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Farmers' Professional Satisfaction with the Rural Production Cooperative Approach

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ABSTRACT

The primary purpose of this study was to assess the professional satisfaction of Rural Production Cooperative (RPC) members. The secondary purpose was to investigate the professional characteristics of RPCs' farmers, and determine the RPC members' attitudes toward cooperative farming. The population of this study consisted of all 2000 rice-growing members of four RPCs in rural Mazandaran, a northern province of Iran. Using a complete randomized sampling technique, 320 members of the population were selected for the study. A questionnaire consisting of three parts was designed to collect the data needed for the study. The results showed that cooperative farming substantially increased farmers' crop yields and lowered their farm operational and maintenance costs. Members reported particular savings in the area of farm labor expenses. More than 90% of the farmers indicated that cooperatives enabled them to have more access to agricultural machinery, which resulted in the efficient use of farm resources. About 64% of the farmers were considered to be practicing a "high" level of mechanization on their rice fields. The members generally had a positive and favorable attitude towards the cooperative and its activities. The mean score on staff professional satisfaction was 2.4 (2= Somewhat satisfied; 3=Satisfied), with a standard deviation of 1.6. There was a statistically significant relationship between members' professional satisfaction and their attitude towards the cooperative (r=0.645). This is considered as a "substantial association". A Multivariate Linear Regression indicated that among the independent variables, the farmers' level of participation in the cooperative's activities, their attitude towards the cooperative, and the amount of land owned by farmers could together explain 68.8% of the variability in members' professional satisfaction. This implied that there are other factors that may have contributed substantially to the variations in farmers' professional satisfaction that were not investigated in this study.

Keywords: Attitude, Cooperative, Educational Program Planning, Mechanization, Participation.

INTRODUCTION

In some less developed countries, despite the progress recorded in the status of general agriculture, most people still live in the rural areas dominated by subsistence agriculture, while rural-urban migration is accelerating, and the agricultural production system is characterized as utilizing low-technology (World Bank, 1999). In a situation like, the Rural Production Cooperative (RPC) approach could play an important role in the development of rural areas. By establishing RPC, farmers initiate a path towards a process of modernizing their farming situation (Abdollahi, 1999).

A universally accepted definition of "cooperative" has not been reported in the literature, however three basic principles capture the essence of a cooperative enterprises and they are: user-ownership (users provide the

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equity investment in a cooperative and have an ownership claim on its assets), user-control (users elect directors and democratically decide other key issues for their cooperative), and user-benefits (users receive both the services provided and a share of the earnings on the basis of how much business they conduct with the cooperative). Tommy Engelke, an executive Vice President of the Texas Agricultural Cooperatives Council, emphasizes two of a themes strategy for co-operatives to succeed in the 21st century. First, greater investment is needed in the people who make up a cooperative. Members, directors, managers and advisers must have the skills required to deal with 21st century issues. Second, he placed an emphasis on pragmatism and profitability. Cooperatives are businesses, and they should focus on solving business problems and provide valuable services to their members. Engelke (2001, as reported by Davis, 2002), suggests some proactive behavior that should be adopted by cooperatives in order to progress successfully in the 21st century. Some of his suggested behaviors that could be labeled as "characteristics of progressive cooperatives" are as follows: accept and embrace change; strengthen cooperative leadership; maintain a solid equity base; emphasize education; seek efficient structures; forge a strong public policy presence; and make decisions based on cooperative principles.

Until recently, rural farmers in Mazandaran (a northern province of Iran) had been operating their farms traditionally with almost no mechanization used. Some of the major challenges facing these farmers in the past had been land size and that their land holdings were apart from each other, which makes it practically impossible and not economically feasible for an individual farmer to utilize any mechanization (Sadighi and Darvishinia, 2002; Lahsaeizadeh, 1990; Fazel, 1980). RPC helps subsistent farmers by incorporating their land holdings with those of neighboring farmers to begin the process of a cooperative approach to farming. In this context, RPCs are instrumental in facilitating the utilization of farm machinery and efficient use of farm resources resulting in improved crop yields and higher incomes for individual members (Abdulrahman and Smith, 1996). Studies have shown (Abdolahi, 1999; Anonymous, 1995; Sadighi and Darvishinia, 2002) that RPCs are also instrumental in enhancing farmers' professional satisfaction, and reducing rural farmers' migration to urban areas, which has positive social and national implications for the country.

