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Socioeconomic Characteristics of Farmers from Iporá and Neighbourhood, Goiás State, Brazil

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Introduction

The economy of Iporá and surrounding municipalities in Goiás state, Brazil (Amorinópolis, Diorama, Israelândia, Ivolândia and Jaupaci) is predominantly based on dairy cattle and to a lesser extent in beef cattle. Of the 432,700 cattle present in these six counties, 46,700 cows are milked daily with production of 145,137 liters of milk per day. Besides dairy cattle, farmers do small-scale cultivation of annual crops (rice = 530 ha, corn = 2,160 ha, soybeans = 4,405 ha) and perennials (cassava = 350 ha, banana = 68 ha, coconut = 33 ha) (IBGE, 2012). However, the data reported by IBGE (2012) are superficial and do not accurately reflect the socioeconomic characteristics of farmers Iporá and region.

The diagnosis of social and economic variables that influence the management of farms must be efficient to point out the main strengths, limitations and opportunities for rural producers involved. This enables the identification of options that bring increased productivity and income within the production chain, so that producers become competitive and offer products with quality and variety. This aligned with RENNÓ et al. (2008), who described that improving the productivity of milk is based on the economic view on the performance of the supply chain. Thus, it represents a competitiveness strategy for producers involved in this activity.

In this context, the aim of the present study was to make the diagnosis of socioeconomic characteristics of farmers Iporá and surrounding municipalities in Goiás (Amorinópolis, Diorama, Israelândia, Ivolândia and Jaupaci) through a structured modular questionnaire. Secondarily, we aimed to propose some alternatives that can strengthen the economy of these producers and the consequent improvement of their social conditions.

Material and Methods

We adopted a convenience sampling methodology for conducting 240 interviews with farmers Iporá and surrounding municipalities in Goiás (Amorinópolis, Diorama, Israelândia, Ivolândia and Jaupaci). Questionnaires were applied between April and November 2013 at various locations and opportunities. They included the field day organized by the company *PROCRIA Saúde e Nutrição Animal*, meetings of rural communities in Iporá, in a joint effort of the Cooperative Family Farming Iporá Area (COOMAFIR), at a meeting of the Association of Rural Producers Headboard Santa Marta (APROSANTA) in the county of Amorinópolis, in agriculture store *PROCRIA Saúde e Nutrição Animal* in Iporá, in the office of the sanitary defence agency (AGRODEFESA) during the

campaign of vaccination against FMD in May and November, and even during the 28th Agricultural Exhibition of Iporá. Data were collected impersonally and without the identification of the respondent.

Proceeded to analyse the data using Statistical Package for Social Sciences (SPSS) version 21.0 (IBM CORP., 2012). Data was entered into quantitative variables (scale) and qualitative (nominal) variables. The reported values in the result tables represent the frequencies, percentages, means and standard deviations of the respective socioeconomic variables.

Results and Discussion

The results of the social characteristics of farmers Iporá and region are listed in Table 1. Male individuals lead the vast majority of households (98.3%), while 116 of these leaders (48.4 %) attended only elementary school. Most of the interviewed families reside on the farm (n = 146, 60.8%), and 139 producers (57.9%) use only family labour. Furthermore, we note that 146 farms (60.9%) have up to 100 ha. Therefore, considering the information presented in Table 1, especially regarding labour used and the farm size, it appears that most farmers Iporá fits the condition of family farmers.

Table 1: Social characteristics of farmers in Iporá and surroundings, Goiás state, Brazil.

Variables	Frequency (n)	Percentage (%)
Sex of household leader		
Male	236	98.3
Female	3	1.3
Without answer	1	0.4
Total	240	100.0
Schooling of household leader		
Illiterate	11	4.7
Elementary (4 years)	62	25.8
Fundamental level (8 years)	43	17.9
Second level (11 years)	66	27.5
Graduate (incomplete)	14	5.8
Graduate	36	15.0
Postgraduate	2	0.8
No answer	6	2.5
Total	240	100.0
Residence of the family		
On farm	146	60.8
In city	91	37.9
No answer	3	1.3
Total	240	100.0
Number of jobs on farm		
Only family labour	139	57.9
1 employee	39	16.3
2 employees	31	12.9
3 employees	14	5.8
4 employees	8	3.3
More than 4 employees	6	2.5
No answer	3	1.3
Total	240	100.0
Farm size		
Up to 50 ha	94	39.2

51 to 100 ha	52	21.7
101 to 300 ha	45	18.7
301 to 700 ha	29	12.1
701 to 1,000 ha	6	2.5
More than 1,000 ha	11	4.6
No answer	3	1.2
Total	240	100.0

Regarding family involvement in farming activities (Table 2), 298 family members participate in agricultural activities, and the predominance of the spouses (136) and sons / daughters (104). It is noteworthy that of the total 236 members who did not participate in agricultural activities, 92 of them are under 18, which reduces to 144 the number of people in the economically active age who have no ties to farming activities. Thus, one sees a large involvement of family members in the daily work of farms Iporá and region, corroborating the information that 139 farmers (57.9%) use only family labour (Table 1), characterizing the structure traditional family farming. Of the total 240 respondents, 21 respondents were some other family member, in which case your family leader was not present during the interview. It is noteworthy that the reason a family leader not participate in agricultural activities is his advanced age (87 years).

