

RESEARCH PAPER

# Brand preference of farmers and dealers towards Bt cotton hybrid seeds in Guntur district of Andhra Pradesh

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## ABSTRACT

Cotton is considered to be an important cash crop in the agrarian economy of India. India is the second largest exporter of cotton after China with an annual export of 7.5 billion US dollars. India is the only country to grow all the four species of cultivated cotton. Due to various factors, the productivity of cotton is very low in the country when compared to the world average productivity. Brand preference in hybrid seeds is one of the factors that directly affects the farmers and influences the productivity of cotton. The present study focuses on the Brand preference of farmers and dealers towards the bt cotton hybrid seeds. Totally 50 farmers and 20 dealers were selected by simple random sampling method. Percentage analysis, Garrett ranking and Standard deviation were used for the analysis of the study. From the results it could be concluded that most of the farmers well aware about the Bt cotton in the study area. Major share of the sample farmer respondents were old aged persons and they are illiterates. Moreover, a majority of the dealers are above the age group of 50 years and well experienced in the marketing of seeds. Cost of seeds and influence of dealers are the main factors influencing the purchase of the hybrid seeds.

**KEY WORDS :** Awareness, Brand preference, Cotton, Constraints, Market share

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It is believed that cotton was first cultivated in Indus-Delta with the first evidence of cotton use found in India dating back to 6000 BC. India is the second

largest exporter of cotton after China with an annual export of US 7.5 billion US dollars. Nearly, 65 per cent of India's cotton is produced on dry land and 35 per cent of them on irrigated lands. The Northern zone is almost totally irrigated while the percentage of area under irrigation is much lower in the central and southern zones. Due to various factors, the productivity of cotton is very low in the country when compared to the world average productivity.

Cotton plays a key role in the national economy in terms of generation of direct and indirect employment in the agricultural and industrial sectors. Based on the

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recommendation of the review committee on genetic manipulation (RCGM) and the Genetic Engineering Approval Committee (GEAC) Bt cotton was officially allowed for commercial cultivation in 2002. Bt cotton with the trade name bollgard-I, developed by Mahyco – Monsanto bio tech limited was released in the same year. The Bollgard- II, with two Bt gene was released in the year 2006. Based on the performance of the Bt cotton that adoption level of Bt cotton has drastically been increased and recently the Bt cotton has occupied more than 92.00 per cent of the total cotton cultivated area in India as of 2014. Andhra Pradesh is one amongst the few states which has more area under cotton. Moreover, the production of cotton is also seemingly higher in AP with 07.10 lakh bales followed by Telangana, Gujarat and Maharashtra with 16.47, 21.87 and 28.69, respectively.

### **Leading cotton producing districts in AP :**

As per the Department of Agriculture, Andhra Pradesh the total cotton cropped area was 4, 88,983 ha in 2015 of which Guntur contributes 1, 61,984 ha followed by Kurnool with 1, 20,584 ha. In considering all the above facts the below objectives were set to study the farmers and dealers preference of different brands of Bt cotton hybrid seeds in Guntur district of Andhra Pradesh.

### **Objectives :**

- To study the awareness level of different brands of BT cotton hybrid seeds among the farmers
- To study factors influencing in the preference of brands both by farmers and dealers.
- To assess the market share of different Bt cotton hybrid seed brands in the study area

### **METHODOLOGY**

The present study focused on the Bt cotton and to study the brand preference of sample respondents regarding farmers and dealers of Guntur district. The study area was purposively selected to explore the Brand preference of different Bt cotton seed brands and market share. The survey was conducted in 2 villages of Tadikonda Mandal of Guntur district. Totally 50 farmers and 20 dealers were selected by simple random sampling method.

Both Primary and secondary data were collected for the study. Well-structured questionnaire has been prepared and used for the collection of data. Primary

data was collected from the farmers and dealers in the study area by the personal interview method. The data from respondents were collected in October 2016. Conventional analysis, Garret ranking and Standard deviation were used for the analysis of data.

### **ANALYSIS AND DISCUSSION**

Socio-economic characteristics of the farmers in Guntur district are analysed with respect to age, educational level, farming experience and income of the sample farmers.

It could be observed from the above Table 1 that the majority of the farmers (38 %) were in the age group of above 50 years followed by 41-50 years. Hence, it could be concluded that majority of the sample farmers in the study area are senior persons and it directly says that they are well known about the agricultural practices and farming systems. Major portion of the surveyed respondents were illiterates with 46.00 per cent and the remaining respondents were educated. It could be inferred that the sample respondents could get agricultural cultivation practices and market related information from reading newspapers and by reading other marketing sales brochures and posters.

