

# Preservation, innovation and governance: Geographical indication of grapes in Jundiaí (Brazil)

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**Abstract.** The formation of the grape growing area of Jundiaí was influenced by Italian immigration and the diffusion of cultivar Isabella. After 1930, the coffee economy crisis, the destructuring of the large monoculture property and the emergence of the Niagara Rosada cultivar allowed for the specialization of the Jundiaí grape growing agglomeration. The diffusion of this cultivar characterized the physiognomy of the regional vineyard with the practice of the “espalier” conduction system, and developed the intangible heritage based on the religious character of the cultural manifestations and harvest celebrations. Currently, urban and industrial expansion provides negative externalities of the geographic proximity between the diverse uses of the agricultural space, a fact that imposes threats to the sustainability of the traditional grape growing activities. This work is based on the hypothesis that the Geographical Indication of the Niagara Rosada grape presupposes governance among the agents and constitutes a project of valuation of the traditional landscape and the cultural heritage, in order to contribute to adding value to the grape and to territorial development. The specific resources, even outside the market sphere, can contribute to the commercial valuation of the Niagara Rosada grape and wealth generation beyond the classic notion of “productivity”.

## 1. Introduction: the grape growing complex of Jundiaí: formation, specialization and current challenges

The formation of the grape growing complex of Jundiaí was influenced by the adaptation of the “Isabella” cultivar and by the customs and knowledge of European immigrants, especially Italians.

Grape growing in the region gains importance with the foundation of the Núcleo Colonial Barão de Jundiaí in 1887, an Italian immigration nucleus, and the Núcleo Senador Prado, a German immigration nucleus. The lands of the Núcleo Colonial and of the Caxambu neighborhood were pioneers in the commercial and industrial grape and wine growing in the municipality, with the production of the Isabella cultivar [1].

Also in the expansion of the coffee economy, between late 19th century and early 20th century, American cultivar “White Niagara” (*Vitis Labrusca*, L.), which was rustic, compatible with the humidity of the São Paulo climate, and French hybrid black cultivar, Seibel 2, more used for the production of red wines, were introduced.

At that time, the territory of Jundiaí covered the current municipalities of Louveira, Itupeva and Vinhedo, important grape and wine growing areas. Grapes were mainly used to make wine, and the production of the time supplied the first wine industries, like Cereser and Borin, which settled in the municipality in 1926.

The frosts of the first half of the 20th century, together with the adaptation of the Isabella cultivar and the coffee crisis in 1929, were the main factors for the commercial exploitation of grape growing in Jundiaí. Gradually, the large coffee-growing properties were dismantled into

smaller fruit-growing properties, while Italian settlers became small landowners. Soon the vineyards acquired the physiognomy of the regional agricultural landscape [2].

The consolidation of regional grape and wine growing counted on the structuring of an institutional apparatus, through the creation of the experimental station in Jundiaí, one of the results of the National Wine Regulation of 1933 [3,4].

At that time, somatic mutations of the original “White Niagara” cultivar were fundamental for the specification and success of the Jundiaí grape growing complex. Such mutations gave rise to the “Niagara Rosada”, which, very well accepted by the “in natura” grape market, provided a new physiognomy to the vineyard of the Jundiaí region.

The Agronomy Institute (IAC) and the Integral Technical Assistance Coordination (CATI) of the State of São Paulo’s Agriculture Department have consolidated the genetic improvement and management system, responsible for the success of the Niagara Rosada in the national market.

Thus, after the 1970’s, the cultivation of grapes for wine is losing space for the production of table grapes. The wineries of the Jundiaí region begin to use grapes from southern Brazil, due to the lower prices. On the other hand, the production of table grapes already provided better financial return for winegrowers. Thus, the combination of these factors promoted the substitution of wine grape for table grape, with specialization of the “Niagara Rosada” cultivar.

The development of the grape and wine growing census in Jundiaí in the 2008/2009 harvest, financed by FAPESP, resulted in the registration of 284 Agricultural Production Units – UPAs with grapes, with Niagara Rosada being present at 280, equivalent to 98.6% of all



**Figure 1.** Population and Logistical Density of the State of São Paulo – 2019 [5].

grape growing properties. This is the most traditional producing region of this cultivar in Brazil.

