



# The Evolution of Catalan Winemaking in the Nineteenth and Twentieth Centuries: Without Wine Merchants There Is No Viticulture

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## Introduction<sup>1</sup>

As early as the eighteenth century, Catalonia was a major centre of wine production. A portion of the territory produced wine to be made into brandy, while another portion produced wine for domestic consumption and for export. Each of these areas saw the development of distinct structures of production and forms of marketing. The present paper argues that it was in those places where marketing was in the hands of large-scale wine merchants and stockists that vineyards survived the changes introduced in the twentieth century. Also, the paper analyses the evolution of viticulture in the region up to the present day.

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The paper is divided into three parts. The first section analyses the evolution of vineyards in Catalonia since the nineteenth century. The second section turns to the respective characteristics of the areas producing wine to distill and wine to drink, and the third section addresses the causes that allowed the vineyards in the area dominated by major merchants and stockists to survive until they could transform into quality vineyards.

## Changes to the Winegrowing Map of Catalonia from the Nineteenth Century to the Twenty-First Century

The massive spread of vineyards in Catalonia is an eighteenth-century phenomenon, which gained speed in the first half of the nineteenth century and reached its height before the arrival of phylloxera (Colomé Ferrer and Valls 1995; Valls Junyent 2004). Table 1 shows the increase in land planted in vineyard between 1858 and 1889, when it reached its greatest extent thanks to the surge in demand for wine caused by the phylloxera outbreak in France. In Barcelona province, the amount of land grew 16% over the period, while the figure was 15% in Tarragona province and 91% in Lleida province, the most rapid growth in the territory. In Girona province, by contrast, less land was dedicated to winegrowing because phylloxera had arrived from France in 1878 and spread through every vineyard in the province (García de los Salmones 1892). What is significant is the accelerated growth that occurred in Lleida. While little is known of this expansion, all indications are that it was one of the areas in which the demand for wine triggered rapid, volatile growth to take advantage of high wine prices.<sup>2</sup>

Table 1 also shows the decline in the amount of land planted in vineyard after phylloxera. The low point was reached at varying times. In

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<sup>2</sup>This phenomenon resembles the expansion of vineyard land in La Mancha as a result of the demand for wine from the French market. See (Figeac and Lachaud 2015).

**Table 1** Growth in land devoted to vineyards before phylloxera outbreak (in hectares)

	1858 (in hectares)	1889 (in hectares)	1858 = 100	Minimum extension	1889 = 100 <sup>a</sup>	Maximum extension	1889 = 100 <sup>a</sup>
Barcelona	113.508	132.155	116,4	35.675 (1898)	27,0	120.777 (1934)	91,4
Tarragona	96.538	111.028	115,0	65.522 (1909)	59,0	103.755 (1951)	93,5
Lleida	62.337	119.077	191,0	15.161 (1909)	12,7	29.334 (1934)	24,6
Girona	38.855	5.184	13,3	5.184 (1889)	13,3	15.506 (1928)	39,9
Catalunya	311.238	367.444	118,1	184.766 (1900)	50,3	268.672 (1934)	73,1

<sup>a</sup>Girona data refer to 1858

Source Pujol Andreu (1988) and own elaboration from data in the Anuario de Estadística

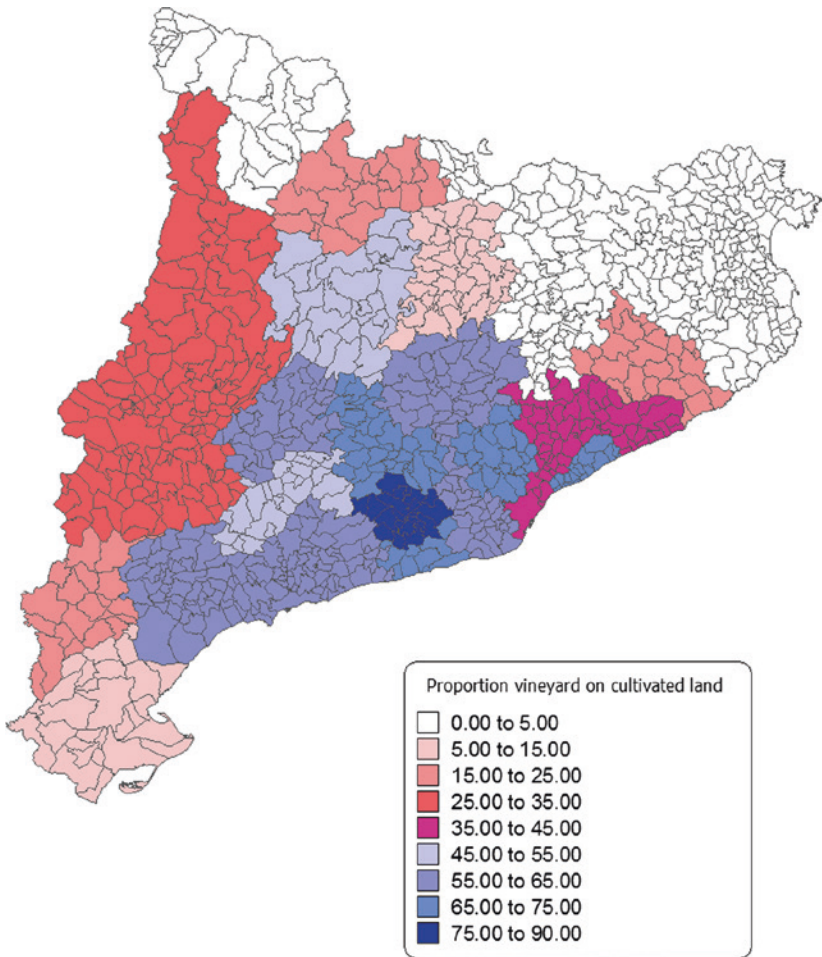
Girona, it came in 1889 (13.3% of the 1858 figure), while Barcelona province did not hit bottom until 1898 (27% of the 1889 figure), with Lleida following suit in 1909 (12.7%) along with Tarragona (59.0%), where the decline in winegrowing land was much less severe, most likely because it was understood by then how to respond to the phylloxera infestation and the replanting was much quicker.

In addition, Table 1 shows the high point achieved after phylloxera to determine the extent to which the vineyards recovered. Everything seems to indicate that the land dedicated to winegrowing in Catalonia reached its greatest extent in 1934, but at different rates. Barcelona province reached 91.4% of its pre-phylloxera level in that year and it exceeded its 1858 level, while Tarragona province reached 93.5% in 1951 and also exceeded its 1858 level. By contrast, Girona province only reached 39.9% of its 1858 high mark in 1928 and even more importantly, Lleida reached its high in 1928, but this was only 24.6% of the maximum surface area of 1889. The amount of land planted in vineyard was volatile and needs to be analysed accordingly.

The Maps 1 and 2 shows the relative weight of vineyard land over total land under cultivation by judicial district<sup>3</sup> Winegrowing land was concentrated in the administrative districts, or comarcas, of Barcelona and Tarragona, where vineyards exceeded 65% of cultivated land. It also extended into Lleida as noted earlier, but with lower intensity. By 1920, with phylloxera overcome, winegrowing land generally shrank in size, but the greatest extent and intensity continued to be in the comarcas of Barcelona (Penedès, Garraf, Baix Llobregat, Anoia, Bages and Vallès Occidental) and Tarragona (Alt and Baix Camp, Tarragonès and Baix Penedès). Girona had seen recovery in Alt Empordà where there had always existed a number of vineyards of some importance, while the intensity of cultivation in Lleida was much lower than the level that had been attained in 1889. In short, the comarcas of Tarragona and Barcelona had the greatest share of vineyards in Catalonia, while

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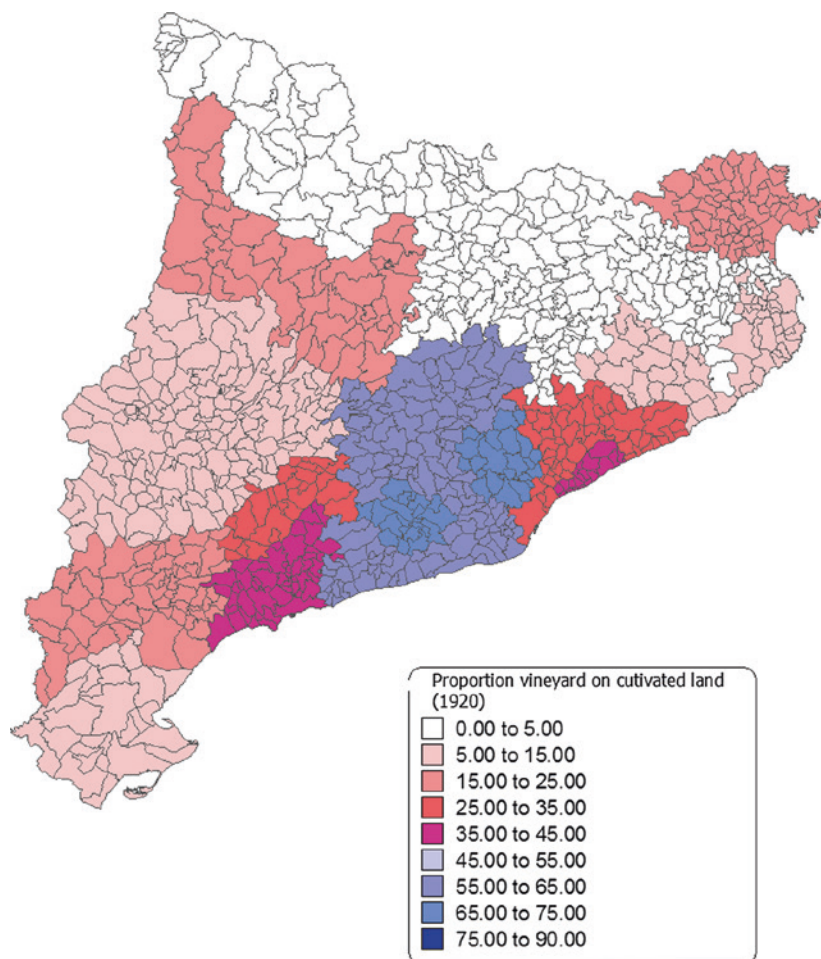
<sup>3</sup>We do not have data broken down by municipality. To compare 1920 data with data for 1889, we have taken the view that the land under cultivation was the same in 1920 as in 1889, a year in which we do have data on the total area under cultivation by judicial districts.