Experience in farming would have a significant role in allocation of resource such as area under crops, selection of brands, and also the success of the farm business. It could be observed from the table that nearly 90 per cent of the farmers had a farming experience of above 15 years followed by 10-15 years of experience. It indicates that maximum years of experience influenced the person to take decision in better level of cultivation of cotton. Majority of the farmers (62.00 %) had the income level of above 50 thousand rupees followed by Rs50.000 – 1 lakh rupees, respectively.

### **Awareness level towards the brand preference of Bt cotton seeds :**

Awareness level towards the brand preference of Bt cotton seeds was analyzed and the results are given in the Table 2.

Nearly 40.00 per cent of farmers were moderately aware about the different brands of Bt Cotton followed by 34.00 per cent. It indicates that the companies have to have further promotional measures to create the awareness about different brands.

**Farmers land holding particulars :**

In general, the size of the land holding of the sample farmers would influence their cropping pattern, type of brand preference, quantity of seeds used, etc., From the results, it could be concluded that majority of the sample farmers 38.00 per cent belonged to small land holding group followed by semi medium (26.00 %) and marginal (22.00 %), medium (10.00 %) and large (4.00 %),

respectively.

**Area wise cultivation of different brands of Bt cotton :**

The area under cultivation of different brands of Bt cotton was discussed in Table 3.

It could be concluded that the above Table 3 that the majority of the area sown was occupied by Rasi

**Table 1 : Socio-economic characteristics of the sample farmers**

Socio-economic characteristics	Category/Class	No. of sample respondents	Percentage
Age wise distribution	Upto 30 years	2	4
	31-40 years	13	26
	41-50 years	16	32
	>50 years	19	38
	Total	50	100
Educational Level	Illiterate	23	46
	Primary education	12	24
	Secondary education	10	20
	Diploma	1	2
	Graduates	4	8
Total	50	100	
Farming Experience	<5 years	1	2
	5 to 10 years	1	2
	10 to 15 years	3	6
	>15 years	45	90
	Total	50	100
Annual income (Amount in Rs.)	< 50,000	31	62
	50,000-100,000	9	18
	1-3,00,000	8	16
	> 3,00,000	2	4
	Total	50	100

**Table 2 : Awareness level towards the brand preference**

Sr. No.	Awareness level	No. of sample farmers	Percentage
1.	Less	17	34
2.	Medium	20	40
3.	High	13	26
	Total	50	100

**Table 3 : Area under cultivation of different brands of Bt cotton**

Sr. No.	Different brands	Cultivation area (in acre)	Percentage
1.	Rasi	164	40.74
2.	Kaveri	139	34.53
3.	Nuziveedu	64.5	16.02
4.	Bayer	23	5.71
5.	Others	12	2.96
	Total	402.5	100

seeds with 40.74 per cent followed by Kaveri 34.53% Nuziveedu 16.02%, Bayer 5.71% and 2.96% by other similar companies.

### Factors influencing the preference of the brands by the sample farmers :

There are many factors which influence the farmers' preference of a particular technology, variety and brand. Identification of the influencing factor for brand preference would be helpful in developing brands by seed producers. The results of the study was analysed through Garrett ranking technique and details were furnished in the Table 4 showed that, the high yielding

character of the brand was found to be the most influencing factor followed by cost of seeds, influence of dealer, availability of seeds, resistance to pest and diseases, Credit facility and brand loyal were the least factors for the brand preference among the sample farmers.

It indicates that the farmers are introduced to buy the seed based on the yield and cost of seeds. So the company has to concentrate on to provide high yielding variety with comparable cost.

### Dealers :

The socio-economic characteristics of the sample

Table 4 : Factors influencing the brand preference by the sample farmers		
Factors	Average score	Rank
Cost of seeds	64.52	2
Influence of dealer	57.72	3
Yield	78.36	1
Availability of seeds	52.16	4
Advertisements	40.18	6
Resistance to pest and diseases	39.6	5
Credit facility	36.5	7
Brand loyal	31.96	8

Table 5 : Socio-economic characteristics of the sample dealers			
Particulars	Category	No. of sample respondents	Percentage
Age	Upto 30 years	4	20
	31-40 years	6	30
	41-50 years	2	10
	>50 years	8	40
	Total	20	100
Educational level	Illiterate	0	0
	Primary education	3	15
	Secondary education	4	20
	Diploma	4	20
	Graduates	9	45
Total	20	100	
Annual income	<2,00,000 rupees	8	40
	2,00,000-4,00,000	4	20
	4,10,000 -5,00,000	6	30
	> 5,00,000 rupees	2	10
	Total	20	100
Experience of sample dealers	<5 years	2	20
	5 to 10 years	3	30
	10 to 15 years	2	10
	>15 years	13	40
	Total	20	100

dealers in Guntur district were analysed with respect to age, educational status, experience in the field and annual income represents the age of the sample respondents were analysed and presented in Table 5.

