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Adoption of sugarcane production technology in Eastern U.P.

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Abstract

The adoption of sugarcane crop at large has tremendous change among the farmers of different group tn the country and more specific in the area of Eastern U.P. The adoption rate has increasing trend however, there are certain groups of clients, who still needs appropriate technological guidance and support by the extension functionaries meant for help of the farming group. The intention of carrying out this study was to know the level/extent of adoption of sugarcane crop technology adopted by the farmers of Eastern U.P. The study was carried out applying multistage sampling process. Two agro-ecological zones, six regions covered by K.V.K. were selected purposively. Out of these K.V.Ks districts, only two K.V.K. were selected randomly. In all 10 villages were selected and finally 200 respondents were selected through proportionate random sampling. The out comes of the study indicate that majority of the respondents belong to middle age group, lived in single family type, having middle education status belonged to the backward caste, have middle social participation, having the medium socio-economic status earned annual income in the range of Rs. 80001 to 160000 and above, have middle farm size, had Pucca home and having medium scientific orientation, economic motivation and risk orientation. Further, it is interesting to note that out of 13 practices selected under sugarcane crop cultivation six components were found having high adoption so far its ranking order is concerned. To mention, hoeing, irrigation, seed requirement, method of sowing, fertilizer and manure management and insect and disease control.

Key words: Scientific orientation, sowing, respondents, socio-economic

Introduction

Teaching, Research and Extension can play a crucial role in increasing production and rural development. Scientist, Teachers and Extensionists have made sustained research and extension efforts which resulted in development of modern high yielding production technologies. The technologies have revolutionized the farm production in India. An important pre-condition to a sound economy is balanced growth of research and extension systems. In fact, the two systems are complementary and supplementary to each other and must to go with co-operative efforts. But this was not fully realized and adopted. As a result of this, an imbalance in the technology development and its application created a wide gap between research, technology transfer and technology adopted or achieved by farmers. In other words, a big gap exists between the available technologies and their rapid transfer to the farmer.

An impotent goal of extension education is the transfer of technology which basically depends upon three systems i.e. the knowledge generating system, the knowledge disseminating system and knowledge consuming system. The knowledge generating system is regarded as research institutions, the members of the knowledge generating system consist of extension personnel's and other transfer of technology agencies. Besides, the knowledge disseminating system also includes the input supply agencies such as Banks, seed and fertilizers agencies and other input agencies related to agriculture and rural development. The main function of knowledge disseminating system is to transfer of technology of sharing of ideas to knowledge consuming system and collect feed back or response and pass it on to knowledge generating system. The knowledge consuming system consists of farmers, users of innovations and technology. Effective behavioural change and technology transfer could be possible when all three systems i.e. knowledge generating system, knowledge disseminating system and knowledge consuming system work in close co-operation and better linkages with other input agencies. It was attempted to find out the knowledge level of sugarcane growers about sugarcane production technology as received from knowledge consuming system.

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Research methodology

Multistage sampling process was followed to select the sample in the study undertaken. At first stage, two agro-ecological zones out of the three zones in eastern U.P. (viz. North East Plain Zone, Eastern Plain Zone and Vindhyan Zone) have been selected purposively. At second stage, the list of regions of two sample zones have been prepared. Since all the six regions are covered by Krishi Vighyan Kendras (KVKs) hence all six regions of two sample zones viz. 1. Devi Patan, 2. Gorakhpur, 3. Basti, 4. Faizabad, 5. Azamgarh, 6. Varanasi have been selected purposively. At third stage of sampling, those districts having Krishi Vighyan Kendras have also been selected purposively out of 22 districts in total falling under the six sample regions. At forth stage two Vighyan Kendras out of total number of KVKs located in sugarcane growing area was selected randomly. At the fifth stage, the list of villages covered from each sample KVK have been selected randomly whose total number was 10 at the last sixth stage of sampling the list of the farmers of all 10 sample villages with respect to their holding size have been prepared and thus 200 respondents have been finally selected from its respective list on the basis of proportionate random sampling. The data was collected through personal interview by the researcher himself with help of pre-structured interview schedule designed for the purpose of study.

