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A STUDY OF THE FACTORS AFFECTING THE ADOPTION OF HYBRID-4 COTTON CULTIVATION

The distinguishing feature of the High Yielding Varieties Programme in Gujarat State is that Hybrid Cotton 4 has been evolved within the State at the Agricultural Research Station, Surat. This is a cross between Gujarat 67 and American nectarless variety. Consequently, hybrid cotton 4 enjoys a place of pride in the high yielding variety programme of the State. In view of the importance of this cultivation especially in Anand Taluk it was decided to take up a study on this crop.

The study sought to discover the adoption behaviour and rate of adoption of Hybrid Cotton 4 cultivation from farmers of Sarsa Village of Anand Taluk of Gujarat State. Lionberger (1964) reported that the highest rate of adoption of new improved practices were observed in the case of farmers of middle age. Lekshminarayana (1970) indicated that more adopters belonged to lower age group (below 45 years). Reddy and Kivlin (1968) pointed out that adoption of HYV tended to those with higher ritual caste rank. Patel and Singh (1970) observed that farmers with large size of holdings accepted farm planning more than others having lesser extent of holdings. Tripathi and Misra (1971) revealed that membership in farm organisations has positive relation with adoption index. Sharma and Nair (1974) reported that farm size is an important variable that effected the adoption of high yielding varieties. Singh and Choubey (1974) reported that a strong positive correlation existed between the operational farm size and the adoption of High Yielding varieties Technology. The present studies were undertaken with a view to identifying some personal and social characteristics of farmers which influence adoption behaviour, the influence of certain situational factors on adoption, the influence of social participation and adoption behaviour and the relative influence of various sources of farm informations used by them.

All the registered land growers of Sarsa Village of Anand Taluk of Gujarat State as recorded in the revenue records constituted the population. From the list the farmers were classified as those possessing below 5.00 acres, 5—9.9 acres, 10—14.9 acres and 15 acres and above. A random sample was drawn for the study by selecting ten per cent of the farmers from each class of the cultivators mentioned below. Cultivating land owners numbering 1164 constituted the population out of which 116 respondents were interviewed.

Data are presented in Table 1. Chisquare Test was done to study the significance of the size of holding on adoption in a 2×4 contingency

table ($\chi^2 = 21.042$). The value was highly significant which shows that adoption is dependent on size of holding. The classification of respondents in 3 caste groups was done using chisquare test in a 2 x 3 contingency table. The χ^2 value was highly significant which shows caste is positively associated with adoption. Maximum number of adopters were noticed in the intermediary castes (68.1%). Regarding age, the calculated value was not significant at 5.00 level. It means age is not related to adoption. But, medium and young age group have adopted more than old farmers. The calculated value of χ^2 (11.825) is higher than the table value at 2 d.f. (5.991) at 5.00 per cent level of significance in the case of education. This shows that education is positively related to adoption behaviour of farmers.

Table 1 Personal characteristics of **adoptors** and non-adoptors

variables	Details	No. of Adoptors N = 59		No. of Non-adopters N = 57		Total N = 116	
		No.	Per cent	No.	Per cent	No.	per cent
1	2	3	4	5	6	7	8
Acrage	Below 5 acres	27	36.50	47	63.50	74	100
	5—9.9 „	19	85.90	3	14.10	22	100
	10—14.9 „	7	53.84	6	46.16	13	100
	15 acres & above	6	85.71	1	14.29	7	100
Caste	Higher	6	54.5	5	45.5	11	100
	Intermediary	45	68.1	21	31.9	66	100
	Lower	8	20.5	31	79.5	39	100
Age	18—30 years	2	66.7	1	33.3	3	100
	31—50 years	30	50.9	29	49.1	59	100
	51 and above	26	48.2	28	51.8	54	100
Education	Illiterate	3	16.7	15	83.3	18	100
	Upto 7th Std.	37	54.4	31	45.6	68	100
	Above 7th Std.	20	66.7	10	33.3	30	100

