

RESEARCH PAPER

Analysis of market of various 'Bt cotton' seed brand in Nanded district of Maharashtra

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ABSTRACT

Study was conducted in Nanded district of Maharashtra, from study it was observed that dealer's recommendations and advice of the fellow farmers were ranked as the top most factors influencing farmer preferences. In case of Promotional activities field demonstration followed by farmers meeting, follow up visits by company representatives to the farmer's field, farmer's visit to research plots, live sample shown at dealers counter and campaigning was considered by the farmers as highly important category.

KEY WORDS : Farmer's preferences, Promotional measures, Bt cotton, Seed, Field demonstration, Dealer's recommendation

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Indian agriculture must continuously evolve to remain ever responsive to manage the change and to meet the growing and diversified needs of different stakeholders in the entire production to consumption chain. Timely and adequate supply of quality seed to farmers can't be neglected because non-availability of required quality and quantity of seed during sowing season coupled with the vagaries of monsoon could make agricultural production more vulnerable, with a resource

poor farmers being worst hit economically. India is one of the few countries where the seed sector is already reasonably advanced. Indian seed market is estimated at US\$ 1.1 billion. It is the 6th largest in the world. It has grown 12 per cent compared to less than 5 per cent growth of global seed market (NSAI Country Report, 2012). The private sector has started to play a significant role in the seed industry over the last few years mainly in the case of rice, maize, sunflower and cotton seeds. India ranks second in cotton production after China. Maharashtra is the largest cotton growing state in the country. It covers about 34 per cent of total cotton area in the country. Maharashtra produces approximately 79.00 lakh bales per year which contributes 17 per cent of the total Indian cotton production having an average yield of 324 kgs per hectare (Current Cotton Scenario, CCI, 2012-13).

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METHODOLOGY

In order to proceed with investigation as per the objectives stated, it was necessary to adopt an appropriate sampling design for which Nanded district is the leading producer of cotton crop which was purposively selected also tehsils were ranked in descending order of their area under cotton crop. It was decided to select four tehsils out of total 16 tehsils which are having highest cotton area under cultivation to investigate the research problem.

To study frequency of promotional measures adopted, Among all the dealers present in selected markets four markets *i.e.* Bhokar, Himayatnagar, Kinwat and Mahur were selected as major markets to collect information on marketing aspect. It was proposed to select 4 dealers and 2 retailers randomly from each tehsils. Hence, a total of 16 dealers and 8 retailers were selected to elicit information required for the study. To study variables such as extent of farmer's preferences in purchase of cotton seed among all the tehsils present in district four tehsils *i.e.* Bhokar, Himayatnagar, Kinwat and Mahur were selected as major cotton growing tehsils and two villages from each tehsil *i.e.* total 8 villages were selected based on the highest area under cotton crop to collect information on marketing aspect and It was proposed to select 15 sample respondents who were growing cotton from each village randomly. A total of 120 sample farmers were selected to elicit information required for the study. In order to collect primary information using pre-determined questionnaire on various variables is prepared.

Garrett Ranking Technique was used to evaluate the extent of preferences to promotional measures, Factors influencing farmer's preferences. In this method, the farmers or dealers were asked to give rank to the given factors according to the magnitude of its importance. The orders of merit given by the respondents were converted into ranks by using the following formula.

$$\text{Per cent position} = \frac{100(R_{ij} - 0.5)}{N_j}$$

where,

R_{ij} : rank given for the i^{th} factor ($i = 1, 2, \dots, 7$) by the j^{th} individual ($j = 1, 2, \dots, 36$)

N_j : number of factors ranked by j^{th} individual

The per cent position of each rank thus obtained was converted into scores by referring to the table given by Henry Garrett. Then for each factor the scores of

individual responses were added together and divided by the total number of respondents for whom the scores were added. Then mean scores for all the factors were arranged in the order of their ranks and inferences were drawn.

A 3 point ranking scales was used to depict the severity of problem as high, medium, and low with scores 1, 2 and 3, respectively.

In the case of promotional measures, importance attached to each measure was ranked as 1, 2 and 3 as very important, moderately important, and less important, respectively.

In the case of factors influencing farmer's preferences to specific brands, 5 ranks with the scores 1-very high, 2-high, 3-moderate, and 4-less, 5-very less was used, respectively was allotted.

Scope and objectives of study :

The study was conducted about cotton growers in Nanded district of Maharashtra with following specific objective

- Factors influencing the farmer's preferences in purchase of Bt cotton seed
- The extent of farmers' preferences towards product promotion measure by seed companies.

Limitations of the study :

The study depends on the data collected from records maintained by official departments of Government as well as private sector stakeholders. Therefore, the investigator had to face certain drawbacks in ascertaining the accuracy of some data. However, greater care was taken to collect comprehensive data from all possible sources. With the constraint of time, the study was restricted to Maharashtra state.

ANALYSIS AND DISCUSSION

The findings of the present study as well as relevant discussion have been summarized under the following heads :

Factors influencing the farmer's preferences in purchase of Bt cotton seed :

While purchasing the various agri-inputs farmers think rationally. There are number of varieties available to the farmer to choose from. The judgements taken by

them depend upon the perception about the products and perceptions are influenced by the various factors which are responsible for farmer's preferences to these brands. Factors that influence farmer's preferences were identified and farmers were asked to give rank between 1 to 5. Garrett Ranking Technique was used and the results are presented in Table 1.

It is observed that, as most of the farmers were illiterate and do not have idea about various varieties available in the market, dealers recommendations and advice of the fellow farmers were ranked as 1st and 2nd, respectively and were the most influencing factors with mean scores of 82.75 and 81.08, respectively. Similar finding were obtained by Sivakumar *et al.*, 2006. Timely availability of seed to farmer at the time of sowing and good quality of seed were ranked as 3rd and 4th factor with mean score of 80.00 and 79.84, respectively. Higher yield and overall better performance of selected brand were ranked 5th and 6th by the farmer with mean score of 78.91 and 77.92, respectively.