**Map 1** Proportion of all cultivated land devoted to vineyards by district (1889)

Alt Empordà and some comarcas in Lleida saw a lower intensity of cultivation.

Tables 1 and 2 and Fig. 1 set out the rate of evolution in the amount of land devoted to winemaking. The year 1934 marked the high point in the recovery that followed the declines caused by the outbreak of



**Map 2** Proportion of all cultivated land devoted to vineyards by district (1920)

phylloxera. In that year, vineyards covered 73.1% of the total in 1889.<sup>4</sup> We can differentiate distinct stages in this development: (a) high surface area planted in the mid-nineteenth century (300,000 ha) and high

<sup>4</sup>Comprehensive statistics on winegrowing surface area begin in 1858, when tax assessments on land were carried out. Later, we have estimations that do not always coincide and it is not possible to generate a continuous series with official data until 1898. Prior to 1898, the data have

**Table 2** Evolution of land devoted to winemaking in Catalonia (1858–2015). 1934 = 100

	1858	1889	1900	1934	1943	1963	1983	2003	2015
Barcelona	94	109	30	100	59	51	24	20	18
Tarragona	104	120	104	100	101	111	64	36	29
Lleida	214	409	145	100	103	53	23	17	16
Girona	287	38	71	100	74	78	49	19	16
Catalunya	121	143	72	100	80	75	40	26	22

Source Own elaboration from data in the Anuario de Estadística Agraria

**Table 3** Comarcas with the highest extension of vineyards (2009)

	Hectares vineyard	% of total vineyards in Catalonia	% of cultivated land devoted to winegrowing
Terra Alta	6983	11.4	28.7
Priorat	3522	5.7	40.3
Conca de Barberà	4498	7.3	18.2
Baix Penedes	3895	6.3	63.0
Anoia	3510	5.7	12.0
Alt Penedès	18,723	30.5	81.3
Alt Camp	7637	12.4	38.9
Otras	12,623	20.6	2.7
Total	61,391		7.7

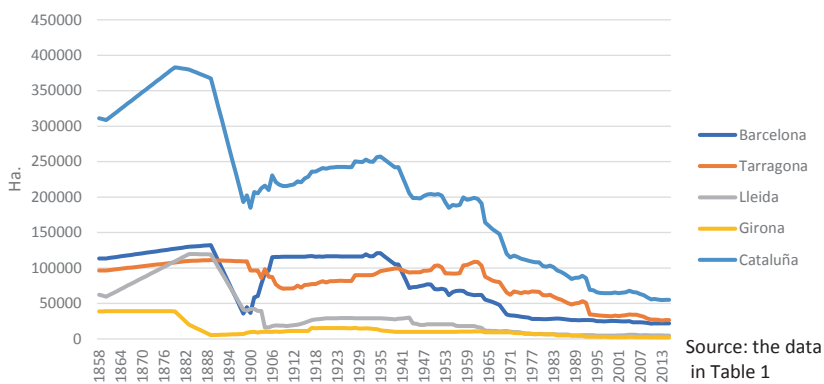
Source IDESCAT. Generalitat de Catalunya

intensity of cultivation in the comarcas of Barcelona and Tarragona; (b) a significant and rapid spread of vineyards particularly in Lleida province because of the phylloxera outbreak in France; (c) a decline in land planted in vineyards, reaching a low point in 1900 (184,000 ha) but falling at a varying rate by province due to the arrival of phylloxera; (d) a slow recovery of the surface area planted in Barcelona and Tarragona, a sharp decline in Lleida and a smaller drop in Girona, resulting overall in a new high mark of 268,000 ha in 1934; (e) the provinces of Barcelona and Tarragona reach the same level of planting that had existed in the mid-nineteenth century; (f) the start of a rapid decline during and after the Spanish Civil War, especially in Barcelona province, where the winegrowing area was cut almost in half; (g) a stabilization of land planted in vineyard up to 1963 thanks to Tarragona province holding steady; and (h) a new period of widespread cuts up to 1983, when Catalan vineyards

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been estimated using the information available in continuous years, while official data have been used from 1898 onwards. We have made estimations only during the Spanish Civil War, when no information was published. While official records do exist, they must be treated with a degree of caution because they usually come from local declarations that are not always reliable. Despite these limitations, we believe that available data do show a trend in the amount of land planted in vineyard in Catalonia. The primary sources of information are: an annual report on agricultural statistics called *Anuario de Estadística Agraria*, which has appeared in various formats and continues to the present day, and reports on agricultural and fishing statistics called *Estadístiques agràries i pesqueres*, which are published by the government of Catalonia.



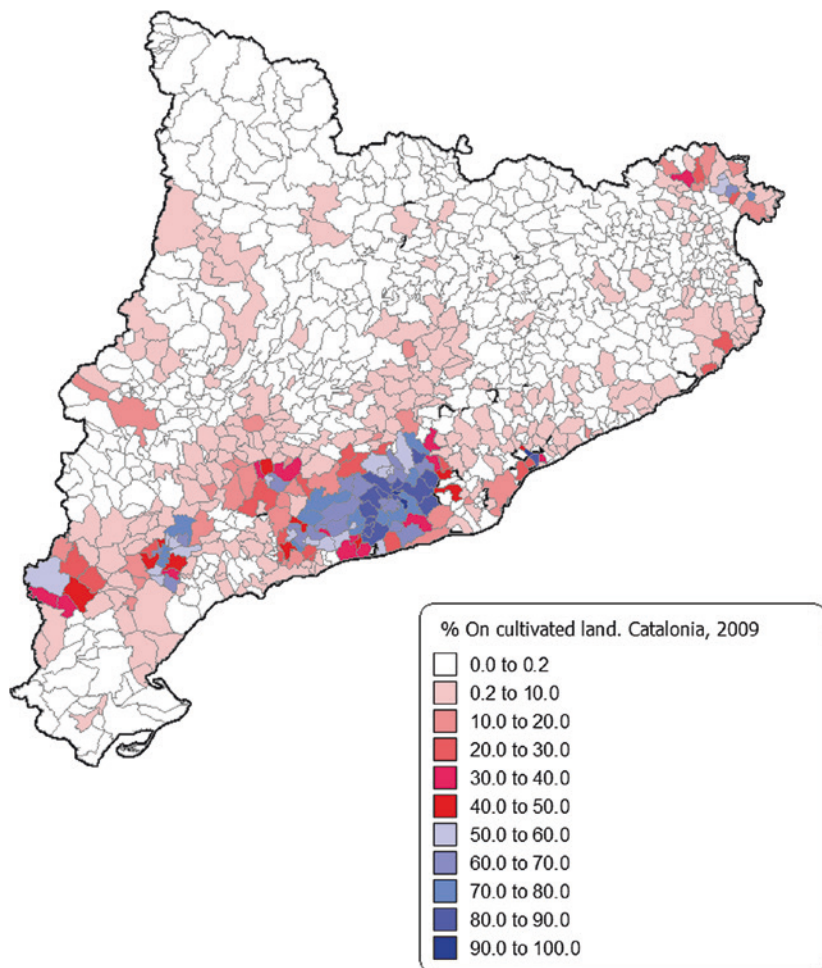


**Fig. 1** Evolution of land devoted to winemaking Catalonia (1858–2015) (Source: The data in Table 1)

occupied only 40% of the surface area in 1934. In fact, in this final period, the reduction continued right up to 2003, by which time the amount of land planted in vineyard was reduced to a quarter, with the decline being particularly sharp across much of Tarragona province. In 2015, the winegrowing area stabilized at low levels, covering 22% of the total in 1934 and 15% of the total in 1889.

