

SOCIO-DEMOGRAPHIC AND ECONOMIC CHARACTERIZATION OF THE POULTRY RURAL MICROENTREPRENEUR

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SAP 28257 Received: 27/09/2021 Accepted: 01/03/2022

Sci. Agrar. Paraná., Marechal Cândido Rondon, v. 20, no. 4, oct./dec., p. 371-377, 2021

ABSTRACT - Brazil's predominant poultry production system is vertical integration, which has advantages for both sides, providing a constant income to farmers and a constant supply of raw material at competitive costs for the agroindustry. The study aimed to understand better the integrated farmers into the broiler production system in the microregions of Araraquara and São Carlos, totaling 17 cities in the interior of the state of São Paulo. The methodology consists of applying socio-demographic questionnaires in the region. It was observed that the properties have an average capacity for raising 36,120 birds in 2 aviaries in a built area of 3,398 m². The workforce is predominantly male, white, married, and with children. In addition, 44.9% have only elementary education, while 22.5% have completed high school, and only 12.4% have higher education. 86.5% own their properties, while 7.9% are tenants. Also, 88.8% have an annual income of R\$360,000 from the activity, and 55.1% go to the sector to supplement their income. In addition, 43% do not have any financing, and 33% have no interest in investing more in the activity. The data found in the present study is more favorable than the socio-economic data of rural producers present in the literature, not that they are concerned with the conditions in which the broiler producers are inserted, which are mainly evidenced by the possession of the properties and the producer's way of life. It was also found that many poultry producers have conservative profiles, using their resources, no financing, and with an aversion to taking risks.

Keywords: poultry, broiler chicken, rural producer.

CARACTERIZAÇÃO SOCIODEMOGRÁFICA E ECONÔMICA DO MICROEMPREENDEDOR RURAL AVICULTOR

RESUMO - O sistema predominante da produção avícola no Brasil é de integração vertical, que apresenta vantagens para ambos os lados, provendo uma renda constante ao microempreendedor rural, e fornecimento constante de matéria prima a custos competitivos para a agroindústria. O estudo objetivou conhecer melhor o microempreendedor rural integrado ao sistema de produção de frangos de corte nas microrregiões de Araraquara e São Carlos, totalizando 17 municípios do interior do estado de São Paulo. A metodologia consistiu na aplicação de questionário estruturado visando identificar o perfil econômico e sociodemográfico da região. Observou-se que as propriedades possuem capacidade média para criação de 36.120 aves, em 2 aviários e em área construída de 3.398 m², que a mão de obra é predominantemente do sexo masculino, branco, casado e com filhos. 44,9% possuem somente ensino fundamental, enquanto 22,5% possuem ensino médio completo e somente 12,4% possuem ensino superior. 86,5% são donos de suas propriedades, enquanto 7,9% são arrendatários. 88,8% tem renda anual da atividade de até R\$ 360.000 e 55,1% escolheu o setor para complementar suas rendas. 43% não possui nenhum tipo de financiamento e 33% não possui interesse em investir mais na atividade no momento. Os dados encontrados no presente estudo são mais positivos que os dados socioeconômicos de produtores rurais presentes em literatura, no que concerne às condições em que os produtores de frango de corte estão inseridos, evidenciado principalmente pela posse das propriedades e modo de vida do produtor. Constatou-se ainda que os produtores avícolas, em sua maioria, possui perfil conservador, utilizando-se de recursos próprios, não detendo financiamento e com aversão a correr riscos.

Palavras-chave: avicultura, frango de corte, produtor rural.

INTRODUCTION

Due to high levels of technology and constant development of technological solutions, poultry farming generates great demands from other sectors that supply products and services, linking different industries and employing millions of people. It is responsible for producing a low-cost, high-quality, non-seasonal protein, with 365 days of occupation, constituting 1.5% of the

Brazilian GDP and generating about 5 million direct and indirect jobs (MENDES, 2014).

