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Change and technological sustainability in the wine industry in southern Santa Catarina

Technological changes in agribusiness winery of Santa Catarina state, southern Brazil

Technological changes in the agroindustrial sector of bodegas in southern Santa Catarina, Brazil

Miguelangelo Gianezini, Cristina Keiko Yamaguchi, Cleber Domingos Ceron, Adriana Carvalho Pinto Vieira

Administrator, Specialized in Production and Quality Engineering. Master's in Applied Social Sciences, PhD in Agribusiness. Postdoctoral fellow (FAPESC scholarship holder)

Accountant, Productivity and Total Quality Specialist. Master's in Business Administration. PhD in Engineering and Knowledge Management, with a postdoctoral degree from UFABC. Coordinator of the Graduate Program in Production Systems (UNIPLAC/ UNESC/ UNC/ UNIVILLE)

Bachelor of Business Administration (PIBIC scholarship holder)

Bachelor's and Master's in Law, PhD in Economic Development, with a post-doctorate from UNICAMP.

SUMMARY

Wine production in Brazil has diverse origins, most notably the history of Italian immigrants, who brought with them the knowledge and tradition surrounding this ancient product. The Urussanga microregion, in southern Santa Catarina, is a colonization area where the Goethe grape has adapted, allowing the production of wines with their own identity.

that were recently recognized with the Indication of Origin seal. Observing

In this context, the objective of this study was to identify the technological changes adopted by the region's winemaking industry. To this end, bibliographic research, a documentary survey, and field research were conducted, collecting data and information from winery managers in the Goethe Grape Valleys. The data were represented from the field collection and also through scientific articles available in the Scientific Electronic Library Online and Google Scholar portal, as well as books and journals available on the subject. Based on the documentary and data survey, it was possible to list the main changes resulting from the IP registration implementation process, which characterized the typicity of the wine produced. The study also identified the actions of internal, intermediary, and external stakeholders in the process, such as organizations, entities, suppliers, subsidiaries, competitors, and consumers. These results allowed us to understand the current technological status of the wineries that completed the IPVUG process, which provides support for other regional wineries seeking technological improvement, as well as for further research in the area.

Keywords: Technology. Viticulture. Stakeholders. Goethe Grape Valleys. Santa Catarina.

ABSTRACT

Wine production in Brazil has different origins, highlighting the history of Italian immigrants who brought with them the knowledge and tradition that surrounds this ancient product. The micro-region of Urussanga located in Santa Catarina State is a have a perfect terroir for the Goethe grape, allowing the production of wines with its own identity and that has recently been recognized with the Geographical Indication. Observing this context, the aim of this study was to identify the technological changes adopted by the wine agribusiness in the region. To this end it was done bibliographical research, documentary research and data collection with field research and information with the managers of the local wineries (Vales da Uva Goethe). Data were represented from the field collection; and also, through scientific articles available on the basis of data Scientific Electronic Library Online and Google Scholar as well as books and

periodicals available on the subject. From the documentary survey and data it was possible to list the major changes from the GI registration of the deployment process, which characterized the typical characteristics of the wine produced. As well as the performance of internal agents, intermediaries and external to the process (stakeholders), organizations, entities, suppliers, subsidiaries, competitors and consumers. These results allowed us to understand the current technological situation of the wineries that have completed the process for obtaining the IPVUG, and provide the same benefits to other regional wineries seeking technological improvement, and for deepening research in the area.

Keywords: *Technology. Viticulture. Stakeholders. Goethe Grape Valleys. Santa Catarina.*

SUMMARY

Wine production in Brazil has different origins, highlighting the history of Italian immigrants who contributed knowledge and tradition to this product. The micro-region of Urussanga in the south of Santa Catarina is a space where the Goethe grape can be adapted, which allows the production of wines with their own identity. This space has been recognized with the seal of origin. In this context, the objective of the study was to identify the technological changes adopted by the wine agroindustry in the region.

To this end, bibliographical research, documentary research and data collection with field investigation information and with those responsible for the Goethe Grape Valley wineries are carried out. Data was represented in the field collection; and also through scientific articles available in the Scientific Electronic Library Online database and Google Scholar portal, as well as books and magazines available on the topic. From the survey and documentary data it was possible to enumerate the main changes regarding the IP registration of the harvesting process and the typical characteristics of the wine produced. As well as the performance of internal and external agents, intermediaries in the process (stakeholders), such as organizations, entities, providers, subsidiaries, competitors and consumers. These results allow us to understand the current technological situation of the wineries that have completed the process of obtaining the IPVUG, and provide the same benefits to other regional wineries that are seeking technological improvement, and to deepen research in the area.