A closer look at the nineteenth-century maps shows that the winegrowing areas were concentrated in Barcelona province and much of Tarragona province. In subsequent decades, vineyards practically disappeared from Lleida and Girona (where they were reduced modestly to traditional wine-producing areas such as Pallars Jussà and a portion of La Noguera in Lleida and Alt Empordà in Girona). This was accompanied by a steady decline in Barcelona and Tarragona, especially in the vicinity of the city of Barcelona. Ultimately, modern vineyards became concentrated in only a few comarcas. Table 3 sets out the comarcas where winegrowing is concentrated at present (2009). It also indicates the intensity of winegrowing as a proportion of total land under cultivation, while Map 3 depicts the intensity by municipality.

The geography of vineyards in Catalonia today bears only a modest relationship to the vineyards of the nineteenth century (there are vineyards and protected areas where there used to be vineyards, such as Costers del Segre in Lleida or Empordà in Girona or Pla de Bages in Bages). However,



**Map 3** Area of vineyard cultivated by municipalities Catalonia, 2009

the areas that have maintained an almost absolute specialization and a very high level of intensity are the comarcas of Alt Penedès (30.5% of total vinegrowing land), Alt Camp, Baix Penedès, Terra Alta and Priorat. These coincide with the areas of greatest intensity in the mid-nineteenth century. The blue on the map above identifies those municipalities that have vineyards on 50% of their land under cultivation and they are the ones that coincide with the comarcas listed above. Why has this geography persisted

and not a different one? Why did the comarcas in Barcelona province that had such intensive winegrowing in the nineteenth century lose nearly all of it, whereas it has continued in the comarcas of Tarragona and in Alt Penedès (which is in Barcelona province but shares the production characteristics of Tarragona)?

The argument of this paper is that different types of viticulture coexisted in Catalonia in the nineteenth century and that the type that adapted best to the changes occurring in the twentieth century was the one that had developed in the comarcas of Tarragona in the eighteenth century, characterized by a highly active network of merchants and stockists who were basically devoted in that century to the production and marketing of brandy and later to the marketing of wine. These structures were to become the driving force behind the modernization of Catalan viticulture. First, we analyse the differences between these types of viticulture and then we move onto the evolution of Catalan viticulture to the present day.

## Viticulture in the Comarcas of Barcelona<sup>5</sup>

The characteristics of this type of viticulture, which we have analysed in previous papers, are summarized below (Ferrer Alòs 2015a, b):

- (a) Planting vines requires a great deal of effort, so landowners sought different formulas to get a return on labour. In many areas, the “rabassa morta” contract was adopted. This meant that the cost of planting was recouped through a long-term contract that lasted as long as the vines survived. In exchange, payment was made in the form of a portion of the harvest (normally a quarter of the grapes). In the comarcas near Barcelona, this gave rise to a network of small winegrowers, or “rabassaires”, who focused exclusively on wineproduction and would, at most, supplement their household economies with proto-industrial activities (notably, spinning carried out by women). In addition to

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<sup>5</sup>in Catalonia, there have been at least two other types of viticulture. Little is known about them. One corresponds to the comarcas of Lleida, particularly in the vicinity of Tremp, and the other corresponds to Alt Empordà in Girona. Exporting through Mediterranean ports was important to the latter type.

these small winegrowers, there appeared landowners who produced wine from their own vines and from the crop shares delivered by the rabassaires under their contracts (Colomé Ferrer 1990; Ferrer Alòs 2014; Moreno Claverías 1995; Valls Junyent 1997).

- (b) This wine was used to supply the domestic market. Wines from the Manresa area went to grain-growing comarcas and comarcas in the mountainous interior, while wines from the coast and around Barcelona supplied the city of Barcelona and the network of medium-sized cities. The amount turned into brandy was relatively small, typically corresponding to residual, surplus or poor-quality wine. This brandy was sold domestically and also added to the product's substantial exports (Ferrer Alòs 1981).
- (c) The marketing was carried out through tavern leases that were offered by municipalities, which regulated wine distribution and brandy sales. In practice, this was a monopoly under municipal control. Mule drivers played a key role in the distribution network. They purchased wine on behalf of the tavern keepers or on their own account and then hauled it to places where it was not produced. The small winegrowers, or rabassaires, were not very active in this commerce. Typically, they would hang a pine branch on their balcony to signal to mule drivers that they had wine to sell. In Barcelona, the sale of wine was free, but taxes did have to be paid on the wine trade and landowners and tavern keepers often worked together to supply the city (Sánchez Martínez 2001; Oliva Ricos 2009). This complex network gave rise to few merchants or agents in control of production as occurred in the comarcas of Tarragona.

## Viticulture in the Comarcas of Tarragona

The characteristics of this type of viticulture are less well known, but a number of aspects are worth noting:

- (a) In the second half of the seventeenth century, peasants in the comarcas of Tarragona saw a rise in the demand for wine to produce brandy. The demand originated from Baltic merchants. The

wars between France and Holland had weakened the traditional commerce in French brandy and the Dutch found a substitute in Tarragona that became well-established in subsequent decades. This territory specialized in producing wine to distill (burn) and not wine to drink or for local consumption as the comarcas of Barcelona did (Torrás Elías 1995; Valls Junyent 2004).

- (b) In contrast to what occurred in the comarcas of Barcelona, vines were planted by means of a contract known as “*concessió a plantar*”. This was a kind of lease that permitted a planter to plant vines and take advantage of the harvest for a number of years before the land devolved back to the owner (Moreno Claverías 1995). Subsequently, the planted vineyards, when returned to the landowner, were leased to short term sharecropping and generated a much less stable harvest than in the areas governed by the “*rabassa morta*” contract. From the little information that we have, this appears not to have given rise to small winegrowers, but rather encouraged the concentration of crops by medium-scale growers from many localities who would take care of the initial processing and subsequent distillation into brandy. In reality, the vineyards were not a monoculture, but were supplemented by crops of hazelnuts, almonds, carob beans and olives, to name but a few. Grapes were simply another cash crop for sale to others.

A description of Pinell de Brai shows what took place when the peasants went to sell their grape harvest: “... *the winegrowers of Pinell de Brai would haul their grapes to Gandesa to sell them, because it was the nearest trading centre. At daybreak, the peasants of Pinell took their loaded wagons as far as the banderole (...) they would arrive at the storehouse of the presumed purchaser, where the bodega keeper would tell them that the owner was not presently in, but was out picking his own plot of grapes, and so therefore no price could be given. Come back later. This business was repeated until the owner appeared and after negotiation or enticement a peasant could do only one of two things: leave the grapes at the price offered or return to Pinell with the grapes in his cart*” (Ber Sabaté 1997). It follows, therefore, that winegrowing and winemaking were not one and the same.

The cultivation contracts in this area show that the short term sharecroppers hauled the harvested grapes to the home of the landowner, where the winemaking would be done.<sup>6</sup> The wine was stored separately in the landowner's storehouse, but he had first preference in its purchase.

- (c) Another characteristic of this type of viticulture was its marketing process. Increased production of brandy cannot be understood without the emergence of extremely powerful merchants in Reus, Valls, Altafulla, etc. to channel, organize and give direction to all production (Rovira Gómez 1987, 1994, 2012). All of these merchants had a background in skilled crafts in the eighteenth century and, as occurred in other areas, they took advantage of the opportunities emerging at the time. Their businesses were based on speculation in the leasing of manor rights, which gave them access to a large amount of agricultural products, the transport of cereal crops from Aragón to Catalonia and trade in the area's products, such as almonds, hazelnuts, olive oil, the import of salted fish and, above all, the export of brandy and, to a lesser extent, of wine. Years later, they would take part in the overseas trade with the Americas and some would go on to become shareholders in factories producing printed calicos, rising into the nobility over the course of the eighteenth century. Creating companies was the most common form of organization.

The rural world in the comarcas of Tarragona was organized by these companies. Among the merchants and peasants, there were agents. These were individuals who went from village to village to understand the markets, purchase from the peasants and resell to the merchants from Reus. Hundreds of loads of brandy were purchased by brokers and agents and taken for distillation to the major export centres. Another option was to purchase the harvest from producers in advance to ensure production. Between 1758 and 1759, we know that 598 formal money advances were signed for a total value of 78,731 Spanish libras and drew on the participation of 40 merchants (Rovira Gómez 1995).

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<sup>6</sup>Arxiu Giralt, Vinseum, Vilafranca del Penedès.

When the first distillation brandy reached the home of a merchant, he would proceed to purify it in successive distillations in preparation for export (Segarra Blasco 1994). The March family had 8 stills for this purpose in 1780. All of this dynamic activity was channelled through the ports of Salou, Vilanova and Tarragona. The brandy business in Catalonia flowed through these ports at the close of the eighteenth century (Lipp 1793).

In summary, there were clearly two distinct types of viticulture. While one produced for the local and urban market, the other produced wine to distill and was driven by a powerful network of merchants who engaged in large-scale export of the brandy they produced.

