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Constraints in Adoption of Improved Cotton Cultivation Technology in Tribal Area

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ABSTRACT

The studies carried out during 1989 in tribal area of Kinwat Block (Maharashtra State). The purpose of the study is to identify the major constraints in adoption of improved cotton cultivation technology in tribal area. The results of the studies revealed that tribals facing major cosntraints were more costly seeds, lack of finance, high cost of irrigation, high cost of chemicals, non-availability of irrigation facility, high rate/prices of fertilizers, etc. In order to overcome these constraints, they should provide atleast seeds, fertilizers and plant protection chemicals on subsidised rate through co-operatives on time.

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INTRODUCTION

The tribals are away from the main stream of national development and they have their unique problem such as (i) problem of exploitation (ii) the problem of cultural crisis, (iii) accessibility problems of the areas inhabiting the tribals i.e. (a) majority live in hilly and forest areas having lack of infrastructure facilities i.e. means of communication, transport, marketing and (b)sparce population of the villages and dispersed habitats seriously limiting the possibility of social, cultural and economic development, (iv) lack of education, economic development, problems of health,. nutrition, housing etc.

Constraints are circumstances or causes which prohibit the farmers from adopting improved farm practices. Operationally constraints are defined as the degree of restriction by which the adoption of technology is either restricted or partially adopted by the farmers. A study of constraints is useful to know the impact of the transfer of technologies, which is considered to be the prime mover in the process of agricultural development.

Studies conducted in past by Sadamate (1978), Kulkarni (1979) and Gholve (1986) found that extent of adoption of technology in tribal area is quite low to medium level. Inspite of legislative efforts by the extension workers, researchers and the administrators, the adoption of technology among tribal farmer remained lower as compared to non-tribal farmers. Many scientists reported different constraints which are responsible for decreasing the rate of adoption of technology. Scattered settlements, un-economic holdings, traditional beliefs were reported causing high technological gap Kulkarni(1973) and Mishra (1974). Marketing, lack of irrigation and inadequate credit facilities are important constraints reported by Sadamate (1978). Kulkarni (1979) found that for both tribal and non-tribal farmers cosntraints like non-compatibility of technology, inefficient input and credit service and lack of knowledge about technology were responsible for

increasing the technological gap. The study was conducted with a purpose to identify the constraints faced by tribal farmers in adopting selected improved practices and to know the suggestions made by the tribal farmers to overcome the constraints in adoption of selected improved practices.

MATERIALS AND METHODS

The study was conducted in tribal area in Kinwat block of Nanded district of Maharashtra State. In all, 210 cotton growers were identified randomly. Constraints were measured by taking into consideration all the possible difficulties arising while adopting selected agricultural technology of cotton crop. Twenty six statements pertaining to constraints were listed. Each respondents was asked to indicate the constraints and the answer of the respondents to each statement was marked Yes/No. The score of 'one' and 'zero' was assigned to 'Yes' and 'No' answers to each item, respectively,. The scores on each statement were summated. Final score was calculated by covering the score into percentage. In the same procedure remedial measures suggested by the respondents in tackling these constraints were computed.

RESULTS AND DISCUSSION

Information pertaining to constraints faced by the tribal farmers while adopting selected improved technology of cotton crop is presented in Table 1.

TABLE 1

Distribution of respondents according to their cosntraints in adopting selected improved practices of cotton crop.

(N=210)

S. No.	*Constraints*	*Frequency*	*Percentage*
1.	Soil is not suitable for cotton cultivation	25	11.90
2.	Lack of awareness-knowledge of hybrid cotton seeds	102	48.57
3.	Non availability of pure and quality seeds	84	40.00
4.	More costly seeds	171	81.42
5.	Cotton seeds is susceptible to pests and diseases	82	40.47
6.	Improper germination of seed	88	41.90
7.	Lack of knowledge about the merit of using fertilizers	112	53.33
8.	Fertilizers availability is difficult	72	34.28
9.	High rate prices of fertilizers	151	71.90
10.	Fertilizers spoils the structure of soils	92	43.80
11.	Introduction of diseases and pests through application of heavy dose of fertilizers.	118	56.19
12.	Diversion of fertilizers to irrigated plots	65	30.95
13.	Lack of awarness-knowledge of plant protection measures.	150	71.42
14.	High cost of chemicals	161	76.66
15.	Application of plant protection is complicated technique.	142	67.71
16.	Non-availability of plant protection implements.	95	44.76
17.	Non availability of plant protection chemicals.	78	37.14
18.	Plant protection practices are against social customs.	137	65.23
19.	Labour requirement is high	104	49.52
20.	High cost of irrigation	165	78.57
21.	Non-availability of irrigation facility	155	73.80
22.	Lack of finance	167	79.52
23.	Non-availability of finance on time	153	72.85
24.	Lack of technical advice	145	69.04
25.	Non-availability of improved implements on time	138	65.71
26.	Lack of incentives from Government	119	56.66