The decision to start a Rural Production Cooperative (RPC) should be taken by the people who will join the cooperative and operate it, because co-ops are owned and operated by members and serves the needs of its members, In any cooperative, cooperation is an important principle (Maricle, 1991), and could be the beginning of the development of a new spirit of cooperation in the community. This cooperation often leads to the organizations learning to work together. When people discover what they can accomplish together via a cooperative, they're ready to try other projects (Davis, 2002; Abel, Thomson and Maretzki, 1999).

The cooperative is becoming a popular method of organizing business nowadays. It is about, empowering, and enriching people's lives. The basic agricultural cooperative has given inspiration and enthusiasm to some nontraditional agricultural and non-agricultural enterprises in such a way that, today, one in every four individuals is a member of some forms of cooperative (Anonymous, 1993).

The idea of cooperatives is compatible with agricultural Extension's goals. Many extension home economists in the United States are already teaching some of the skills necessary in operating cooperatives. Experience in Michigan shows that it's best for the extension agent to begin by working with a small group of 25 to 35 families in a relatively small geographical area. Once the first group is off to a good start, the idea will often catch on by itself and soon members of the co-op will be helping others in the area to get a similar group started (Abdel *et al*., 1999; Maricle, 1991; Fabiyl, 1983). Coop-

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eratives provide an excellent opportunity for Extension programming that can have a positive impact on individuals and a community (Warner and Christenson, 1984). Because co-op members learn by doing and help themselves in the process, the skills they learn will have a lasting effect on the quality of their lives. Extension's contacts with community members and access to media can be instrumental in getting a group started. The Extension office can then serve as a contact point where interested people can get in touch with one another. The agent can teach the skills necessary to run an effective organization. Technical skills such as the establishment of by- laws, incorporation as a cooperative, sales tax licenses, and other necessary steps are easily learned and re-t aught by extension personnel. Once the cooperative is running smoothly, extension can help by providing continuing education (Abdel, *et al*., 1999; Maricle, 1991; Chase, 1983), to its members.

The main purpose of this study was to assess RPC's members' professional satisfaction. The more specific objectives of the study were to:

1. determine professional characteristics of the RPCs' farmers;
2. determine the RPC members' attitude towards the TPC approach to farming;
3. determine the relationship of RPC members' professional satisfaction with the farmers' technical and individual characteristics; and
4. determine how much of the variance in members' professional satisfaction could be explained by independent variables in the study.

METHODOLOGY

The design of this study was descriptive-correlational in that was carried out by a survey method. The population of this study consisted of all 2000 rice-growing members of four rural production cooperatives that had been established among rice farmers in rural Mazandaran province, located in the north of the country alongside of the Caspian Sea. By a complete randomized sampling technique, 320 members of the population were chosen as a sample for the study. Sample size and sampling technique are supported by the studies of Krejcie, and Morgan (1970). A questionnaire consisting of three parts was designed to collect needed data for the study. In constructing a suitable questionnaire for the study, the authors were aided by pervious related attitude studies (Sadighi, 2002; Sadighi and Akhondi, 2001; Sadighi and Mohammadzadeh, 2002). The first part of the questionnaire was related to information on the characteristics of professional staff, including the level of members' participation in the RPC's activities, and the level of mechanization practiced by farmers in the co-ops. The level of Mechanization was determined by the following procedure: Farmers were provided with a list of equipment that could possibly be used on a rice field, and they were asked to determine their level of usage on the basis of hours used per growing season, per year. Hours used were divided by the hectares of cultivated land to come up with the hours used per hectare. Then, by adding up the scores of the 16 machinery items the mechanization level was determined.

