE OBJECTIVES OF E-KHARID PORTAL?

The key objective of e-Kharid portal is to fetch transparency at all the levels in the procurement process of food grains; to enhance ease of doing business to the traders and to empower the farmers by providing them real-time information and timely payment [4].

A. Eligibility Criteria for e-Kharid

There are some criteria that who can be eligible for this portal:

1. All the beneficiary farmers to be the residents of Haryana state.
2. All above the age of 18 years are eligible to register under the portal.
3. Farmers including landlords; lessee or tenant on rent.

B. Why e-Kharid Portal?

Now; question raise that who are the eligible for e-Kharid portal and why this is started?

- It promotes the interests of the farmers and facilitating the buyers.
- It enhances the uniformity in the agriculture marketing by stream living of procedures across the integrated markets.
- It reduced the role of middleman in the procurement process of food grains.
- It benefits with logistic quality management certification and warehousing.
- It empowers the farmers of the Haryana state to work accordingly to the real time scenarios so that the farmers can be avail timely payments and more benefits.

- A provision of a soil testing laboratories is given for selected mandi (market) in order to encourage the farmers for visiting the mandi.
- The Government e-Kharid initiative supplements the NAM (National Agriculture Marketing) and a pan -India electronic portal of the existing APMC mandis to fetch transparency and efficiency in procurement process of agriculture commodities.

3. OBJECTIVE OF THE STUDY

The present study is an attempt to examine the status of e-Kharid portal and discuss the linkage of Meri Fasal Mera Byora (MFMB) portal with e-Kharid portal. It is also important to discuss the MSP of major crops in relation to e-Kharid portal in Haryana.

4. REVIEW OF LITERATURE

Madaswamy; M. [5]; in his study "Digitalization of Agriculture in India: Application of IoT; Robotics and Informatics to Establish Farm Extension 4.0" described the need for farm extension 4.0 framework for empowering more than 140 million farm operational holders of the country to adopt farming as a service through the use of technologies i.e.; IoTs; robotics; informatics & smart farming in villages etc. This farm extension 4.0 technological framework has capacity to facilitate development of about 2.25 lakh Deep Agri Tech Start Up in India; one per each gram panchayat. Upadhyay; M. [6]; in his study "Digitalization of Agriculture in India: Challenges and Hopes" analyzed the challenges and hopes related to the agricultural digitalization. The study was descriptive in nature and based on the secondary data that has been taken from the company websites; newspapers and journals. The study found that digitalization will change the scene of Indian agriculture in future and guarantee higher income to farmers and reduce distress.

Beriya; A. [7]; in his study "Digital Agriculture: Challenges and Possibilities in India" examined the challenges and the perspectives of agriculture digitalization. Agriculture digitalization enhancing the agricultural output as well as income of the farmers. The study found that lower cost of technology; easy to use portable hardware; pay per use renting models; policy support and harnessing the power of farmer collections are essential for the success of

agricultural digitalization in India. Kumbhar; V. [8] in his study "Impact of MSP on Area under Cultivation and Level of Production: A Study of Selected Crops in India" assessed the relationship between MSP/SMP; area under cultivation; productivity and also examine the impact of MSP/SMP; area under cultivation; productivity on overall production of rice; wheat; pulses; cotton & sugarcane. The study was based on the secondary data and the time period of the study was taken from 1980-81 to 2009-10. The results of the study indicated that area under cultivation and productivity were most significant predictor and MSP/SMP were not significant predictor of production in case of rice; pulses; cotton & sugarcane. However; MSP; area under cultivation and productivity were only found significant in wheat production in India.

On the basis of above studies; it may be concluded that agriculture digitalization is required in the present time for agriculture development. In this regard; an initiative is taken by the Haryana government to digitalize the procurement system. So; this study focused on e-Kharid portal which provides transparency at all levels in the food grain procurement process.

5. METHODOLOGY

The study is descriptive in nature and based on the secondary data. The secondary data has been taken from the various government reports; newspapers and government official websites etc. Descriptive statistics like tables and charts are used in the study.

