

## GEOGRAPHIC INDICATION CAN ADD VALUE TO JACU COFFEE' PRODUCERS

## INDICAÇÃO GEOGRÁFICA PODE ADICIONAR VALOR PARA OS PRODUTORES DO CAFÉ JACÚ

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### Abstract

This study proposes an analysis of Geographical Indication impact on Jacu Coffee. The study made a documental search at the base of the INPI and interviews with the producers of Jacu coffee. The researchers found characteristics of the birds seen in Camocim Farm, everything leads us to believe that it really is the species Penelope Obscura. And the study show that a good management model can turn a terrible problem in a very lucrative business opportunity. Therefore the Geographical Indication of Jacu coffee add value to the region of Domingos Martins and the state of Espírito Santo, and may bring a positive socioeconomic impact to the region, as an option to improve the Management of Agribusiness, as occurred with the coffee of Cerrado Mineiro. Furthermore, this work could contribute to future studies on other products with potential in Geographical Indication.

**Keywords:** Intellectual Property; Agribusiness management; Jacu coffee; Geography Indication

## **Resumo**

Este estudo propõe uma análise dos impactos da Indicação Geográfica no café Jacu. Apresentar que a Indicação Geográfica do café Jacu, além de agregar valor à região de Domingos Martins e ao estado do Espírito Santo, além disso, podem trazer um impacto socioeconômico positivo para a região, no gerenciamento do agronegócio, como ocorreu com o café do Cerrado Mineiro. O estudo realizou uma pesquisa documental na base do INPI e entrevistas com os produtores do café Jacu. Os pesquisadores encontraram características das aves vistas na fazenda Camocim, e acreditam que é realmente a espécie Penelope Obscura. Este trabalho contribuirá para estudos futuros sobre outros produtos com potencial de Indicação Geográfica. Além disso, uma pesquisa como essa poderia ajudar no futuro pedido de certificação de Denominação de origem do café Jacu.

**Palavras-chave:** Propriedade Intelectual, Gestão de agronegócio, Café Jacú, Indicação Geográfica

## **1 Introduction**

The Geographical Indication (GI) is a certificate granted to products and services that have unique characteristics of their place of origin, becoming known the reputation of such products. According to Russo et al. (2011), two different types, indication of origin and designation of origin characterize the GI. Indication of origin occurs when a region is known for the production, manufacturing of a product or providing a service, while the Designation of Origin refers to a region where there is a product with characteristics that are given exclusively or mainly by the geographical environment, including natural and human factors, such as soil, climate and management.

A geographical indication ensures the added value of the product, distinguishing it from the other. In an increasingly competitive and demanding market, the pursuit for differentiated products is a growing trend. Products with the GI stand out for their unique characteristics and its recognized production and designation, what ensures customer loyalty. This occurs because they know they will find a quality product with defined characteristics.

Maintaining the special features of the product and the heritage of the specific region is a characteristic of GI. The areas bounded by GI earn fame in the national scene and in some cases even internationally, drawing attention of investors to the region, whom

invest in new technologies, increasing the supply of jobs. There is also an increase of tourism in the region, because of the product fame and the curiosity to know the procedures of its production and manufacturing, because the GI associates the product image to the given region (FERNANDES, 2011).

We have as world-famous examples of GI the Cuban cigars, wines from the region of *Bordeaux*, France, the *Grana Padano* cheese from Italy, the *Champagne* - sparkling wine from a region of France with the same name, the Parma ham also from Italy, the French cheese made from sheep's and goat's milk called *Roquefort*, among many others (NASCIMENTO et al., 2012). In Europe, the quality control of their products began in the 19th century. In Brazil, the culture of protection of registration of GI is recent; its first registration was from the region of Vale dos Vinhedos in 2002 (ROCHA & TULLA, 2015).

