

Information Needs of Bt. Cotton Growers

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ABSTRACT

Farmer's needs are the main basis for developing meaningful agricultural programmes, therefore the study was undertaken in Idar taluka of Sabarkantha district of Gujarat state to know the information needs of Bt. Cotton growers. Total 60 Bt. Cotton growers were interviewed. The finding reveals that the fertilizer management, plant protection measures, and the sowing practices are the areas where Bt. Cotton growers of a selected area needs more information for better crop production. Education, mass media, social participation and economic motivation are highly significantly but negatively correlated to information needs and age is significantly positively correlated with information needs of Bt. Cotton growers. The finding also shows that the major constraints in getting information regarding Bt. Cotton is that the time of telecast of T. V. programme is not suitable.

Keywords: Information needs, Bt. Cotton growers, Constraints

INTRODUCTION

Bt. Cotton across the world led to spectacular farm level benefits. India granted approval for its commercial cultivation since 2002 and there has been phenomenal increase in its acreage. Agriculture development depends not only on technology generation process but also on dissemination of technology as per the needs of the farmers in a particular farming system. Therefore, prior to technology dissemination, extension agencies need to explore and understand farmer's need and relevance of technology for a particular situation. Cotton is an important commercial crop of India cultivated across nine major states of the country. The pattern of cotton production and consumption shows that India has major strides since independence from net importer to self-sufficiency and a marginal exporter of raw cotton. Total area of cotton under cultivation of India was 119.78 lakh hectares for the year 2012-13 and having production of 365 lakh bales with productivity of 518 kg/ha. India's 2013/14 cotton production is forecast at 34.5 million from 12 million hectares, the second highest area and production on record. Gujarat is leading cotton producer with the area about 24.97 lakh hectares and it produces 93 lakh bales with average productivity of 633 kg/ha.

The technologies generated by State Agricultural Universities may not have been reached to the farmer's farm on a massive scale or the farmers really realized its contribution to increase production in short or to increase sustainability in long run. Acquisition of information has always been regarded as a factor playing an important role in molding human behaviour leading to decision for adopting of innovation. Identifying information needs of the users can become solid basis for developing meaningful information warehouse. Keeping in view the present study was carried out with following objectives.

OBJECTIVES

- (i) To study the profile of the Bt. Cotton growers.
- (ii) To know relationship between selected characteristics of the Bt. Cotton growers and their information needs.
- (iii) To ascertain information needs of the Bt. Cotton growers
- (iv) To analyze the constraints faced by Bt. Cotton growers in getting information.

METHODOLOGY

The present study was conducted in Idar taluka

of Sabarkantha district of Gujarat state. In Idar taluka five villages were selected randomly. From each of the villages Bt. Cotton growing farmers were selected by proportional random sampling, making a sample of total 60 respondents. The data were collected by the investigator with the help

of specially prepared and structured schedule employing personal interview technique. The area of different six information need is divided in to five sub need and measured by three continuums Eg. Not needed, needed and most needed. All the required statistical measures were used.

RESULTS AND DISCUSSION

Components of Bt. Cotton growers

Table 1: Component of Bt. Cotton growers

n=60

Sr. No.	Components	Categories	No.	Per cent
1	Age	Young age (up to 40 years)	19	31.67
		Middle age (40 to 50 years)	22	36.66
		Old age (above 50 years)	19	31.67
2	Education	a. illiterate	00	0.00
		b.read n write	03	5.00
		c.Primary (up to 7 th)	04	6.67
		d.Secondry (8 th to 12 th)	24	40.00
		e.College level	29	48.33
3	Mass media	Very low(up to 2)	15	25.00
		Low level (3to 4)	18	30.00
		Medium level (5 to 6)	17	28.33
		High level (7 to 8)	08	13.33
		Very high(more than 8)	02	3.34
4	Social participation	No membership.	00	00
		Membership in organization	44	73.33
		Membership in more than 1	07	11.66
		Position holder	09	15.00
5	Economic motivation	Very low(up to 10.8)	00	00
		Low level (10.9 to 15.6)	01	1.66
		Medium level (15.7 to 20.4)	11	18.34
		High level (20.5 to 25.2)	21	35.00
		Very high (25.3 to 30)	27	45.00
6	Total area of land	Marginal farmer (Up to 1 hectare)	04	06.66
		Small farmer (1.01 to 2 hectare)	24	40.00
		Medium farmer(01 to 4 hectare)	25	41.67
		Large farmer (>4 hectare)	07	11.67
7	Land under cotton cultivation	Up to 41.00 per cent	11	18.34
		41.01 to 72.00 per cent	35	58.33
		Above 72.01 per cent	14	23.33

Age

Table 1 shows that 36.66 per cent of the farmers were in middle age group followed by equal per cent (31.66) of farmers in young and old age, respectively.