Keywords: *Technology. Viticulture. Participants. Goethe's Grape Valleys. Santa Catarina.*

1 INTRODUCTION

The Brazilian economy, among its fluctuations, allows the most differentiated segments and market niches, the expansion or contraction of their activities. In the winemaking scene, sentence is reaffirmed. In recent years, the sector has been gaining national prominence and awakening the attention of more *stakeholders.*

Analyzing the national scenario Athia and Dalla Costa (2009), in their studies on the productive evolution in winemaking, report significant evolution between 1975 and 2008 in grape production. In 2008, production exceeded 1.39 million tons and for the first time more than half of it was used to produce wines, juices and derivatives.

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In 2012, according to data from the State's Federal Superintendence of Agriculture, Santa Catarina's wine production gained prominence with the processing of 21.18 million liters of wine and grape and wine derivatives. It is estimated that more than 70% of this production refers to table wines, which represents an increase of 11.77% in this category. In on the other hand, there was a 19.14% reduction in the production of fine wines in the State (MELLO, 2012).

In this environment, the union between the winemaking tradition originating from Italian immigration in Urussanga microregion and the Goethe Grape, allowed the production of typical wines with own identity. The centuries-old trajectory of Goethe wines in the region has entered a new phase from 2005, with the founding of the Goethe Grape and Wine Producers Association of Urussanga Region - PROGOETHE (PROGOETHE, 2012).

Assuming that research is essential to verify data in various areas; and observing the construction of a panorama that helps decision-making organizational or even facilitate the exchange of experiences between winemakers, it is understood as essential to update information with a view to improving standards of competitiveness. And competitiveness, linked to access to new means of production, through of fairs and events, has been the engine that moves entrepreneurs to seek changes in various organizational spheres.

The present study aimed to address the changes that occurred in the Vales microregion of the Goethe Grape (VUG), through the identification and analysis of the technological changes adopted after granting of registration by the National Institute of Intellectual Property (INPI), in addition those arising from the process undertaken by wineries until obtaining the Indication of Origin (IP).

2 THEORETICAL BASIS

Ferreira (1999) states that changes can be characterized as an alteration or modification of a developed process. Changes may also be associated with a deviation or linked to synonyms such as remove, exchange, renew and displace.

Relating the studies carried out by Silva *et al* (2006) at the Wine Cooperative Aurora, positive results of research and adaptation for better serving the target audience. Through changes in packaging and labels, it was possible

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expand the range of customers and bring satisfactory results when compared to competitors.

The renewal of existing equipment in the organization as the best way to profitability and productivity, demonstrates a conservationist, incremental and training (HARMON, 1993).

Some of the innovations that can happen come from an intentional search and conscious, opportunities for innovation are divided between the internal and external environment of the organization and can be organized into groups (DRUCKER, 2004). Internal opportunities arise from: *i)* Unexpected occurrences; *ii)* Inconsistencies; *iii)* Need for Process; *iv)* Changes in the market and industry. External opportunities are linked to: *i)* Changes demographic; *ii)* Changes in perception; *iii)* New knowledge (DRUCKER, 2004).

Considering the different organizational environments, the above-mentioned sources can act at the same time, representing most of the opportunities available to innovation (DRUCKER, 2004). In all processes carried out by wineries there is a range of agents, both internal and external, influencing their results. The term *Stakeholder,* cited by Freeman (1984), presents himself in an organization, as any individual who can influence the achievement of its objectives.

According to Osterwalder (2011), companies create partnerships aiming to reach higher levels that would be impossible without its partners, these connections can connect the company with non-competitors, with competitors or even establish a customer-supplier relationship when the search for quality and guaranteed supplies is the main objective.

Within English literature the words *stake* and *holder* mean (piece, slice) and (the one who holds) respectively, it is metaphorically understood that *stakeholder* is the individual who owns part of the organization (TORRES, 2013). Given the growing study that has been developed based on the work of Freeman (1984) on *stakeholders,* it is done necessary to divide them into some categories. This process facilitates decision-making decisions within the organization taking into account the number of bodies, companies, and people linked to the organization continues to grow.

