

LETTER

Growing of black pepper by small farmers in the city of Capitão Poço, PA, Brazil

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ABSTRACT

The objective of this work was to conduct a study on the cultivation of black pepper by small farmers in the city of Capitão Poço / PA. The research was developed based on the application of semi-structured questionnaires, in order to identify the form of cultivation of black pepper in the municipality carried out by family farmers, where a total of 50 producers were interviewed, and this sample was defined based on amount of small producers in the municipality. In addition, other resources were used, such as photographic records, audio recording, notes in field notebooks and direct and indirect observations, which also supported the research. Most respondents (46%) have been producing black pepper for over ten years, and 38% have reported growing the crop between five and ten years, 54% of producers said that the cultivation practice of the crop was adhered to. income supplementation and 32% said it was a passed on activity from father to son and the main variety cultivated by farmers (56%) is kotanadan. Thus, it was found that the main factor of cultivation of black pepper, is the complementation of income of small producers, using the variety kotanadan, because it is easily accessible in family farming of the studied region.

Highlighted Conclusion

The main factor for cultivation of black pepper var. kotanadan is the supplementation of income of familiar producers.

INTRODUCTION

Black pepper (*Piper nigrum* L.) is a perennial creeper species belonging to the Piperaceae family, originating from tropical regions of India. After its introduction in Brazil, the crop has been highlighted by the high economic yields for small and medium producers, especially in the Amazon Region (Embrapa 2006). In Brazil, a few dozen varieties of pepper are produced. Among them, black pepper is one of the most important in the process of obtaining income by farmers, especially family members, in the North and Northeast Regions of the country (DESER 2008).

Traditionally, this crop is widely grown in Capitão Poço, gaining prominence in family farming, where it is responsible for most of the production of the state of Pará, due to its high profitability in the commercialization periods. According to IBGE (2005), Pará is responsible for almost 84% of Brazilian production, demonstrating the increase and importance of this crop to obtain farmers' income, as well as reflecting current product prices in the domestic and global markets.

For Moraes et al. (2018), family production has been modernized with the introduction of new living tutoring techniques using gliricidia and more resistant species, generally revealing positive impacts on the local economy. Thus, it is necessary to understand the possibilities of changes in production systems in order to be able to subsidize farmers in introducing certain changes in production systems. In this sense, it is essential to gather information from farmers about cultivation and consequently direct the development of future research to boost social and economic development in the municipality.

The objective of this work is to conduct a study on the cultivation of black pepper by small farmers in the city of Capitão Poço/PA.

MATERIAL AND METHODS

The field research was carried out from December 03, 2018 to January 14, 2019, with the producers of black pepper belonging to the city of Capitão Poço / PA. In this locality the cultivation of the crop is developed by both small, medium and large producers. However, this is an agricultural activity that helps supplement the income of small farmers in the current agricultural environment in the region.

The city of Capitão Poço is located at a latitude of 01°44'47 "S and a longitude of 47°03'34" W). It belongs to Microregion of Guamá, mesoregion of northeastern Pará and is 226km from the capital Belém. , 7 to 26.9 ° C with an annual average of 26.2 ° C, only 1.2 ° C. And according to the Köeppen classification the Ami climate (Silva et al. 2011), with annual precipitation around 2,500mm and a short dry season between September and November (monthly rainfall around 60mm), and a relative humidity between 75% and 89% in the months with the lowest and highest rainfall, respectively (Schwart 2007).

The research was developed based on the application of semi-structured questionnaires, in order to identify the form of cultivation of black pepper in the municipality carried out by family farmers, where a total of 50 producers were interviewed, and this sample was defined based on amount of small producers in the municipality.

In addition, other resources were used, such as photographic records, audio recording, notes in field notebooks and direct and indirect observations, which also supported the research.

Data were tabulated in a Microsoft Excel 2010® and 2013® spreadsheet, where they were manipulated to elaborate the graphs. Finally, the interpretation and analysis of the information obtained was performed.

RESULTS AND DISCUSSION

According to the survey, the majority of respondents (46%) have been producing black pepper for over ten years, and 38% reported producing the crop between five to ten years. Taking into consideration that the city of Capitão Poço / PA has great power in the cultivation of the crop, where according to IBGE data (2017) the amount produced and the average yield in the city of Capitão Poço/PA were 2,200 tons and 4,000 kg/ha, respectively, being among the five largest producers in the state. Thus, there are demands from the export market in agriculture, and this to some extent encourages farmers to seek new alternatives for large-scale production, assisting in the cultivation growth and income supplementation of farmers in the region.

