Int.J.Curr.Microbiol.App.Sci (2017) *6*(3): 2013-2020

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 6 Number 3 (2017) pp. 2013-2020**
Journal homepage: http://www.ijcmas.com

Original Research Article https://doi.org/10.20546/ijcmas.2017.603.229

Communication and Psychological Behavior of the Sugarcane Growers in Sitapur District (U.P.), India

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Keywords

Socio-economic profile, Knowledge and Adoption, Awareness, etc.

Article Info

Accepted:
20 February 2017
Available Online:
10 March 2017

A B S T R A C T

This study was conducted in Khairabad block of Sitapur district (U.P.) by conducting personal interview with 100 respondents which were selected through random sampling technique from 5 sample villages on the basis of majority of sugarcane grower. The majority of the respondents 41% institutional membership, 71% overall material possession (41-84 equipment), gram pradhan I ranked formal sources, family member I ranked informal sources, mobiles I ranked mass media, 54% medium (20-23) economic motivation, 54% medium (23-27) scientific orientation, 63% medium (21-25) risk orientation, 33.66% fully knowledge and 26.35% partially knowledge of respondents about IPM practices in sugarcane crop, 28.29% high, 29.66% medium and 40.54% low adoption of respondents about IPM practices in sugarcane crop.

Introduction

Sugarcane is an important cash crop grown all over the world. It belongs to the grass family poaceae. Sugarcane is the world largest crop. In 2012 FAO estimate it was cultivated on about 26.00 million hectare land, in more than 90 countries, with a worldwide harvest 1.83 billion tonnes. India is the largest producer of sugarcane in the world. The next five major producers in amount production are Brazil, China, Thailand, Pakistan and Mexico.

Sugarcane is a tropical, perennial grass that forms lateral shoots at the base to produce multiple stems, typically three to four meter height and about five centimeters diameter.

Sugarcane is a cash crop, but it is also used as livestock fodder.

Sugarcane is moderately non-sunny weather loving plant is grown in two distinct climate regions; the tropical and subtropical. The total area under sugarcane in India is 5.06 million hectare with 356.56 million tonnes production in 2014-15, out which 70% lies in the subtropical region and the remaining 30% in the tropical belt.

Major sugarcane growing states in India are U.P, Maharashtra, Karnataka, Tamilnadu, Andhra Pradesh and Punjab etc., but northern

India having subtropical climate. The important sugarcane growing states of the northern region are U.P, Haryana, Punjab, Bihar and Jharkhand. Uttar Pradesh is the highest sugarcane producing State in sub-tropical zone having area about 22.28 Lakh hectare with the production of 134.69 Million tonnes whereas Haryana has highest productivity of sugarcane in sub-tropical zone. In Sitapur district during 2013-14 the sugarcane had an area 1.44 Lakh hectare with the production of 9.32 million tonnes and productivity 64.68 tonnes/ hectare.

To sustain a huge agro-industry a wide research infra-structure has been created in country. At present the country has three national institute and 53 state research stations and four sugar factory sponsored research stations. At the national level all research activities are coordinated by an All India Coordinated Research Project which operates under the control of Indian Council of Agricultural Research (ICAR).

Integrated Pest Management (IPM) is a broad ecological approach for pest management which employs all available skills, technique and methods include applications of chemical pesticide as a last resort in a harmonious and compatible manner with a view to suppress pest population below the economic injury level, on regular crop pest surveillance and monitoring. The IPM is a dynamic approach and process varies from region to region, time to time, crop to crop and pest to pest etc. and at minimizing crop losses with due consideration to human health besides safety to environment live and let live is the philosophy behind IPM. IPM approach has been global accepted for achieving sustainability in agriculture.

The philosophy of IPM did not percolate down to the farmers for quite a long time after its presentations and prescription for solving pest problems in modern agriculture. It was also suggested that the illiterate farmers of developing countries were unable to grasp the concept of IPM and, therefore, could not implemented it. However, the pessimists have been proven wrong and the same farmers have now demonstrations that they are quite capable of understanding the intricacies of IPM. The success of farmer field schools (FFSs) in the implementation of IPM in many Asian countries proves that farmers are quite responsive to appropriate Technologies which give due to weightage their traditional wisdom, local conditions and socioeconomic constraints (Bergvinson, 2004).