6. RESULTS AND DISCUSSION

A. Status of e-Kharid Portal

In this section; we will discuss the current status of e-Kharid portal of Haryana government as well as the linkage of Meri Fasal Mera Byora (MFMB) portal with e-Kharid portal and MSP of major crops in relation to e-Kharid portal in Haryana. The e-Kharid portal launched for farmers of Haryana to sell their crops on the minimum support price in Mandis. In every mandi of Haryana; the gate pass are issues to the farmers for entering in the mandis. It helps the government in gathering the overall information about number of farmers selling the crops on MSP; type of crops etc. Here; the researcher takes the major crops of Kharif season like Paddy; Bajra; Moong and Maize & for Rabi

season crops are Wheat; Mustard; Chana and Sunflower.

Table 1. Status of Gate Pass Issued and Total Quantity Purchased on MSP in Mandis for the Kharif Season 2020 in Haryana

Crops	Gate Pass	Weight (in Tonne)
Paddy	684668	5508339.60
Bajra	300068	786898.44
Maize	1879	4869.33
Moong	973	1627.78

Source: <https://ekharid.haryana.gov.in> [9]

Table 1 indicates the status of gate passes issued to the farmers for entering in the mandis of Haryana for selling their crops on MSP and quantity of different crops purchased on MSP. Table reveals that Paddy and Bajra were the major crops that are grown in the Kharif season in Haryana state. In Haryana; paddy is grown in large areas followed by Bajra.

Table 2. Farmers Registered on MFMB Portal for the Rabi Season 2020-21

Crops	Farmer Registered
Wheat	7;32;858
Mustard	3;21;145
Gram	25;396
Sunflower	7;831

Source: <https://fasal.haryana.gov.in> [10]

B. Linkage of Meri Fasal Mera Byora with e-Kharid Portal

Government of Haryana launched the portal Meri Fasal Mera Byora (MFMB) on December 25; 2018 for the farmers to gathering the all information about the crops; area sown and non-cultivated land etc. farmers who want to sell their crops in mandis on MSP; they have to register themselves on the Meri Fasal Mera Byora portal. The major objectives of the Meri Fasal Mera Byora portal implemented in Haryana state for the welfare of the farmer through enhancing their income by providing a platform where they can sell their crops on the fair prices [11]. The portal was also linked with the e-Kharid portal. Farmers registered themselves on MFMB portal they not need to register on e-Kharid portal.

Table 2 shows the number of farmers' registration on MFMB portal for the crops of Rabi season. Only four crops are found in the portal

for which the farmers are registered themselves. These crops include wheat; mustard; gram and sunflower. Wheat and mustard are the major crops in Haryana which are grown in Rabi season and a large number of farmers registered for these two crops only for selling on the MSP.

Table 3. Status of Gate Pass Issued and Total Quantity Purchased on MSP in Mandis for the Rabi Season 2020-21 as on 25-05-2021

Crops	Gate Pass	Weight (in Tonne)
Wheat	983327	8;530;302.42
Mustard	14	31.45
Chana	0	0.00
Sunflower	0	0.00

Source: <https://ekharid.haryana.gov.in> [9]

Table 3 indicates the total gate passes issued and quantity purchased of different crops on the MSP. The table reveals that wheat is the only crop for that large number of gate passes issued and largest quantity of wheat is purchased on the minimum support price in Haryana mandis. For mustard small number of gate passes is issued and small quantity of mustard crop is purchased. For remaining two crops no farmer went in mandis for selling the crops.

The Fig. 1 shows the district wise gate pass issued to the farmers and total quantity purchased on MSP for the wheat crop. The figure depicts that Karnal district is on the top in issuing the gate passes to the farmers and followed by Kurukshetra and Yamunanagar; whereas in case of purchasing the highest quantity of wheat on MSP; Sirsa is on the top followed by Kurukshetra and Jind.

The Fig. 2 shows the district wise gate pass issued to the farmers and total quantity purchased on MSP for the mustard crop. The figure depict that Hisar district is on the top in both issuing the gate passes to the farmers purchasing the highest quantity of mustard on MSP. Only six districts' farmers sold their mustard crop in small quantity on the MSP in Haryana out of 22 districts. It is because the MSP provide by the government for the mustard crop is very low in comparison to the price paid by the private agencies. Therefore; the farmers sold their crop to the private agencies in this season.