## Changes in the Nineteenth Century Prior to the Phylloxera Outbreak

Little is known about the evolution of viticulture in the first half of the nineteenth century. While no sound statistics exist, the collected samples do show a sharp increase in the amount of land planted in vineyard although the causes remain unclear. From the series of “*rabassa morta*” contracts taken from Bages and the notary’s offices in Piera, Valls, Baix Penedès, Sentmenat and Palau-solità, and Alt Penedès (Parés 1944; Plans Maestra 2010; Valls Junyent 1996; Querol 2001; Garrabou and Tello 2004; Moreno Claverias 1995; Colomé Ferrer 1990), the tremendous growth in the nineteenth century centred on two decades: 1820–1829 and 1840–1849. This is also the case in Vallès Occidental (Roca Fabregat 2015). And the same timing has been identified in Girona and Alt Empordà (Congost Colomé and Sagner 2013).

Fewer data exist for the comarcas of Tarragona because no series has yet been produced from contracts. What were the causes of expansion? The colonial and North Atlantic markets, which had absorbed thousands of hectolitres of wine turned into brandy, were in the midst of a crisis and in the process of restructuring, while the domestic market was also undergoing restructuring and Andalusian producers of fortified wines were unable to absorb the surplus of alcohol. Did the growth in population push demand higher? Had consumption habits changed, with more wine now being consumed? Josep Colomé and Francesc Valls

(1995) have sought to explain the expansion by demonstrating that planting grapevines was more profitable than cultivating cereal crops because the prices of grapes were more advantageous. But planting vineyards for what market? The answer is not at all clear and research is needed to clarify the point.

Another element of this debate is the thesis of Francesc Valls (2004), who shows how the model based on the distillation of wine and the export of brandy was plunged into crisis in the first half of the nineteenth century when it started to be replaced by another model based on the export of wine and the import of cotton from the Americas in return. The data that have been provided are clear in this respect, but they raise new questions. Was there really a crisis in the production of brandy? If so, why was it still viewed as good business to set up distilleries in the Penedès region in the first half of the nineteenth century? Were the vineyards of Tarragona massively converted to produce wine to drink instead of wine to burn? Valls' thesis is consistent with the overseas market, but it fails to account for the growth in land planted in vineyard or for the existence of other alternatives like the domestic market, about which we know absolutely nothing.

The description of what occurred in the Penedès region is highly significant for an understanding of what was to happen later. Winegrowing was not the major crop in the eighteenth century and the "rabassa morta" system expanded in the nineteenth century. In 1838, the Frenchman Andreu Frances set up a distilling apparatus in Vilafranca at the request of Pau Boada, producing 25° Cartier and revolutionizing the business of wine distilling. Other distilleries followed, suggesting that business was still going well even though the overseas market was less dynamic (Martorell Pañella 2010). According to Frances, the good fortune of the Penedès region came with the outbreak in Vilanova of oidium, which destroyed the coastal vineyards. Merchants turned to the interior for their wines "giving rise to the major wine trade that has contributed to the prosperity of the Penedès and the aggrandizement of its capital". This set of circumstances led to the creation of commercial enterprises like Via and Raurell, which were dedicated to the export of wines to Cuba, and other companies soon followed in their footsteps. The beginning of rail transport meant that wines could reach the port



of Barcelona and travel to France. The most important symbolic event came when Jaume Torres i Vendrell—of the future Torres y Cía—built a number of warehouses on the same premises in 1874 with a total capacity of 120,000 hectolitres as well as a winery of 6000 hectolitres. In 1878 J. B. Berger, a native of the Alsace, set up shop in Vilafranca to purchase the wines of the area and sell them abroad, just as did other Frenchmen and Swiss seeking to capitalize on the phylloxera outbreak in France by purchasing Catalan wines to supply the French market. As in the eighteenth century, agents and brokers controlled the wine market. The viticulture of the Penedès region was developed through these enterprises, which were dedicated to the marketing of wine.

In the comarcas of Tarragona, a large network of agents, brokers and merchants continued to operate throughout the entire nineteenth century. August Muller (who hailed from Reims) set up in Tarragona in 1851 because of the good prospects of Tarragona wines (Olivé Serret 1991). His enterprise bought the wine of entire villages by means of credit and cash advances (Nagel 2000), that is, the same technique used by the merchants of Reus and Valls in the eighteenth century when advancing money to safeguard brandy production. The list of foreign companies resident prior to the phylloxera outbreak is uncertain, but it begins to offer some idea of the importance of the process: Braedlin, Muller y Bonsoms, Carey Hnos, Clement Groupille, P. Pages et Cie, C Peyroud y Cía, Violet Frères (Alió Ferrer 2010).

One of the other nodes in this powerful commercial network was set up in Sant Martí de Provençals to take advantage of the benefits of the port of Barcelona. Merchants set up companies there to blend and fortify wine basically for export to the Americas. In 1861, there were two companies, but the number had risen to 27 in 1877 and 47 in 1886 (Nadal and Tafunell 1992). Three major names stand out: Gironella, founded in 1873; Maristany, which had been dedicated to this business since 1846; and Magí Pladellorens, who came from a family of rabassaires and wine dealers in Gages, in the Catalan interior (Ferrer Alòs 2004).

In the nineteenth century, the marketing model that we have described for the eighteenth century was reinforced, although we cannot currently establish continuities and breaks. The system of supply remained the same in Catalonia's interior and in the comarcas near

Barcelona after the municipal monopolies were ended and the free taverns established. The merchants continued to be modest in size and the “measurers” who levied the municipal tax whenever there was a transaction played a fundamental role in the movement of local wine.

*Some data on the comarcas of Barcelona.* Did this model of agents and merchants extend across all of Catalonia? We can see what happened in the comarca of Bages in the interior. Traditionally, the wine that was produced there went to supply the non-producing comarcas in the interior. The available statistics show that land planted in vineyard grew by 5000 ha between 1860 and 1889 and the produced wine had to be channelled into exports to France, which was the leading market for wines of all kinds.

It is worth noting that the industrial registry of Manresa in 1860 did not feature a single wine stockist. It only had taverns that sold at retail, brandy factories and liquor and wine stores. By contrast, the registry in 1889–1890 not only had cafes, wine cellars and wine retailers, but it also had wine stockists for the first time. Four, in fact, were located on the same street. By 1914, the number had risen to seven.

This was a fragile network that had little to do with the network of merchants in Tarragona or the Penedès region. Villages and cities continued to have small winemakers who sold to the local population and to the people of the comarca by means of informal networks. In the comarca of Bages, cooperative wineries appeared in 1926 in Santpedor and Salellas and again in 1935 in Artés (Ferrer Alòs 1998). They are late in comparison to the cooperative wineries in the Camp de Tarragona or the Penedès region. When vineyards began to decline in these areas, the cooperatives were the recipients of the grapes still being produced and they distributed the wine through local networks in the same way that small and medium-sized producers had previously done so.

Nor in the judicial district of Igualada did the cooperative wineries proliferate. The local wine producers group, *Sindicat de Vinyaters d'Igualada*, made wine for direct sale and, when it sold to more powerful merchants, the latter were from the same area.<sup>7</sup> This behaviour does not differ from what occurred in the judicial district of Manresa.

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<sup>7</sup>Only two cooperative wineries were created to make wine: the *Sindicat de Vinyaters of Tous* (1924) and the *Sindicat de Vinyaters of Igualada* (1921). See Planas Maresme (2013).

More research must be done to understand how the market operated in these areas of Catalonia. Roig Armengol, in his publication of 1890, provided numerous advertisements of winemakers from all the judicial districts in Barcelona province that produced more than 100 hectolitres (Roig Armengol 1890). Some of the winemakers indicate in their ads that the wine is suitable for export, while a smaller number indicate that they are wine agents or brokers. These are not, however, the major merchants of Tarragona, who were capable of producing any product by blending wines of varied origins.

## The Creation of Wine Brands

Wine prices were related not only to supply and demand, but also to the creation of brands and designations of origin, which might help winegrowers to compete with merchants. Wines were often known by their place of origin and this could potentially add value or permit the entry of wine by small producers. The descriptions in this respect, however, are scanty. In 1600, Pere Gil noted: “In Mataró excellent claret wines are made; in Sitges and Vilanova, excellent malvasia; in the Camp de Tarragona, all kinds of wines” (Iglesies 2002). This is the first mention of the malvasia of Sitges, which was the only place to undertake such a delicate production process to yield a wine that attracted a good price.

In the early nineteenth century, the wines that were known by their place of origin once again included the malvasia of Sitges as well as the white and red wines of Priorat and Camp de Tarragona, the wines of Maresme (which appeared under the name of Alella) and the wines of the Empordà coast (which specialized in fortified wines made from Grenache grapes, or Garnatxa in Catalan) (Alonso de Herrera 1818; Iglesias Xifra, s.d.).

The daily newspaper *Diario de Barcelona* provides a sample of wine advertisements from between 1850 and 1870.<sup>8</sup> Though it is not intended to be an exhaustive sample, the adverts do suggest that the

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<sup>8</sup>Collection of Emili Giralt i Raventós, Vinseum, Vilafranca del Penedès.

most prestigious wines included malvasia and other wines from Sitges and the vicinity, the wines of Priorat and some of the comarcas of Tarragona, and the Alella wine. These were the wines on sale in private homes and in confectionery shops in the city for people with a certain purchasing power. Everyone else consumed low-quality cask wine from all places of origin, distributed through channels that resembled the ones in use in the eighteenth century.

