

Differential Characteristics of Growers and Non-Growers of High Yielding Varieties

By

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ABSTRACT

Of the 12 characteristics studied only six were significantly and positively associated with the adoption of IR 8 rice by farmers. It was observed that the farmers with larger holding, higher education, higher income, more social participation and adequate credit facility were found to be the growers of IR 8 rice. They extensively used mass media and formal sources of information.

INTRODUCTION

Roy (1959) reported that one of the main reasons for non-adoption of Japanese method of rice cultivation was scarcity of proper irrigation facility. Sinha (1963) found that small size holders adopted less practices than large size of farm owners. According to Shankariah (1965) a formal education was a differential characteristic between the growers and non-growers of vegetables. Lionberger and Coughenour (1957) observed a significant relationship between membership in formal organization and adoption rating.

For an extension worker, a clear understanding of the differential characteristics of farmers among whom he works is very important. Such a knowledge will help him to locate potential farmers and work with them. The present study is, therefore, an attempt

to analyse the differential characteristics of farmers who grow or do not grow the high yielding variety, IR 8 rice.

MATERIALS AND METHODS

The investigation was carried out in four selected villages of Periyanaickenpalayam block of Coimbatore district, Tamil Nadu. From the sample villages, the farmers were grouped into categories as growers and non-growers of high yielding varieties of rice over a period of three years and they were listed separately, the number in each category being 123 and 142 respectively. From each category a sample of 60 farmers was randomly drawn. The data were obtained on a structured and pretested schedule through direct personal interview with the selected farmers.

The farmer's characteristics as: age, education, farm size, annual

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income, source of information, social participation, type of family, occupation, fragmentation of holding, irrigation facilities, land ownership and credit supply were analysed in this study. The test of chi-square was used to find out whether the growers and non-growers of IR 8 rice differed significantly among themselves with regard to their characteristics.

RESULTS AND DISCUSSION

Age: When the sample respondents were distributed by their age categories, it was found that there was no difference between growers and non-growers of IR 8 rice in respect of their age (Table 1).

Education: While analysing the distribution of farmers by different levels of education, it was observed that in case of non-growers, a considerable proportion of them (40 per cent) strikingly had no schooling at all while such illiteracy was only 15 per cent among growers. Slightly less than half of the non-growers (48 per cent) had however studied upto primary level and those who had reached the high school level of education was comparatively very low (12 per cent). Thus it is apparent that there was a marked difference in the educational status of growers and non-growers of IR 8 rice (Table 1).

Sources of information: For the majority of growers (80 to 87 per cent), the formal as well as mass media was the chief source of information. Among non-growers, the formal source was also found more popu-

lar with a majority of them (75 per cent); but the mass media was found to be less popular and effective with them as reported by only 20 per cent of non-growers. It is therefore inferred that the growers and non-growers of IR 8 rice differ in respect of the type sources of information on which they depend (Table 1).

Social participation: Among growers of IR 8 rice, 12 per cent had high level of social participation, 40 per cent low level of social participation, and the rest had no social participation. On the contrary, none of the non-growers were in the high level of social participation. Majority of non-growers, 77 per cent had no social participation and those with low level of participation accounted for 23 per cent only. This indicates that the extent of social participation of farmers is apparently an important factor in distinguishing the grower and non-grower categories (Table 1).

Farm size: It is widely reported that farmers with larger holdings are likely to be more prone to the adoption of new practices. As indicated in the Table 1, majority of the growers (53 per cent) were owning medium size holdings while the majority of non-growers possessed only small holdings. Further, one-fourth of growers (25 per cent) belonged to the category of larger holdings whereas the percentage of non-growers having larger holdings was about half of the growers of the same category (13 per cent). Thus, there is reason to believe that farmers with bigger size holdings favoured the adoption of IR 8 rice (Table 1).

Table 1. Differential characteristics of growers and non-growers of IR 8 rice

Characteristics and categories	Growers (n=60)	Non-Growers (N=60)
Age		
i. Young (upto 30 years)	9	11
ii. Middle age (31-50)	28	24
iii. Old age (over 50)	23	25
(X^2 value - 0.58 not significant)		
Education		
i. Illiterate	9	24
ii. Primary level (1-5 years)	32	29
iii. High school level (6-11 years)	19	7
(X^2 value-12.48 significant at 0.1 level)		
Sources of information		
i. Formal	52	45
ii. Informal	28	57
iii. Mass media	48	12
(X^2 value-31.26 significant at 0.01 level)		
Social participation		
i. No participation	29	46
ii. Low level	24	14
iii. High level	7	—
(X^2 value-10.26 significant at 0.01 level)		
Type of family		
i. Joint family	37	36
ii. Nucleus family	23	24
(X^2 value-0.02 not-significant)		
Occupation		
i. Agriculture alone	43	39
ii. Agriculture and other occupation	17	21
(X^2 value-0.60 not-significant)		
Farm size		
i. Small (1-5 acres)	13	33
ii. Medium (5.1-10 acres)	32	19
iii. Big (10.1 and above)	15	8
(X^2 value 14.84 significant at 0.01 level)		

Table 1 (Contd)

Land ownership

i. Owner

48

51

ii. Owner cum tenant

10

6

iii. Tenant

2

3

(X² value 0.50 not significant)

Fragmentation of holding

i. Fragmented

27

24

ii. Consolidated

33

36

(X² value-0.28 not significant)

Irrigational facilities

i. Adequate

24

27

ii. Inadequate

36

33

(X² value-0.28 not significant)

Annual Income

i. Low

9

25

ii. Medium

31

29

iii. High

20

6

(X² value-15.10 significant at 0.01 level)

Credit supply

i. Using own resources

21

6

ii. Securing loan at times

39

36

iii. Unable to secure loans

—

18

(X² value-17.44 significant at 0.01 level)

Annual income: A sound financial position is said to be an important factor affecting farmers' response to improved practices. As could be observed from the Table 1, one-third of growers (33 per cent) were getting him farm income whereas the proportion of non-growers receiving such high income was only 10 per cent. Among farmers with low income, a higher proportion belonged to non-growers category (42 per cent) while the proportion of gro-

wers with low income was comparatively very less (15 per cent) (Table 1).

Credit supply: Capital and credit are not adequately available to all farmers. One-third of growers (35 per cent) were able to meet the cultivation cost from their own resources and the remaining two-thirds were able to get loans at times when they were in need. Among growers, there was none who could not secure loans. On the contrary nearly one-tenth of non-growers (18 per cent) were unable to secure loans when they were in need.

Further the number of persons who were able to meet the cultivation expenses from their own resources was found small among the non-growers through 60 per cent of non-growers found it possible to secure loan at times. It is therefore apparent that the credit facilities were more adequately available to the growers of IR 8 and non-growers could not enjoy that much.

Other characteristics: In addition to the characteristics considered above, the other five characteristics namely type of family, occupation, land ownership pattern, fragmentation of holdings and adequacy of irrigational facilities were analysed. These characteristics consistently showed no marked difference in the distribution of growers among the different categories for the concerned characteristics.

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