Factors such as previous experience of farmer, price of seed and technical guidance available to farmers were given less importance and were ranked at 7th, 8th and 9th position with mean scores of 75.76, 73.92 and 70.54, respectively.

Factors such as suggestions from extension personnel, scientist, credit sale, brand image and quality of output/lint were ranked a 10th, 11th, 12th and 13th. It is

inferred that the mean scores and total scores of these factors compared to other factor scores are almost the same

The factors such as availability of irrigation facility, early maturity, promotional measures and psychological factors were ranked least important factors influencing farmer's preferences.

The extent of farmers' preferences to product promotion measure conducted by seed companies in the year 2013-14 :

To increase the awareness about the product and ultimately increase the sales, companies adopt various promotional activities. The farmers' preferences and change in their perception to product promotion measure conducted by different seed companies is presented in the Table 2 Garrett ranking technique was used to obtain the results.

From Table 2 it is observed that field demonstration was ranked first by the farmers with mean score of 85.08 followed by farmers meeting with mean score of 84.00. Follow up visits by company representatives to the farmer's field like after sale service were ranked 3rd with mean score of 82.92. Farmer's visit to research plots was ranked as 4th by the farmer with mean score of 81.83. Live sample shown at the dealer's counter and campaigning were ranked 5th and 6th rank, respectively.

Distributing of literature, posters and grower and

Sr. No.	Preference parameters	Total score	Mean score	Garrett rank
1.	Timely availability	9600	80.00	III
2.	Price	8870	73.92	VIII
3.	Quality	9581	79.84	IV
4.	Credit sale	8030	66.92	XI
5.	Better performance	9350	77.92	VI
6.	Promotional measures	7730	64.42	XVI
7.	Previous experience of farmer	9091	75.76	VII
8.	Quality of output/lint	7938	66.15	XIII
9.	Dealers recommendations	9930	82.75	I
10.	Higher yield	9470	78.91	V
11.	Technical and scientific guidance	8465	70.54	IX
12.	Brand image	7980	66.5	XII
13.	Advice of the fellow farmers	9730	81.08	II
14.	Psychological factors	7626	63.55	XVII
15.	Suggestions from extension personnel, scientist	8115	67.63	X
16.	Early maturity	7890	65.75	XV
17.	Availability of irrigation facility	7925	66.04	XIV

Table 2 : The extent of farmers' preferences to product promotion measure conducted by seed companies in the year 2013-14

Sr. No.	Promotional measures	Total score	Mean score	Garrett rank
1.	Field demonstration	10210	85.08	I
2.	Farmer visit to research plots	9820	81.83	IV
3.	Campaign	9610	80.08	VI
4.	Field day	9220	76.83	X
5.	Slide shows	8754	72.95	XVII
6.	Farmers meeting	10080	84.00	II
7.	Live telecast	8800	73.33	XVI
8.	Live sample shown in dealers counter	9690	80.75	V
9.	Posters	9340	77.83	VIII
10.	Wall painting	8866	73.88	XV
11.	Calendars	8920	74.33	XIV
12.	Exhibition	9074	75.62	XII
13.	Grower and crop photos shown in dealer counter	9242	77.02	IX
14.	Distributing of literature	9420	78.50	VII
15.	Banners	9148	76.23	XI
16.	Follow up visits by company representatives	9950	82.92	III
17.	Magazines	9056	75.47	XIII

crop photos shown in dealer counter were ranked 7th, 8th and 9th with mean scores of 78.50, 77.83 and 77.02, respectively. Field day and banners were ranked 10th and 11th rank by the farmers. These measures belonged to medium influence category as it less preferred measures as compared to the first six measures mentioned earlier. Because these measures disseminate the information about product or the growers but do not incorporate the practical aspects which are mostly preferred by the farmers.

Exhibition, magazines and calendars were at 12th, 13th and 14th position with mean scores 75.62, 75.47 and 74.33. The measures such as wall painting, live telecast and slide shows were least preferred measures and ranked on 15th, 16th and 17th rank with mean scores of 73.88, 73.33 and 72.95, respectively.

Observations from study revealed that farmers are well aware about the different promotional measures conducted by seed companies. Their perceptions and preferences are more influenced by practical oriented techniques and face to face communication rather than dissemination of theoretical information.

From the study it was found that dealer's recommendations and advice of the fellow farmers were ranked as 1st and 2nd, respectively as the top most factors influencing farmer preferences. In medium influencing category, factors such as previous experience of the farmers, price of the seed and technical guidance

available with the farmers were indicated in the study. Factors such as availability of irrigation facility, early maturity, promotional measures and psychological factors were ranked least important factors influencing farmer's preferences. It was observed that, in highly important category, field demonstration followed by farmers meeting, follow up visits by company representatives to the farmer's field, farmer's visit to research plots, live sample shown at dealers counter and campaigning reported by the farmers are present. In less important category, exhibitions, magazines and calendars were reported by the farmers. The measures such as wall painting, live telecast and slide shows were least preferred measures by the farmers. Similar work related to the present investigation was also carried out by Dalal and Bishnoi (2008); Daniel and Adetumbi (2004) and Khalache *et al.* (2012)

Suggestion :

The farmers in this region prefer the field demonstration, farmer's meeting, follow up visit by company personal, farmer's visit to research plots as important promotional measures so as it provides them with an idea of practical knowledge about crop production. The seed supplying firms may take into account this while formulating their product promotion strategies.

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