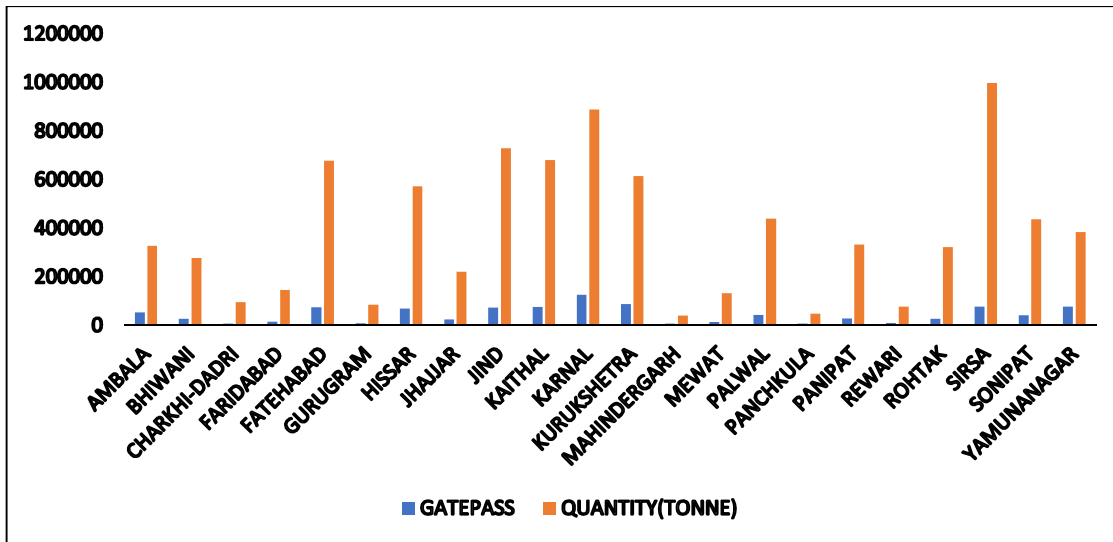


Fig. 1. District wise Issued Gate Pass and Purchased Quantity of Wheat Crop on MSP in Haryana for the Rabi Season 2020-21 as on 25-05-2021

Source: <https://ekharid.haryana.gov.in> [9]

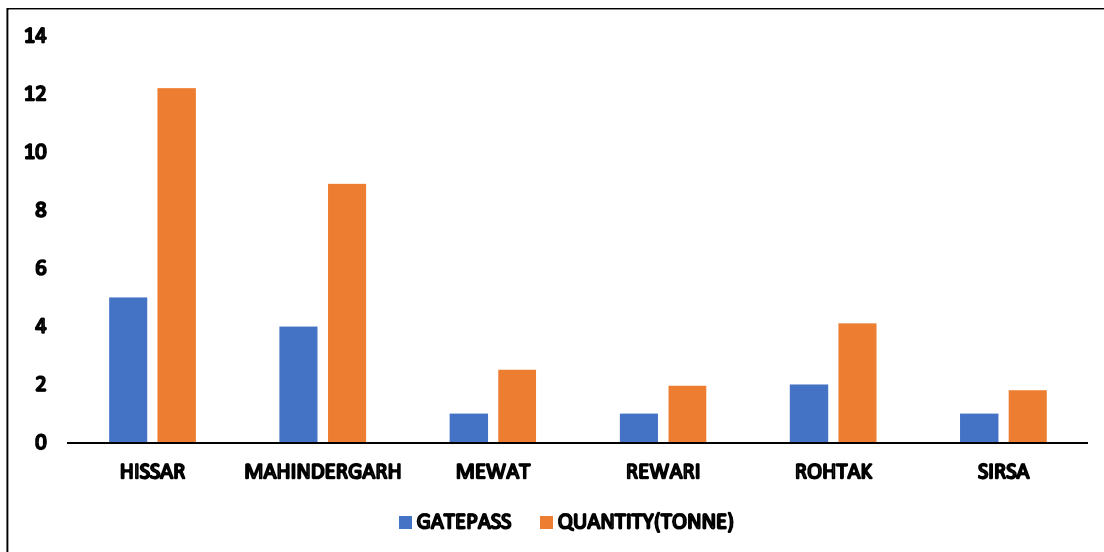


Fig. 2. District wise Issued Gate Pass and Purchased Quantity of Mustard Crop on MSP in Haryana for the Rabi Season 2020-21 as on 25-05-2021