The most of area's farmers depends only insecticides to control the insect pest it is caused the farmer are unaware about IPM and IPM technologist. Farmers are also unknown about resistant varieties for different insect pest. There is also lack of communications and knowledge in understandable language about IPM and about benefits of IPM. The major insect pest of sugarcane crop are Root borer, Early shoot borer, Pyrilla, Gurudaspur borer, Top borer, sugarcane white fly and Black bug etc.

To keep pest number below harmful life Economic Threshold Level (ETL) instead of their eradication.

To protect and conserve the environment including bio-diversity.

To make plant protection feasible, safe and economical even for the small farmers.

There is always a distorted view of IPM as pest control without chemical or biological control. In fact IPM is based on the optimization, not maximization of chemical pesticides. The IPM approach encompasses all available control techniques to contain and combat pest infestation with the aim of

lessening the pesticides load in the environment. To get economic production it is essential to combine all suitable technique and methods of pest suppression in as compatible a manner as possible to maintain pest population at level below those causing economic injury.

Importance of integrated pest management

The strategy of a good IPM programme advocates need based use of insecticides rather than calendar based prophylactic treatment.

Protects the environment from pesticidal pollution through air, water, soil and food chain system.

Minimizes the chances of the development of insect pest resistance against insecticides, pest resurgence and Secondary pest outbreak.

IPM is useful to maintain ecological balance.

Protects beneficial insect and natural enemies from the effects of synthetical chemical pesticides they are easily bio-degradable.

It is beneficial to public health. It is economically viable and socially propositional.

It is essential for food processing, particularly for export.

IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common sense practices. IPM programme use current comprehensive information on the life cycle of pest and their interaction with the environment. This information, in combination with available pest control methods is use to manage pest, damage by the least possible hazards to people, property.

IPM is not a single pest control method but rather a series of pest management evaluation, decisions and controls. In practicing of IPM, growers who are aware of the potential for pest infestation follow a four-tiered approach. The four steps include:

Set action thresholds.
Monitor and identify pest.
Prevention.
Control.

Through the use of good agronomic or cultural methods, which are unfavorable for the development of pest problems, regular monitoring of pest activity is essential for decisions in IPM. Selected control measures to check pests are to taken at economic threshold level (ETL) or action threshold level (ATL). IPM strives to optimize rather than maximize pest control efforts.

Materials and Methods

The study was conducted in purposively selected Sitapur district of Uttar Pradesh. There are 19 community development blocks in this district out of that is one block Khairabad was selected purposively. This block has 10 Nyay Panchayat, 66 gram panchayat and 114 villages, covering an area of 25361 hectares. The number of villages was 114 from which 5 villages were selected purposively, and then the list of total farmers was prepared for each selected villages. Thereafter 100 farmers were selected as respondents though random sampling techniques with respect to the categories of the farmers for each selected village. Data were collected with the help of semi-structured interview schedule specially developed on standard scales with some modifications in the light of objectives and analyzed with suitable statistical methods respectively.

Results and Discussion

Communication media possession

Table-1.4that the majority of respondents (92%) were observes possessing Mobile

phone with them. The rest of respondents who had other communication media were in descending order as Radio (87%), T.V. (65%), Newspaper (84%), D.T.H. (34%), Agriculture Books (33%), V.C.D. player (21%), Agril. Journals/ Magazines, General Magazines (18%), Internet (10%), Laptop (2%), and Tape-recorder, Desk top (1%) respectively. Thus, it can be inferred that mobile phone and Radio were main sources for getting information's and recreation purposes.

Institutional membership

The Table-2 indicates that the overwhelming majority *i.e.* 59% of the respondents did not have any institutional membership, followed by 41% respondents participation in one institutional membership respectively. It means that the respondents did not have more interest in participating in the institutional membership.