Education

Education is generally believed to have the effect on widening the mental horizon of a person and thereby predisposes him to be receptive to new ideas. The table shows that nearly less than half (48.33 per cent)of the farmers educated up to college level followed by 40.00 per cent and 6.66 per cent of the farmers educated up to secondary level

and primary level. Whereas 5.00 per cent were illiterate.

Mass media

Mass media is the different source from where farmers can get latest information regarding particular object. Table 1 shows that one third (30 per cent) of the farmers had medium level of mass media exposure followed by 28.33, 25, 13.33 and 3.33 per cent of the farmers had medium, very low, high and very high level of mass media exposure, respectively.

Social participation

Table 1 shows that the majority (73.33 per cent) of

the farmers had membership in one organization while, 11.66 per cent had membership in more than one organization and 15 per cent of the farmers were position holder.

Economic motivation

The data shows that nearly less than half (50per cent) of the farmers had very high level of economic motivation followed by 35, 18.33 and 1.66 per cent had high, medium and low level of economic motivation, respectively

Total area of land

The data shows that slightly more than two fifth (41.66 per cent) of the farmers were medium farmers followed by 40.00, 11.66 and 6.66 per cent were marginal, large and small farmers, respectively.

Land under cotton cultivation

The data shows that more than half (58.33 per cent) of the farmers had 41.01 to 72.00 per cent of their total land holding under cotton cultivation, followed by 23.33 per cent of the farmers had more than 72.00 per cent and 18.33 per cent had up to 41.00 per cent of their total land holding under cotton cultivation.

Relationship between selected characteristics of the Bt. Cotton growers and their information needs

The results presented in Table 2 revealed that out of seven independent variable i.e total area of land and total land under *Bt.* Cotton cultivation was found non significant. From the remaining five independent variable one variable namely age was found significant and positively related with the information needs and rest of all independent variables was found highly significant but negatively correlated with information needs.

Table 2 : Relationship between selected characteristics of the Bt. Cotton growers and their information needs n=60

Sr. No.	Characteristics	Correlation coefficient ('r' value)
1	Age	0.265*
2	Education	-0.601**
3	Mass media	-0.456**
4	Social participation	-0.373**
5	Economic motivation	-0.714**
6	Total area of land	0.186NS
7	Land under cotton cultivation	-0.249NS

* Significant at 0.05 per cent level of probability

** Significant at 0.01 per cent level of probability

NS=Non Significant

Information needs of Bt. Cotton growers

Table 3 : Information needs of Bt. Cotton growers n=60

No.	Area	Mean Percent Score	Rank
1	Variety	0.98	IV
2	Sowing	1.14	III
3	Fertilizer Management	1.43	I
4	Plant Protection	1.42	II
5	Harvesting & Post Harvesting	0.94	V
6	Marketing	0.91	VI

Table 3 explains that farmers of the study area, required highest information needs regarding “fertilizer management” in *Bt.* Cotton farming with 1.43 MPS rank first and “plant protection needs” (1.42 MPS), “sowing needs” (1.14MPS), “variety needs” (0.98 MPS), “harvesting & post harvesting needs” (0.94MPS) and “marketing needs” (0.91MPS) which were at 2nd, 3rd, 4th, 5th, and 6th ranks needed by the *Bt.* Cotton growers, respectively.

Information needs regarding variety

Table 4 : Information needs regarding variety n=60

No.	Areas of information	MPS	Rank
1	Suitability of High yielding variety	1.00	III
2	Characteristic of high yielding variety	1.06	IV
3	Source of seed	0.43	V
4	Stock of seed	1.15	II
5	Rate of seed	1.26	I

Table 4 explains that farmers of the study area, required highest information needs regarding “rate of seed” with 1.26 MPS ranks first and “Stock of seed” (1.15 MPS), suitability of high yielding variety (1MPS), “characteristic of high yielding variety” (1.06MPS) and source of seed (0.43MPS) which were at 2nd, 3rd, 4th, 5th ranks needed by the *Bt.* Cotton growers, respectively.

Information needs regarding sowing

Table 5 : Information needs regarding sowing n=60

No.	Areas of information	MPS	Rank
1	Time of sowing	0.35	V
2	Depth	1.01	IV
3	Method of sowing	1.13	III
4	Spacing	1.50	II
5	Gap filling	1.71	I

Table 5 explains that farmers of the study area, required highest information needs regarding “gap filling” with 1.71MPS ranks first and “spacing”(1.5MPS), “method

of sowing” (1.13MPS),“ depth” (1.017MPS) and “time of sowing” (0.35MPS) which were at 2nd, 3rd, 4th, 5th ranks needed by the Bt. Cotton growers, respectively