Table 2: Participation of family members in farming activities in Iporá and surroundings, Goiás state, Brazil.

Relationship to household leader	With participation (n)	Without participation (n)
Household leader[1]	20	1
Spouses	136	65
Sons/daughters	104	141
Parents/parents in law	19	10
Grand parents	3	1
Brothers/sisters	6	5
Grandson/granddaughter	4	9
Son in law/daughter in law	4	0
Stepson/stepdaughter	1	0
Nephew/niece	1	2
Brother in law/sister in law	0	1
Cousin	0	1
Total	298	236[2]

[1]In 21 questionnaires the respondent was not the household leader.
[2]In total, 92 family members have less than 18 years of age.

Table 3 shows that of the total 240 interviewed farmers, the dairy cattle on average contributes 63.2% to the income of families (165 farms), followed by beef cattle with 55.6% share in family income, in this case in 109 properties. This information is in line with data reported by IBGE (2012), in which dairy and beef farming are the main sources of income in the municipalities of Amorinópolis, Diorama, Iporá, Israelândia, Ivolândia and Jaupaci. It is noteworthy that the relative contribution of each activity was reported by the interviewee, not the result of dividing the frequency of the number of farms in each activity divided by 240 and multiplied by 100. For example, horticulture and fish farming contribute respectively with 22.5 and 15% of the income of families interviewed farmers, but the frequency with which these activities actually contribute to the family income was the same (4 farms).

Table 3: Participation of farm and off-farm activities in family income in Iporá and surroundings, Goiás state, Brazil.

Activity	Frequency (n)	Percentage (%)
Dairy cattle	165	63.2
Beef cattle	109	55.6
Annual field crops	23	43.5
Fruits	4	22.5
Vegetables	5	34.0
Fish	4	15.0
Rural pensions	42	34.5
Government social support programs	14	30.7
Off-farm activities	71	47.3

Except for dairy and beef cattle, other agricultural activities pose little importance in the household income of the interviewed farmers. However, off-farm activities and government social support programs contribute 47.3 and 30.7% in household income, indicating that farm income alone has not been sufficient to sustain these families (Table 3).

Conclusions and Outlook
Farmers Iporá and surrounding region depend almost exclusively on milk production to sustain their families, i.e., the level of diversification of these farms is limited. Considering that the majority of producers are family farmers by having small farms and using family labour, the low level of diversification does not contribute to the improvement of the socioeconomic conditions of the farmers.

References
IBGE. (2012). Goiás/Amorinópolis/Diorama/Iporá/Israelância/Ivolância/Jaupaci/Lavoura permanente 2012. Goiás/Amorinópolis/Diorama/Iporá/Israelância/Ivolância/Jaupaci/Lavoura temporária 2012. Goiás/Amorinópolis/Diorama/Iporá/Israelância/Ivolância/Jaupaci/Pecuária 2012. Available: http://www.cidades.ibge.gov.br/xtras/temas.php?lang=&codmun=520090&idtema=122&search=goias|amorinopolis|diorama|ipora|israelandia|ivolandia|lavoura-permanente-2012. http://www.cidades.ibge.gov.br/xtras/temas.php?lang=&codmun=520090&idtema=123&search=goias|amorinopolis|diorama|ipora|israelandia|ivolandia|lavoura-temporaria-2012. http://www.cidades.ibge.gov.br/xtras/temas.php?lang=&codmun=520090&idtema=121&search=goias|amorinopolis|diorama|ipora|israelandia|ivolandia|pecuaria-2012 Accessed 27 Jan. 2014.
IBM Corp. IBM SPSS Statistics for Windows, Version 21.0. Released 2012. Armonk, NY: IBM Corp.
RENNÓ, F.P., PEREIRA, J.C., LEITE, C.A.M., RODRIGUES, M.T., CAMPOS, O.F., FONSECA, D.M. AND RENNÓ, L.N. (2008). Avaliação bioeconômica de estratégias de alimentação em sistemas de produção de leite. Metodologia alternativa: nível de utilização de capital. Revista Brasileira de Zootecnia 37(4): 754-764.