In their work Freeman, Harrison and Wicks (2007) present a map facilitating the understanding who the main *stakeholders* are and their relationship with the organization, let's see the map:

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Figure 1 - *Stakeholder* Map

Source: Freeman, Harrison and Wicks (2007, p.7).

In Figure 1 you can find the organization in the center, surrounded by *stakeholders* primary, which, according to the authors, require greater attention given their direct relationship with the company. At the edge of the map are the secondary *stakeholders ,* these influence the company's relationship with primary *stakeholders .*

Clarkson (1995) classifies primary *stakeholders* as those who maintain a direct link with the organization requiring constant attention. Interdependence is considered high-level at this stage. Dissatisfaction or disengagement of any of the primary *stakeholders* may mean damage or even the inability to continue with the organization's activities.

Secondary stakeholders according *to* Clarkson (1995) despite being connected to the company are not essential for their maintenance and survival. Even though they are not listed at the top from the interest list secondary *stakeholders* must always be kept under observation, as they influence and can also pose risks to the organization, as they do not will necessarily be in accordance with the policies established by the company, the same may oppose in order to satisfy their own primary *stakeholders .*

Within the *stakeholder* theme , many proposals have been discussed in order to achieve an order of importance of the same. Several authors approach the topic with different points of view.

Fassin (2009) based on Freeman's studies considered the basic *stakeholders ,* as employees and customers and remaining individuals as *stakewatchers* and *stakekeepers.* The *stakewatchers* do not have a direct interest in the company, but they benefit *stakeholders,* they would be the intermediaries. *Staff keepers* are distant from the organization, but they still have influence on it, a factor that is not very reciprocal. The government can be cited as an example.

Frooman (1999) listed the levels of dependence and power between the company and its *stakeholders.* In his publication he mentioned three basic questions for the study of these agents,

Who are they? What do they seek/need? And how do they intend to achieve/fulfill their needs? needs? Clarksson (1995) divided them into primary and secondary.

Mitchell, Agle and Wood (1997) talk about the theory of *stakeholder alienation,* the the results of their research indicate an order of service that is based on the criteria of power, legitimacy and urgency.

Within the free and broad market competition, it is also worth highlighting how survival strategy the search for competitive advantages. Among the main existing possibilities, organizations have chosen to establish links between themselves. The associations have mainly helped small businesses in competing for a sustainable development (CRUZ; QUANDT; MARTINS, 2008).

In his studies, Verschoore Filho (2006) found that cooperation networks provide an environment conducive to learning and innovation. In this way, the PROGOETHE association becomes partially responsible for enabling the success of small producers in implementation of new processes or conquest of new markets in the Urussanga region (WITTMANN, DOTTO AND WEGNER, 2008).

Wine production in the Urussanguense microregion is centuries old, and the same recognized as the “capital of good wine in Santa Catarina” as early as 1932. Recognition in other parts of the state and even outside it occurred after the inauguration of the railroad in 1919. The railway was essential for the valorization of regional cultivation (BRASIL, 1932).

The recent obtaining of the indication of origin has enabled new studies on the microregion and wine production. The creation of PROGOETHE and the recurring processes the achievement of IPVUG allowed managers to expand their knowledge, as well as evolution of routines and procedures in processes (YAMAGUCHI *et al,* 2013).

According to Marzano (1991) many branches were brought from Italy to Brazil. Even the vines that were developing did not bear fruit because the climate was not suitable. However, the vines that came from the United States developed better and demonstrated better adaptation to the tropical climate.

Urussanga was the only city to successfully receive and cultivate the Goethe grape, even also being sent to Rio Grande do Sul, where the cultivation failed. In Urussanga the cultivation of this variety shows its peculiarities, such as the problem in rainy periods in ripening season (VELLOSO, 2008). A special characteristic that the microregion urussanguense acquired was the genetic mutation of the Goethe grape, giving rise to a wine different from that produced until then (REBOLLAR *et al,* 2007).

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During the Getúlio Vargas administration, wine production was strongly encouraged. In addition, the consumption of Goethe grape wines tasted at diplomatic receptions in the federal capital (at the time the city of Rio de Janeiro), Vargas founded the first oenology substation in Urussanga in 1942. The Substation maintained 420 experiments at its peak (VELLOSO, 2008).