Figure 1 shows the main factors that made the farmers adhere to the practice of cultivation of black pepper in the municipality, where 54% of producers stated that this activity was adhered to complement their income. And 32% said it was a past activity from father to son.

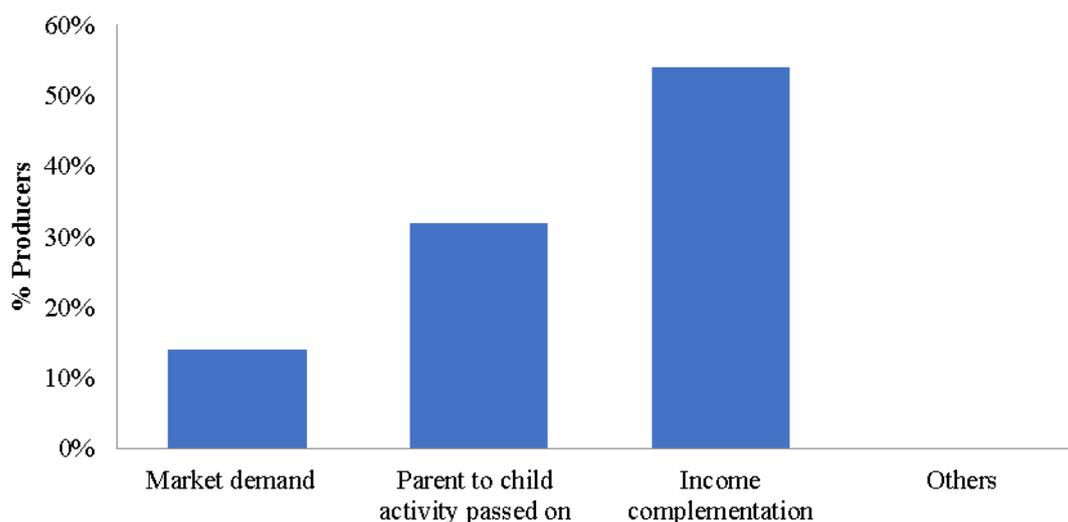


Figure 1. Main factors described by family farmers, which contributed to the adoption of black pepper cultivation in the city of Capitão Poço/PA.

In family farming, everything that comes from agriculture is used for both food and income supplementation. However, this last factor also helps in the maintenance of clothing, medicine, leisure, and in assisting food supplementation for subsistence.

When asked about the main varieties grown, 56% of farmers reported using the Kotanadan black pepper variety more (Figure 2). This can be explained due to its easy access to crop production. Other cultivated varieties were also reported by 38% of growers, including Apra pepper, India, Tira Cota, Ouro Branco and common.

According to Rodrigues and Ataíde (2001) and Nakashima et al. (2003), these varieties grow well in soils of medium and clay texture, with depth greater than 70 cm, with humic arable layer and good progress of subsoil structure and good drainage condition, with poor drainage being the main factor of impaired productivity, which can cause root rot diseases.

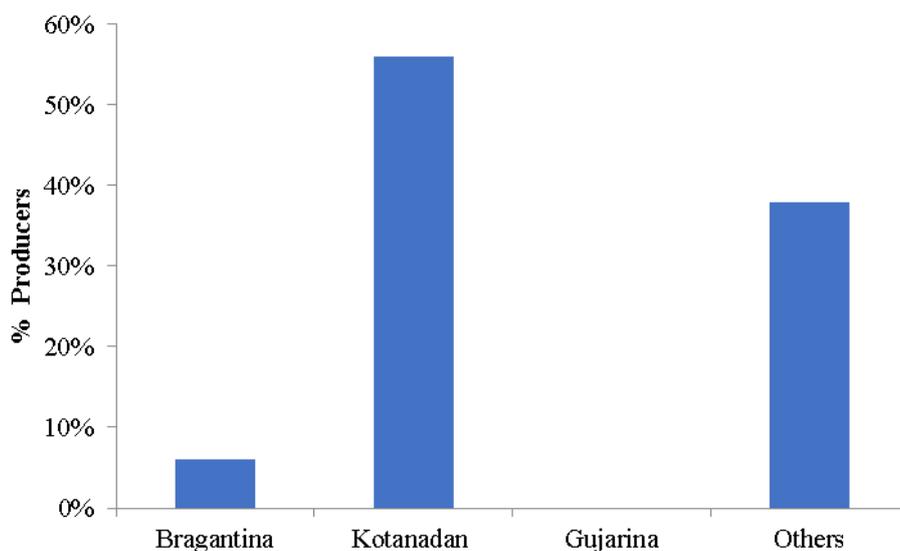


Figure 2. Main varieties cultivated by small producers of black pepper in the city of Capitão Poço/PA.

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