Extension contact

The Table-3 shows the extent of contact of respondents with different information sources as used by them for general information as well as about various crops cultivation. The information sources was categorized into three categories namely, formal sources, informal sources and mass media exposure to find out the extent of contact of respondents. In case of formal sources namely, Gram pradhan, Kisan Sahayak, V.D.O, seed/fertilizer store, A.D.O, B.D.O, Co-operative societies, mandi samiti, Agriculture University, and Ag. Scientist got rank orders as I, II, III, IV, V, VI, VII, VIII, IX, X and Nil respectively. The mean of scores for formal information sources was found as 1.077.

So far as informal sources like family members neighbor, friends, local leaders, progressive farmers and relatives got rank orders as I, II, III, IV, V and VI respectively. The mean of scores for informal information sources was found as 4.52.

So far as mass media sources like were found in descending *i.e*. Mobile, Radio, Television, Newspaper, film shows, agriculture books, exhibition, Farmers fair, News bulletins, Farm magazines, internet, Posters, Field day, demonstration, Folder, circular letters, O.F.T. (On Farm Test), got rank orders as I, II, III, IV, V, VI, VII, VIII, IX (A), IX (B), X, XI, XII, XIII (A), XIII (B), Nil and Nil respectively. The mean of scores for informal information sources were found as 1.41.

The overall mean scores of Extension contact were found 2.33.

Economic motivation

The Table-4 shows that the majority 54% of the respondents had medium level of economic motivation followed by high 26% and low 20% level economic motivation, respectively. On the basis of data, it can be said that there was no much difference found in economics motivation among respondents. The mean of score for economic motivation was observed to be 21.19 with a range of minimum 16 and maximum 25.

Scientific orientation

It is apparent from the Table-5 that the maximum number of respondents 54% was found having medium level of scientific orientation while 27% and 19% respondents were found in the categories of high and low levels of scientific orientation, respectively.

The average mean of scores for scientific orientation was observed 24.61. Hence it can be concluded that most of the respondents were found possessing medium level of

orientation towards scientific knowledge.

Risk orientation

It is apparent from the Table-6 that the maximum numbers of respondents 63% was found having medium level of Risk orientation while 22% and 15% respondents were found in the categories of low and high levels of Risk orientation, respectively.

The average mean of scores for Risk orientation observed to be 22.72. Hence it can be concluded that the respondents have medium level of bearing risk relating to improved farming system.

Table.1 Distribution of the respondents on the basis of communication media possession

N=100

S. No.	Communication media	Respondents	
		Number	Percentage
1.	Radio	87	87.00
2.	T.V.	65	65.00
3.	Tape-recorder	1	01.00
4.	Mobile phone	92	92.00
5.	Agril. Journals/ Magazines	18	18.00
6.	D.T.H.	34	34.00
7.	General Magazines	18	18.00
8.	Agriculture Books	33	33.00
9.	News paper	48	48.00
10.	Internet	10	10.00
11.	VCD player	22	22.00
12.	Desk top	1	01.00
13.	Laptop	2	02.00

Note: More than one items have been shown by respondents, hence the total percentage of all items would be more than 100

Table.2 Distribution of the respondents on the basis of institutional membership

N=100

S. No.	Participation	Respondents	
		Number	Percentage
1.	Not have any institutional membership	59	59.00
2.	Participation in one institutional membership	41	41.00
	Total	**100**	**100.00**

Table.3 Distribution of respondents on the basis of Extension contact with different information sources