Source: <https://ekharid.haryana.gov.in> [9]

C. Minimum Support Price (MSP)

First time in 1966-67; the MSP was announced by the Government of India for wheat crop [12]. MSP is an instrument which guarantee to the farmers; prior to sowing season that a fair amount of price is fixed to their upcoming crops to encourage higher investment and production of agricultural commodities. MSP based

procurement system protect the crops from price fluctuation due to several unwanted factors like monsoon; lack of market integration; information asymmetric etc. and also helps in stabilizing and increasing the farmers income. At present; MSP covers 22 crops and Fair Remunerative Price (FRP) for sugarcane (agricoop.nic.in). However; MSP does not have any legal provision.

Table 4. MSP for Kharif Crops

Year/Crops	Paddy	Bajra	Maize	Moong	Groundnut
2010-11	1000	880	880	3170	2300
2011-12	1080	980	980	3500	2700
2012-13	1250	1175	1175	4400	3700
2013-14	1310	1250	1310	4500	4000
2014-15	1360	1250	1310	4600	4000
2015-16	1410	1275	1325	4850 [^]	4030
2016-17	1470	1330	1365	5225 ^{^^}	4220 [*]
2017-18	1550	1425	1425	5575 [^]	4450 [^]
2018-19	1750	1700	1700	6975	4890
2019-20	1815	1760	1760	7050	5090
2020-21	1868	1850	1850	7196	5275

Source: <https://farmer.gov.in> [13]

Note: Including bonus of Rs.: *100/quintal; ^ 200/quintal; ^^ 425/quintal.

Table 5. MSP for Rabi Crops

Crops Year	Wheat	Barley	Gram	Mustard	Sunflower
2010-11	1120	780	2100	1850	2350
2011-12	1285	980	2800	2500	2800
2012-13	1350	980	3000	3000	3700
2013-14	1400	1100	3100	3050	3700
2014-15	1450	1150	3175	3100	3750
2015-16	1525	1225	3500 ^{**}	3350	3800
2016-17	1625	1325	4000 [^]	3700 [*]	3950 [*]
2017-18	1735	1410	4400 [!]	4000 [*]	4100 [*]
2018-19	1840	1440	4620	4620	5388
2019-20	1925	1525	4875	4875	5650
2020-21	1975	1600	5100	5100	5885

Source: <https://farmer.gov.in> [13]

Note: Including bonus of Rs.: *100/quintal; **75/quintal; ^ 200/quintal & ! 150/quintal.

Table 4 indicates the MSP for the Kharif crops from 2010-11 to 2020-21. MSP is continuously increasing during this period but in a slow rate.

Table 5 indicates the MSP for the Rabi crops from 2010-11 to 2020-21. MSP is continuously increasing during this period in a slow rate. It means that MSP is helpful to stabilizing the income of the farmers who sell their crop on MSP. But; it may not be sufficient to doubling the farmers' income. So; it is an urgent requirement to take appropriate measures like fair MSP that will help in increasing the Indian farmers' income in a faster way.

6. CONCLUSIONS AND SUGGESTIONS

e-Kharid portal is one of the steps of Haryana government towards the digitalization. This portal provides the information regarding the gate pass issued; total quantity purchased; purchasing agencies so on. It linked with the MFMB portal.

All the farmers registered on MFMB portal are eligible to sell their crops on MSP in Haryana.

The study results indicated that a large number of farmers registered on the MFMB portal for selling their crops on MSP for wheat; mustard; gram and sunflower in Rabi season but e-Kharid portal showed that only wheat is the one major crop that is sold by farmers on MSP. Small number of farmers sells the mustard crops on MSP. For remaining crops no farmers went to the mandis for selling their crops. It is because the MSP given by the government for these crops are very low. Therefore; the farmers sell their crops to the private purchasers on higher prices in comparison to the MSP in the year 2020-21.

It is suggested that the policy maker should fix a fair MSP for the all crops and covered more crops under MSP; it encourages the farmers for enlarging the production that will increases their income and it may be a step towards doubling of farmers' income.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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