In the 19th century, Europe experienced a socio-cultural growth, and the quality control of the wine (its main drink) can be noticed during this period. In Brazil, the culture of protection of registration of GI is recent; however, there are registered products in several Brazilian states. As examples, there are the Vale dos Vinhedos in Rio Grande do Sul, the *Cachaça* in the region of Salinas in Minas Gerais, the Cocoa almonds in Espírito Santo among others, despite these being recent registration, the theme has aroused, in recent years, the interest of researchers in the area.

A Brazilian state with great potential in agricultural products, Espírito Santo, has four registrations of GI: Association of pan producers of Guava, the Technological Center of marble and granite, Association of cacao farmers of Linhares and Association of Producers of yam of Sao Bento de Urania. It should be emphasized that the four registrations that the State has with the National Institute of Industrial Property (Instituto Nacional de Propriedade Industrial - INPI) are an indication of origin, not having any in designation of Origin (INPI, 2017).

The coffee production is the main agricultural activity of the Espírito Santo, being the second largest producer in the country. Thus, it is possible to say that coffee is the primary economic source of the majority of the towns of Espírito Santo. The Conilon and Arabica coffees are the reference in the State of Espírito Santo; however, there is a growing demand by the so-called Specialty coffees (which are coffee with refined taste and with a very high value) throughout the world. This has driven the producers of

Espirito Santo to invest in the production of specialty coffees with high quality standards, unique production and cultivation systems, as the Jacu coffee.

The Jacu coffee arose in the city of Domingos Martins in Espirito Santo, more precisely in the farm Camocim, where a producer got to know the Kopi Luwak coffee, considered the most expensive coffee in the world, reaching the cost of US\$600.00 per 500 grams. This special coffee, produced in Indonesia, is extracted from the feces of an animal called the civet, similar to the Brazilian skunk. The civet only eats the finest grains, and excrete it in one piece; from these grains is made the famous and precious coffee. This producer, who was having losses in its crop because of Guans (Jacu) (typical birds of the forests in the region) who ate the ripe coffee (losses that would be up to 10% of the crop), saw in the method of production of Kopi Luwak a business opportunity. Observing that the Jacus, that as the civet in Indonesia, it only ate the best grains and excrete it in one piece, the producer has employed in its tillage a similar method of production. It was born the Jacu Bird Coffee, the coffee of Guan (Jacu), which today is the most expensive of Espirito Santo State, and one of the most expensive of Brazil, coming to cost R\$600.00 per kilo. The Guan went from villain to hero of Camocim. The quality of the coffee of guans is linked exclusively to its region and the unique way that is produced, which may characterize a designation of origin.

In Brazil there are some coffee with GI certified by INPI, being 4 Geographical Indication (Alta Mogiana, Norte Pioneiro of Paraná, region of Serra da Mantiqueira of Minas Gerais and the Cerrado region of Minas Gerais) and only one Designation of Origin, obtained in 2013 by the region of the Cerrado Mineiro. The region of the Cerrado Mineiro is a pioneer in GI, because it was the first to get the registration of a Geographical Indication, and the Designation of Origin. Today, this is rewarded with a significant increase in the price of coffee from the Cerrado Mineiro, which between 2013 to 2014 obtained a higher market value of between 30% and 40% than the coffee not certificate (CCCMG, 2014).

Therefore, this study proposes an analysis of the impacts of a GI on Jacu Coffee. It is intended to show that the GI certification of Jacu coffee, besides adding value to the region of Domingos Martins and the state of Espirito Santo, may bring a positive socioeconomic impact to the region, as an option for the Management of Agribusiness, as occurred with the coffee of Cerrado Mineiro. Because with the certification, the Jacu

coffee can ensure the added value of coffee and ensure their protection against future imitations, thus having more visibility for consumers, who will have a quality guarantee that only a GI certification brings, in addition to creating jobs, establishing the inhabitants in the region. In addition, an appreciation of the jacu coffee imply a greater interest of producers and employees to maintain and/or increase the cultivation of this product, having as a result the protection of Guan (Jacu) bird and its habitat, because the Guan is responsible for the specialty of the coffee.