N=100

S. No.	Source of information	Respondents	
		Mean Score value	Ranks
A.	**Formal source**		
1.	B.D.O.	0.22	VI
2.	A.D.Os.	0.32	V
3.	V.D.Os.	1.20	III
4.	Kisanshayak	3.81	II
5.	Gram pradhan	4.42	I
6.	Co-operative society	0.16	VII
7.	Agril college/ University	0.03	IX
8.	Mandisamitti	0.06	VIII
9.	Seed &Ferti. Store	0.55	IV
10.	Agril. Scientist	0.0	NIL
	Average	**1.077**	
B.	**Informal Source**		
1.	Family Members	6.00	I
2.	Neighbors	5.80	II
3.	Friends	5.70	III
4.	Relatives	3.05	VI
5.	Local Leaders	3.34	IV
6.	Progressive Farmers	3.21	V
	Average	**4.52**	
C.	**Mass media source**		
1.	Radio	5.22	II
2.	T.V.	3.06	III
3.	News paper	3.02	IV
4.	Agril. Books	1.54	VI
5.	News bulletin	0.51	IX A
6.	Field day	0.02	XII
7.	Farm magazines.	0.51	IX B
8.	Circular letters	0.00	NIL
9.	Poster	0.04	XI
10.	Mobiles	5.64	I
11.	Farmer fairs	0.59	VIII
12.	Demonstration	0.01	XIII A
13.	Folders	0.01	XIII B
14.	Film shows	2.95	V
15.	Exhibition	0.73	VII
16.	Internet	0.20	X
17.	OFT(On Farm Trail)	0.00	NIL
	Average	**1.41**	
	Overall Average	**2.33**	

Table.4 Distribution of the respondents according to economic motivation

N=100

S. No.	Categories (score value)	Respondents	
		Number	Percentage
1.	Low (up to 19)	20	20.0
2.	Medium (20-23)	54	54.00
3.	High (24and above)	26	26.00
	Total	**100**	**100.00**

Mean=21.19, S.D. =2.635, Min. =16, Max. =25

Table.5 Distribution of the respondents on the basis of scientific orientation

N=100

S. No.	Categories (score value)	Respondents	
		Number	Percentage
1.	Low (up to 22)	19	19.00
2.	Medium (23-27)	54	54.00
3.	High (28 and above)	27	27.00
	Total	**100**	**100.00**

Mean=24.61, S.D. =2.89, Min. =18, Max. =30

Table.6 Distribution of the respondents on the basis of Risk orientation

N=100

S. No.	Categories (score value)	Respondents	
		Number	Percentage
1.	Low (up to 20)	22	22.00
2.	Medium (21-25)	63	63.00
3.	High (26 and above)	15	15.00
	Total	**100**	**100.00**

Mean=22.72, S.D. =3.03, Min. =18, Max. =30

On the basis of the findings, it may be concluded that-

The majority of respondents (92%) were observes possessing Mobile phone with them. The rest of respondents who had other communication media were in descending order as Radio (87%), T.V. (65%), Newspaper (84%), D.T.H. (34%), Agriculture Books (33%), V.C.D. player (21%), Agril. Journals/ Magazines, General Magazines (18%), Internet (10%), Laptop (2%), and Tape-recorder, Desk top (1%) respectively. Thus, it can be inferred that mobile phone and Radio were main sources for getting information's and recreation purposes.

A majority *i.e.* 59% of the respondents did not take participation in any organization followed by 41% respondents participates in one organization respectively.

The majority of respondents (92%) were observed possessing Mobile phone with them. The rest of respondents who had other communication media were in descending order as Radio (87%), T.V. (65%), Newspaper (48%), D.T.H. (34%), Agriculture Books (33%), VCD player (22%), General Magazines, Agril. Journals/ Magazines (18%), Internet (10%), Laptop (2%), and Tape-recorder, Desktop (1%) respectively. Thus, it can be inferred that mobile phone and

Radio were main sources for getting information's and recreation purposes. Majority of respondents (54%) were in medium level of economic motivation followed by high and low levels, respectively.

Majority of respondents (54%) were in medium level of scientific orientation followed by high and low levels, respectively. Majority of respondents (63%) were in medium level of Risk orientation followed by low and high levels, respectively.

Acknowledgement

I acknowledge to the Department of Extension Education, Narendra Dev University of Agriculture &Technology, Kumarganj, Faizabad for providing all short of facilities required for conducting this research.

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How to cite this article:

Jagatpal, R.K. Doharey, Kaushik Prasad, S.N. Singh, Rahul Kumar Singh and Manoj Kumar. 2017. Communication and Psychological Behavior of the Sugarcane Growers in Sitapur District (U.P.). *Int.J.Curr.Microbiol.App.Sci.* 6(3): 2013-2020.
doi: https://doi.org/10.20546/ijcmas.2017.603.229