



## RESEARCH PAPER

# Mapping channel operations in agri-input markets: An Indian context

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**Abstract :** India's agriculture input markets are undergoing significant changes in terms of size, participation, and diversification. The study was undertaken to map current operations of the agriculture input markets in two districts viz., Guntur and Kurnool districts of Andhra Pradesh state and two districts viz., Nalgonda and Khammam of Telangana state. Sixty agriculture input retailers were selected using a random sampling method for the study. The data were collected from each respondent through a personal interview method with the help of a structured schedule. Distribution of the respondents based on personal and socio-economic characteristics showed that the majority of the agricultural input dealers were middle-aged (50%), had education till intermediate level (58%), farming experience of more than 10 years (44%), solo proprietary (90%), business experience in a range of 5 - 10 years (44%), annual business turnover more than 1 crore (75%), had smartphones (93%), dealing with agrochemicals (96.7%), dealing with chemical fertilizers (86.7%), orders agriculture inputs weekly during the season (50%), preferred to buy inputs directly from the company (73%), fulfilling the local demand of farmers was the most preferable parameter while selecting a product line (4.18), farmer's choice as the most priority while selecting a particular brand in agriculture inputs (4.35), and the level of pests and diseases incidence during the current season while taking inventory holding decision.

**Key Words :** Agriculture input retailers, Agricultural inputs, Brand preference, Inventory holding

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## INTRODUCTION

Agriculture and allied sectors are playing a pivotal role in the sustainable growth and development of the Indian economy. Agriculture is the primary source of livelihood for about 58 per cent of India's population.

During the 1960s, the beginning of the green revolution in the agricultural sector successfully

transformed India from a food deficit to a food-sufficient economy and also a net aggregate exporter of agricultural commodities. This was resulted due to the promotion of the use of HYV (High Yielding Varieties) seeds, which are highly responsive to chemical fertilizers and agrochemicals, which have resulted in a drastic increase in productivity and production. This has called for the commercialization of Indian agriculture through

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the use of fertilizers, pesticides, seeds, fungicides, herbicides, farm machinery, credit, and information technologies. As a result, creating new markets for agriculture inputs in India. The agri-input industry plays a crucial role in providing on-time, reliable and quality inputs. The industry is assumed to grow at 8.1 per cent annually and surpass US\$ 8.1 billion by 2025. (FICCI). The value of agri-input in India accounted for US\$ 5 billion (2018) (according to FICCI, 2018). From the beginning, availability, accessibility, quality, and pricing have all been important concerns in this industry.

Most of the Indian farmers are small and marginal farmers having small landholdings and limited resource availability. Farmers lack awareness of various agro-advisory services like training in new farm technologies and diagnosis of pests and diseases. Insufficient availability of information and inappropriate farming practices also end up with the destruction of natural resources, which are irreversible e.g. soil fertility. Hence, knowledge related to high-quality seeds, fertilizers and chemicals must be provided in raising the productivity and income of the farmers by Agri-input dealers (Kumar, 2020).

Agricultural input dealers become a prime source of extension advisory services, clearly having a location advantage and good rapport with the farmers. Availability of agricultural inputs, quality of the product, and preferred brand increase the loyalty of the agricultural input dealers among the farmers (Padmanabhan, 1999).

The present study was conducted to understand the channel operations in agri-input markets with the following stated objectives :

- To study the demographic and business particulars of sample agriculture input dealers
- Mapping of current operations in agriculture input marketing channels

## MATERIAL AND METHODS

The present study was undertaken during 2021-2022. Andhra Pradesh and Telangana will be chosen as the location of the study, as the pattern of consumption of agriculture inputs in southern India is almost similar. The study was undertaken in two districts viz., Guntur and Kurnool districts of Andhra Pradesh state and two districts viz., Nalgonda and Khammam of Telangana state were selected purposively based on the highest number of agriculture input dealers. From each of the selected districts, fifteen respondents were selected randomly from

the list of the agriculture input dealers obtained from the officials of the State Department of Agriculture, making a total of 60 respondents. Primary data was collected from sample agriculture input retailers using a well-defined and pre-tested schedule through personal interviews. Primary data from sample agriculture input retailers were collected by developing a well-defined and presented schedule through telephonic interviews.

