

MARKETING OF WHEAT - A CASE STUDY

Amar Singh S.M. Ilyas

Agricultural Engineering Division

IARI, New Delhi

INTRODUCTION

Food grain production, which stood at 51 million tonnes in 1950-51, reached a level of 150.50 million tonnes in 1985-86. However, the per capita consumption today stands at only 424.4 gm against 468.7 g in 1961 and 468.8 g in 1971. The technological change has broken the age-old stagnation of agriculture but the challenge of food and fibre for future generations remains unanswered. There exists a tremendous scope for increasing yield and productivity of food grains. The main answer lies in unleashing an era of high yielding varieties of different crops and availability of better and assured post harvest facilities such as cleaning, drying, marketing and handling. It is estimated that about 10 per cent of our food grains are lost every year due to the availability of poor post harvest facilities with the farmers.

Grain market situation was not so bad in early sixties when the country was dependent on food grain import. With green revolution, came the problems of plenty. The wide scale adoption of mechanised threshing and improved harvesting operation reduced time gap of wheat arrival with peak touching between mid May and last week of June. The market presents a picture of utter confusion during arrival days. Traffic congestion, days long waiting for the farmers, stacking of uncovered grain bags, delay in market operations, inefficient utilization of labour, poor grain quality and delay in farmers' payments and other associated problems. Blackening and sprouting of food grains occurred whenever untimely rains occurred making them unfit for human consumption. There was considerable loss of food grain on market floor during market operations. Farmers were put to a lot of inconvenience during waiting period and did not get due payments of their produce.

Some important reasons can be explained for these problems in marketing food grains. The production increase has been manifold in the recent past. With the production increase, the market arrival also increased many times. Labour force responsible to carry out different operations is not easily available and therefore, there is delay in market operations. These market problems in Punjab and M.P. have been highlighted by various field studies conducted by Holeman(1969), Gill (1970), Bhatnagar (1970), Singh (1970 & 85) and Chouksey (1985). In order to study the grain marketing systems and problems of the farmers in three northern wheat growing states namely, Delhi, Haryana and Western U.P., a survey of three grain markets representing each of the states, was undertaken in 1985-86. The brief objectives of the study were :

1. to study the wheat marketing procedure in various states;
2. to determine the time requirement in performing various operations involved in wheat marketing, and

3. to study the mode of payment of different charges in the grain market.

METHODS AND MATERIALS

The wheat movement in a grain market is shown in Fig. 1. Same pattern was found in all the three grain markets surveyed. Farmers bring their produce in bullock carts, camel carts, horse carts and tractor-trailors to the grain markets in bags as well as in loose form. It is unloaded and cleaned, before auction and bagged, weighed, stiched and loaded after the auction. The cost incurred in these operations is shared by the seller and the purchaser.

The data on the time requirement, manpower requirement, different charges paid by the farmers and the purchaser, gadgets and equipment used for performing different operations in the mandis were collected by the study team. The time required in unloading, cleaning, bagging, weighing and stiching was measured. The manpower requirement in carrying out all the operations was observed and recorded. The other information such as mode of payment, facilities provided etc. was collected through personal discussion with the farmers, traders, commission agents, Government officials and available records.

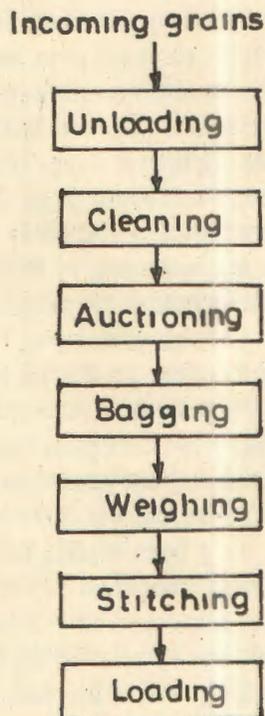


Fig.1 Sequence of Operations in Grain Market.

RESULTS AND DISCUSSIONS

Unloading, cleaning, bagging, weighing, stitching and loading are the main operations performed in marketing of food grains in grain markets/mandis. The grain is auctioned after necessary cleaning. The price is also dependent upon the purity and quality of the food grains. It is observed that most of the operations in grain markets/mandis are carried out manually. Ordinary sieves, which are raised on two legs on one end to provide a slope for free flow of the materials from the top end to the bottom end of the screens are being used for cleaning the food grains. This arrangement consists of generally two screens of different perforations. There is no provision of forced air for removing lighter material. It was observed that the cleaning efficiency of these machines/sieves is much lower than the required threshold. Moreover, the capacity is very low and manpower requirement is very high. In Hapur mandi the manually oscillating sieves are also being used. The manpower required for this system is also very high.

There is no equipment for filling of bags with cleaned grains. It is done manually. Two men hold and open the bags, while the third one brings the grain in containers and pours in the bags. The time requirement and manpower requirement seem to be high for this system. A simple bag holder, if used for holding and opening the bag, may save considerable manpower and time.

The filled bags are then weighed on a platform balance. But the horizontal and vertical movement of the bag is required. Generally, three men are engaged in carrying and weighing of the bags.