In the vertical integration model adopted in the Brazilian poultry industry, the producer is responsible for its installations, electricity, water, equipment, and workforce. The company provides inputs and technical assistance for the fattening of broilers. Most of the national broiler production has an integrated system (ZALUSKI; MARQUES, 2015), which guarantees a scale yield

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throughout the system and maintains the quality standard in all production segments. Among the advantages generated by the system, we can mention market stability, excellent zootechnical rates, uninterrupted production, profitability, technical assistance, etc. (ZALUSKI; MARQUES, 2015).

According to De Zen et al. (2019), from the 1970s onwards, with the advent of processing companies and specialists in the chicken process in the Brazilian market, the development of poultry farming took place. In 1990, the Latin American economy opened, allowing the agroindustry to compete at a world level with intense technological and sanitary modernization. There was an increase in the per capita consumption of chicken meat (ESPINDOLA, 2012).

According to the Brazilian Association of Animal Protein (ABPA, 2018), in 2017, Brazil housed more than 50 million broiler breeders, and the per capita consumption (kg hab⁻¹) was 42.07. For Massuda et al. (2015), Brazilian poultry farming involves many small and medium rural producers, highlighting the sector's social importance. Ferreira et al. (2019) highlight that the vertical integration system that integrates the industry with family agribusiness is one of the reasons that influenced the development of poultry increasing productivity gains and increased competitiveness, especially in small properties.

With the growth of agribusiness, the environment has become more competitive, creating a challenge for the rural producer to increase the effectiveness of processes and apply management strategies (ALCÂNTARA; MACHADO FILHO, 2014). In addition, Complementary Law n° 123 granted benefits to the Individual Micro entrepreneur (MEI), such as social security coverage, hiring an employee at a lower cost, exemption from registration fees, absence of bureaucracy, access to banking services, purchases and sales joint, reduction of the tax burden, very simplified controls, issuance of permits over the internet, ease to sell to the government, free services, technical support in the Brazilian Service of Support to Micro and Small Enterprises (SEBRAE) in the organization of the business, the possibility of growth as an entrepreneur, and legal certainty (BRASIL, 2013).

Afterward, Complementary Law n° 155/2016, which aims to encourage rural workers to start rural entrepreneurship, which covers workers working in industries, trade or services, with fishing, beekeeping, aquaculture, poultry, rabbit farming, agricultural production, animal or plant extrativism, enabling the formalization as MEI, allowing the inclusion of producers who earn up to R\$ 81,000 per year (BRASIL, 2016). The rural MEI allows hiring an employee who receives a minimum wage or the minimum wage for the category. Among the advantages of the rural MEI, there is registration in the National Registry of Legal Entities (CNPJ), which allows the request for loans and the issuance of invoices. Because it is included in the Simples Nacional tax regime, it is exempt from federal taxes, allowing access to social security benefits without losing the quality of particular insured person (OLIVEIRA, 2013).

In the first quarter of 2018, the number of rural entrepreneurs in Brazil reached 4.06 million people, representing approximately 15% of the total number of entrepreneurs in the country. This number has been falling since 2016; one reason is the increase in the rural exodus and the technological increase in the countryside, replacing the workforce. Regarding the level of education of rural entrepreneurs, approximately 70% have at most incomplete elementary education, and only 2% have completed higher education. However, the education level of rural entrepreneurs has been evolving slowly since 2015, when 75% had at most incomplete elementary education. 47.13% of rural entrepreneurs are 35 to 55 years old (IBGE, 2018). Because of the above, the objective of this work was to define the microentrepreneur's socio-demographic and economic profile.

MATERIAL AND METHODS

To evaluate the socio-demographic and economic profile of rural microentrepreneurs, a structured questionnaire with a direct approach containing questions related to the theme was applied to 100 producers integrated into the company Ad'oro S/A distributed in the microregions of Araraquara and São Carlos in the interior of the state of São Paulo, as shown in Figure 1.