Despite the success in the national market, the sustainability of the activities related to the production of the regional Niagara Rosada cultivar has been threatened. The urban and industrial expansion, characteristic of the logistic axis of Jundiaí, pose great threats to the agroindustrial activities of the region under study. Agroindustrial activities increasingly compete with several other uses of agricultural space, suffer the negative externalities of the geographic proximity to gated communities, large industrial sheds and product warehouses (Fig. 1).

This context exposes concerns about the future of grape growing in the region and raises the question: How can the preservation and valuation of the grape growing heritage and the traditional landscape contribute to the creation of new social-economic perspectives and promote the sustainability of the agents involved?

Thus, the objective of this work is to analyze the specific resources related to the production of Niagara Rosada from Jundiaí, from the potential to register the Indication of Provenance, one of the modalities of Geographical Indication adopted by Brazilian legislation.

The work is based on the hypothesis that the registration of the Geographical Indication constitutes a strategy of valuation of the traditional grape growing practiced in the region, a policy of preservation of the landscape and activation of the specific resources related to the Niagara Rosada cultivar in this context of decharacterization managed by real estate speculation.

This project presupposes the strengthening of the territorial proximity between the agents involved with the regional grape production, it requires an effective territorial governance, since it constitutes a collective project of territorial base.

## 2. Methodology

As it is an important tool for preserving the quality and tradition of products, for the valuation of regional specificities, the Geographical Indication contributes to territorial development.

According to the National Institute of Industrial Property – INPI, responsible for the registration of Geographical Indications in Brazil, “Geographical Indication is an industrial property asset used to identify the

origin of a particular product or service.” Despite focusing on protecting the origin of products, INPI recognizes that this policy has potential for regional development, as it contributes to the differentiation and improvement of access to the products and services market” [6].

Besides the protection of the regional production tradition and the valuation of the specific attributes of goods and services of certain territories, the Geographical Indication presupposes a geographical and organizational proximity, a governance among the regional agents, as it is a regional-based collective project.

This proposal is based on the recognition of the current economic potential of the specific territorial resources by the agents involved, including local governments.

In this context, the work is based on the theoretical and empirical advances developed by the group of proximity and school of the regulation of France, notably by the works of André Torre (Université Paris Saclay, INRA – AgroParistech) and Bernard Pecqueur (Université Grenoble Alpes – UMR PACTE), partners of projects funded by the Foundation for Research Support of the State of São Paulo – FAPESP: “Territorial Governance Modalities in the State of São Paulo: coordination, territories, public policies and development” (11/50837-9) and “Territorial Governance in Brazil: institutional specificities, spatial logics and development policies” (Process 2015/25136-8).

The recognition of the specific attributes of regional grape growing is based on the characterization of the production provided by the development of project “Revitalization of the Grape and Wine Growing Chain in São Paulo: competitiveness, governance and sustainability,” financed by the Foundation for Research Support of the State of São Paulo – FAPESP, in the Public Policies modality (Process 2006/51949-7).

In addition to the information provided by the projects, we highlight the data resulting from the participation in meetings of the Grape and Wine Industry Chamber of the State of São Paulo and the Steering Committee group responsible for the standardization of the Geographical Indication of the Niagara Rosada Grape from Jundiahy. Such activities provide ongoing contact with industry leaders and representatives of Local Governments.

## 3. Geographical indications in Brazil: Highlights of the grape and wine growing sector

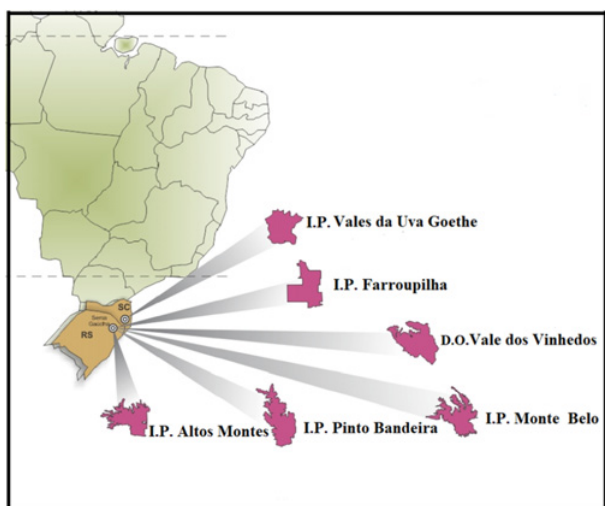
In Brazil, Law No. 9.279 of May 14, 1996, known as the Industrial Property Law – LPI, regulated and defined two types of geographical indication: Indication of Provenance (I.P.) and Denomination of Origin (D.O.).