Coal exploration in the southern region of Santa Catarina, which began in 1917, was rapidly rise and strong impact on wine culture. First, the vines were weakened due to the acidic action that slowed the growth and production of grapes. Subsequently, farmers were attracted by the ease of capital accumulation offered by mining companies, leaving the cultivation for commercial purposes (VENDRAMINI, 2003).

In 1940, at the height of coal exploration, wineries were closed and the production of grapes was reduced to the extreme. For the first time it became necessary to use grapes produced in the neighboring state to supply the wineries that remained open (REBOLLAR *et al,* 2007).

However, in the mid-1970s, a new movement was established in Brazil, a search for identity references, in this same period Mr. Hédi Damian together with Mr. Genésio Mazon, local entrepreneurs who, supported by the Rotary Club, started a project of reorganization and incentive to wine production (VALES DA UVA GOETHE, 2014).

In 1990, grape experiments were resumed. The substation became the Urussanga Experimental Station and became managed by the Research Company Agriculture and Rural Extension of Santa Catarina - EPAGRI (GOETHE GRAPE VALLEYS, 2014). Since the founding of the PROGOETHE association, producers have set objectives to be achieved, the main one being obtaining the registration of geographical indication of origin (PROGOETHE, 2012).

In achieving registration, we must also credit the partnership with several entities, in especially the Brazilian Support Service for Micro and Small Businesses (SEBRAE), the Company of Agricultural Research and Rural Extension of Santa Catarina (EPAGRI), the University Federal of Santa Catarina (UFSC), the Foundation for Research and Innovation Support of the State of Santa Catarina (FAPESC) and the Municipalities of Urussanga and Pedras Grandes, which granted PROGOETHE the necessary resources to regain its prominent position, already occupied in other times by the region's wines (MAESTRELLI, 2011).

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Finally, on February 14, 2012, the Goethe Grape Valleys received from the Institute National Industrial Property Office - INPI the registration of Geographical Indication of Origin (IGP). The VUG is described with the following nominative:

> Microregion located between the slopes of the Serra Geral and the southern coast of Santa Catarina in the basins of the Urussanga and Tubarão rivers, comprising the municipalities of Urussanga, Pedras Grandes, Cocal do Sul, Morro da Fumaça, Treze de Maio, Orleans, Nova Veneza and Içara (INPI, 2012).

IPVUG recognition enables Goethe products to enjoy a strong base concrete for a new stage of development. In this way, the objectives initially proposed in the search for the same begin to be realized through an economy sustainable regional (VIEIRA; PELLIN, 2015).

After discussing winemaking in Brazil and Urussanga, a brief presentation of the perspectives for modernizing the sector. In the documentary research, the project was found MODERVITIS as a representative of these perspectives. This is an initiative of IBRAVIN together with EMBRAPA, and has as partners the ministries of Development, Industry and Foreign Trade (MDIC), of Agrarian Development (MDA) and Agriculture, Livestock and Supply (MAPA), in addition to having the support of several other federal institutions (IBRAVIN, 2013).

MODERVITIS has clear and concise objectives from which you can highlight the modernization of vineyards, increase in the average productivity of grapevines, increase in sugar content (degree brix), reduction in the number of commercial varieties produced, provision of technical assistance to program participants, offering lines financing for the physical and technological modernization of wineries and the increase in storage capacity (IBRAVIN, 2013). With the initial objective of serving 1,250 small producers in the states of Rio Grande do Sul, Santa Catarina and Paraná, MODERVITIS aims encourage young people to remain in the countryside through qualification in production and new scenario that has been constructed.

3 METHODOLOGY

In this study, exploratory and descriptive research was used. The factor determining factor for it to be classified as exploratory is the need for a survey of data, quantity and type of equipment currently used, with the purpose of analyzing and whether or not to notice the changes that have occurred.

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The designated target population were wineries that have the Indication of Recently achieved provenance, which requires greater investment in standardization, technology and consequently, competitiveness and quality

In the data collection plan of this study, it was intended to use field research as an initial method. Among the established objectives was the survey of machinery used by the target audience. This was done through data collection and information from winery managers.

The use of a spreadsheet facilitated the research, because according to Roesch (2009) This method is characterized by its dynamic application methods. After field collection made data analysis necessary, where the information obtained was converted into meaningful data for research. Emphasizing the project objectives mixed or quantitative-qualitative approach proved to be adequate.