Descriptive statistics containing questions related to the theme with graphs, tables, and parametric descriptions, using the IBM SPSS Statistics software (OSB Software, 2021) were used.

To frame the rural microentrepreneur integrated into the broiler chicken production system, the definition of the size of companies, individual microentrepreneurs, and rural producers will be used as a parameter based on the annual revenue stipulated by the 2019 constitutional programming funds created by the Federal Government (SEBRAE, 2012), to develop agribusiness in Brazil in certain regions. The following funds were used:

- a) National Development Fund for the North (FNO) (BASA, 2019),
- b) Constitutional Fund for Financing of the Northeast (FNE) (BNB, 2019) and
- c) Constitutional Fund for the Development of the Midwest (FCO) (FCO, 2019).

According to the constitutional funds, we can classify Rural and extractive producers, considering the annual gross agricultural income from the sale of products from all agricultural activities explored by the producer as follows:

- I. Mini: up to BRL 360 thousand,
- II. Small: over BRL 360,000 up to BRL 4.8 million,
- III. Small-medium: above BRL 4.8 million up to BRL 16 million and
- IV. Medium: over R\$ 16 million.

SEBRAE, in a study launched in 2012, used the same methodology for classifying rural producers by size.

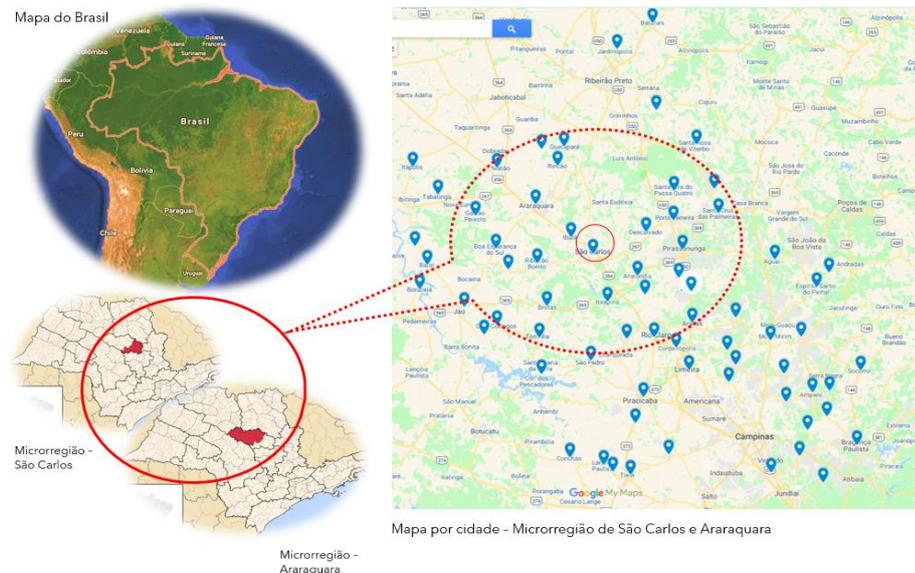


FIGURE 1 - Microregion of São Carlos and Araraquara (SP).

RESULTS AND DISCUSSION

From the 100 questionnaires applied, 89 responses were obtained, and 11 did not accept participating in the research.

Exploratory analysis was used to evaluate the data, mainly frequency, to analyze the predominant

characteristics in the economic and socio-demographic profile of the rural poultry farming micro-entrepreneur.

As for the size of the poultry enterprise, as shown in Table 1, the properties have an average capacity to raise 36,120 birds in 2 aviaries in a total constructed area of 3,398 m².

TABLE 1 - Sizes of poultry enterprises.

Poultry enterprises	Average values
Poultry capacity	36,120 units
Area	3,398 m ²
Number of aviaries	2 units

TABLE 2 - Characteristics of the family nucleus.

Categories	Prodrominant feature	Representation (%)
Ethnicity	White	82.0
Sex	Male	86.5
Marital status	Married	87.6
Number of children	1.79	-

TABLE 3 - School level.