INPI has already granted registration for 71 Geographical Indications. Of these, 51 are Indications of National Provenance and 20 Denominations of Origin, distributed in 11 national and 09 foreign [6].

As well as internationally, the grape and wine growing sector has a strong expressiveness in the register of Geographical Indications in Brazil. Currently, it is responsible for seven of the twenty cases of “Denomination of Origin”, six foreign and one national. The sector also stands out in the “Indication of

**Table 1.** Number of Geographical Indications registered by INPI, 2019.

GIs	Indication of Provenance I.P.		Denomination of Origin D.O.		Total
	Grape	Wine	Grape	Wine	
National	2	6	-	1	9
Foreign	-	-	-	6	6
Grape + Wine	8		7		15
Grand Total GIs	51		20		71



**Figure 2.** Geographical Indications (GI) of Brazilian Wines [7].

Provenance” modality, which holds 8 out of fifty-one national cases registered by INPI (Table 1).

In all, the grape and wine sector accounts for 21% of all Geographical Indications recognized by INPI, 15.7% of Indications of Provenance and 35% of Denominations of Origin.

Of the eight national Indications of Provenance:

- Six are for wines (Fig. 2): Vale dos Vinhedos (2002), Pinto Bandeira (2010), Vales da Uva Goethe (2012), Alto Montes (2012), Monte Belo (2013) and Farroupilha (2015).
- Two for fine table grapes: Vale do Submédio São Francisco (2009) and Marialva (2017).

The oldest Indication of Provenance of wines, that of Vale dos Vinhedos, received the registration of Denomination of Origin in 2012.

#### 4. Geographical indication of Niagara Rosada from Jundiá grape, São Paulo – Brazil

Although there is an important potentiality for the development of interactions among the several institutions involved with grape growing, they need to be raised. Only the implementation of a collective project among the agents related to the production of the Niagara Rosada cultivar of the Jundiá agglomeration will allow for the overcoming of current difficulties, the generation of externalities and the activation of specific resources that



**Figure 3.** Geographical Delimitation of the “Niagara Rosada from Jundiá” Geographical Indication.

are key to the differentiation of regional production and the definition of a course of territorial development.

The process for the Indication of Provenance of the Niagara Rosada Grape in the Region of Jundiá was resumed in 2015, through the composition of a steering committee, chaired by the Agribusiness, Supply and Tourism Management Unit of the Municipality of Jundiá. In addition to this agent, the committee is made up of representatives of the Agricultural Association of the Municipality of Jundiá, the Agronomy Institute of the Secretariat of Agriculture and Supply of the State of São Paulo, the Federal Institute and the EMBRAPA Territorial Unit.

Although it still requires greater adherence by the regional grape growers’ representatives, this territorial governance has already provided some important advances for the registration of the Geographical Indication of the Niagara Rosada from Jundiá grape: the definition of the geographical delimitation and the technical specifications of notoriety of the grape in the market (Fig. 3).

The geographical delimitation agreed by the Steering Committee comprises the “Old Jundiá” region, currently formed by the Municipalities of Itatiba, Itupeva, Jarinu, Jundiá, Louveira and Vinhedo. This composition prevailed at the time of the somatic mutation that gave rise to Niagara Rosada cultivar (Fig. 3).

According to the agricultural census of 2017, this region has 1,528 hectares cultivated with table grapes, which corresponds to 25.5% of the total vineyards in the State of São Paulo and 7% of the national total (Fig. 4).

The region accounts for 12,449 tons of grapes, 98% of which are table grapes, notably Niagara Rosada (Fig. 5).

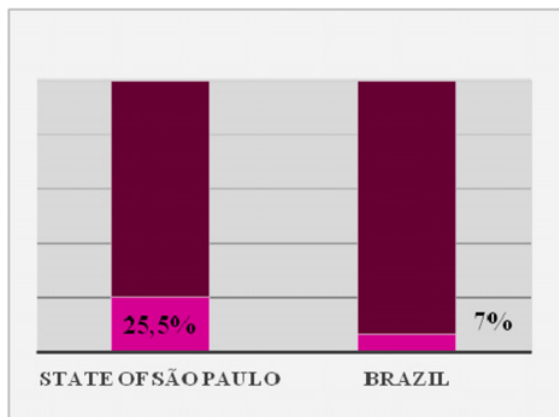
The municipalities of Jundiá and Louveira produce, altogether, 62% of the total regional grape [8].