The second part of the questionnaire was designed to gather data on members' attitudes towards the cooperative. A set of 22 questions was designed to measure the members' attitude. An overall attitude score for each respondent was assessed by computing and adding up all responses to the 22 questions (based on a Likert's scale ranging from 0 to 5). The third part of the questionnaire was designed to measure the members' professional satisfaction. A set of 18 questions was prepared for this purpose. Members' reactions to the 18 statements that covered all aspects of cooperatives' objectives and ranged from "strongly disagree" (equal to zero) to "strongly agree" (equal to 5), were recorded and summed to determine the member's professional satisfaction score. In order to characterize the members' attitude, the following formula: [Dissatisfied=A:

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Minimum score≤ A< Mean score - St.dev.; Relatively satisfied=B: Mean score - St.dev. ≤ B< Mean score; Satisfied=C: Mean score ≤ C < Mean score + St.dev.; Very satisfied = D: Mean score + St.dev. ≤ D ≤ Maximum scores] was applied and the four categories shown in Table 2 were established.

RESULTS AND DISCUSSION

Findings are presented and discussed here for each objectives and followed in the order that appeared on "purpose and objective" section.

Objective One

The mean age of the respondents was about 44 years; their minimum and maximum ages were 32 and 79 years, respectively. The average number of years of formal education obtained by the farmers was 8 years. Almost all of the members of the cooperative were considered to be subsistence farmers. The mean hectares of land owned and cultivated by the farmers was 2.36 hectares; the minimum and maximum land areas were 0.5 and 12.30 hectares, respectively. The respondents had in average 2.62 land holdings that they farmed on. The results showed that cooperative farming substantially increased farmers' crop yields and lowered their farm operational and maintenance costs. Members reported particular saving in the area of farm labor expenses. More than 90% of the farmers indicated that cooperatives enabled them to have more access to agricultural machinery, which resulted in efficient use of farm resources. About 64% of the farmers were considered to be practicing a "high" level of mechanization on their rice fields. The members generally had a positive and favorable attitude toward the cooperative and its activities. Table 1 shows the farmers' mean responses to key questions on attitude section of the questionnaire.

Objective Two

The mean score on staff professional satisfaction was 2.4 (2=Somewhat satisfied; 3= Satisfied), with a standard deviation of 1.6. The findings indicated that 47.1 % of the farmers are either "satisfied" (27.8%) or "very satisfied" (19.3%) from the professional operations of the cooperatives (Table 2). There was a statistically significant relationship between members' professional satisfaction and their attitude towards the cooperative (r=0.645). This is considered as a "substantial association" (Davis, 1970; Table 4). This supports the findings in the literature (Sadighi and Darvishinia, 2002),

Table 1. Farmers' general attitude towards the cooperative's key activities.

Variables	Mean	Std. Dev.
1. Improvement of production yields	3.69	1.56
2. Reducing labor expenditure	5.00	1.79
3. Improvements of general economic status	4.25	1.64
4. Willingness to buy more share	3.87	1.99
5. Better access to agricultural inputs	4.35	1.81
6. More access to agricultural machinery	4.56	1.95
7. Efficient control of farm' pests and insects	3.83	1.67
8. More access to technical information	4.12	2.12
9. Having a more reasonable selling price	4.50	1.89
10. Better marketing	4.65	2.15
11. Better storage facilities	4.00	1.79
12. Reduced intermediaries in marketing	5.00	1.03
Collective Attitude toward cooperative	4.31	1.48

n=320; Not at All=0; Very Little=1; Little=2; Do not know=3; Much=4; and Very Much=5

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which implies that members' professional satisfaction enhances as their attitude towards the cooperative improves on a continuum from 0 to 5.

The level of members' participation in the co-op's activities showed to have a positive and statistically significant relationship with their professional satisfaction (r=0.299). This is considered to be a moderate association with satisfaction (based on Davis's convention). The size of land owned by farmers showed to have a statistically significant and positive relationship with their professional satisfaction (r=0.229), with a low association (Table 4).