This research contribute to the knowledge of future works on the subject, as well as for a future attempts to register the Jacu coffee. As was done in the case of the coffee of cerrado mineiro, where producers had used several sources for research, as articles and academic papers as this proposed to have specific knowledge in GI and do the certification request to the INPI. The request was successfully granted.

## **2 Method**

The analysis of the potential for GI of Jacu coffee was made through an exploratory study, because it allows greater familiarity with the subject researched, exploring and improving the ideas and finding insights (SEVERINO, 2007; PRODANOV & FREITAS, 2013). Vergara (2009) indicates this type of study for unexplored areas. Regarding the approach of the problem, there was a case study of a qualitative nature (MINAYO, 2008).

This study consists of a data collection through literature study based on public domain content. A documental search at the base of the INPI and interviews with the producers of Jacu coffee. The data were analyzed qualitatively regarding the theoretical framework for interpretation and construction of the results.

The interview with one of the Jacu coffee producers was at 26 August 2016, on a visit to Camocim Farm, located in the town of Domingos Martins, in the State of Espírito Santo. First, it was made an internet search to find the owner of the Camocim farm and mastermind of the Jacu coffee; as the farm has a sales website, the contact was made by phone using the number available on the website. At first, visit would not be possible, as they did not allowed farm visits, only store visits where they sold the coffees

produced at the farm, but after a brief explanation of the work that was being developed, and the importance of it, they immediately allowed the visit.

To collect data, the conversation between interviewee and interviewer was recorded, for which it was used a handheld recorder. Initially, was requested to the producer to talk about the history of Jacu coffee, how he came up with the idea and how it was implemented; thereby, he told the initial trajectory of the coffee production so everyone could understand how it happened that interesting story. The second part of the interview was done through questions, which were previously structured. These questions have been thoroughly developed so the interview was objective and do not become wearisome or was too long to the interviewee. In addition, only matters of great importance and value adding to research were discussed. These questions can be found in the results of the study.

### 3 Results and Discussion

One of the steps of the bibliographic search that most demanded attention and in-depth study was the biological study of the Jacu bird, who is the protagonist of this study. The difficulty encountered was the existence of several confuse studies, which hash the species of this bird and several other important information, because there are several species of Guan, each with its peculiarities and inhabiting specific regions. Even in approved articles in journals, there were mistakes, which shift the source of the study to internet sites with great reputation in bird studies and books considered classics in this theme.

In Espírito Santo, the species that inhabit the State is *Penelope Obscura*, more precisely the subspecies *Penelope Obscura Bronzina* and *Penelope Superciliaris* as known as margined *Jacupemba*. However, due to the characteristics of the birds seen in Camocim Farm, everything leads us to believe that it really is the species *Penelope Obscura*, because this species is much larger and heavier, and is darker in color, without brownish marks on the back and the edges of the wings are not ferruginous. Besides having the blackish legs, which does not occur in other Guans (SICK & BARRUEL, 1984).

The guan (Jacu), also known as legged guan (*Jacuaçu*) in some regions of Brazil, is an animal belonging to the class Bird, from order *Galiforme* and the family *Cracidae*.

Is divided into three subspecies: *Penelope obscura bridgesi*, *Penelope obscura obscura* and *Penelope obscura bronzina*, which is the species that occurs in Espirito Santo and will be thoroughly studied on the research (WIKIAVES, 2016).

The name *Penelope obscura* has the meaning in Greek and Latin which means: from the Latin *pene* = almost; and the (Greek) *lophos* = Crest; and from (Latin) *obscurus* = dark, gloomy, that in english would be: dark Bird with partial crest. This bird inhabits high forests, secondary forests and plantations. Has on average 68 to 72 cm and weighs from 1000 to 1200 grams. It has a quite dark bronze-green plumage and its neck, mantle and breast finely striated in white and black legs. The male has a red iris, differing from the female. Is a big and loud bird, as well as vocalization with a strong "oao" and an ascending melodious "o, o, o" (as the Portuguese pronounce of 'o'). When flies, its wings produce a weird and notable noise wherever it goes (SIGRIST, 2009).

