Attitudes of Farmers Toward Farming in Trinidad

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Abstract

This study explored and described farmers' attitudes toward farming in Trinidad. It examined farmers' overall attitude, determined the attitude component factors, and how these varied based on selected farmer and farm system variables. The prevailing view that "farmers have unfavorable attitudes" was challenged. Some areas of "unfavorable attitudes" were identified and examined to determine if these were constant for all categorizations of farmers.

The results showed that overall, farmers had favorable attitudes toward farming, which varied based on some characteristics of the farmer and the farm system. No differentiation was evident on farmers' attitudes and attitude component factors based on gender, ethnicity and land tenure status. Also, from the three factors identified, technology belief showed the highest level of differentiation among farmers.

Introduction

Food production by limited resource farmers in small developing countries is quite complex and multifaceted. Farmers operating under conditions of limited and irregular access to the resources needed for production are likely to hold varied attitudes toward farming. The intensities of these attitudes would vary depending on their personal circumstances, access to and control over circumstances in their operating environment.

McGuire (1985) suggested that an attitude is a mediating process linking a set of objects of thought in a conceptual category which evokes a significant pattern of response. Van den Ban and Hawkins (1986) defined an attitude as the more or less permanent feelings, thoughts and predispositions a person has about certain aspects of the environment. They further described it as an evaluative disposition towards some object or subject which has consequences for how a person will act toward the attitude object. Consequently, a range of opinions as they symbolize attitudes and behavioral responses are to be expected in the farming sector.

Policy makers often lament the unfavorable attitude of farmers toward agriculture. The National Agricultural Development Plan (1989-1995) cited the perceived lower wages and incomes as the main reasons for farmers low participation in agricultural programs and projects, and set a major objective to increase the sense of appreciation for agriculture among them. Additionally, extension workers often verbally claim that this unfavorable attitude is one of the major reasons for low farmer participation in their programs and low technology utilization.

Furthermore, commonly held views are that " agriculture is not attractive to young people and that the future of the sector is in some way jeopardized by this" (Ministry of Agriculture Land and Marine Resources, 1995; p.15), and "agriculture is unattractive as a source of income and chosen path, and is held in low esteem" (Ministry of agriculture land and Marine Resources, 1993; p.14)

These claims have some support. Several local studies (Ganpat, 1993; Bholasingh, 1995) which measured the opinions of farmers and young farmers in specific environments, provided some evidence of less than favorable dispositions to farming. This type of evidence, in addition to the expressed feelings of extension workers, have informed the broad policy framework for planning of agricultural programs.

Problem

If farmers have unfavorable attitudes toward agriculture as claimed, the authors expect that, under normal circumstances, the agricultural industry would stagnate, and farmers may exit the industry depending

on external opportunities. Food production levels would be expected to decrease over time.

However, this notion of unfavorable attitudes conflicts with the review of domestic agricultural production (Ministry of Agriculture, Land and Marine Resources, 1995) which revealed that during 1981-1992 there were significant increases in the production levels of vegetables, poultry, milk, pork, rice and fruits; and that the production of root crops, legumes and beef and labor force participation in the sector was fairly constant.

The authors challenge the prevailing view that farmers generally have unfavorable attitudes toward farming. They believe that this claim is misleading; inferred from simplistic assessments, based mainly on single statements that measure more or less one attribute of farmers' overall attitudes. The results are that broad generalizations are made about all farmers, regardless of differing circumstances in their farming systems. Consequently, if action taken and programs planned are based on assumed unfavorable attitudes, then farm systems that have potential to further improve domestic agriculture would be left unattended.

The positive trend in food production recorded, suggested that farmers' attitude toward agriculture is probably positive in nature. However, there may be specific negative views/ opinions/ perceptions which will vary depending on the farmer's personal circumstances and system of farming. These should be identified as a first step toward improving any system.

Objectives

The objectives of this study are to:

(1) examine farmers' overall attitudes toward agriculture, and determine the component factors that form these attitudes; and

(2) determine the similarities and differences that exist in farmers' attitudes and attitude component factors by selected farmer and farm system variables.

Methods

A questionnaire was administered to 470 farmers in 1995 through personal field interviews. These farmers were selected from a population of 40,000 farmers by proportionate random sampling, to reflect the major agricultural commodities produced, and spatial distribution of farmers across Trinidad. The questionnaire was finalized in consultation with the two regional and eight county agricultural extension officers in the survey areas. It was pretested among five farmers, and modified accordingly, before being used. A 5-point Likert-type scale ranging from strongly agree to strongly disagree was used to measure respondents' level of agreement or disagreement to each of 27 items .