In Catalonia, therefore, very little wine was classified by a designation of origin. The reputation of some wines was related to comarcas, localities or individuals who sought to raise the prestige of their product, above all in Barcelona. Such wines, however, did not abound. Nor did phylloxera help to improve the level of quality: the wines supplied an undemanding popular consumption or were blended for export to France or the Americas. The real art of adding value to the wines was through coupage and fortification, which were carried out by prominent merchants and stockists.

## Some Attempts at Own Brand and Product Creation

One of the paths to modernization—the French experience was well known—was to create own brands and products and commit to quality. To do this, the grape harvest had to be separated from winemaking. The increasing number of small winemakers led to the production of many different wines of low quality and merchants would gather these wines and blend them to increase their value. Brands offered another approach. We know of a few experiences of wine producers who strove to create their own brand and product in the nineteenth century.

For example, Codorniu in Sant Sadurní d'Anoia had 107.1 ha. In 1860, most of the land was vineyard (83.6 ha), but what interests us at present is that 59.8 ha were cultivated directly and only 23.8 ha were leased to 18 rabassaires. This was a major vineyard, which began to specialize between 1875 and 1880 in the production of sparkling wine in the style of champagne and focused on the creation of its own brand (Valls Junyent 2007). Then, in the twentieth century, the Raventós Codorniu

family purchased the estate of Raïmat in the comarcas of Lleida (a wine-growing area overwhelmingly abandoned during the phylloxera outbreak), where it undertook a major planting of vines. The aim was to emulate the French chateaus and to create wines known by their brand.

The Marqués de Monistrol, a large estate in the municipality of Sant Sadurní d'Anoia—in reality, a property in the aggregate village of Monistrol d'Anoia—began production of sparkling wine in 1882 using its own grapes to create its own brand (Segura 1993). The owners modernized their winery and began to buy grapes from small winegrowers in the vicinity, ultimately affecting what grapes the latter would have to plant. Winemaking was to become a matter for the brand to decide.

Another experience of brand creation is offered by the Girona family on their estate of Castell del Remei in the comarca of Urgell in Lleida province. The estate had been purchased during the disentailment period, but it was not until the arrival of Ignasi Girona in 1880 that they decided to turn it into a model vineyard, with very careful planning of which varieties to plant (Pedro Ximénes from Andalusia, Macabeo from Catalonia, Sémillon and Cabernet from France) and the incorporation of French winemaking techniques. The brand Castell del Remei was launched and the winery became one of the first to sell wines under its own brand (Mateu Giral 2012). Are these cases isolated or were there more? All indications are that the process of creating brands linked to the production of own wines was really limited, perhaps influenced by large-scale exports of wine to France (Nagel 2000). At the end of the nineteenth century, the merchants/stockists were still the dominant figures in the wine business.

## **Wine Exports and Wine-Producing Crises in the First Third of the Twentieth Century**

A number of factors account for the fact that the network of wine merchants and stockists in Barcelona, Vilafranca del Penedès, Tarragona and other cities in the area exported between 40% and 50% of Catalan wine production. These include the long tradition of wine exports dating back to the eighteenth century; the phylloxera outbreak and the

destruction of French vineyards, which stimulated Catalan production; and a rail network that aided in overland export (Pascual Doménech 2015).

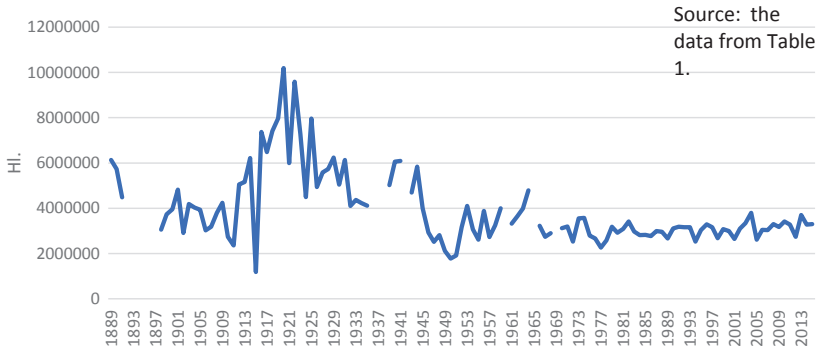
Wine production series in Catalonia began in 1889, when expansion was reaching its high point before the outbreak of phylloxera. At the time, production ranged between 6 and 7 million hectolitres and exports accounted for between 40 and 50%<sup>9</sup> (Fig. 2). The traditional market for Catalan wine was the Americas. Between 1868 and 1877, exports to the Americas accounted for 85–90% of exports and the remainder supplied European and African markets. With the outbreak of phylloxera in France, exports to that country increased. However, while the French market was fundamental for Spain, this was not so in the Catalan case, for which the Americas continued being an important market (Pujol Andreu 1984).

The golden age of Catalan vineyards, therefore, mixed a strong foreign demand, a growing domestic market, high wine prices and a structure of merchant exporters who had become stronger with the outbreak of phylloxera.

In the last decade of the nineteenth century, however, the model was plunged into crisis. Wine production had risen worldwide because of France's recovery and the entry of new producers into the market to take advantage of high wine prices. Industrial alcohol was competing against wine alcohol and artificial wines were making their appearance in the marketplace. Exports to France practically disappeared from 1891 onwards and the American market declined sharply with the loss of Cuba and Puerto Rico. Wine prices cratered in the early years of the twentieth century. Then came the "*crisis de mévente*" or crises of overproduction. The momentary reduction in vineyards caused by the gradual spread of phylloxera in Catalonia mitigated the effects, but the wine market was subjected to a sharp contraction. Production cuts, low prices and replanting costs initiated a number of lean years.

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<sup>9</sup>These export figures must be treated with caution. We do not have official data on Catalonia. Often, only maritime departures are considered and overland customs are not taken into account. Also, departures from these ports may not necessarily carry Catalan wine, but may haul wine from other places of origin.

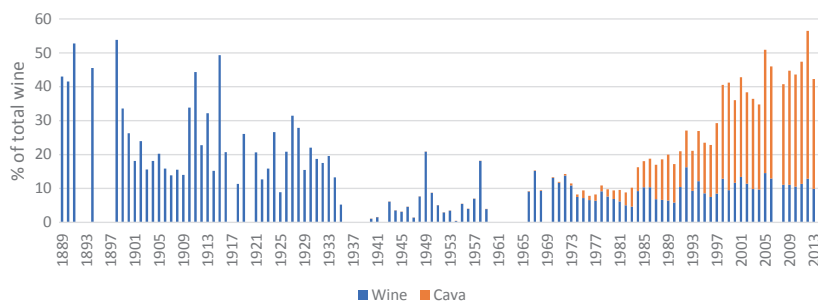


**Fig. 2** Evolution of wine production in Catalonia (1889–2015) (Source The data in Table 1)

Phylloxera changed cultivation techniques. Winegrowers had to learn how to grow American varieties and how to do grafting. Also, their vines needed to be treated with sulphur and copper sulphate to tackle oidium and mildew. As a result, the costs of cultivation rose. In addition, the “*rabassa morta*” contracts that had generated property rights for the winegrower were changed into long-term sharecropping. If there had been no major contractual problems in the nineteenth century, now with the new type of contract and falling prices, demands for a different sharing out of agricultural income would become one of the issues to plague the Catalan countryside (Pujol Andreu 1984; Ferrer Alòs et al. 1992; Colomé Ferrer 2015).

However, phylloxera was no impediment to replanting in nearly the entirety of Barcelona and Tarragona provinces, though not in Lleida, where the growth in vineyards had been superficial and specific. The changes also led to an increase in productivity, which was compounded by good harvests during the First World War, when production finally surpassed the pre-phylloxera period, thanks to the growth in exports brought about by global conflict. Foreign demand, however, continued to fall because it basically depended on French demand and France was the destination of the largest share of exports (Pujol Andreu 1984).

The most severe crises of overproduction took place after the First World War. The conflict had thrown markets into chaos. The return to normality, however, saw more productive vineyards, more land under



**Fig. 3** Proportion of Catalan wine production destined for export (1889–2015) (Source Pujol Andreu (1988); *Datos de los vinos de calidad...* [various years])

cultivation and a blocked foreign market. As can be seen in Fig. 3, prices slumped and the 1920s was one of the hardest decades, marked by a widespread intensification of social unrest (Pujol Andreu 1984, 1986; Soler Becerro 2014).

## Cooperative Associations and Wineries

In response to falling prices, rising costs, adulterated wines and industrial alcohols, farmers formed associations as a solution. With the decree of 1906, hundreds of cooperative unions were founded all across Catalonia, particularly in the winegrowing areas. The main aim was to collaborate in driving down production costs. To achieve this, the associations focused on the joint purchasing of rootstocks, sulphur and copper sulphate, as well as other services. They also disseminated new winegrowing practices through lectures, the publication of journals and informational leaflets. In some cases, they even installed distilling apparatuses to take advantage of the pomace and sour wines and to reduce the surplus (Ferrer Alòs 2008). These activities did not entail any strategic shift: small farmers continued to make their own wine as they had always done and, at best, strove to improve the product by applying some of the techniques learnt in the association.