Education	Representation (%)
Elementary and Middle School	44,9
High School	22.5
Technical Education	15.7
University	12.4
No answer	3.4
Illiterate	1.1

As for the characteristics of the family nucleus, there is a male predominance (86.5%) in front of the business. There is also a predominance of married people (87.6%) of white ethnicity (82%) with an average of 1.79 children per family, as shown in Table 2. The average age shows a mature and experienced population, with 79.7%

older than 40 and more than 50% with more than 15 years of experience in the poultry industry. In Table 3, we can see the level of education of the interviewees, highlighting that almost 45% have only elementary education. As for ownership, we have 86.5% who own the property, as shown in Table 4, and 68.5% live there.

TABLE 4 - Property types.

Properties	Representation (%)
Own	86.5
Leased/Rented	7.9
No answer	3.4
Granted	2.2

When asked what the motivating factor for joining the activity was, the predominant answer was due to a family inheritance, as shown in Table 5. The properties are well structured, having treated water in its entirety, coming from the public system (16.9%) and the remainder from wells or springs, as shown in Table 6. All properties have

energy. As for the comfort item in the rural property, it is noticed an excellent condition of life. In most properties, there are essential items, according to Table 7. However, there is a low subscription rate for tv, computer, and landline telephone.

TABLE 5 - Motivation to enter the poultry activity.

Start if activities	Representation (%)
Parents inheritance	34.80
Acquisition	32.60
To supplement income	23.60
Other	5.60
No answer	3.40

TABLE 6 - Water supply.

Abastecimento de água	Representation (%)
Inner well/spring	83.1
General distribution network	15.7
External well/spring	1.10

TABLE 7 - Producer's way of life.

Items	Owns (%)
Vehicle	100
Cell phone	97
Refrigerator	96
Television	94
Radio	70
Internet	62
Computer	37
Cable TV	19
Landline Phone	12

In general, the business is managed by the rural poultry farmer with the help of hired workforce (69.7% of

the properties) and with low use of additional family labor (30.3%), according to Table 8.

TABLE 8 - Type of labor in the activity.

Human resources	Representation (%)
Hired workforce	69.7
Family staffing	30.3

Regarding economic aspects, annual income from poultry activities in the range of up to BRL 360,000 covers 88.8% of respondents, and below BRL 1,000,000.00 is 98.9%. Poultry farming is the only source of income for 34% of the interviewees, and the main parallel activity is cattle farming, with 35.9% of participation, as shown in

Table 9. When asked why they worked with chicken farming, 55.5% treated the activity as an income supplement and 38.5% as a family business, as shown in Table 10. As for indebtedness, more than 43% do not have any financing, as shown in Table 11, and 33% have no interest in investing more in the activity.

TABLE 9 - Parallel activities.

Activities	Representation (%)
Cattle raising	35.9
No activity	34.0
Agriculture	17.5
Other	12.6

TABLE 10 - Reasons for choosing the poultry enterprise.

Reasons	Representation (%)
Income supplement	55.1
Family business	38.2
No answer	4.5
Lack of Jobs in other areas	1.1
Other	1.1

TABLE 11 - Indebtedness.

Financing ranges	Representation (%)
No funding	43.8
Funding up to R\$100.000	40.4
Funding up to R\$300.000	10.1
> R\$300.000	2.2

In the search for financial resources, most respondents prefer to use their resources (52.8%), and 47.2% opt for external resources, as shown in Table 12. At

the time of the survey, 59.6% of respondents would not expand their poultry enterprise.

TABLE 12 - Resource Source Preference.

Source of resources	Representation (%)
Own Resources	52.8
Rural Credit	28.1
Bank loans	18.0
Union Credit	1.1

Despite the great importance of poultry farming in Brazil, whether economic or producing a source of high-quality protein, little is known about the profile of the people responsible for raising these animals. The territorial extension of Brazil is 851.487 million hectares, of which about 41% are used as agricultural establishments, totaling 351.289 million ha, divided into more than 5 million establishments. Approximately 90% of establishments have the producer as owner or co-owner (IBGE, 2017). In the present study, 86.5% of the producers own the establishment, which has an average built area of 3,398 m² and a capacity for 36,120 birds.