Attitude scale data were subjected to Likert and factor analytic techniques to define the scale and identify the operating factors that constitute farmers' attitudes. The item set before validation comprised 27 statements. A "Likert analysis" computer program developed by the Caribbean Agricultural Research and Development Institute (CARDI), Trinidad, was used to evaluate the item set, specifically to eliminate the items with low item to total correlation. The final attitude measure consisted of 22 items, 11 of which were positively stated and 11 negatively stated. Each item was scored from 1 to 5, with the weighting scheme reversed for unfavorable statements so that the higher values always indicated a more favorable attitude with respect to the attitude being measured. The summed score across items for a given respondent, therefore, ranged from 22 to 110, with scores greater than 66 indicating favorable attitudes, and scores 66 and lower an unfavorable attitude. Factor analyses on the 22 items were done to identify the operating factors that constitute farmers' attitude, using the Statistical Package for the Social Sciences (SPSS). Farmer and farm system data were also collected. T-tests examined the differences in total attitudes and component factors by these variables.

The final scale had good reliability (Cronbach α=0.97). R-type factor analysis of the Likert scale, using orthogonal varimax rotation, extracted three factors with Eigenvalues. 1. These factors were labeled and defined as follows:

Factor 1: Future of farming - the concern that farming has a bleak future; that farmers are powerless to change this direction, and would exit the industry at their earliest convenience.

Factor 2: Farming as a challenge - the opinions that farming is a challenging occupation, is dynamic, and that farmers are proud to be involved in the industry.

Factor 3: Technology beliefs - farmers' assessment of the risks versus the benefits of offered technologies, as well as their appropriateness and ease of learning.

Results

Description of Sample:

The sample (Table 1) consisted of a majority of farmers in the southern region (60.4%); mostly crop based (79.4%); farming mainly on a full time basis (51.3%); on more than 2 acres of land (66%); and a slight majority (57.2%) in short term enterprises.

The sample also reflected an older group (71.5%, older than 35 years of age); very experienced in farming (64.5% with more than 15 years experience); and a remarkably low level of education (72% with less than secondary level education). The majority of the interviewees were men (88%) of East Indian descent (72%).

Similarities and Differences in Overall Attitudes, Attitude Factors and Selected Statements (Tables 2 & 3):

Overall attitude:

Farmers' overall attitudes toward agriculture were moderately positive. This positive trend was maintained regardless of differentiation by region, enterprise type, enterprise term, farming status, tenure, age, farm experience, education level, gender, and ethnicity.

However, overall attitudes, though positive, were significantly different (p .01) when categorized by farming regions, farm size, enterprise term, and education. There were no significant differences when categorized by part time/full time status, enterprise type, land tenure status, age, farming experience, gender and ethnicity.

An examination of the component factors showed that farmers were generally positive about their future, ready to accept the challenges of farming, and positive in their technology beliefs.

Farm System Variables:

Regionally differentiated attitudes:

When segregated by farming regions, farmers' overall attitudes were positive and different (p.01). Farmers in the South region had a slightly more positive attitude than North farmers (Table 2).
While farmers in both regions were hopeful about the future of agriculture, southern farmers were more hopeful (p.01) compared to Northern farmers. They were also more positive in their technology beliefs (p.001). Farmers from both regions could not be differentiated in their view of farming as a challenge.

Part time/full time status:

Although part time and full time farmers were generally undifferentiated by their overall attitudes, they were different on the technology belief factor . Part time farmers were more positive in their belief about technology use (p.01) than full time farmers.

Farm size:

Farmers with more than 2 acres of land had stronger overall positive attitudes (p.01) than those on less than 2 acres (Table 2). They were also more hopeful about the future of farming and had stronger technology beliefs (p.01). They were undifferentiated on the farming as a challenge factor.

Enterprise type:

Crop and livestock farmers had similar overall positive attitudes (Table 2). Crop farmers, however, had stronger positive technology beliefs (p.001) than livestock farmers. Crops and livestock farmers could not be differentiated based on their concern for the future of farming and farming as a challenge factors.

Enterprise term:

Farmers engaged in the production of short term crops had stronger overall positive attitudes (p.01) and more favorable technology beliefs (p.001) and were more positive about the challenge of farming (p.05) than those engaged in the production of long term crops (Table 2). They were, however, similar in their concern for the future of farming.

Land tenure status:

Farmers with all types of land tenure arrangements were no different in their overall attitude or attitude component factors (Table 2).

Table 1

Sample Distribution for Farm System and Farmer Variables

Farm System Variables	Sample Size (%) (N=470)	Farmer Variables	Sample Size (%) (N = 470)
Region:		Age:	
North	186 (39.6)	<35 years	134 (28.5)
South	284 (60.4)	>35 years	336 (71.5)
Time Status:		Farm Experience:	
Full time	241 (51.3)	<15 years	167 (35.5)
Part time	85 (18.1)	>15 years	303 (64.5)
No response	144 (30.6)		
Farm Size:		Education Level:	
< 2 acres	159 (33.8)	Non/primary	342 (72.8)
> 2 acres	311 (66.2)	Secondary	128 (27.2)
Enterprise Type:		Gender:	
Crops	373 (79.4)	Male	415 (88.3)
Livestock	97 (20.6)	Female	55 (11.7)
Enterprise Term:		Ethnicity:	
Short term	269 (57.2)	Non Indo-Trinidadian	131 (27.8)
Long term	201 (42.8)	Indo- Trinidadian	339 (72.2)
Tenure:			
Private	262 (55.7)		
State/other	218 (44.3)		

Farmer Variables:

Age:

Old and young farmers had similar overall attitudes (Table 3). However, younger farmers had stronger technology beliefs (p.01), and felt that farming was more of a challenge (p.05) than older farmers. Both groups had similar views about hope for the future of farming.