The data collected was analyzed to attain the stated objectives by using frequencies, percentages, and Arithmetic mean.

## RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under the following heads :

### Socio-economic characteristics of agriculture input retailers :

A sample of 60 sample agriculture input retailers was considered for this study. The respondents were distributed into different categories based on their selected profile characteristics *i.e.*, age, education, farming experience, nature of business incorporation, business experience, annual turnover, and type of mobile use are summarized below.

#### Age:

The study on the age group of sample respondents revealed that half (50%) of the sample agriculture input retailers belonged to the middle age group *i.e.*, 36 to 50 years, followed by the old age group *i.e.*, 51 years and above (30%), and young age group *i.e.*, upto 35 years (20%). The results of this present study were aligned with the study of Anitha (2005), Leelavani (2011), and Shilake *et al.* (2015).

**Table 1 : Age groups of sample agricultural input retailers**

Sr. No.	Category	Age (Years)	Frequency/ (No. of agricultural input retailers)	Per cent (%)
1.	Young age	upto 35 years	12	20
2.	Middle age	36-50 years	30	50
3.	Old age	51 years and above	18	30
Total			60	100

#### Education :

The data from Table 2 indicated that, 58% of the

sample agriculture input retailers were having education qualifications up to the intermediate level, 30% of the sample agriculture input retailers were having educational qualifications of more than graduation level and 12% of the sample agriculture input retailers were having educational qualifications only upto the primary. The current study results were in line with the study of Singh *et al.* (2015).

**Table 2 : Education levels of sample agricultural input retailers**

Sr. No.	Category	Frequency (No. of Agricultural input retailers)	Per cent (%)
1.	Upto primary	07	12
2.	Upto intermediate	35	58
3.	Graduate and above	18	30
Total		60	100

### Farming experience :

About 43% of the sample agriculture input retailers had more than 10 years of farming expertise, followed by 34% who had 1-10 years of experience.

**Table 3 : Farming experience of sample agricultural input retailers**

Sr. No.	Farming experience	Frequency (No. of agricultural input retailers)	Per cent (%)
1.	No experience	14	23
2.	1- 10 years	20	34
3.	>10 years	26	43
Total		60	100

### Nature of the business incorporation and business experience :

From the data, it was evident that the nature of the firm is preferred by agricultural input retailers, 90 % were solo proprietary and 10 % of them operate in partnership mode. Concerning business experience 44% of sample agriculture input retailers were having experience in the range of 5 – 10 years, followed by 23% in the range of 10 – 15 years, 20% had business experience of more

**Table 4 : Business experience of sample agricultural input retailers**

Sr. No.	Business experience	Frequency (No. of agricultural input retailers)	Per cent (%)
1.	<5 years	08	13
2.	5 – 10 years	26	44
3.	10 – 15 years	14	23
4.	>15 years	12	20
Total		60	100

than 15 years and 13% had business experience less than 5 years.

### Annual turnover :

Among 60 sample agriculture input retailers, 75% of them have an annual business turnover of more than 1 crore, followed by 22% of sample agriculture input retailers were having annual business turnover in the range of 10 lakh – 1 crore and 3% of them have annual business turnover less than 10 lakh.

**Table 5 : Annual business turnovers of the agricultural input retailers**

Sr. No.	Annual turnover	Frequency (No. of Agricultural input retailers)	Per cent (%)
1.	< 10 Lakh	02	03
2.	10 Lakh – 1 Crore	13	22
3.	>1 Crore	45	75
Total		60	100

### Digital penetration :

About 100% of the agriculture input retailers were using mobile of which 93% of the agriculture input retailers were having smart phones and 7% of the sample agriculture input retailers were having featured phones.

### Mapping of current operations in agriculture input marketing channels :

To map current operations in agricultural input marketing channels, the major factors concerned was range of product lines dealt by input retailers, frequency of ordering the inputs, preferred channel to buy inputs, considering factors while selecting a product line, influencing factors to prefer brands and factors influencing the inventory holding decisions.

### Major product lines dealt by agricultural input retailers :

Out of 60 agriculture input retailers, 96.7% of them were dealing with agrochemicals followed by 86.7% of them were dealing with chemical fertilizers, 65% of them dealing with seeds, 3% of them deals with bio and organics, 3.3% of them with soil conditioners and only 1.7% of agriculture input retailers were dealing with irrigation system.