The result of a bivariate correlation test showed that age of the respondents has a negative relationship with their professional satisfaction. In contrast to age, the respondents' level of formal education was shown to have a positive relationship with their satisfaction. There was a statistically significant relationship between the level of mechanization practiced on their farms and the farmer's level of professional satisfaction (r=0.164), which is a low association (Table 4).

Table 4. The Davis (1971) Convention.

The Coefficient's Magnitude	Characterization
±0.70	A very strong association
± 0.50 to ± 0.69	A substantial association
± 0.30 to ± 0.49	A moderate association
± 0.10 to ± 0.29	A low association
± 0.01 to ± 0.09	A negligible association
0.000	No association

Table 2. Farmers' professional satisfaction distribution levels.

Professional Satisfaction	Frequency	Percent	Cumulative Percent
Dissatisfied	52	16.8	16.8
Somewhat satisfied	115	36.1	52.8
Satisfied	88	27.8	80.7
Very satisfied	61	19.3	100
Total	316	100	

Objective Three

A Multivariate Linear Regression indicated that, among the independent variables, the farmers' level of participation in coop's activities, their attitude towards the cooperative, and the amount of land owned by farmers, together could explain about 68.8% of the variability in members' professional satisfaction. This implied that there are other factors that may have contributed substantially to the variations in farmers' professional satisfaction that were not investigated in this study. The independent variables with intervertial data were used in a multivariate linear regression which included the participants' age, level of formal education, level of participation in cooperative activities, number of land holdings, amount of

Table 3. Correlation between the farmers' professional satisfaction and their characteristics.

	Professional Satisfaction	
Variables	*r*	*ρ*
Age (year)	-0.108	0.56
Education (year)	0.012	0.831
Land (ha)	0.229*	0.015
Land holdings (ha)	0.217*	0.021
Participation level in coop's activities	0.299*	0.031
Mechanization level	0.164**	0.000
Attitude toward cooperative	0.645**	0.000
Number of coop's stock owned	0.003	0.952
Annual income	0.076	0.178

**p<0.001; *p<0.05

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land owned by individual farmer, the members' attitude toward cooperative, their annual income, mechanization level practiced by farmers, and number of share owned by farmers. Utilizing the Backward Elimination method, the variables of attitude, hectares of land, and farmers' level of participation remained in the regression equation and the other variables were eliminated. Table 5 gives the details of the Multivariate Regression Analysis.

The regression analysis provides variables with a statistically significant level (as shown in Table 5), so the following predication equation was formulated to estimate the members' professional satisfaction with the cooperative.

$Y = -3.123 + 0.640 (X1) + 0.448 (X2) + 0.324 (X3)$

where Y = The RPC members' professional satisfaction.

Table 5. Multivariate Regression Analysis (Attitude toward PTD as a Dependent Variable).

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
Constant	-3.123	1.179		-2.648	0.009
Attitude toward cooperative (X1)	0.640	0.056	0.491	11.340	0.000
Participation level in coops' activities (X2)	0.448	0.050	0.396	8.929	0.001
Land owned (X3)	0.324	0.099	0.108	3.266	0.001

R^2=0.688

CONCLUSIONS

1. The results showed that cooperative farming substantially increased farmers' crop yields and lowered their farm operational and maintenance costs. Members reported particular savings in the area of farm labor expenses.
2. More than 90% of the farmers indicated that cooperatives enabled them to have more access to agricultural machinery, which resulted in the efficient use of farm resources. About 64% of the farmers were considered to be practicing a "high" level of mechanization on their rice fields.
3. The members generally had a positive and favorable attitude towards the cooperative and its activities.
4. There was a statistically significant relationship between members' professional satisfaction and their attitude toward cooperative (r=0.645). This is considered a "substantial association".
5. A Multivariate Linear Regression indicated that among the independent variables, the farmers' level of participation in their co-op's activities, their attitude towards the cooperative, and the amount of land owned by farmers could explain 68.8% of the variability in members' professional satisfaction. This implied that there are other factors that may have contributed substantially to variations in farmers' professional satisfaction that were not investigated in this study.
6. This study indicated that a cooperative approach to farming plays an important role in improving farm mechanization, resulting in higher crop yield and more income to individual farmers. Also, Extension educational activities through cooperatives can be carried out more efficiently. This is realized because of a proper needs assessment and delivery methods that reached more target groups per programming. In addition to the RPCs' social, economic, and professional advantages to members, a cooperative approach to farming should be promoted because it helps to improve ru-

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ral development and the nation's food security.