1	2	3	4	5	6	7	8
Social participation							
	Panchayat	1	1.69	1	3.50		
	Service Co-operative	32	54.23	20	35.08		
	Farmers Club	2	3.38	—	—		
	Youth Club	2	3.38	—	—		
	Bhajan Mandal	—	—	1	1.75		
	Milk Producers Co-op. Society	51	86.44	34	59.64		
	Others	3	5.08	2	3.50		

Source of Farm Information

<i>Personal Sources</i>							
	Agri. Scientists	10	83.33	2	16.67	12	100
	Extn. Workers	51	51.50	48	48.50	99	100
	Progressive Farmers	37	46.80	42	53.20	79	100
<i>Impersonal Sources</i>							
	Res. Bulletins	2	66.67	1	33.33	3	100
	Leaflets and Booklets	41	56.16	32	43.84	73	100
	News Papers	50	49.01	52	50.99	102	100
	Radio	50	49.01	52	50.99	102	100
	Other sources, if any	—	—	—	—	—	—

It is also evident that 86.44 per cent adopters occupied membership in milk producers co-operative society, 54.23 per cent in Service Co-operatives whereas the representation of non-adopters was 59.64 and 35.08 respectively. Agricultural Scientists and Extension Workers were utilised more by adopter farmers in personal sources (83.33% and 51.50%) than non-adopter farmers. Regarding impersonal sources, adopter farmers use more of research bulletins, leaflets and pamphlets, (66.67, and 56.16 per cent) than non-adopter farmers.

സംഗ്രഹം

അത്യുൽപ്പാദന ശേഷിയുള്ള സങ്കരപരുത്തി കൃഷി ചെയ്തവരുടെ അംഗീകാരത്തോടും രീതിയും പരിശോധിച്ചുനോക്കിയതിൽ കൃഷിയിടത്തിന്റെ വിസ്തൃതി, ജാതി, വിദ്യാഭ്യാസം എന്നീ ഘടകങ്ങൾ അംഗീകാരവുമായി ബന്ധപ്പെട്ടിരിക്കുന്നതായി കണ്ടു. മറ്റൊരു ഘടകമായ വയസ്സും അംഗീകാരവും തമ്മിൽ സാരമായ ബന്ധം ദൃശ്യമായില്ലെങ്കിലും

ffISOiOJQJ)crv>^<9jri>99(Dിക്കാരാണു് കൂടുതലായി പുതിയ കൃഷിരീതികൾ അവലംബിക്കുന്നതായി കാണപ്പെട്ടതു്. അംഗീകാർക്കു് കൂടുതലായി ഗ്രാമീണസംഘടനകളിൽ അംഗത്വം കാണപ്പെടുകയും അവർ കൂടുതലായി കൃഷിശാസ്ത്രജ്ഞന്മാർ, വികസനപ്രവർത്തകർ, ലഘുലേഖകൾ, പത്രികൾ ഇവ അറിവുസമ്പാദനത്തിനായുപയോഗിക്കുന്നതായും കണ്ടു.

REFERENCES

- Lakshminarayana, H. D. 1970. "Differential characteristics of adopters and non-adopters of Farm Practices" *Behavioural Sciences and Community Development*, 4, 16—21.
- Lionberger, F. Herbert 1964. Adoption of new ideas and practices. The Iowa University Press.
- Patel, P. M. and K. N. Singh 1970. "Differential characteristics of adopters and non-adopters of Farm Planning," *Indian J. of Ext. Edn.*, 6, 96—102.
- Reddy, S. K. and J. E. Kivlin 1968. Adoption of High Yielding Varieties—A study in three Indian Villages. *Behavioural Sciences and Community Development*, 2, 121—142.
- Sharma, S. K. and Nair, G. T. 1974. "A multivariable study of Adoption of High Yielding Varieties of Paddy" *Indian J. Ext. Edn.* 10, 30—35.
- Singh, K. N. and Choubey 1974. "Operational Farm Size and Differential Adoption of High Yielding wheat Varieties Technology". *Indian J. of Ext. Edn.* 10, 41—46.
- Tripathi, S. L. and Chhotelal Misra 1971. "Socio—Personal Factors and New Ideas in Farming". *Rural India* 34. 84—89.

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