It was evident from the Table 1 that a majority of the tribal farmers have experienced that they were facing various problems while adoption of improved agricultural practices of cotton crop. The major constraints identified were more costly seeds (81.42 per cent), lack of finance (79.52 per cent), High cost of irrigation (78.57 per cent), high cost of chemicals (76.66 per cent), non-availability of irrigation facility (73.80), non availability of finance on time (72.85 per cent), high rate/prices of fertilizers (71.90 per cent), lack of awarness-knowledge of plant protection measures (71.90 per cent) and lack of technical advice (69.4 per cent). Further they indicated application of plant protection was complicated technique as well as against social custom (67.61 and 65.23 per cent) and non-availability of improved implements on time (65.71 per cent).

Constraints like non-availability of plant protection implements (44.76 per cent) non-availability of plant protection chemicals (37.14 per cent) and non-availability of chemical fertilizers (34.28 per cent) were also expressed by the respondents.

The suggestions given by the respondents to overcome these constraints are mentioned in Table 2.

It was observed from the Table 2 that a majority of the tribal farmers had indicated constructive suggestions to overcome these constraints faced by them in adopting improved agricultural practices of cotton crop. The most important suggestions given by them were pure seeds, fertilizers and plant protection measures should be supplied through co-operative on time (80.95 per cent), followed by subsidy for purchase of improved seeds, fertilizers and plant protection chemicals (71.01 per cent), irrigation facilities should be made available by the government (75.23 per cent), farmers should be provided knowledge about seeds, fertilizers and plant protection measures (71.42 per cent), technical guidance at all levels should be provided timely through extension personnel working in the area (68.57 per cent).

TABLE 2

Distribution of respondents according to their suggestions to overcome the constraints.

(N=210)

S.No.	*Suggestions*	*Frequency*	*Per cent*
1.	Farmers should be provided knowledge about improved seeds, fertilizers and plant protection measures.	150	71.42
2.	Quality seeds, fertilizers and plant protection measures should be supplied through co-operative on time.	170	80.95
3.	Subsidy for purchase of improved implements.	127	60.47
4.	Subsidy for purchase of improved seeds, fertilizers and plant protection chemicals	163	77.61
5.	Preference to cotton growers in getting electric line.	115	54.76
6.	Irrigation facilities should be made available by government	158	75.23
7.	Cotton price should be fixed after studying the cost of cultivation and average production of area.	91	43.33
8.	Payment of cotton produce should be immediate.	102	48.57
9.	Technical guidance at all levels should be provided timely through extension personnal working in the area.	144	68.57
10.	Timely short duration training to the tribal farmers.	135	64.28

Besides, tribal farmers also expressed that they should provide timely short duration training, subsidy for purchase of improved implements, preference to cotton growers in getting electric line, immediate payment of produce and adequate cotton price to be fixed on the basis of average production of the area.

Tribals facing constraints like economical, situational, administrative, lack of irrigation facilities, inefficient input supply etc. hence they should provide at least seeds, fertilizers and plant protection chemicals on subsidised rate through co-operative on time. They should provide sufficient credit, timely service and skill training. The panchayat should be the unit of planning and implementation to be able to take into consideration the local resources and situational needs. Each panchayat should prepare detailed outline for farm planning. The extension agency and panchayat leaders should jointly implement the programme.

REFERENCES

Gholve, M. A. 1986. Socio-cultural and psychological correlates of tribal development in Kinwat block of Nanded district of Maharashtra State. Unpublished Ph. D. Thesis Parbhani, M.A.U.

Kulkarni, M. G. 1973. Problems of tribal development : A case study Pune : Gokhale Institute of Politics & Economics.

Kulkarni, R. R. 1979. An analysis of technological gap in tribal economic system. Unpublished Ph.D. Thesis, Parbhani, M.A.U.

Mishra, R. K. 1974. Co-operative sector as an instruments of economic change in tribal and hill areas. *Indian Cooperative Review*, **12** (2) : 115.

Sadamate, V. V. 1978. A study of tribal farming system and technological gap. Unpublished Ph. D. Thesis New Delhi : I.A.R.I.