Its diet is fruit based, a frugivorous animal, but also feeds on sprouts, leaves, insects and grains. Although they live in the woods, the Guans go to the open field for food and drink on the rivers banks, draining the water with its nozzle submerged, similar to what pigeons do; the seeds of the fruit it ingests are defecated undamaged. It has curious habits, as opening and closing the tail wildly, which is a sign of excitement, have the habit of shaking its head and, during the afternoon, become too restless before roosting; This fact is due to the desire to find a good place to sleep (SICK & BARRUEL, 1984; SIGRIST, 2009).

They are monogamous animals, males feed their females, turning and lowering its heads, in the same way they feed the chicks. The bridal ceremonies of these birds are little known, it is known that the couples caress on the head. The couple makes a little nest in the treetops or on vine zone, also they use abandoned nests by other birds. Can also install on a branch between *gravatás*, whose leaves they trample to build their nest. Lay on average 3 whites and large eggs, their incubation lasts 28 days and usually occurs in the months of October to March, the litters are composed by two to three cubs. The Guans usually live in packs of 6 to 10 individuals (SICK & BARRUEL, 1984; WIKIAVES, 2016).



### **3.1 Interview with the Owner**

The owner of the Camocim (ES) farm made a trip to Indonesia, and on this trip, he drank the exotic Kopi Luwak coffee and asked the barista the history of coffee. After some time, he learned by the employees of the farm that the Guan was doing the same thing. In the first moment he did not thought to took this material and along with the coffee production of the farm. He told the whole story and asked what he could do to keep the Guans, because the Guans were breaking the branches of the coffee bushes and eating its fruits, then the technician suggested them to taste the beans. However, at first time they tried the coffee, the coffee was not good. They were not doing the process correctly, the coffee was staying for a long time in the fields, a lot of time in the woods, was brewing, rotting away and gone sour, they were washing the coffee and that moisture had sour coffee. After some time, they simply took the fresh coffee and put on the terrace to dry, it reacted differently, creating a good drink, even better than the coffee that was sold at the farm at the time. In Chart 1 are listed the questions asked to the owner and his respective answers.

### **3.2 Exotic Coffee**

The biggest states that produces coffee in Brazil are Minas Gerais and Espirito Santo, However Minas Gerais is the largest producer, responsible for 97.7% of production of Arabica coffee (BARROS et al., 2014). Coffee production is the major agricultural activity and source of economy of the municipalities in the State of Espirito Santo. With strong demand to obtain a better income, local producers have begun to invest in the production of specialty coffees. The production of this type of coffee takes into account the influence of temperature, soil type, altitude, as well as the influence of human handling, because these factors may change the composition of the coffee (ÖZDESTAN et al., 2013). An example of special coffee produced by local farmers is the Hoatzin.