According to data from the 2017 Agro Census and this research, the family nucleus consists mainly of white married men. The number of women in charge of rural properties in the country in 2017 was 19% (IBGE, 2017). It is essential to highlight this information considering the growth of the economically active female population. There is a strong trend towards greater participation of women in Brazilian agribusiness (CIELO et al., 2014), as already demonstrated in the United States, according to the Census of Agriculture (USDA, 2017), which shows that almost 30% of producers are women.

According to FIESP (2019), based on data from the Agribusiness Confidence Index (ICAGRO) on the profile of

rural producers, 37.1% have completed higher education, and 24.7% have finished high school, data which contrast with those found in the research of this work, with the majority (44.9%) having only completed elementary school. Medina and Novaes (2014) reveal, in a socio-demographic survey, that 46% of respondents consider the situation regarding family education to be positive. However, it is revealed that only about 16% finished elementary school. However, 91.6% of school-age adolescents are enrolled in educational institutions. On the other hand, according to the 7th Rural Producer Habits Survey, carried out by the consultancy Informa Economics in partnership with the Brazilian Association of Rural Marketing & Agribusiness (ABMRA, 2017), 31% of respondents have incomplete primary education. In contrast to 14% who have completed higher education, these being graduated mainly in agronomy.

79.7% of the producers are over 40 years old regarding the age group. There is a trend towards an increase in the percentage of older people in production and a decrease in the rate of young people, which can be considered a challenge. In 2017, the number of elderly rural producers was 21.41% (IBGE, 2017). According to the Census of Agriculture (USDA, 2017), an agricultural census in the United States, more than 91% of male

producers are over 35 years old. More than 33% are elderly, and the average age is 57.5 years old.

According to the 7th Rural Producer Habits Survey (ABMRA, 2017), 61% of Brazilian producers have a cell phone with internet access. This question is more optimistic when we evaluate only poultry producers, considering that in the present study, 97% of respondents have a cell phone, and 62% have internet in their homes. Most of these residences are located in the countryside (65%). Regarding subsistence, in a study by Medina and Novaes (2014), food conditions were evaluated as good or excellent by 56% of respondents, while 50% considered health conditions as good or excellent.

A study carried out by Medina et al. (2017) evaluated 10,362 rural households in 16 Brazilian states and concluded that 5.9% of rural families did not have electricity, and 12.2% did not have water in or near the house. Also, 26.7% did not have a bathroom inside the house, 7.3% did not have a gas stove, 14.7% did not have a refrigerator, and 39.7% did not have a telephone. In addition, 48.7% of the households supplemented their income with the Bolsa Família program, with the figure rising to 65.8% for the poorest.

The present work highlighted the importance of knowing the characteristics of the producer. It clarified some issues regarding the economic and socio-demographic profile of regions in the interior of São Paulo to understand their needs and objectives and thus optimize the relationship between the integrated and the integrator. This type of knowledge can be an essential factor in improving both relationships. In addition, it can minimize technical and managerial difficulties, contributing to the permanence of families in rural areas.

In general, the data found in the present study, compared with the socio-economic data current in the literature regarding rural producers in general, are more optimistic regarding the conditions in which broiler chicken producers are inserted. That was highlighted mainly by owning the producer's properties and way of life. However, the research also shows that poultry producers have a more conservative profile. The majority prefer to use their resources, not having financing and not wanting to take risks.

CONCLUSIONS

The vertical integration system integrates industry with family agribusiness, stimulating poultry development and increasing productivity gains and competitiveness, especially in small properties.

The rural micro-entrepreneur depends on the agroindustry to operate with economic efficiency and thus guarantee the survival of their production unit.

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