One of the issues, however, was that winemaking was fragmented. This reduced the farmers' bargaining power and resulted in rather



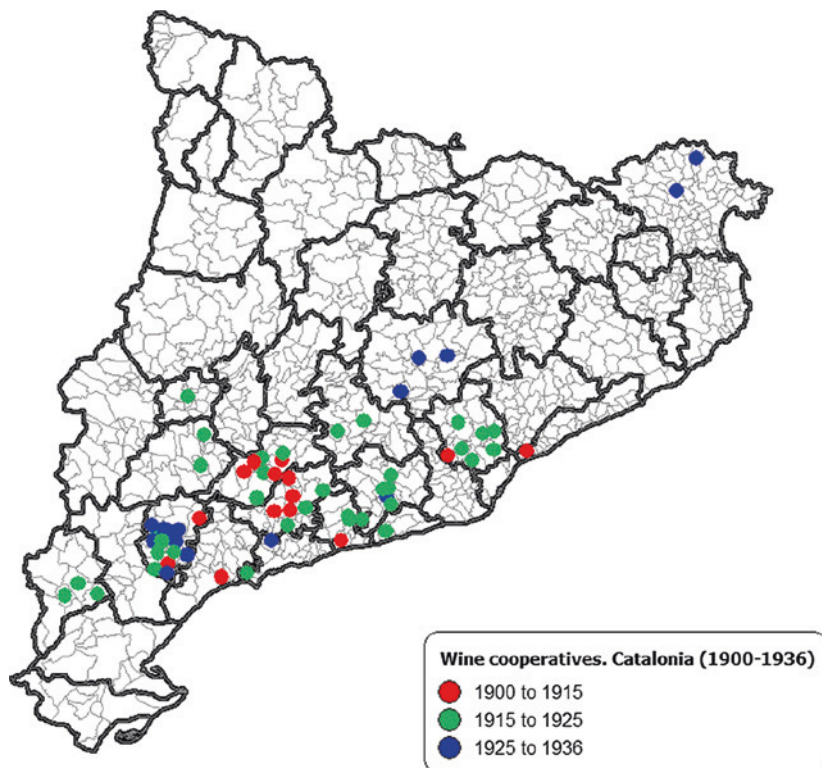
uneven quality. The only people to benefit from the situation were the agents and brokers who were already blending wine in coupages that set the prices on offer. Why was no effort made to produce wine jointly in order to enhance the quality, improve bargaining power and push sales prices higher? Cooperative wineries were the answer. Map 4 shows the geography of the cooperative wineries founded in Catalonia between 1900 and 1936. A closer look reveals the following: (a) that the first cooperative wineries founded between 1900 and 1915 were located within the type of viticulture found in the comarcas of Tarragona; (b) that the growth occurring across the rest of the territory took place between 1915 and 1935 largely in the area of Tarragona and the Penedès region; and (c) that a nucleus emerged between 1925 and 1936 in Priorat, Bages and Alt Empordà.

Why did winemaking cooperatives emerge basically within the type of viticulture that has been linked above with the comarcas of Tarragona, where merchants and stockists were predominant? The answer can be found in the distinct kinds of winemaking that occurred in each area. The tenant farmers in the comarcas of Tarragona (who were not rabassaires) did not make wine, because winegrowing was only one part of a combination of crops, such as almonds, hazelnuts and carob beans. They sold their harvested grapes to the highest bidder, but the landowner was entitled to buy the grapes and set the price. This was the context in which tenant farmers growing grapes decided to create cooperative associations through which they could do what they had not done before: turn their grapes into wine. It was a way for them to increase the value of their harvest. This would explain the first geography of cooperative wineries (Planas Maresma 2015; Gavaldà and Sntesmases Ollé 1993; Fuguet and Mayayo 1994).<sup>10</sup>

By contrast, in the rabassaire areas, the small winegrower made his own wine and improvements were achieved through joint purchasing or through the cooperative production of alcohol by distilling the pomace

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<sup>10</sup>The cooperative winery of Alella, which was set up in 1906, was one of the first. It was the only one to create its own brand (with a wine that was already well-known) and to sell its own wines, and it was one of the first to bottle. As had always been the case, it supplied the domestic market, where the Alella brand was very prestigious (La comarca de Alella 1909; Barnadas Ribas 2013).



**Map 4** Wine cooperatives founded in Catalonia (1900–1936) (Source Own elaboration from various sources)

and sour wines, or through a better sharing out of agricultural income, as can be seen from the large amount of social conflicts in these areas (Pomés 1998). The tradition of individual production by *rabassaires* and by landowners and the specific networks for marketing delayed the appearance of cooperative wineries.

With the worsening crises of overproduction in the 1920s, social unrest and demands over agricultural income intensified. However, this was also the period in which the most cooperative wineries were created in the *rabassaire* area. Individual winemaking brought quality problems and a risk of sour wines. It did not allow for investing in the improvements to winemaking that were then required. Against this

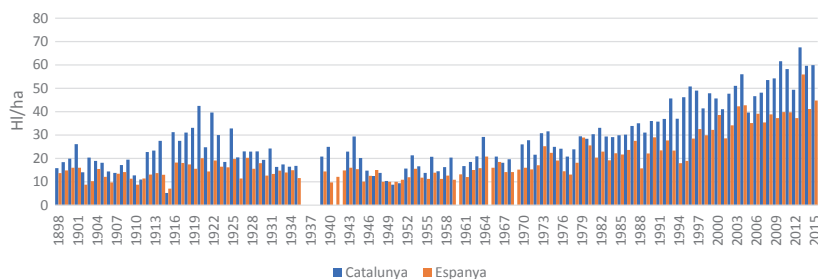
backdrop, the rabassaire areas were driven to concentrate winemaking in cooperative wineries or in individual wineries that performed a similar function. In the medium term, it would be the cooperatives that ensured the continuation of vineyards (Ferrer Alòs 1998) and even the creation of a certain distribution network. The problem would come when the cultivation of grapes no longer turned a profit.

However, the cooperative wineries in the Tarragona area never competed against the merchants and stockists. They acted as a guarantee of the best price for the winegrower, but despite some attempts, they produced wine only to sell it to stockists through auctions or other procedures (Saumell Soler 2002, 2003). In reality, the winemaking had improved, but the commercial structures remained intact.

## The Evolution of the Catalan Wine Sector in the Post-war Period

With the Spanish Civil War, the land planted in vineyard fell by 25% from 1934 to 1963. The decline was accelerated in Barcelona province, the area in which rabassaire viticulture was predominant. Production also fell and eventually levelled out at 3 million hectolitres, where it remains today. This was achieved with constant growth in yields, if we consider that the amount of vineyard land has continued to decline. Figure 4 shows the constant increase in yields since 1960, rising from less than 20 hl/ha to 60 hl/ha at present.

Prices collapsed in the early years of the Franco dictatorship. Between 1947 and 1953, they fell by 58.6% and between 1958 and 1963, by 29.6% (Medina Albadalejo 2014). The foreign market, about which we have little data, hardly existed for wine. When we do have data, from 1965 onwards, we know that exports barely reached 10% of total production (Fig. 3). In some areas such as Barcelona province, economic growth provided higher paying jobs than winegrowing offered. The vines were pulled up. Some authors argue that the post-war crisis explains the development of the cooperative movement in Spain. Winegrowers faced a choice. As had occurred in Catalonia in the crisis of the 1920s, they had to quit or join together in winemaking



**Fig. 4** Evolution of yield per hectare in vineyards in Catalonia and Spain (1889–2015) (Source Own elaboration using the sources from Table 1)

cooperatives. In Catalonia, the number of cooperative wineries climbed from 39 in 1920 to 69 in 1940, 75 in 1946–1947 and 171 in 1980 (Medina Albadalejo 2015). In some areas, wine production came to be limited solely to these cooperatives.

In the Penedès region, despite the existence of winemaking cooperatives, the sector was controlled by wine merchants/stockists who had their facilities in Vilafranca del Penedès, Vilanova and Vendrell. They limited their activity to purchasing wine from cooperatives and individuals and then making various blends and selling to the domestic market or abroad, by bulk in large casks. They were new enterprises, some of which came into existence in the nineteenth century or in the first third of the twentieth century, and they had control of wine production (Soler Becerro 2003).

Mention must also be made of the appearance of cava in Catalonia. Above, we have noted how Manuel Raventós began making champagne in the late nineteenth century after the decline in the production of Mistelle wine. Raventós was not the only one to attempt this at the time; others tried in Reus (Giralt Raventós 1990; Valls Junyent 2003). To this end, he undertook to develop a new model of viticulture based on direct cultivation of much of his vineyards in order to ensure a certain quality in the wine. He also created his own brand with the sale of bottled champagne.

Throughout the first third of the twentieth century, the production of champagne rose through the substitution of French imports, with the help of protectionist measures and an increase in consumption. In

1935, there were 62 companies producing champagne in Spain, 52 of them being located in Barcelona province, particularly in Sant Sadurní d'Anoia in the Penedès region. Typically, cava makers not only made wines, but also purchased white wine from cooperatives and wineries specializing in the production of base wines from which to make cava (Valls Junyent 2003, 2007). The production of base wine mitigated the problems of failing prices and lower consumption. Later, cava would play a fundamental role.