Stitching of these bags is again done manually with the help of a needle and a little jute twine. One man does this satisfactorily. The stitched bags are then loaded and stacked at one place. This is also done manually and requires three men for this purpose. A simple hand cart may help in reducing this manpower and time requirement for this job.

The time taken in completing unloading, cleaning, bagging, weighing and stitching of one quintal of wheat in all the three grain markets was measured and is given in Table 1. It is observed that the maximum time is required for cleaning operation alone. It is 41.70, 42.00 and 46.90 per cent in Nazafgarh, Bahadurgarh and Hapur mandis, respectively. There is a little variation in the time consumption because the operation is done manually and with different types of cleaning devices. There may be some variation in the cleaning standard but it is acceptable to the purchasing agencies. And it is because of this reason the sample of cleaned grains were not collected for the analysis and determining the cleaning efficiency of these systems.

Bagging and weighing consumed 34.30, 40.50 and 29.20 per cent time in Nazafgarh, Bahadurgarh and Hapur mandis, respectively. The variation in time consumption in the three grain markets may be due to the variation in the efficiency of the man-machine system and environment. The bagging and weighing is followed by unloading which consumed 19.90, 12.0 and 18.70 per cent time. The minimum time was consumed in stitching which is a single man operation. The figures are 4.10, 5.50 and 5.20 per cent in Nazafgarh, Bahadurgarh and Hapur, respectively (Fig. 2).

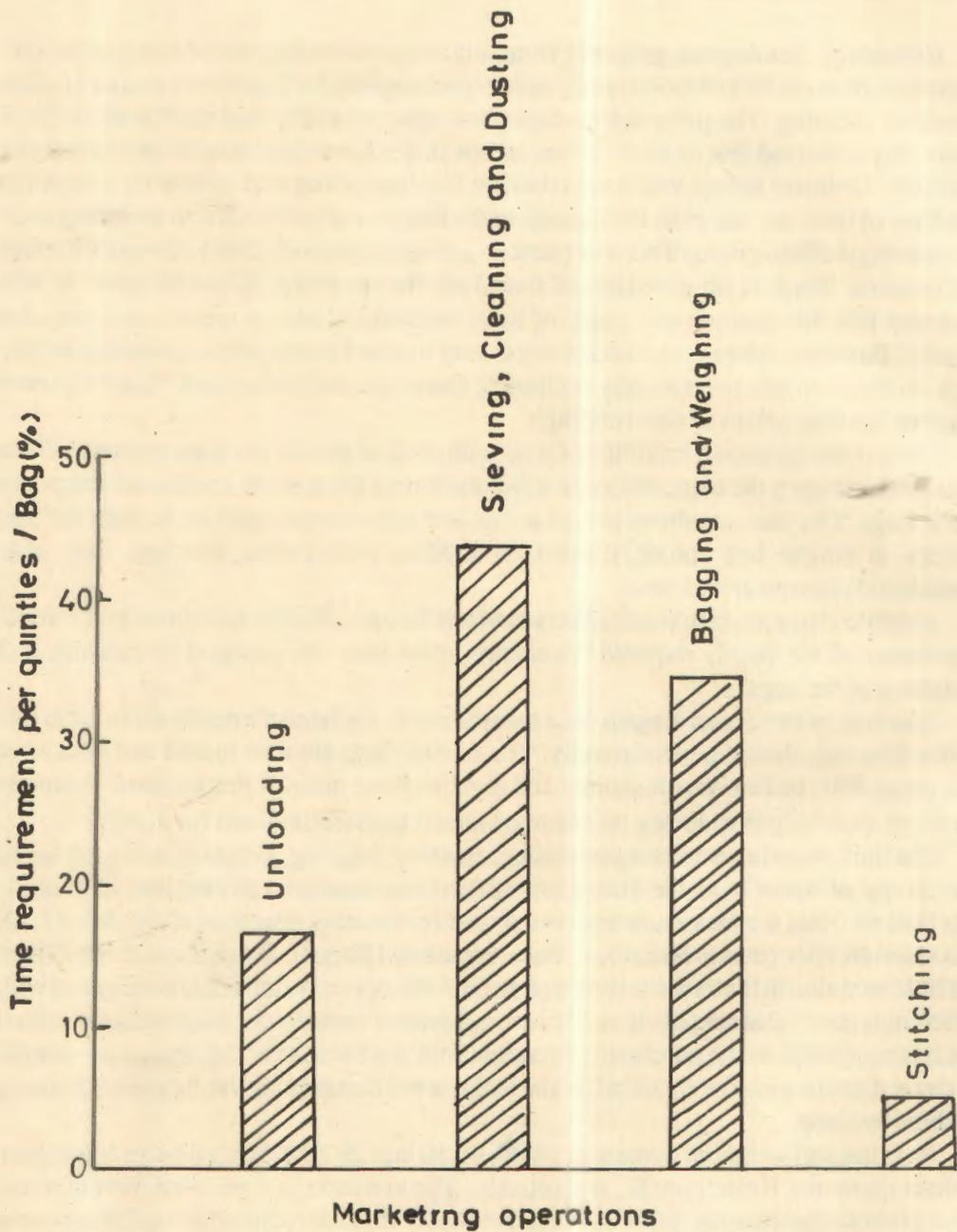


Fig.2 Time Requirement in Different Marketing Operations.