4 RESULTS AND DISCUSSION

4.1 AVAILABLE MACHINERY

Through data collection carried out together with managers, we developed if table 1, in which it is possible to check the main equipment currently used in wineries, as well as the quantity existing in each of them. For the purposes of the research, there was a need to reveal the names of the wineries studied. They are represented with the acronyms that represent the wineries. The following is the table based on the collection of data carried out:

Table 1 - Quantity and variety of equipment

MACHINERY / WINERIES	V1	V2	V3	V4	V5		
Overwhelming	1	1		1	1	1	1
Fermentation vats	6	4		8	12	3	
Temperature control coils	4	-		-	-	-	
Press	1	-		1	2		-
Air compressor	1	-		-	1	1	
Ammonia compressor	1	-		-	-	-	
Cooling tank	-	-		-	-	-	
Tank	40	12	26	46	14		
Filters (ground, pressure, air, module)	1	1		1	2		1

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Filler	1	1	1 2		1
Cork stopper	2	1	1	1	1
Beak freezing	2	-	-	-	-
Capper for sparkling wine	1	-	-	-	-
Labeler	1	-	-	1	-
Shrink capping machine	1	-	-	2	1
Bottle washing machine	2	1	1 2		1
Cold room	1	1	-	-	-
Pumps for transporting wine	3	3	3	3	3

Source: Own elaboration

Considering the size of the wineries, it should be considered that production is not yet fully automated, for example there are some processes and equipment that involve human strength (manual labor), such as presses, fillers, labeling machines, rinse.

4.2 STAKEHOLDERS' PERFORMANCE

Based on the concept of authors such as Freeman, Harrison, Clarkson (2007) and others can be highlighted in Figure 5 a range of actions that characterize the internal environment (inside the winery) and a set of activities that require a relationship with the external environment (outside the winery).

Therefore, there are also relational actions, which are positioned in a space intermediate (inside and outside the winery at the same time). In this sense, it is possible to infer that stakeholders permeate all these environments that surround the space in which the wineries (market) and at the same time the actions that are indirectly carried out.

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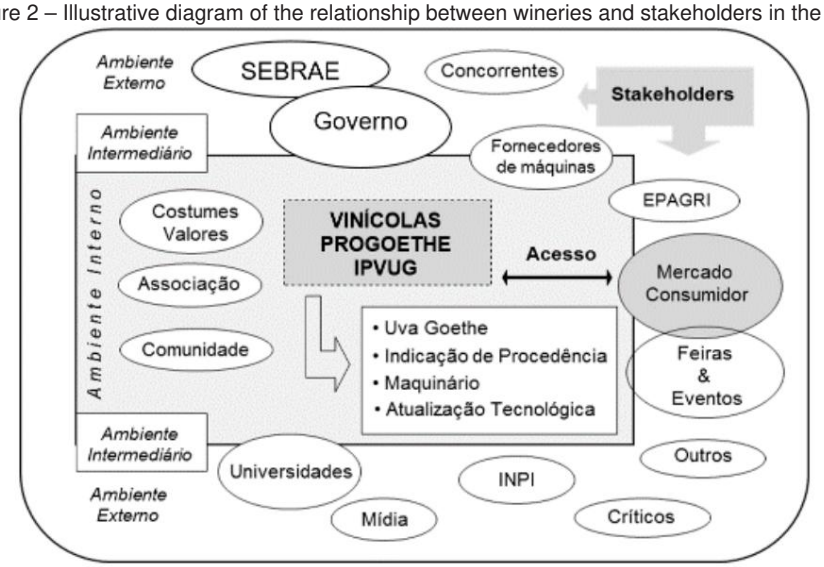
Figure 2 – Illustrative diagram of the relationship between wineries and stakeholders in the VUG



Source: Adapted from Gianezini *et al* (2015).

Still according to the studies of Freeman, Harrison, Clarkson (2007), it can be list as primary stakeholders everything that is within the internal environment, as well as everything that permeates the intermediate environment. Remaining as secondary stakeholders are the agents that are located in the external environment and do not have a direct relationship with the wineries.

The main stakeholders involved in achieving IPVUG were SEBRAE, who took the initiative to seek out managers with the aim of developing the project; with acceptance of which there was technological support from EPAGRI; research from UFSC; and current support in research at the University of the Extreme South of Santa Catarina (UNESC).

The project would also be unfeasible without capital support from the Santa Catarina State Government. Catarina through FAPESC, and financial investments from the City of Urussanga. The traceability process was developed by the Totem Cultural Institute – ITC, and EMBRAPA Grape and Wine approached in 2014 and is helping with coordination and support to the project (FINEP).