**Chart 1: Interview with the owner and creator of the Jacu Coffee**

1 How much cost the jacu coffee in reais?	The Jacu coffee is sold at R\$600.00 per kilo, and R\$18,000.00 a sack.
2 Added value: Does GI adds value or ensures the value?	The Camocim farm has organic and biodynamic certified, these certifications, as well as a possible added designation of origin certificate and ensure the value and the quality of the coffee.
3 Why drink Jacu (Guan) Coffee?	The Guan is a frugivorous bird, and then it will eat all the ripe fruits available; it eats the coffee because the coffee is sweet and has a very large concentration of sugar.
4 Why in Espirito?	The Guan eats coffee seed in other farms, but the desire to market these grains excreted by Guan began in Camocim with the knowledge of the manufacturing process of Kopi Luwak by the owner of the farm, which deployed similar method in Guan coffee. Even in the South of Minas Gerais there are farmers producing and selling Jacu Coffee.
5 Man's establishment on the farm (indicators for establishment of the man on the farm)	When you produce a high quality coffee, you get an added value which is highly lucrative for those who produce, as well as the generation of new jobs for other residents of the region.
6 Work Value (labor)	In the farm, employees make R\$70.00 per day.
7 Potential of jobs (INCAPER) how many people are need to collect a bushel/hectare?	Today there are 15 employees working in harvesting, 10 more working in other sectors, with a total of 25 employees.
8 Mechanization of farming (or manual crop?)	The process of brewing the Jacu Coffee is manual.
9 Weather in Domingos Martins/Venda Nova	The farm has an annual average temperature of 19°C.
10 The altitude of the farm	The farm has fields that begin with the altitude of 1000 meters, reaching 1200 meters of altitude.
11 Other animals that eat coffee	Besides the Guan, Camocim has the Gray four-eyed opossum that also eats coffee, but not in the same amount as the Guan, as it is a much smaller and a mammal, the digestion of coffee is longer causing it to excrete away from the farm, which would make the harvest harder. The birds have very simple digestive system; that is why practically at the same time as they eat the fruit, they expel the bean.
12 Value of Kopi Luwak	A pound of Kopi Luwak can cost at least US\$400 (R\$1400) in the U.S. market and in finest cafes, a single cup can leave for US\$30 (R\$100) (BBC, 2016).

**Source: Survey Data**

To better understand what is the Guan Coffee, you need to know a about this animal. The Guan is a species of bird in the Cracidae family, which lives usually in Neotropical regions (GRAU et al., 2005), and that feeds on fruit and excrete the seeds through the forest, helping in the development of new trees (THEL et al., 2015). These birds have the characteristic being relatively large birds, which awakens attention of hunters. Therefore, its poaching is a risk to species.

According to Teixeira et al. (2014), humans have always exploited animals because of its resources and the birds are in the group of world's most hunted vertebrate

animals for food. His study, done in the Brazilian semi-arid region, showed that apart from the predatory hunting for food, the birds are also hunted for contraband, domestication and even medicinal purposes. Therefore, the discovery of Guan Coffee can contribute to the preservation of the animal, as the residents of the region profit from its "service", since it generates jobs and income for the entire region.

The Guan coffee is a coffee produced similar to the exotic Kopi Luwak, considered the most expensive coffee in the world that is produced in Indonesia, specifically in the Java, Sumatra and Sulawesi Islands. The Kopi Luwak coffee comes to cost \$ \$600.00 per 500 grams and its name comes from the Indonesian words for coffee and *civeta* (*Paradoxurus Hermaphroditus*). The *Civeta* is a mammal that lives in Asia, which has features like climb at the coffee tree and only eat the best beans. Creating a natural selection of flawless fruits and therefore better for the manufacture of a good coffee. In addition, within its stomach these beans suffer reactions due to gastric acid and digestive enzymes, which trigger changes in them, making this coffee has unique aroma and flavor. As the beans are excreted 'completely', they can be collected by producer, sanitized, and finally, toasted. The Kopi Luwak has this attractive market price due to the exotic process in which it is produced, in addition to its qualities of different aroma and taste. (MARCONE, 2004; ONGO et al., 2012; JUMHAWAN et al., 2013, 2015).

The fact of the Kopi Luwak have this price, awaked the interest of other people on its production. According to Marcone (2004), the place biggest producer of Kopi Luwak is the island of Sulawesi in Indonesia, but a local war damaged to production, because few people have the courage to venture into the forests to harvest the drops of coffee beans, because they fear being killed by conflicting. Thus, the production was almost finished. In order to be able to buy authentic Kopi Luwak coffee, other areas were surveyed where the *Civet* inhabits were studied and analyzed. Ethiopia, in African continent, was chosen, a country famous for its production of Arabica coffee. However, the African Civet has some particularities, but the most important thing is that as its relative of Indonesia he also eats mature coffee. Studies have shown that there is a difference between the grains excreted by both Civets: in size, weight and color and consequently in your flavor, which shows us how that this is unique, because even if they are produced by similar animals, the difference of a habitat and the particularities of each animal reflects on the final product.

