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COUNSELING BRAZILIAN FARMERS ON THEIR MANAGEMENT ACTIVITIES

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SUMMARY

The study identified some reasons that explain the limited use of scientific management tools by Brazilian farmers. A matrix of management activities was built to classify these reasons. Primary data used in the study were collected during two phases. During the first, 8 focus group manned by cash crop farmers, beef cattle farmers, and extension agents and counselors, were used to produce qualitative information. During the second phase, quantitative informations were collected via a survey with 494 individual questionnaires applied to the same public covered by phase one. For the statistical tests performed 95% of significance was required. Some conclusions of the study are: (1) farmers differ significantly from extension agents or counselors on farm management subjects; (2) farmers do not alter their strategic production plans in response to price changes or other signals perceived as short or mid term movements due to costs of changes in their production processes; (3) in organizing their human resources structure farms tend to concentrate into their hands amounts of responsibilities larger than they can handle; (4) in organizing their financial flows there is a large gap between the desired level of details and their abilities to collect the data; and (5) the major difficulties faced in the function of controlling are linked with problems of collecting data. This is due to low levels of formal education that characterize the farm-hired labor.

Key words: Brazilian farm management; counseling farmers; matrix of management activities.

INTRODUCTION

Several studies have shown that better farm management practices result in better economic results. It means that by explicitly increasing farmer's adoption of the so called management functions – planning, organizing, direction, and control – will contribute to increase farmer's profits (Phillips & Peterson, 1999; Miller et al., 1998). On the other hand, even though this positive correlation is observed, most farmers in Brazil still does not formally utilize several practices that are though to increase their returns (Meira, 1996; Dalmazo & Albertoni, 1991).

In Brazil, several farm managers are loosing their competitive status and are leaving the sector. It has also been observed that extension agents and private technical consultants (College of Agriculture graduates and Veterinarian Doctors) are not enough involved with farm management techniques (Olinger, 1998; Lima et al., 1995; Guadagnin, 1995; Geraldo, 1991). The study addresses the problem associated with the degree of ignorance by farmers about the management tools available to them and the degree of knowledge about those techniques held by the extension agents and private technical consultants that offer their service to the farmers.

The objective of the study is to describe how commercial farmers presently manage their business and to identify the reasons that explain the low use of formal management techniques among them. It also intend to evaluate how farmers, consultants, and extension agents perceive the management processes being used in the sector and propose alternative tools that may be used by farmers. extension agents and private technical consultants.

METHODS

Expression [1] shows a relation where the management process (PA) is related to the management functions (FA_i) with i = 1,2,3,…,n and those n functions are, by their turn, related to management activities (AA_{ji}) with j = a,b,…,z.

$$PA = f\{FA_1(AA_{a1},AA_{b1},\ldots AA_{z1});FA_2(AA_{a2},AA_{b2},\ldots AA_{z2});\ldots;FA_n(AA_{an},AA_{bn},\ldots AA_{zn})\} \qquad [1]$$

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Table 1 shows 32 sub-sets of management activities as distinct elements of an 8 by 4 matrix. The 8 rows represent the four management functions considered - planning, organizing, direction, and control – each evaluated at the strategic or operational level. In the four columns the management areas – production, finance, commercialization, and human resources - were considered. Each element of the 8x4 matrix represents a management activity of the 32 considered by the model.

Table 1 – Matrix of management activities

Management Function\Areas	Production	Finance	Commercialization	Human resources
Strategic planning				
Operational planning				
Strategic organization				
Operational organization				
Strategic direction				
Operational direction				
Strategic control				
Operational control				

Primary data were collected through a survey among farmers and extension agents and private farm consultants. Initially, eight focus groups, manned by cash crop farmers (2), livestock producing farmers (2), and extension agents and private farm consultants (4) were used to produce qualitative information. From the transcript of the eight focus groups questions were raised to build a questionnaire used to collect quantitative data on the view of the population. They were applied to a sample of 494 farmers and technical expertise. Most of the questionnaires were sent by mail and a smaller part was directly applied. In both cases the person answering the questionnaire had to interpret themselves the questions.

Among the interviewed 159 declared to be cash crop farmers, 82 declared to be livestock producers, 54 declared to be extension agents or consultants to cash crop farmers, 39 declared to be extension agents or consultants to livestock producing farmers, and 160 declared other rural activities or more than one of the above options. 100 interviewed declared to be less than 30 years old, 147 declared to be in between 31 to 40 years old, 124 declared to be in between 41 and 50 years old, 112 declared to be 51 years or older, and 11 did not declare their age.

Fifty-eight members of the sample have attended the first eight years of elementary school or less, 109 attended some or all class of secondary school, 312 have a college degree, and 15 did not indicate their formal education. The interviewed were from 15 different states of Brazil but highly concentrated in the State of Parana (366). 47 were from São Paulo State, 33 from Mato Grosso do Sul, and 38 from other states. 10 interviewed did no state their place of work or indicated more than one state.