What happened to wineconsumption? Data for the late nineteenth century are sparse. In 1887, the rate of consumption was 53 litres per person in Lleida and 113 in Tarragona (Mayayo Artal 1991). Various sources put the number at between 70 and 90 litres for Barcelona (Pascual Doménech 2015). In 1970, more reliable data put consumption at 62 litres per person, but from that point consumption began to fall dramatically, dropping to 44 litres by 1985 and 34 litres by 2004 (Soler Becerro 2007). Recent data put annual consumption at 17.25 litres per person. The reduction in consumption has necessarily had an effect on the model of wine production.

## **Cava, Designations of Origin, Quality Wine and the Recovery of the Foreign Market**

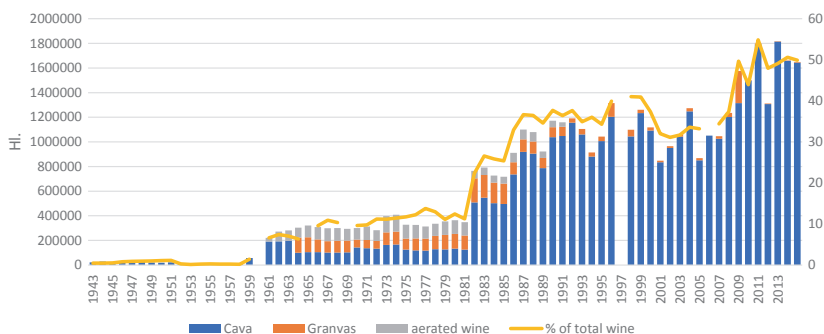
The wine sector had to adapt to changes in consumption and this could only be done by moving towards quality production. The first major change to affect the modern evolution of the wine sector in Catalonia occurred in the sector that produced sparkling wine. The work of import substitution had been carried out in the first third of the twentieth century and this is how the situation remained until the 1960s, when demand began to grow because of a rising standard of living and a successful sales campaign for the product. The product also started to be discovered by the foreign market. Cava was excellent value for money and foreign sales began to grow. The dispute with champagne prohibited the use of this designation and it was then that the word *cava* was adopted to identify the product.

From that point onwards, cava production did not stop expanding. This can be seen in Fig. 5. At the initial stage, cava properly speaking (where the second fermentation takes place in the bottle) was supplemented by cava produced by the Charmat method (where the second fermentation takes place in stainless steel tanks) and by lower-quality carbonated wine. Gradually, however, these production methods disappeared and practically all cava has been fermented after bottling since the 1990s. The wine used in cava has continued to increase so much so that, in recent years, it stands at between 50 and 55% of all wine produced in Catalonia. This has spurred winegrowers to plant Macabeo, Xarel·lo and Parellada varieties, which produce the grapes for cava, and they have created a complex network of cooperatives and small wineries to produce the base wine used by cava makers.

The viticulture of Catalonia, particularly in the Penedès region and adjacent comarcas, cannot be understood without the spectacular development in cava production, which, at the same time, has aided in the sector's modernization, helping it to learn the mechanisms by which foreign markets operate as well as production techniques like bottling.

Falling wineconsumption led to production focused on quality and greater added value and it raised the need to adapt to new consumption habits. In the 1960s, bulk wine started being replaced by bottled wine and stainless steel tanks were introduced to control fermentation. Major stockists who had controlled the market and made their wines on the basis of blends that allowed them to make any product now began to disappear, elbowed aside by winemakers who made and sold their own wines and created brands. Initially, the prominent stockists themselves were the enterprises to make this transformation. This was accompanied by lower costs in winegrowing, thanks to mechanization processes that enabled winemakers to have their own vineyards and achieve better quality control. These major enterprises, which were the heirs of the old structures, were joined by small wineries that made and sold wine.

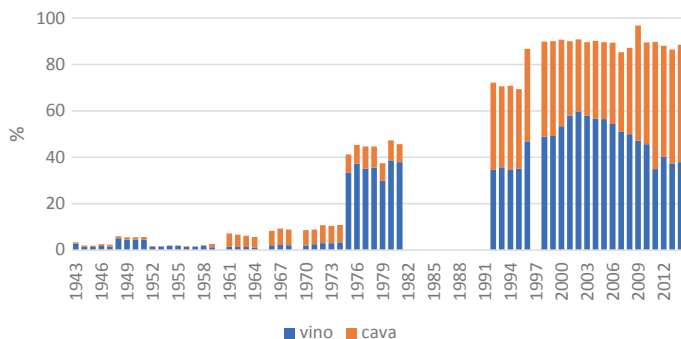
The new winemakers opted for quality and for the introduction of new varieties that were uncommon in the area (e.g., Merlot, Cabernet Sauvignon, Syrah, Chardonnay, Sauvignon Blanc) in imitation of the French model. They were convinced that this was one of the ways to improve the quality of the musts. Nowadays, a need has been identified



**Fig. 5** HI devoted to cava production in Catalonia, and cava production as a proportion of the total (1943–2014) (Source Own elaboration based on data from the *Anuario de Estadística Agraria* in its various formats)

to be distinct from the classic tastes of varieties of French origin, and autochthonous varieties are being introduced and recovered in various designations of origin (e.g. Piquepoul and Mandó in Pla de Bages and Trepát in Conca de Barberá) (Soler Becerro 2003).

The next step towards the recovery of quality, in response to the gradual reduction in hectares and the abandonment of vineyards, was the creation of designations of origin, or Designations of Origin (D.O.). The aim was to guarantee the quality of output produced under a given seal. In Catalonia, the effort has focused on bringing practically the entire territory under some D.O. classification. By 1932, four areas had been recognized (Alella, Priorat, Penedès and Tarragona). However, the practical effects were slim. It was not until the 1970s and later, with Spain's entry into the European Union, that the various winegrowing areas were organized and took on distinct personalities. The D.O. Ampurda-Costa Brava was created in 1975 and then became D.O. Empordà in 2005. In 1976, the D.O. Tarragona was restructured and, in 2002, the D.O. Montsant was separated out. In 1985 the D.O. Conca de Barberà was created. In 1986, the D.O. Costers del Segre was divided into 7 sub-areas. In 1995, the D.O. Pla de Bages was created and the D.O. Terra Alta followed in 2005. Separate mention must also be made of the D.O. Catalunya, created in 1999. In reality, the D.O. Catalunya is a strategy to build value for all wines in the territory and



**Fig. 6** Wines with Designation of Origin in Catalonia (1943–2014) (Source Own elaboration based on data from the *Anuario de Estadística Agraria* and *Datos de los vinos de calidad...* [various years]. Prior to 1973, the sources refer to fine wines)

enable the creation of blends and composite products using wines produced in different areas. This explains why very few wines in Catalonia are not included under some classification for quality wines. It is also necessary to add D.O. Cava, which groups together all parcels of land that produce for this designation.

Although the official data are very imprecise and sometimes do not calculate the same concepts, it is apparent from Fig. 6 that wines classified under a designation of origin have been increasing in number.<sup>11</sup> From 1990, the proportion climbed to 70% and since 2000 it has approached 90%. Cava accounts for a very important share of this classification (between 55 and 60% of all classified wine).

Lastly, the commitment to quality has been complemented by foreign sales. A look back at Fig. 3 shows the evolution of Catalan wine exports since the end of the nineteenth century. In the wake of the Spanish Civil War, wine sales abroad barely exceeded 10% of total production. From the 1980s, however, cava started being exported on a mass scale. This was the first major instance of internationalization, though some

<sup>11</sup>Changes in legislation make it very difficult to determine the amount of wine produced under Designations of Origin. Prior to 1963, wines were classified as table wines or fine wines. Subsequently, the Designations of Origin appeared, but in the official statistics, they disappear between 1982 and 1992. In Fig. 6, only the evolution of cava is shown in those years.



**Table 4** Percentage of wine exported for each D.O. in Catalonia

	1989/1990	1996/1997	2000/2001	2005/2006	2009/2010	2014/2015
Alella	7.5	11.4	15.0	16.1	45.6	sd
Catalunya			52.0	52.4	50.3	50.3
Conca de Barberà	0.6	28.4	30.5	46.0	29.2	24.7
Costers del Segre	0	15.8	20.5	34.3	37.5	28.9
Empordà	1	4.5	4.2	6.6	12.2	11.8
Montsant				34.3	44.5	31.2
Penedès	31.4	39.6	35.0	35.7	41.9	30.6
Pla de Bages		11.1	14.6	15.1	13.7	20.0
Priorat	7.3	28.7	40.3	42.6	48.7	53.3
Tarragona	21.9	7.9	8.3	25.5	31.5	23.8
Terra Alta	2.1	1.8	12.4	38.1	77.5	41.2
Total Catalunya	19.8	19.5	26.6	39.2	46.7	41.8

Source Own elaboration based on data from Datos de los vinos de calidad

wine stockists did have export experience prior to the Spanish Civil War. In 1987, cava exports stood at 10.2% of Catalan wine production. By 2012, however, the figure had reached 40%.