Kopi Luwak consumers are concerned with the authenticity of their coffee. That is why several studies are being made to ensure the originality of the product. According to Jumhawan et al. (2016), Kopi Luwak coffee has been adulterated with other cheap cafes, an illegal act that affect both producers and consumers. Generally, the assessment of the originality of the coffee is performed by human sensory perception, but many scholars consider this a very subjective. In this way, the researchers tried to do the experiment in another way, through a biochemical analysis to quantify the degree of adulteration of coffee, the prediction model showed accurate estimate of the percentage of blend, successfully validating the quantification of mixing composition of samples. In this way, more and more studies are done to improve the ways to protect the authenticity of a product.

Kopi Luwak is not the first nor the only human food that goes through processes of digestion of other animals, the honey we eat, for example, is a mixture of pollen, nectar of flowers and excrement of bees, because the nectar is regurgitated and mixed with other substances to make the honey we know. Another case is the Bird's Nest Soup, as known as the "caviar of the East", made from the saliva of an Asian bird that uses its saliva to make their nests, that saliva solidifies on contact with the air. From these nests are made this rare soup, which is imported into various countries of the world, as United States, which is one of the largest importers. Argan oil comes from Morocco in Africa, its particularity listed are in goats that are induced by their creators to climb trees and eat the Argan fruit. They eat this fruit similar to an olive and then excrete it. The seeds are taken out from feces and from oil said to be an aphrodisiac is made, besides serves for cooking and massage (MARCONE, 2004).

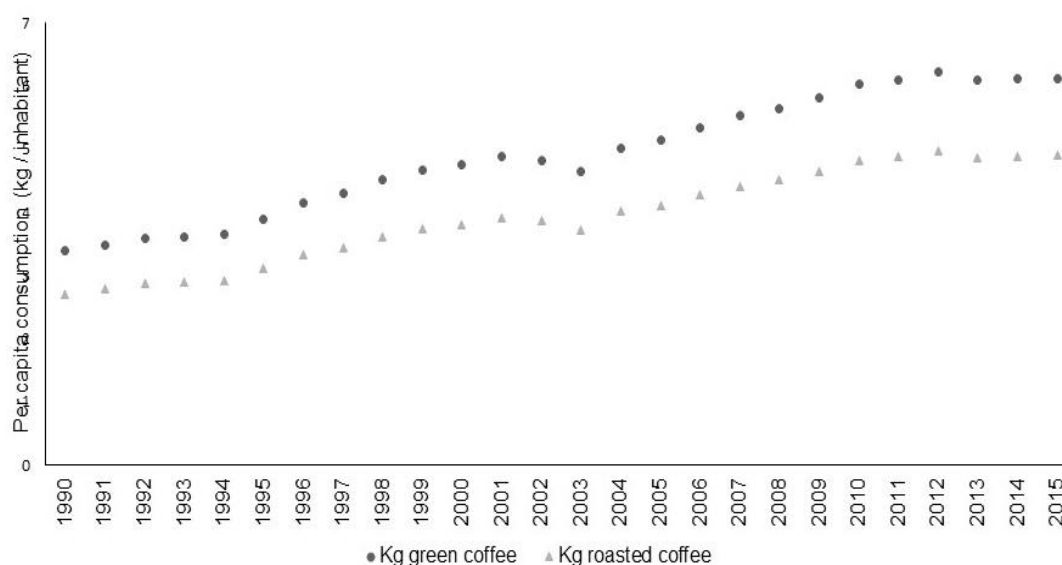
### 3.3 Coffee Scene

In Figure 1 are shown the values of domestic consumption of coffee per capita in Brazil in the years 1990 to 2014. Green coffee began in 1990 with a domestic consumption of 3,390,000 sacks coming in 2014 to 6,120,000 sacks. On the other hand, the roasted coffee had in the years of 1990 domestic consumption of 2,710,000 sacks, coming in the year 2014 the 4,890,000 sacks (ABIC, 2015).