The agricultural specialization of the Jundiá Region in Grape and Wine Growing was accompanied by the production specification process, with highlight to some resources that deserve to be strategically valued by the Geographical Indication project.

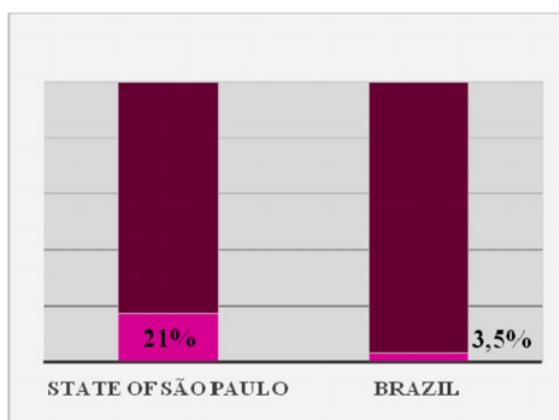
##### 4.1. Specification of the Jundiá grape growing complex: attributes for geographical indication of Niagara Rosada grape

Focusing on the cultivation of Niagara Rosada cultivar, the Jundiá grape growing agglomeration started the





**Figure 4.** Participation of the Region in the Total Area cultivated with Table Grapes in the State of São Paulo and Brazil (Hectares) [8].



**Figure 5.** Participation of the Region in Table Grape Total Produced by the State of São Paulo and Brazil (Tons) [8].



**Figure 6.** Niagara Rosada Cultivar in the espalier conduction system.

specification process, through the activation of non-transferable resources, in time and space.

Thus, the most important factor of the specification was the emergence of the Niagara Rosada cultivar itself, resulting from somatic mutations of the original White Niagara. The first record of the somatic mutation occurred in the District of Rocinha, current Municipality of Louveira, which in 1933 belonged to the Municipality of Jundiáí, and the second record occurred in 1934 in the lands of Antonio Carbonari, Traviú farm (Fig. 6).

In the following ten years, the Niagara Rosada cultivar caused a radical transformation in the São Paulo grape



**Figure 7.** “Y” Structure – manger conduction system [11].

growing structure [1]. From Rocinha, the cultivar spread in the region’s landscape and defined the aspect of the Bandeirante vineyard, the largest producer of this grape in Brazil. The Niagara Rosada cultivar, the common table grape most cultivated and consumed in Brazil, originated in Jundiáí.

Another determinant of the specificity of the regional grape growing landscape is the typical system of conduction of this cultivar: low espalier, with average height of 1.60 m, with single cordon and short pruning.

This conduction system is considered the most adequate for cultivars of common table grapes, as is the case of cultivar Niagara Rosada, as it is the simplest and cheapest conduction system, being predominant in the State of São Paulo [9].

From a technical point of view, the specialization of the grape growing complex of the Jundiáí Region on the Niagara Rosada cultivar did not bring important innovations until the 1990s, a fact that consolidated the tradition of the espalier conduction system, a characteristic element of the regional grape growing landscape. Until the mid-1990s, “Niagara” cultivation could be characterized as a family activity, conducted on an open espalier, with short pruning on single cordon in winter and harvesting in the summer. The innovations of the culture were focused on the modernization and expansion of the use of agricultural pesticides, a fact that provided constant increases in production costs [10].

The “espalier” conduction system is a remarkable feature of the Jundiáí grape growing landscape, an important element of the regional tradition of Niagara Rosada grape production. However, this traditional characteristic is no longer economically feasible. Recent studies indicate the benefits of other vine conduction systems, especially the “Y” system, also known as “manger” (Fig. 7).

It is an innovation that poses threats to the preservation of regional specificities. In this sense, it is worth mentioning the work carried out by researchers of the Agronomy Institute – IAC – that evaluates the effects of the microclimate characteristics of the espalier and manger conduction systems in the productivity and quality of the bunches of the “Niagara Rosada” vine. The experiment, carried out in an area of the Agronomy Institute located in Jundiáí, confirmed the advantages of the manger conduction system. Among the main results,



**Figure 8.** Stamp commemorating the fifty years of the grape festival of Jundiaí, 1984 [14].

it was observed that the manger system provided a greater number of bunches (22 to 29 bunches per plant) compared to the espalier system (12 to 20 bunches per plant), due to the greater number of branches that can be conducted on the double cordon. These advantages of the manger system provided a significant 75% increase of production in the average of the evaluated crops.

