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## Role of market intelligence in agricultural marketing

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#### Abstract

In agriculture rich countries like India, agriculture plays critical role in meeting out the food and nutritional needs of society along with the raw material requirement of agro processing industries. But the volatility in prices of agricultural commodities has been remained the matter of serious concern for both farmers as well as traders. The high post harvest losses, high market arrivals and low prices led to decrease the producer's share in consumer's rupee. The study outlines the role of market intelligence in marketing of agricultural commodities. Market intelligence is type of market information which helps the society to become aware about the future movement of prices based upon the past and present trends. The study recommends that market intelligence in agri-business should focus on establishing efficient marketing and agro-processing linkages between farmers/farmer producer groups, markets and processors which would make agriculture a more viable proposition. The step would not only help in generating better returns but also help in reducing the losses, generating employment and ensuring the price guarantee. It would serve as the source of commercialization for farmers who are doing subsistence farming only.

**Keywords:** agriculture, price volatility, post harvest losses, market intelligence, employment and commercialization

#### Introduction

Earlier agricultural production of our country was not able to meet the production demands of growing population but with the inception of green revolution Indian agricultural got revolutionary change. The production of food grains increased with the increase in production of foodgrains after green revolution but the next important issue was poor marketing due to the lack of market information. The change in marketing environment resulted in utmost need for understanding the price behaviors to safeguard the income of farmers as well as various stakeholders. But the main issue is that most of the rural producers and entrepreneurs are not able to understand the market and price behaviour of various agricultural commodities. For gaining profitable returns in agricultural marketing and to prevent the ill effects of volatile prices farmers must be aware about the price behavior of major marketing agricultural commodities. Therefore the market information and intelligence are important to enable farmers and stakeholders to get informed about prices and market behavior so as to make decisions regarding what type of crop to be grown, when to sell and which market is suitable to sell it.

**Major Issues in Agricultural Marketing:** The major issues in agricultural marketing are as follows (Acharya and Aggarwal, 2016) <sup>[1]</sup>:

**a.) Increase in Production levels/ Market Arrivals:** Increase in production of agricultural commodities at farm level resulted in increase in marketed surplus. The rise in marketed surplus further led to increase in market arrivals. The various functions like grading, weighing, sorting, etc. Took place in market yards. But due to lack of space in market yards the process got affected. The lack of market information and conditions was the main reason behind this chaos. Recently, few market committees constructed spacious market yards but most of market them do not have sufficient space because of non-availability of land and funds.

**b.) Instability of Prices:** Agricultural prices are highly volatile in nature and fluctuate frequently depending on demand and supply conditions of commodities. These prices of agricultural commodities fall during post-harvest months and increase later during remaining year. The increased market arrivals due to surpluses led to fall in prices as a result of which farmer's share in consumer rupees decreases. The increased price instability adversely affects the income of farmers. Therefore, there is a need for reducing instability of prices. Several steps have been taken by Government like fixation of minimum support prices of the crops, procurement of the commodities and development of housing facilities to check post-harvest sales. But these steps are not sufficient enough to reduce post harvest losses. Further there is a need to aware the producers about the varying prices in order to prevent them from fluctuating prices and high post harvest losses.

**c.) Agricultural Market intelligence:** A Market Intelligence system refers to systematic collection and processing of information from all the relevant sources to ascertain the changing trends in the agricultural marketing environment. In simple words, the producer/ farmer/ trader gathers data from all the available sources and process these into meaningful information that can be used in critical decision making. In order to obtain the market intelligence the farmer/ producer/ trader make use of primary and secondary sources like newspapers, magazines, books, trade publications, social media, and feedback from customers, suppliers, distributors who cover the entire gamut of an market conditions. The higher the information gathered, the accurate and specific would be the reports generated on the basis of which efficiency of marketing could be enhanced.



**Fig 1:** Main constituent elements of Market Intelligence

### Components of Market Intelligence

It constitutes basically four major components:

- Price:** It provides information about prevailing prices of different commodities in future based upon present and past conditions.
- Product:** It provides information about important features of product which make it distinguished in the market to get better prices.
- Place:** It gives intelligence about place or market where the commodity would fetch better prices.
- Period:** It provides information about right time period at which sale of produce would provide high returns.

### Market Information V/s Market Intelligence

Market Intelligence is basically a process which provides information regarding what might happen in future market. The whole process requires that data regarding market arrivals and prices based upon which market intelligence is implied. Here is an example regarding market intelligence and information:

- **Data** - If Prices for our products have declined by 5 percent.
- **Information** - Labour cost has been lowered due to new offshore facilities
- **Intelligence** - Our key competitor is about to acquire a facility in India that will increase storage facility for future sale in the market which further would cater higher profits.