It was observed that the time consumption by various operations can be minimised with the introduction of some improved tools/machines. Introduction of high capacity cleaning machines may help in reducing the total time. The automatic weigher-bagger may reduce the time taken in carrying, weighing and bagging manually. Simple and friction less hand carts may help in reducing the time consumed by the horizontal transport.

The data on market fee, sales tax and other charges paid by the sellers and the purchasers are given in Table-2. It indicates that the unloading charges per bag is uniform in all the three markets representing three states. However, there is a little variation in other charges. The cleaning charges vary for single cleaning or double cleaning. In Nazafgarh and Bahadurgarh mandis, the single cleaning is done whereas in Hapur mandi, double cleaning is done. With the result, the cleaning charges in Hapur mandi is 50 paise per bag and in Nazafgarh and Bahadurgarh it is 20 paise and 25 paise per bag, respectively. The number of cleanings depends upon the type and quality of incoming materials.

The farmer/seller pays the unloading, cleaning, bagging and weighing charges in Nazafgarh and Hapur whereas in Bahadurgarh mandi farmers pays only unloading and cleaning charges and rest of the amount is paid by the purchaser. In Delhi state there is no sales tax but in Haryana and UP the sales tax is charged from the purchaser. In Delhi's grain markets, the buyer pays the auction charges whereas in Haryana and UP there is no auction charge. From the study, it is observed that there is no uniform marketing system followed in the country. It varies from state to state although the support price is uniform throughout the country.

The short comings of the present system of grain marketing are given below :

1. The farmers have to spend a lot of time in the market to sell their produce though they are very busy in harvesting and selling of the previous crops and preparation of fields for timely sowing of the next crop. The reduction in time taken to complete all the operations is needed in the improved system. In the present system farmers have to stay with their vehicle in the market for at least 8 to 10 hours. It causes avoidable congestion, pollution and shortage of space.
2. The existing system, being labour intensive, requires a huge labour force to complete all the marketing operations. Invariably the required labour force is not available. This results into sub-standard cleaning, inaccurate weighing, poor stitching of bags and arbitrary fixing of the prices.
3. The tools and equipment used for carrying out different operations are less efficient and time consuming. There is a need for replacement of these tools with the improved machines.
4. Facilities of lodging and boarding, drinking water, animal feed and animal and machinery sheds are inadequate in the market areas.
5. The farmer does not get the payment for his produce sold on the same day.
6. At present, there is no method applied or instrument used for the determination of moisture content of the arrivals. This results in avoidable problems. The mandis should have a few moisture meters for determining the moisture content of grains. These instruments should be calibrated periodically.

It is concluded that the facilities of cleaning may be included in the grain market/mandis by installing high capacity grain cleaners. Improved gadgets such as bag holder, bag closer, hand cart and moisture meter should be provided in the grain markets to reduce time required for bagging and transport. Automatic bagger-weigher will be of great help in reducing the time requirement of manually weighing and bagging. The grain marketing system should be uniform throughout the country.

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Table 1 : Time requirements for various operations performed in grain markets.

Sl. No. Operations	Time requirement minutes		
	Nazafgarh mandi	Bahadurgarh mandi	Hapur mandi
1. Unloading	1.75 (19.90)	0.80 (12.00)	1.50 (18.70)
2. Sieving, cleaning and dusting	3.66 (41.70)	2.80 (42.00)	3.75 (46.90)
3. Bagging and weighing	3.00 (34.00)	2.70 (40.50)	2.33 (29.20)
4. Stitching	0.36 (4.10)	0.36 (5.50)	0.41 (5.20)
Total	8.77 (100)	6.66 (100)	7.99 (100)

Note: Time requirement in percent is given in parenthesis.

Table-2: Market fee and other charges paid in different grain markets. (rupees)

Item of cost	Nazafgarh mandi	Bahadurgarh mandi	Hapur mandi
Unloading per bag	0.20	0.20	0.20
Cleaning per bag	0.25	0.20	0.50
Bagging per bag and weighing per bag	0.50	0.20	0.80
Stitching and loading per bag	0.50	0.20	1.00
Market fee (%)	0.50	2.00	1.00
Commission (%)	2.50	2.00	1.50
Sales tax (%)	-	4.00	5.00

Table-3: Distribution of marketing charges

Operation/ items	Delhi state		Haryana state		UP state	
	Farmer	Buyer	Farmer	Buyer	Farmer	Buyer
Unloading	✓	-	✓	-	✓	-
Cleaning	✓	-	✓	-	✓	-
Bagging	✓	-	-	✓	✓	-
Weighing	✓	-	-	✓	✓	-
Stitching	-	✓	-	✓	-	✓
Loading	-	✓	-	✓	-	✓
Market fee	-	✓	-	✓	-	✓
Commission	-	✓	-	✓	-	✓
Auction Charge	-	✓	-	-	-	-
Sales Tax	-	-	-	✓	-	✓