The median was used as the statistical central measure. The option of using the median was due to the ordinal nature of the variables considered in the study. Grades from one to ten were attributed to most statements associated with the cells of the 8x4 management activity matrix according to the degree of accordance the respondent showed with each statement. The median value showed: (a) the degree of concordance (or discordance) with each statement; (b) the degree of concordance (or discordance) indicated by the majority of each sub-set that comprised the sample – cash crop farmers, livestock producers, cash crop production experts, livestock production experts, and other rural activities. The significance level was set at 5%. The qui-square test of the likelihood ratio (G^2 test) was utilized to identify the existence of association between the interviewed major activity and each statement of the questionnaire.

RESULTS

The focus groups showed that several factors limited farmer's management efficiency: low levels of knowledge, absence of important abilities, the presence of negative farmer's attitudes, and lack of certain farmers' internal socio-economic conditions. It was hypothesized that the low level of knowledge of both, the farmers and the extension agents and farm consultants, was due to deficiencies in the groups' formal education and to the kind of experience both groups accumulated.

The absence of appropriate farm management models were hypothesized to be due to: (a) high financial cost of implementing efficient control systems, given that available rural labor have low formal educational levels; (b) the poor human resource organization within the farm therefore producing a large accumulation of responsibilities with the farm manager reducing its management effectiveness; (c) the farmer's lack of ability to organize an accounting plan that would allow the analysis of the contribution of each farm activity to the firm's result.

Several hypothesis were suggested to explain the farmers and extension agents and farm consultants' negative attitude toward the use of management tools: (a) the fact that other factors like weather conditions, agricultural policies, and government interventions on the markets have always been more important than the use of management tool to the firm's result; (b) the fact that traditionally farmers aim more at higher yields than at using more efficient management tools; (c) the fact that extension agents and farm consultants have historically aimed at increasing crop yields instead of looking at overall farm efficiency; (d) the fact that farmers negatively react to supply data on their effective financial situation hindering the use of accounting tools; (e) the fact that technical assistance to all aspects of a farm firm would cost more than the traditional technical assistance provided in a basis of each crop either by extension agents or by private farm consultants.

The following results were obtained through the grades given by the respondents of the questionnaire: (1) the familiar nature of the farm firm sometimes lead it to aim at objectives different from those prescribed by profit maximization criteria; (2) there are important and significant differences in the perception of farmers and consultants and extension agents about the best way to manage a farm firm; (3) the low participation of consultants and extension agents in the management of the firms are mainly due to farmers resistance to accept or to demand their help. Farmers believe that technical assistance should came mainly on crop yield matters and less on management issues; (4) presently, both farmers and technical experts believe that new requirements are due in terms of management processes. This suggests that the demand for farm management counseling services will increase in the near future; and (5) farm management counseling services will have to consider the specificity of each farmer objectives instead of providing general counseling. The importance of strategic and operational management activities differ according to the kind of farm firm being considered. Table 2 shows the level of relevance of each management function for different referential farm firms. Level 5 means highly relevant, while 1 means not relevant.

When analyzing the limiting factors that hinder the formal use of planning, results show that: (a) farmers do not systematically change their strategic production plans to adjust to new market signals due to the costs associated with changes in the production process; (b) in financial planning producers normally direct their resources to fixed assets or increasing stocks. By doing so they hinder family demands for increasing consumption levels.

When analyzing the limiting factors that hinder the formal use of organizing functions results show that: (a) farmers tend to overinvest in their stocks of machinery and equipments and in the number of fixed employers aiming the reduction of production risks; (b) in organizing their financial systems there is a difficulty in using the available software. They demand too much time for data collection increasing the management costs.

Table 2 - Estimates on the importance (relevance) of strategic and operational management for different reference farm firm.

	Reference farm firms						
	Grain	Beef Cattle	Sugar Cane	Coffee	Poultry	Horticul ture	Small Farm
GE[1] Production	4	4	3	4	3	4	4
GO[2] Production	5	3	3	4	4	5	5
GE Finance	3	3	2	3	2	4	3
GO Finance	5	3	2	3	2	5	2
GE Commercialization	3	4	1	3	1	5	2
GO Commercialization	4	4	1	4	1	5	3
GE Human resources	3	2	1	3	3	3	3
GO Human resources	4	2	1	4	4	4	4

Source: Canziani, 2001.
Obs: 5 means highly relevant, while 1 means not relevant
[1] GE (Strategic management)
[2] GO (Operational management)

When analyzing the limiting factors that hinder the function of directing the farm firm results show: (a) farmers does little delegation of functions generating excess demand on their time; (b) the operational direction of production absorb most of the farmer time therefore reducing the efficiency of the other direction functions.

Finally, when analyzing the limiting factors that hinder the function of controlling results show: (a) the low level of knowledge, insufficient abilities, and negative attitudes of the hired labor toward control activities makes it difficult to collect data to feed the analytical models; (b) most of the software found in the market for controlling farm activities require better labor quality than it is available.

CONCLUSIONS

Results of the study point out to the indication that the familiar nature prevailing in the agricultural sector requires special analytical tools to describe the management of the firm. The managing process varies with the firm's production system and the farmer personal characteristics. Therefore, counseling farmers on management matters must have a low degree of generalization.

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