Information needs regarding fertilizer management

Table 6 : Information needs regarding fertilizer management n=60

No.	Areas of information	MPS	RANK
1	Price of fertilizer	0.78	V
2	Method of applying fertilizer	1.33	IV
3	Bio fertilizer	1.63	II
4	Dose of fertilizer	1.62	III
5	Nutrient requirement of plant	1.80	I

Table 6 explains that farmers of the study area, required highest information needs regarding “nutrient requirement of plant” with 1.80MPS ranks first and “bio fertilizer” (1.63MPS), “dose of fertilizer” (1.62MPS),“ method of applying fertilizer” (1.33MPS) and “price of fertilizer” (0.78MPS) which were at 2nd, 3rd, 4th, 5th ranks needed by the Bt. Cotton growers, respectively.

Information needs regarding plant protection measure

Table 7 : Information needs regarding plat protection measure n=60

No.	Areas of information	MPS	Rank
1	Identification, nature of damage & control measures for insect/pest	1.53	II
2	Identification, nature of damage & control measures for disease	1.53	II
3	Integrated Pest Management	1.58	I
4	Price of pesticide &insecticide	1.20	IV
5	Trade name	1.26	III

Table 7 explains that farmers of the study area, required highest information needs regarding “integrated pest management” with 1.58MPS ranks first and “identification, nature of damage & control measures for disease”(1.53MPS), “identification, nature of damage & control measures for insect/pest” (1.53MPS), “trade name” (1.26MPS) “price of pesticide &insecticide” (1.2MPS), which were at 2nd, 2nd, 3th, 4th ranks needed by the Bt. Cotton growers, respectively.

Information needs regarding harvesting & post harvest management

Table 8 : Information needs regarding harvesting & post harvest management n=60

No.	Areas of information	MPS	Rank
1	Time of harvest	0.23	V
2	Method of harvest	0.66	III
3	Care during picking of cotton	1.18	II
4	Care after picking of cotton	1.21	I
5	Grading, packaging & forward- ing to cotton market	0.55	IV

Table 8 explains that farmers of the study area, required highest information needs regarding “care after picking of cotton” with 1.21MPS ranks first and “care during picking of cotton” (1.18MPS), “method of harvest” (0.66MPS), “grading, packaging & forwarding to cotton market” (0.55MPS) “time of harvest” (0.23MPS), which were at 2nd, 3rd, 3th, 4th, 5th ranks needed by the Bt. Cotton growers, respectively.

Information needs regarding marketing

Table 9 explains that farmers of the study area, required highest information needs regarding “time of market inflow” with 1.33MPS ranks first and “facilities available at market” (1.25MPS), “marketing procedure” (0.80MPS), “market price” (0.73MPS) “place of market” (0.45MPS), which were at 2nd, 3rd, 3th, 4th, 5th ranks needed by the Bt. Cotton growers, respectively.

Table 9 : Information needs regarding marketing n=60

No.	Areas of information	MPS	Rank
1	Place of market	0.45	V
2	Market price	0.73	IV
3	Marketing procedure	0.80	III
4	Facilities available at market	1.25	II
5	Time of market inflow	1.33	I

Constraints faced by *Bt.* Cotton growers**Table 10 : Constraints faced by *Bt.* Cotton growers in getting information** n=60

Sr. No	Constraints	Total Score	Per Cent	Rank
1	Agricultural information is not published regularly in paper	30	50.00	V
2	Agricultural information in paper is not supported by good photographs	15	25.00	VII
3	Agricultural information is news paper is not understandable	09	15.00	VIII
4	Time of broadcasting of radio programme is not suitable	07	11.66	IX
5	Agricultural information broadcasting through radio is not timely	06	10.00	X
6	Agricultural information broadcasted through radio is not understandable	05	08.33	XI
7	Agricultural information telecasted through TV is not timely	39	65.00	III
8	TV programmes are not repeated at peak time	33	55.00	IV
9	Time of telecast of TV programme is not suitable	50	83.33	I
10	Agricultural information telecasted through TV is not understandable	04	06.66	XII
11	Irregular visit of village level worker.	48	80.00	II
12	Articles and magazines are not published at proper time.	18	30.00	VI

CONCLUSION

We can say that the rate of adoption of any technology happens to be faster if that meets the felt need most. It is very tough for a person to categorically claim to know all of the information needs of farmers especially in an information dependent sector mostly like in agriculture where there are many new and highly complex problems becomes hurdle in daily routine of farmers. This study suggests that the information regarding sowing, fertilizer management, plant protection measures are the areas where *Bt.* Cotton growers of Idar taluka of Sabarkantha district require high need of information for higher *Bt.* Cotton production. It is advisable for the extension agencies of that area that they become engaged in transfer of recommended *Bt.* Cotton production technology and concentrate their strategy to give information regarding available technologies for better crop production.

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