Results and Discussion

Table 1 indicates the socio-economic level of sugarcane growers were mostly found of middle levels with respect to age (69.50%), family system single (74.50%), family size (68.0%), family educational status (60.5%), social participation (64.0%), socio-economic status (68.0%), farm size status of land ownership (74.0%), scientific orientation (70.0%), economic motivation (72.5%) and risk orientation (67.5%).

Extent of adoption of sugarcane practices by the respondents

The result pertaining to the extent of adoption of sugarcane practices in terms of mean and ranking order is presented in Table 2.

Table 2 shows the ranking position of adoption extent of sugarcane growers regarding sugarcane cultivation practices. It is evident from the table that hoeing was reported at I rank with its mean scores value i.e. 61.50 followed by in descending order, irrigation II (59.55), seed requirement III (56.50), method of sowing IV (55.33) fertilizer and manure management V (55.02), insects and pests VI (59.96), seed treatment VII (52.91), tieing of the crop VIII (52.77), sowing time IX (51.88),high yielding varieties X (50.22), better temperature for good germination

Table 1: Socio-economic profile of sugarcane growers

Socio-economic profile categories	No. of respondents	Percentage of respondents
1. Age		
Up to 39 (Young)	29	14.5
40-63 (Middle)	139	69.5
64 and above (Old)	32	16.0
Family Type		
Single	149	74.5
Joint	51	25.5
Family size		
Upto 4 members (Small) 18.0		36
5-11 (Middle)	136	68.0
6 and above (Large)	28	14.0
Family educational status		
Upto 2 (Low)	31	15.5
3-5 (Middle)	121	60.5
6 and above (High)		
Caste composition		
General caste	43	21.5
Scheduled caste	59	29.5
Other backward caste	98	49.0
Social participation		
Up to 3.00 (Low)		
4.00-6.00 (Middle)	128	64.0
& and above (High)	29	14.5
Socio economic status		
Up to 75 (Low)	30	15.0
76-109 (Middle)	136	68.0
110 and above (High)	34	17.0
Annual income (Rs.)		
Up to 40000	42	21.0
40001-80000	59	29.5
80001-120000	10	5.0
120001-160000	18	9.0
160001 and above	71	35.5
Farming experience		
Up to 25 years(Low)	30	15.0
21-30 (Medium)	48	24.0
31 and above	122	61.0
Family size status of land ownership		
Up to 0.5 acre (Low)	18	9.0
0.51-6.44 (Middle)	148	74.0
6.45 and above (High)	34	17.0
Housing pattern		
Hut	00	0.0
Kachcha	12	6.0
Mixed	82	41.0
Pukka	106	53.0
Scientific Orientation		
Up to 14 (Low)	35	17.5
15-21 (Medium)	145	72.5
22 and above (High)	17	8.5
Risk orientation		
Up to 14 (Low)	50	25.0
15-22 (Medium)	135	67.5
23 and above (High)	15	7.5

Table 2: Showing ranking order of sugarcane cultivation practices with respect to their adoption extent

sugarcane cultivation practices	Mean	Ranking order
1. High yielding varieties(HYVs)	50.22	X
2. Field preparation	40.31	XV
3. Better temp. for good germination	49.19	XI
4. Seed requirement	56.50	III
5. Seed treatment	52.91	VII
6. Fertilizer & manure management	55.02	V
7. Sowing timing	51.88	IX
8. Method of sowing	55.33	IV
9. Irrigation	59.55	II
10. Hoeing	61.50	I
11. Earthing	43.20	XIV
12. Tiening of the crop	52.77	VIII
13. Weed control	48.63	XII
14. Insect and diseases	53.96	VI
15. Harvesting	47.75	XIII

XI (49.19), weed control XII (48.63), harvesting XIII (47.75), earthing XIV (43.20), and field preparation XV (40.31),respectively.

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