It was clear from the Table 5 that majority of the dealers were above the age group of 50 years (40.00 %) followed by 31-40 years and upto 30 years, respectively. Major portion of the surveyed respondents are educated and had the income level of below 20 lakh rupees followed by 4,10,000-5,00,000 rupees (30 %), respectively.

The experience of the sample dealers in dealing with the agri seed input has a significant influence over their decision making process. The experienced dealers know their customers well and have a good rapport with them over years. It was inferred from the Table 5 that the majority of dealers had the business experience of more than 15 years (40.00 %) followed by 5-10 years. It indicates that majority of the dealers are having very good experience in dealing of hybrid varieties and marketing practices and strategies. The higher level of business experience showed their business innovations and further developments.

#### Factors influencing the preference of brands by dealers :

There are many factors which influence the

Dealers' preference of a particular technology, variety and brand. Identification of the influence brand preference would be helpful in developing brands by seed producers. The details on different factors that influence on preference of brands by sample dealers were analysed and presented in Table 6.

It could be concluded from Table 6 that farmers' preference is the most influencing factor followed by the product quality, brand image, promotional offers from company, high profit margin, brand loyalty, credit facility and the influence of sales representatives. So, the dealers have to take effort to identify the need of farmers and purchased the product.

#### Market share of different brands of Bt cotton in Guntur district :

Market share the percentage of a market accounted for by a specific entity. In this context, the market share is referred to the maximum number of Bt cotton hybrid brands sold in the markets. The market share was analysed and presented in Table 7.

It was evident the table describes that the market share of different brands of Bt cotton point out that the major shareholders are Rasi (33.46%) and Kaveri (31.94%), followed by Nuziveedu (12.18%), Ajeet (5.15%), Veda (3.37%). The share of other such companies came around 13.8%. Hence, the company

**Table 6 : Factors influencing the preference of brands by dealers**

Factors	Average score	Rank
Credit facility	33.35	7
High profit margin	47.8	5
Influence of sales representative	31.3	8
Promotional offers from company	51	4
Brand image	52.4	3
Farmers preference	74.75	1
Quality of the product	71.85	2
Brand loyalty	38.55	6

**Table 7 : Market share of different brands of Bt cotton in Guntur district**

Sr. No.	Company	Total packets sold (450 g/packet)	Percentage
1.	Rasi	33750	33.46
2.	Kaveri	32250	31.94
3.	Nuziveedu	12250	12.18
4.	Ajeet	5200	5.15
5.	Veda	3400	3.37
6.	Others	14000	13.80
	Total	100850	100

has to adopt market promotion strategies for further development of sales value. Similar work related to the present topic was also carried out by Kumaresh and Praveena (2012); Shiva Kumar (2014); Sivasankaran and Sivanesan (2013); Geeta (2015) and Velavan *et al.* (2015).

### Summary and Conclusion :

From the study a majority of the famers was above the age of 50 and were illiterate with 46.00 per cent. It could be seen that 2/4<sup>th</sup> of the farmers (40.00 %) were moderately aware about the different brands of Bt Cotton. Moreover, a majority of the dealers are above the age of 50 with 40.00 per cent followed by the major portion of the surveyed respondents was graduates with 45.00 per cent, the majority of dealers has the farming experience of more than 15 years. The major factors influencing the preference of brands by dealers are Farmers preference followed by Quality of the seed, Brand image, Promotional offers from company, High profit margin. The top three market share of the Bt cotton brands in the Guntur district are Rasi, Kaveri and Nuziveedu. It could be observed that the poor quality of seeds, lack of awareness about the different brands of Bt cotton were the major constraints faced by the farmers in the procurement of Bt cotton.

### Suggestions :

- Companies must come up with various

marketing promotional activities such as field demonstrations, awareness campaigns, and trade shows, to create the awareness of particular brand.

- Companies should promote the dealers to attract the farmers by some promotional offers.
- Companies should supply good quality seeds which may attract both dealers and farmers and which in turn may become brand loyal.

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