Domestic consumption of coffee in sacks in Brazil has increased, both for roasted/ground and instant coffee, having roasted/ground coffee started in 1996 around

10.6 and reached the 19,200,000 sacks in 2014. The instant coffee increased from 8.2 in 1990 to 20,300,000 sacks in 2014 (ABIC, 2015). The monthly average prices received by producers, total amount paid to producers by the sack of type 6 Arabica coffee drink lasts from 60 kg, in the years 2014 to 2016. The lowest price was in 2014 priced in the range of R\$214.09 and reaching its highest value of R\$448.41 in 2016 (CCCV, 2017). The Jacu Coffee costs on average R\$18,000.00 per sack, also being sold by kilo for R\$600.00.

Figure 1. Domestic coffee consumption per capita in Brazil, in the period 1990-2014



Fonte: ABIC, 2015

In the beginning of production of Arabica coffee, the Camocim farm, in the mountainous region of the Espírito Santo, the birds called popularly of Guan, were a kind of plague for coffee producers because they broke the branches of the coffee bushes because of they are a heavy bird; in addition, they eat the ripe beans, significantly injuring crops. The producer and owner of the farm decided to take action, and to have the knowledge of another kind of coffee production, which had been deployed in Indonesia, where the animal predator of coffee was used in favor of production, he implemented in his farm a similar method. Having a management attitude, because other member in the production chain sees rural producers as managers, they are always required to have

qualified management attitudes with updated knowledge, which leverages the competitiveness (UECKER; UECKER & BRAUN, 2005).

The competitiveness of agribusiness is supported and maintained by products, processes and services (BINOTTO, NAKAYAMA & SIQUEIRA, 2013). The Ground coffee is a high quality product that has a particularity because it is an exotic product, which facilitates its marketing because has no competitors in the market. Due to the ability to manage and the entrepreneurial vision of one of the producers of the Camocim farm, it was possible to transform a problem (the losses that the Guans brought crops) in solution (a new product, the Jacu (Guan) Coffee). Because to create new knowledge is not only acquiring external expertise or be able to learn from other people, it is also the ability to build itself a labor-intensive interaction between the members of an organization with ideas and ideals that let you try, make mistakes and get it right (MORESI, 2001).

Was with specialized technical assistance, efforts of producers and help of all employees who work on the Camocim farm, which was possible to reach a product of extraordinary quality as the Jacu Coffee, as were several failed attempts to reach the proper management to produce a quality coffee. That way you can see that coffee producers have applied management knowledge, which, according to Terra (2005) is the identification and sharing of knowledge strategically relevant to the organizations. Applying in their method tacit knowledge, which is the "learn by doing" through practice, imitation and observation, getting experience with mistakes and attempts (KIM, 1998; LEROY & RAMANANTSOA, 1997; NONAKA & TAKEUCHI, 1997; LAM, 2000). So it is fair to say that the Jacu Coffee, is a product of quality and success, success that due to the efforts of an entire community, led by a man who in your management model managed to turn a terrible problem in a very lucrative business opportunity and social character.

Technological progress and the improvement of market products make increasingly demanding consumers appear willing to obtain a special and valuable product. Thus, the geographical indication makes it quite useful and important because it is a guarantee of quality and origin for consumers, and greater profits and visibility for producers.

## 4 Conclusions

This research aimed to show that a geographical indication would ensure the added value of Jacu Coffee and benefit coffee-producing region, as this singular coffee, which already has international fame, and has its specificity characteristics, has a strong potential to obtain both certification of designation of origin as indication of origin.

As studies in GI are recent in Brazil and have been increasing the number of searches on the subject, this work could contribute to future studies on other products with potential in GI, which may become a source of bibliographical study for researchers and anyone interested in acquiring more knowledge about the geographical indication and everything that involves it. In addition, a survey like this could help in a future request for certification of Designation of origin or indication of origin of the Jacu Coffee in the INPI.

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