4.3 RELATIONSHIP WITH FAIRS AND EVENTS

Visiting events allows small producers to exchange information about the that is available on the market. We can mention the national events that take place in the Sector Wine industry, such as: Vinotech, ExpoVinis Brasil, QualityWine, VinumBrasilis, WineIn, Modervitis Sectoral Articulation Workshop in Santa Catarina.

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Although there is a wide variety of fairs and events nationwide, programmed content of the same has a strong focus on the finished end product, reducing the few address the cutting-edge machinery on the market.

By studying cultural and technological advances, investments in grape cultivation and greater concern with the quality of national wine, Di Giulio (2007) identified that in Brazil, wine production and oenological technologies were implemented through the acquisition of new machines and equipment, such as grape crushers, selector tables and presses intelligent.

4.4 DEMAND AND PRODUCTION

Government investments and the cultural appreciation project developed by SEBRAE has boosted local tourism and consequently extolled the term GOETHE. Through data collection, the difference between the profile of “pre” and “post” tourists became clear. obtaining the IPVUG registration, given that previously they did not distinguish between quality of wine and now they come looking for a specific characterized product.

According to managers, with traditionally more rustic production and a focus in wine, only after all these studies and investments from “pro-Goethe” stakeholders, or that is, favorable to IPVUP, was that some wineries “woke up” to requirements competitive in the market, such as labeling with basic information about the product (pre-seal).

To support the search for Goethe products, managers invested through from PROGOETHE and/or on their own initiative – in a design professional who developed a new look for the wines produced. This sought to give them characteristics contemporary exteriors and typical interiors, with unparalleled flavor and aroma, which allowed Goethe wine gains space on the shelves of local and regional supermarkets (Giassi chain and Martins).

4.5 SUPPLIERS

With the lack of subsidies for the import of machinery, the acquisition of equipment for wine production is limited to national brands that sell products technologically inferior and in some cases similar. It should be noted, however, that there is

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the concern of some managers in keeping up to date with market suppliers external, mainly Italians and French, who traditionally produce the best equipment.

Considering the reality presented by the object of research, about the machinery used, the brands and main suppliers for the domestic market stand out VUG: AGM Máquinas, Vinox, Sava Equipamentos Industriais, Japa, Zegla, Maqmundi, Luvison, Netzsch, Ricefer and Dueville.

The existence of other companies that carry out trade must also be considered. of equipment in the sector for large-scale wineries. However, this equipment becomes unfeasible for the companies studied, whether due to physical, monetary or demand limitations finished product.

Managers have also benefited from visits by representatives of companies in the sector. They bring in their catalogs what is new in the domestic market. It fits mention that these sellers often represent two or even more companies; and thus, the producer can compare technologies and values in order to choose the best option within your needs.

4.6 LIMITATIONS

On the threshold of completing two decades of enactment (2006), it was the Complementary Law No. 123 (BRAZIL, 2006) which expanded the number of requirements for using the simple national. Thus, wineries were harmed and lost the reduction in their tax burden. Currently, taxes on a bottle of wine reach 58% of the value of the finished product.

The government subsidy for wine production that exists in neighboring countries, Chile, Argentina and Uruguay, benefits them and together with the legislation in force in Brazil facilitates the entry of imported products at very competitive prices.

However, the benefit that exists in other countries is a limitation that has made it difficult the growth and leverage of the national wine industry. Unlike what has been practiced in Europe, alcoholic beverages are not nationally recognized as food, therefore producers encounter legislative barriers that make the product difficult and more expensive end.

Contact with managers allowed the discovery of new variables that until then were unknown to the researcher. Among the difficulties in acquiring new equipment mentioned above, the variation in power voltage is added, as an obstacle for the implementation of new machines.

With the inefficiency of the energy companies that provide electricity to the region, it is necessary to adopt as a preventive measure the installation of generators that ensure constant supply, avoiding possible problems in the performance of new equipment and as a result would increase the final cost of the investment.

4.7 PROGOETHE

The studies developed by Wittmann, Dotto and Wegner (2008) are in line with the reality existing in the studied scenario. The PROGOTHE association brought visibility necessary for Goethe products, through which managers become part of of the stands at fairs no longer as spectators, but as exhibitors of typical wine from VUG.