### Order frequency :

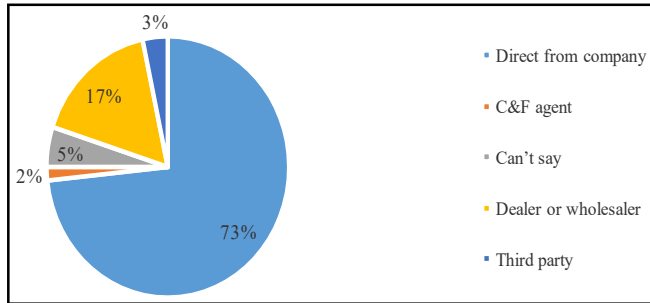
Concerning the order frequency of the agriculture

input retailers, 50% of them orders agriculture inputs weekly during the season followed by 30% orders fortnight, 13% orders daily, and 7% orders monthly.

**Channel preference to buy the agricultural inputs:**

It was concluded that 73% of the sample agriculture

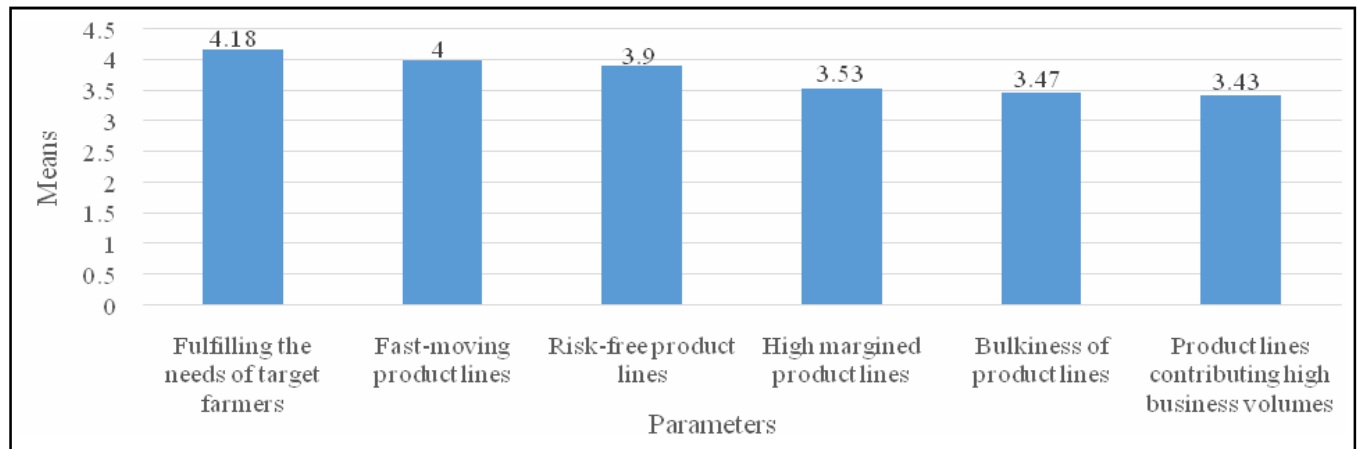
input retailers were preferring to buy agriculture inputs directly from the company, followed by 17% of the sample agriculture input retailers were preferring to buy from dealers or wholesalers. 5% of the agricultural input retailers did not have any preference towards channels, 3% were preferring to buy from a third party, and 2% were preferring to buy from C and F agents.