The adoption of “Y” shaped manger conduction systems, associated or not with protected cultivation, emerged as an alternative for the reduction of manpower and the use of pesticides, together with increased product quality and, consequently, profitability of the vine culture.

Despite the advantages of the “Y” conduction system, which are important for the economic sustainability of Niagara Rosada cultivar, this system is not a traditional element of the regional wine landscape. This is a challenge for the steering committee of the current Geographical Indication process, an impasse between preservation and innovation. How to value the specificity of the espalier conduction system if it is no longer economically viable? From this perspective, the committee has a tendency not to determine the Niagara Rosada grape’s conduction system in the technical specification of the Geographical Indication, a fact that demonstrates the option for innovation to the detriment of the preservation of tradition.

However, the valuation of the specific resources of the territories reveals a new way of generating wealth that no longer goes by the classic notion of “productivity” [12].

The intangible heritage provided by the grape growing activities of the Jundiaí region is also a factor of specificity and contributes to territorial development. Many territorial resources may be outside the market sphere (landscape, culture and history), but contribute to market valuation [12].

The sharing of the same culture by a community favors the convergence of interests, restricts conflicts and causes the emergence the historical-cultural heritage resource as part of the collective assets [13].

According to the author, it is a matter of identifying the players involved, the cultural objects they mobilize in the territories, but also of understanding the underlying issues and logic, in order to determine the conditions under which culture can be a resource for the territory and possibly serve as operator to highlight and mobilize other resources [13].

In this perspective, the prominence assumed by the grape and wine growing of the region conferred to Jundiaí the seat of the grape festival of São Paulo in 1934 (Fig. 8).



**Figure 9.** Marketing posters for the Caxambu Festival in 2019 “85 years of tradition” [15].

In the same year began the traditional grape celebration in the Caxambu neighborhood, located in the Municipality of Jundiaí. The association of the church with the production of grapes and homemade wine constitutes an institution that has already reached 85 years in 2019 (Fig. 9).

The religious character of the celebrations for the grape and wine crops is an important element of the cultural heritage of grape and wine growing in the Region of Jundiaí, notably in the Caxambu district (Fig. 9).

## 5. Final considerations

The grape and wine growing agglomeration of Jundiaí is reinforced in the current capitalist context, marked by the processes of constitution of a new territorial organization of production, based on the revival of “regional vocations”, of local singularities, of the valuation of the production “terroirs”.

Since 2015, the greater governance among grape growing agents has been responsible for the composition of the steering committee focused on the development of the Indication of Provenance project for the Niagara Rosada grape of the “Old Jundiahy” Region, territory formed by the present municipalities of Jarinu, Jundiaí, Itatiba, Itupeva, Louveira and Vinhedo. This geographical delimitation corresponds to the limits of the area when the somatic mutation that originated the Niagara Rosada cultivar occurred.

In developing grape and wine growing, the “old Jundiahy” region underwent a specialization process and, by focusing on the cultivation of the Niagara Rosada cultivar, started the specification process, by activating non-transferable resources, in time and space, vectors of competitiveness and of territorial development.

First, the conduction system characteristic of this cultivar, visually recognized by the low espalier, of average height of 1.60 m, with unilateral single cordon and short pruning, constitutes a characteristic element of the traditional grape growing landscape of the territory. Second, the cultural heritage, the Italian customs associated to the production and consumption of regional grapes and wines.

Italian culture is an important resource in this current context. Since the occupation and formation of the grape and wine growing territory, customs became gradually associated to grape and wine production, becoming traditional cultural references, very well revived and explored in grape festivals and, in particular, by some growers. The religious character of the celebrations for

the grape and wine crops is an important element of the cultural grape and wine growing heritage in the Region of Jundiaí.

The production of the Niagara Rosada cultivar in this traditional context, given by specific natural and social-cultural resources, can assume a complementary market valuation due to the “territorial quality”. This territorial quality of the Niagara Rosada grape can be exploited by local governance, by registering the Indication of Provenance, the most widespread form of Geographical Indication in the Brazilian territory.

This strategy of promotion of supplementary income beyond the classic productivist logic, based on the specific resources that are outside the market sphere, the project of Geographical Indication assumes relevance for the sustainability of the activities related to the production of the Niagara Rosada grape, in the unfavorable context of urban and industrial expansion.

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