It is worth mentioning that the PROGOETHE association has characteristics that differentiate it of a cooperative. In the data collection it became clear to the researcher that the association was used for the purchase of materials on a large scale seeking mutual benefit for producers, However, this practice was repeated a few times and today it can be said to be extinct.

4.8 TECHNOLOGICAL CHANGES

Based on the proposed general objective, there is a need to present the findings from the specific objectives. In the on-site survey it was clear that the The process of obtaining the registration of indication of origin did not require changes to the structure physics of the wineries, therefore, the relationship between the changes and the recent obtaining GI registration.

Correlating Ferreira's (1999) studies on changes, and the research developed by Silva et al (2006) at the Cooperativa Vinícola Aurora, a strategy is observed of customer acquisition and market expansion through labeling adjustments. VUG wineries, influenced by stakeholders such as SEBRAE, followed the same path path. In addition to developing a new look that would cater to a wider audience

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requirement that labels now have information about GI registration that adds value to the product end.

Still according to Ferreira (1999) two theories stand out: Theory of Changes and Theory of innovations. The theory of innovation is linked to created or invented processes, unlike theory of change that deals with the renewal or adaptation of processes. In VUG predominantly the theory of changes was evidenced, and there was no, on the part of of the researcher, record of innovation in the technological field.

Highlighting the technological changes, the researcher found in V1 an increase in some equipment for the development of sparkling wines using the *champenoise method.* For the production of sparkling wines with this method requires freezing the nozzle, carried out by equipment adapted to the needs of producers.

Through the dialogues between the researcher and the winemakers, the pros and cons became clear on the use of concrete tanks and stainless steel tanks for fermentation. While some producers defend the use of concrete tanks highlighting the conservation of characteristics of wines offered by the slow change in temperature, some others report dissatisfaction related to their maintenance and cleaning over the years.

Thus, in V5, the exclusive implementation of stainless steel tanks was observed, According to the winery owner, it was clear that using them speeds up the process and brings positive results in the final product.

FINAL CONSIDERATIONS

The current global scenario imposes numerous conditions on the existence of companies, whether they are small, medium or large. Current competition, based on the strong specialization of each market niche, makes the relationship between companies more competitive every day, and requires constant updating of available technologies. With the ease of crossing borders, relationship between companies in the same sector becomes more intense, and in the case of the commercialization of wines, Brazilian producers need to deal with the massive entry of Chilean wines, Argentines and Uruguayans, developing the most diverse strategies to maintain themselves competitive.

Based on the specific objectives proposed, it was possible to identify, through the data collection method, the equipment that is currently being used within the wineries. Considering their small size, it was possible to see that many

processes are still developed manually, despite the existence of automated machines to carry out the entire process.

The resulting value of the excessive tax burden is unfavorable to the import of machinery for wine production. National companies that sell similar equipment invest basically in large-scale production machines, leaving small-scale production machines producers have few investment options. Thus, this factor goes against the needs of IPVUG wineries, as they operate as small production.

On the other hand, the existence of equipment with relevance is highlighted, being marketed in countries such as France and Italy. As noted by managers, such machines have dimensions that are not so robust, but they fit perfectly into the needs presented. Given the lack of capital for investment and the difficulties in to obtain financing, small producers sometimes choose to use improvised equipment, thus significantly reducing investments and partially meet their needs.

Verifying such difficulties, MODERVITIS, proposed by IBRAVIN in partnership with EMBRAPA, has disseminated the provision of technical assistance to participants in the program, in addition to offering financing lines for the physical and technological modernization of wineries, with a focus on small businesses (IBRAVIN, 2013). It was found from winemakers, however, that the counterpart of such projects is very high, there being no support for their participation.

According to the data collection, it became clear to the researcher the importance of stakeholders in favor of IPVUG, with emphasis on SEBRAE in the first steps towards achievement of the record. Based on the theoretical foundation and the survey developed, the researcher can conclude that the wineries located in the Goethe Grape Valleys have walked in short steps towards the possibilities of technological expansion regarding machinery used.

Therefore, technological change was almost not present in terms of machinery. In the event of a positive outcome, wineries could enjoy an economic greater return and greater possibilities of reaching foreign markets at the price competitive. In this way, it is believed that within this theme, it is possible to propose new in-depth studies on the relationships between machinery-producing countries and wineries. Highlighting the main stakeholders involved in imports and possible processes for new technological improvements in IPVUG or in other wine-producing regions.

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