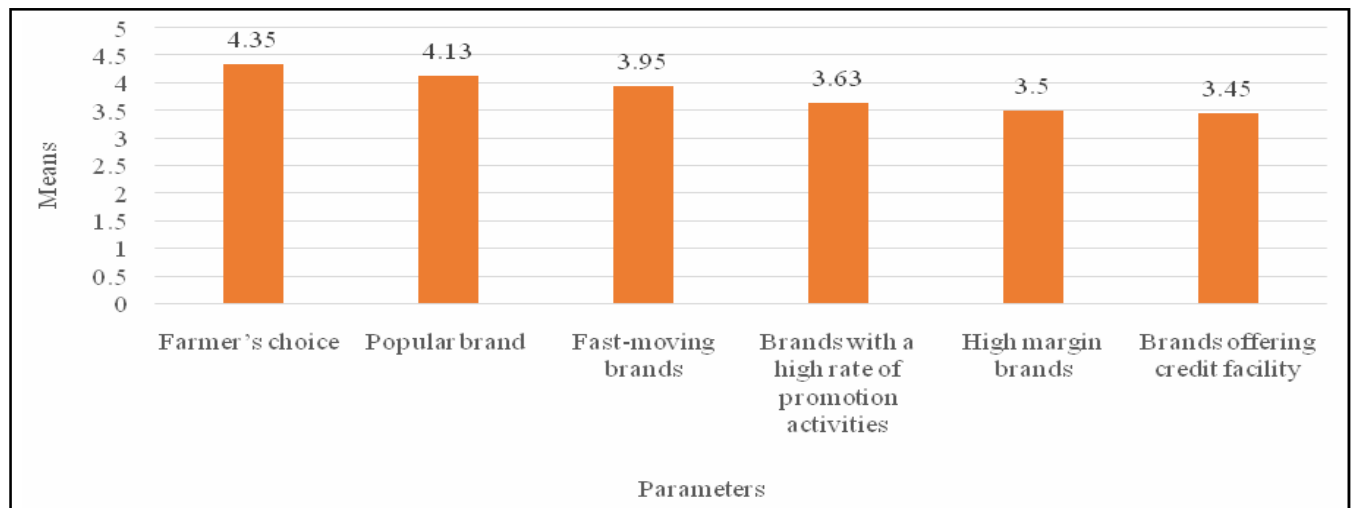
**Fig. 1: Channel preference of agricultural input retailers to buy the agricultural inputs**

**The factors considered while selecting a product line :**

The information regarding the major factors like, product lines to fulfil needs of local target farmers, high margined product lines, product lines contributing high volumes, bulkiness of the products, and risk-free product lines were collected. It was summarized that agriculture input retailers considered, fulfilling the local demand of farmers was the most preferable parameter while



**Fig. 2 : The factors considered while selecting a product line**



**Fig. 3 : The factors influencing brand preference by the agricultural input retailers**

selecting a product line, so this parameter was ranked first with a mean score of 4.18 followed by fast-moving product lines (4.00). Risk-free product lines, product lines with high margin, bulkiness of the product lines, and product lines contributing high business volumes were ranked third (3.90), fourth (3.53), fifth (3.47), and sixth (3.43), respectively. Sample agriculture input retailers were least preferring the parameters like bulkiness and high volumes while selecting a product line.

#### The factors influencing brand preference :

The agriculture input retailers considered the farmer's choice as the, most priority while selecting a particular brand in agriculture inputs, so this parameter was ranked first with a mean score of 4.35 followed by popular brand value among the farmers (4.13). Fast-moving brands, brands with a high rate of promotion activities, high-margin brands, and brands offering credit facilities were ranked third (3.95), fourth (3.63), fifth (3.50), and sixth (3.45), respectively.

#### The external factors influencing the inventory holding decision :

Concerning the external factors influencing the inventory holding decision of sample agriculture input retailers, the level of pests and diseases incidence during the current season was ranked first with the total score of 111, farmer's feedback was ranked second with a total score of 105, crop-specific favorable climatic conditions were ranked third with the total score of 98. Rainfall during the current season, net changes in the cropping pattern, and company executive recommendation factors were ranked fourth, fifth and sixth with total scores of 97, 85, and 58, respectively. The level of pests and diseases and farmers' feedback were the most considering factors of agriculture input retailers while holding the agriculture inputs.

The agricultural input retailers preferred to buy inputs directly from the company due to growing digital disruption in the agriculture input industry that led to the disclosure of prices, discounts and product availability to every retailer and hence aimed to obtain direct benefits

from the company. Further due to digital penetration at the farmer level, their awareness levels for agriculture inputs and brands were also increasing (Dhaka and Chayal, 2010, Shanthini and Kathirvel, 2013). Thus, the input retailer's brand preferences were changing towards farmers' choice brands and popular brands. The brand preference by farmers is in turn related to pest and disease occurrence in the current season and feedback over the previous cropping season. These two were considered as major external factors influencing the retailer decision of holding various brands of inventory.

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