Market Intelligence differs from market information as the former one requires analysis in order to derive some meaning information from the piles of data and information. Market Information and intelligence are crucial to enable farmers and traders to make informed decisions about what to grow, when to harvest, where to markets the produce and whether to store it or not.

Market Intelligence should not only give the factual information but also declare what is going to happen in future. Market Intelligence helps in maintaining competitiveness by working upon our strategic decisions. Most importantly price intelligence helps the producer/ farmers to get acquainted about market situations. Apart from that on the basis of market intelligence extension workers advice the producer to grow as well as market their produce. Low understanding of Market Intelligence led to realization of lower net prices by farmers. The main reasons for lack of market intelligence are as follows:

- Poor access to market intelligence.
- Limited availability of market information.
- Limited access to existing information by farmers and entrepreneurs.
- Less reliance on price forecasting system.

For successful outcomes, a typical market intelligence process under agricultural marketing system should encompass the relationship between following:

- Present land use pattern, suitability of crops and agricultural situation
- Crops and their quality demanded in near future
- Price prevailing in the market of major crops
- Use of inputs, credit and transport facilities
- Production techniques like organic, Integrated farming system, contract farming and Post harvest management techniques.
- Food safety and standards followed, present supply and value chain networks, etc.

### Methodologies used for market intelligence

Various time forecasting models could be implied to have price forecast for the agricultural commodities. Few of them are listed below which are frequently used and provide good results:

- Exponential Smoothing
- ARIMA Models (Autoregressive Integrated Moving Average)
- Seasonality
- ARCH (Autoregressive conditional Heteroscedastic)
- GARCH (Generalized Autoregressive conditional Heteroscedastic)

## f.) ANN (Artificial Neural Network)

Various steps involved in market intelligence are shown in figure 2.

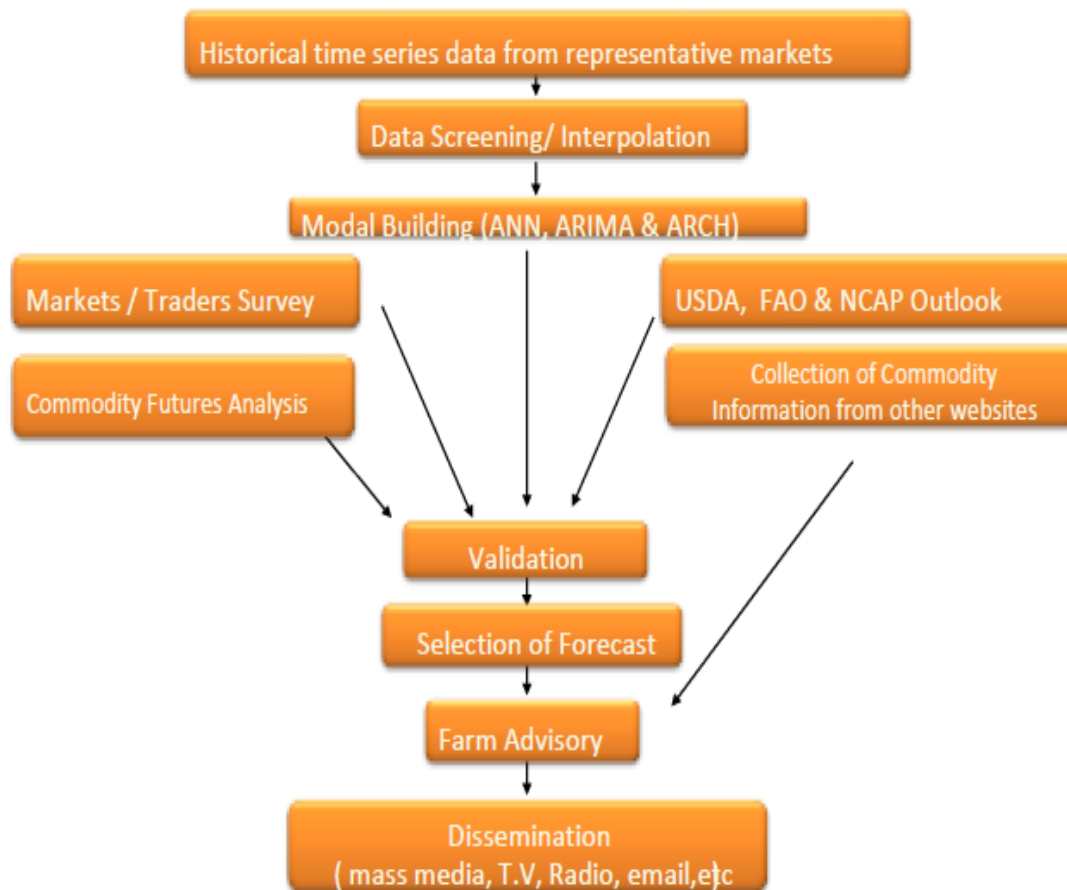


Fig 2: Steps followed under Market Intelligence (Burark, 2019) <sup>[2]</sup>

### Problems in Agricultural Market Intelligence

The market intelligence is also not free from issues and challenges. Few of them are listed below:

- The size of agricultural market is large and continuously expanding so market intelligence need to keep the same pace of growth with the increasing size.
- The privatized trade in agriculture is about 80 per cent so there exist difficulty in capturing the real image.
- The market mandis are not well equipped and having lack of market yards etc which cause the ill defined results of market intelligence.
- The poor market supply chain lead to cause high post harvest losses which caused a lot of trouble in market intelligence.
- The absence of grading and standardization measures causes lot of difficulty in marketing of agricultural commodities.

### Advantages in Market Intelligence

The advantages of marketing intelligence are as follows:

- 1.) It serves as source for best practices on which one can rely in order to make decisions.
- 2.) It helps in identifying the areas which need improvement to deal with risks and find opportunities.
- 3.) It further helps in identifying the performance gaps in comparison to the competitors.
- 4.) It helps in reducing the price risk level to a large extent.
- 5.) It helps in deciding products which are optimum for the market along with the decision on market channels of distribution.
- 6.) It also proved helpful in reducing the post harvest losses.

### Impact on agriculture of MI

The impact of Marketing intelligence use in agriculture lead to increase in farmer's income, reduction of post harvest loses and increase in consumer satisfaction. Marketing intelligence help in better and efficient allocation of productive resources. The bargaining power of farmers with traders as well as share of farmer's in consumer rupees could also be improved. The reduction in risks associated could lead to reduction of transaction costs (i.e. the costs of selling the produce). The marketing intelligence would help farmers in deciding the market as well as marketing channel. With the help of market intelligence farmers can switch to high value crops that would generate better returns for them. The traders mostly dependent on marketing intelligence to gain competitive position in marketing of agricultural commodities (Swaminathan and Sivabalan, 2016) <sup>[5]</sup>. The market intelligence can proved to be helpful when State-controlled marketing system switched over to private enterprise in such cases that farmers and small traders are made more aware of market opportunities It also proved useful in assisting the consumer's bargaining power as it provides information on retail prices as well. The policy marking in agriculture marketing also improved with the help of market intelligence. MI is also served as component of Early Warning Systems for ensuring food security as it can assist in identifying areas of possible expansions of marketing activities and can highlight whether prices are above or below normal seasonal trends (Burark and Sharma, 2013) <sup>[3]</sup>.

### Scope of Market Intelligence

As disposable income level of consumers increased, the emphasis on quality of raw material as well as processed

products also increases. In that case market intelligence served is having good scope of development. It proved fruitful in identifying the future returns which farmer may get if worked upon the quality standards of material provided. Seasonality of agricultural products generates a scope of market intelligence in its marketing. Advancement in modern technology and cultural practices reduced the gap which existed due to the seasonal nature of agricultural commodities. In order to compete on social platform, farmers have to work in reducing seasonality or fitting into a pattern of social competitiveness. To become more competitive farmer need to have an idea about market information which serve as the source of data building for market intelligence (Sivabalan and Swaminathan, 2013) <sup>[4]</sup>. The market intelligence also served as the base of comparisons between domestic and international markets, on the basis of which decisions regarding supply chains are based.

### Conclusion

An efficient Market Intelligence is essential to develop the agriculture sector as a whole. It would help in providing outlets and incentives for increased production. It plays a great role in commercialization of subsistence farmers. Non availability of market intelligence would lead to nullify most of the efforts of the government to increase agricultural production. It is expected that growth in agriculture sector would largely source from the improvements in productivity of diversified farming systems with sustainable management of natural resources, and regional specialization. It further help in building up the effective linkages of production systems with supply chains and value added activities which further would play an important role in the diversification of agriculture.

### Recommendations

Data generation on market intelligence is itself a huge task. There exists lot of data in various departments of agriculture. Hence, there is a need to establish linkages between agriculture line departments and departments of market which would strengthen the Market Intelligence. Further, there is requirement to conduct SWOT analysis of the market from time to time. Strengths will give an idea about demand, high marketability, good price etc., Weaknesses represents major specifications which are lacking in present system, Opportunities help to identify export destinations, appropriate time of selling etc. and Threats will provide a viewpoint on perishability of the products etc. Accordingly, the farmers and agripreneurs are required to be make aware about market intelligence on the basis of which their production and marketing decisions are based. The major challenge here is in motivating the extension personnel to learn about market intelligence and to make people aware about it. The enhancement of interactive and communicative skills of the farmers as well as extension personal would help in the long run for better Market intelligence prospects. In present day situation establishing marketing and agro-processing linkages between farmers' groups, markets and private processors is of utmost requirement.

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