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رضایتمندی حرفه‌ای کشاورزان نسبت به رهیافت تعاونی تولید روستایی

ح. صدیقی و ا. ا. درویشی نیا

چکیده

هدف اصلی این تحقیق بررسی رضایتمندی حرفه ای کشاورزان نسبت به راهکار تعاونی تولید روستایی بود با امید به اینکه دستاوردهای این مطالعه بتواند در توسعه تعاونی‌های تولید مفید واقع شود. جامعه آماری این تحقیق را اعضاء شرکتهای تعاونی تولید روستایی استان مازندران که جمعا" ۲۰۰۰ نفر بودند، تشکیل دادند. تعداد ۳۲۰ نفر به روش نمونه‌گیری کاملا" تصادفی بعنوان نمونه‌های آماری تعیین گردیدند. این تحقیق به روش پیمایشی (Survey Research) انجام شد و پرسشنامه‌ای جهت گردآوری داده ها تهیه شد. آزمون پیش آهنگی (Pilot Test) بمنظور برآورد ضریب اعتبار پرسشنامه انجام شد و ضریب کرونباخ الفا ۰/۸۴۹ به دست آمد. کشاورزان عضو شرکت تعاونی را برنجکاران خرده پا تشکیل دادند که میانگین زمین زراعی آنان ۲/۳۶ هکتار بود. نتایج نشان می‌دهد کشاورزان نگرش نسبتاً خوبی نسبت به تعاونی های تولید روستایی داشته اند و میزان رضایتمندی اکثر آنان از تعاونی‌ها در حد میانگین ۲/۴ (نسبتاً رضایتمند=۲؛ رضایتمندی کامل=۳) برآورد شد. وضعیت اعضای تعاونی‌ها نشان می‌دهد که اکثریت آنان در فرایند فعالیتهای زراعی از عملکرد زراعی مطلوبی برخوردار بودند و در هزینه های جاری خود بخصوص هزینه‌های کارگری و نگهداری و ادارهٔ مزارع صرفه جویی‌های قابل توجهی داشتند که موجب بهبودی وضعیت اقتصادی آنان نیز شد. بیش از ۹۰٪ کشاورزان تأکید داشتند که عضویت در تعاونی های تولید باعث شده تا دسترسی بیشتری به ماشینها و ادوات کشاورزی داشته باشند و این امر موجب استفادهٔ بهینه از منابع موجود نیز شده است. بین میزان مشارکت اعضاء و موفقیت شرکتهای تعاونی تولید روستایی رابطه مثبت و معنی‌داری مشاهده شد. بیش از ۷۲٪ اعضاء ابراز داشتند که در قالب تعاونی‌ها برنامه‌های آموزشی و ترویجی براساس نیازهای واقعی آنان طراحی می‌شود و در این خصوص رضایتمند بودند. نتایج این تحقیق نشان داد که برنامه‌های آموزشی - ترویجی نقش مهمی را در میزان موفقیت تعاونی‌ها ایفا می‌کنند. رگرسیون چند متغیره نشان داد که از بین متغیرهای مستقل تحقیق، بیش از ۶۸٪ تغییرات در میزان رضایتمندی اعضاء را میزان مشارکت، میزان مالکیت زمین، و نگرش آنان نسبت به تعاونی‌ها تبیین می‌کند. بنابراین، با معادله‌ای که از این متغیرها بدست آمده می‌توان میزان رضایتمندی کشاورزان نسبت به شرکتهای تعاونی تولید روستایی را تخمین زد.

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