Farming experience:

Farmers had similar overall attitudes despite differences in their farming experience (Table 3). However, those farming for less than 15 years had a stronger positive attitude toward technology use than those with more experience (p.01). They were undifferentiated by the other component factors.

Education:

Farmers with secondary level education were significantly more positive in their overall attitudes than those with none/primary education (p.001) (Table 3). They had stronger technology orientation (p.001) and were more hopeful about the future of agriculture (p.01).

Gender:

Farmers were undifferentiated in their overall attitude and attitude component factors based on gender (Table 3).

Ethnicity:

Farmers had similar overall attitudes, regardless of their ethnic background (Table 3). Both groups showed no differences on all the other factors and items investigated.

Conclusions

The purpose of this analysis of attitudes was not to investigate causal links to farmers' attitude, but rather to explore and describe their diversity in attitudes, as an initial step towards understanding farmers' behavioral responses.

Table 2

Overall and Component Factor Scores of Attitudes of Farmers by Farm System Variables

Farm System Variables	N	Overall Attitudes	Factor 1 (Hope for Farming)	Factor 2 (Farming as a Challenge)	Factor 3 (Technology Beliefs)
Region:					
North	186	70.42	13.66	23.51	15.77
South	284	72.15	14.56	22.97	17.27
t-value		-2.17**	-2.36**	1.72	-5.41***
Time Status:					
Part time	85	70.41	13.41	22.50	17.44
Full time	241	70.46	13.69	23.03	16.29
t-value		-0.05	-0.52	-1.18	2.83**
Farm Size:					
< 2 acres	159	70.01	13.64	23.88	16.27
> 2 acres	311	72.23	14.52	23.25	16.87
t-value		-2.69**	-2.23**	-0.55	-2.04**
Enterprise Type:					
Crops	373	71.71	14.16	23.11	16.98
Livestock	97	70.53	14.36	23.47	15.50
t-value		1.21	-0.42	-0.94	4.35***
Enterprise Term:					
Short term	373	72.31	14.34	23.44	17.03
Long term	97	70.33	14.01	22.85	16.20
t-value		2.52**	0.89	1.90*	2.96***
Tenure:					
Private	262	71.68	14.21	23.19	16.84
Other/state	218	71.66	14.30	23.15	16.62
t-value		0.03	-2.10	0.14	0.71
Eigen Value			2.88	2.0	1.0

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level.

The results of the survey showed a surprisingly high level of positivity among farmers, regardless of differentiation. This evidence supports the proposition that guided the study, and contradicts the statements from national documents used for planning purposes.

The importance of investigating differentiations was highlighted by the fact that overall attitudes, though positive, varied depending on characteristics of both the farmer and the farm system. Moreover, when overall attitudes are analyzed into component factors, the differentiations that exist are brought sharply into focus.

While some measure of differences existed on all factors investigated, major contrasts were evident on the "technology belief" factor. These differences should be an important consideration when planning programs aimed at increasing technology use by farmers.

Finally, we wish to suggest that more emphasis should be placed on the analysis of attitudes of farmers. Most organizations do their economic analyses well, as a pre-requisite for program planning. However, where program plans are to be developed based on the socio-psychological predispositions of farmers, these also need to be carefully analyzed.

Table 3

Overall and Component Factor Scores of Attitudes of Farmers by Farmer Variables

Farmer Variables	N	Overall Attitudes	Factor 1 (Hope for Farming)	Factor 2 (Farming as a Challenge)	Factor 3 (Technology Beliefs)
Age:					
< 35 yrs	134	72.16	14.64	22.73	17.20
> 35 yrs	336	71.16	14.04	23.34	16.47
t-value		1.13	1.40	-1.76*	2.31**
Farming Experience					
< 15 yrs	167	71.85	14.36	22.86	17.10
> 15 yrs	303	71.25	14.11	23.36	16.44
t-value		0.72	0.63	1.51	2.27**
Education:					
Primary	342	70.71	13.90	23.17	16.35
Secondary	128	73.59	15.00	23.25	17.59
t-value		-3.28***	2.62**	0.23	3.96***
Gender:					
Male	415	71.65	14.22	23.26	16.70
Female	35	69.81	13.92	22.67	16.45
t-value		1.49	0.51	1.20	0.56
Ethnicity:					
Non-indo Trinidadian	131	71.32	14.58	22.76	16.31
Indo-Trinidadian	339	71.14	14.01	23.18	16.66
t-value		0.19	1.24	-1.16	-0.43
Eigen Value			2.88	2.0	1.0

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level.

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