The D.O. have followed the same path and are exporting a significant portion of their output. Table 4 shows how the percentage of exports has evolved in each of Catalonia's D. O. While the creation of the D.O. Catalunya (Miquel Torres markets its wines with this classification) plays an important role by volume and export percentage, the percentage of total classified wine exported can be seen to have risen from 19.8% in 1989 to 46.7% in 2009 and 41.8% in 2014. This export success is clear, but it is much less than the success of cava by volume.

In recent years, efforts have been made to deepen our understanding of quality and originality based on the introduction of autochthonous varieties as a response to the early trend of introducing French varieties. Research is also delving into original forms of winemaking, the introduction of varietal wines to give greater value to simple wines, the investment in wineculture to increase consumption of quality wines, the promotion of enotourism (or wine tourism) as an additional activity of wineries and a way to encourage wine culture, the introduction of habits of wine consumption in bars and wine shops to build value for bulk wines, and more.

Now in the twenty-first century, Catalan viticulture has been modernized. Very little remains of what it was in the eighteenth and nineteenth centuries. The current geography, however, must be explained in part by the features that once characterized it.

## Statisticals

Anuario de Estadística Agraria, Ministerio de Agricultura Pesca y Alimentación, Madrid. (1904–1999). [https://www.mapa.gob.es/app/biblioteca/articulos/rev\\_numero.asp?codrevista=AEA](https://www.mapa.gob.es/app/biblioteca/articulos/rev_numero.asp?codrevista=AEA).

Anuario de Estadística. (1999–...). Ministerio de Agricultura, Pesca y Alimentación, Madrid. <https://www.mapa.gob.es/es/estadistica/temas/publicaciones/anuario-de-estadistica/default.aspx>.

*Datos de los vinos de calidad producidos en regiones determinadas*, Ministerio de Agricultura, Pesca y Alimentación, Madrid (various years). <https://www.mapa.gob.es/es/alimentacion/temas/calidad-agroalimentaria/calidad-diferenciada/dop/htm/cifrasydatos.aspx>.

Estadístiques Agràries i pesqueres de Catalunya, Departament d'Agricultura i Pesca, Generalitat de Catalunya (des de 1988). [http://agricultura.gencat.cat/ca/departament/dar\\_publicacions/dar\\_publicacions\\_periodiques/dar\\_anuaris/dar\\_anuaris\\_historics/](http://agricultura.gencat.cat/ca/departament/dar_publicacions/dar_publicacions_periodiques/dar_anuaris/dar_anuaris_historics/).

IDESCAT, Generalitat de Catalunya. <https://www.idescat.cat/tema/agraar>.

## Bibliography

- Alió Ferrer, J. (2010). *El comerç i l'exportació de vi a Tarragona*. Tarragona: Arola editors.
- Arnabat Mata, R. (Ed.). (2001). *Els moviments socials al Penedès. Actes del II Seminari d'Història del Penedès*. Vilafranca del Penedès: Institut d'Estudis Penedesencs.
- Barnadas Ribas, M. (2013). «El Sindicat Alella Vinícola. Innovació tècnica i arquitectònica». Paper in *Jornades d'Estudi. De la vinya a la fassina. Vinyes, vins i cooperativisme vitivinícola a Catalunya*. L'Espluga de Francolí.
- Ber Sabaté, R. (1997). *El celler de Pinell*. Tortosa.
- Colomé Ferrer, J. (1990). «Les formes d'accés a la terra a la comarca de l'Alt Penedès durant el segle XIX: el contracte de rabassa morta i l'expansió vitivinícola». *Estudis d'Història Agrària*, 8, 123–144.
- . (2015). *Expansió vitícola, consolidació de la propietat capitalista de la terra i conflictivitat social a la Catalunya prelitoral durant el segle XIX: la comarca del Penedès* (Colomé, Planas, & Valls, Ed., pp. 245–279).
- Colomé Ferrer, J. (Ed.). (2003). *De l'aiguardent al cava. El procés d'especialització vitivinícola a les comarques del Penedès-Garraf*. Vilafranca del Penedès: El tres de vuit i Ramon Nadal.
- Colomé Ferrer, J., & F. Valls. (1995). «La viticultura catalana durant la primera meitat del segle XIX. Notes per a un reflexió». *Recerques*, 30, 47–68.
- Colomé, J., J. Planas, & F. Valls. (2015). *Vinyes, vins i cooperativisme vitícola a Catalunya*. Barcelona: Publicacions de l'Abadia de Montserrat.
- Congost Colomé, R., & E. Saguer. (2013). *De contractes de rabassa morta a emfiteusis perpètuas: una negociació des de baix? La regió de Girona, 1700–1900* (Colomé, Planas, & Valls, Ed., pp. 177–208).

- D. D.A.A. (1995). *Jornades sobre la viticultura de la Conca Mediterrània*. Tarragona: Facultat de Filosofia i lletre de Tarragona.
- . (2004). *Josep Fontana. Història i projecte social. Reconeixement a una trajectòria*. Barcelona: Crítica.
- . (2014). *El món de la viticultura. els vins, caves i aiguardents al Penedès històric i al Camp de Tarragona*. Vilafranca del Penedès: Institut d'Estudis Penedesencs.
- Ferrer Alòs, Ll. (1981). «La fabricació d'aiguardent a Manresa a la primera meitat del segle XVIII». *Miscel·lània d'Estudis Bagecs*, 1, 107–128.
- . (1998). *La vinya al Bages. Mil anys d'elaboració de vi*. Manresa: Centre d'Estudis del Bages.
- . (2004). «La formació de la burgesia catalana. Magí Pladellorens Playà, de rabassaire al Bages a exportador de vins a Sant Martí de Provençals». En *Estudis d'Història Agrària*, 17, 465–484.
- . (2008). «El Sindicat Agrícola de Llobregat de Bages. Una sortida a la crisi agrària de finals del segle XIX». *Dovella*, 97, 40–45.
- . (2014). «Derechos de propiedad y mercado de la tierra en la Catalunya Vella (s. XV–XIX). El caso de Artés (Bages)». *Historia agraria*, 62, 47–82.
- . (2015a). «Les vignobles en Catalogne (XVII–XVIII siècles): sous-employés, propriétaires et commerçants-commissionnaires» (Figeac & Lachaud, Ed., pp. 201–220).
- . (2015b). *Vi per cremar, vi per beure. Dues vitivinicultures a Catalunya (segles XVII–XIX)* (Colomé, Planas, & Valls, Ed., pp. 147–176).
- Ferrer Alòs, Ll, C. Álvarez Arróniz, C. Sanmartí Roset, & A. Güell Sabata. (1992). *Vinya, fil·loxera, propietat i demografia a la Catalunya Central*. Manresa: Centre d'Estudis del Bages.
- Figeac, M., & S. Lachaud. (2015). *La construction de la grande propriété viticole en France et en Europe XVI–XX siècles*. Bordeaux: Feret.
- Fuguet, J., & A. Mayayo. (1994). *El primer celler cooperatiu de Catalunya. Centenari de la societat de Barberà de la Conca (1894–1994)*. Barcelona: Departament d'Agricultura i Pesca. Generalitat de Catalunya.
- García de los Salmones, N. (1892). *La invasión filoxérica en España y las cepas americanas*. Barcelona: Imp. de Luis Taso.
- Garrabou, R., & E. Tello. (2004). *Constructors de paisatges. Amos de masies, masovers i rabassaires al territori del Vallès (1716–1860)* (D.D.A.A, pp. 83–104).

- Gavaldà, A., & J. Santesmases Ollé. (1993). *Història econòmico-social de les cooperatives agrícoles de Nulles (1817–1992)*. Valls: Institut d'Estudis Vallencs.
- Giralt Raventós, E. (1990). «Origines du “cava” de Catalogne». In *Le vin des historiens. Actes du 1er Symposium vin et histoire 19/20/21 mai 1989*, editat per D. D.A.A. Université du Vin.
- González Portilla, M., J. Maluquer de Motes, & B. de Riquer Permanyer (Eds.). (1986). *Industrialización y nacionalismo*. Barcelona: Universitat Autònoma de Barcelona.
- Iglesies, J. (2002). *Pere Gil (1551–1622) i la seva Geografia de Catalunya. Seguit de la transcripció del llibre primer de la historia cathalana en lo qual se tracta de historia o descripció natural, ço és de cosas naturals de Cataluña*. Barcelona: Institut d'Estudis Catalans.
- «La comarca de Alella, sos vins y'l Sindicat Agricol». (1909). *Catalunya Agrícola*, març, 1–3.
- Lipp, L. (1793). *Guide des negociants dans toutes les entreprises mercantiles*. Montpellier: Imprimerie de Joseph François Tournell.
- Maldonado Rosso, J., & A. Ramos Santana. (2000). *Actas del I Encuentro de historiadores de vitivinicultura española*. Puerto de Santa María: Ayuntamiento de El Puerto de Santa María.
- Martorell Pañella, A. (2010). *El Penedès. Notes crítiques sobre les vicissituds de l'Agricultura, Indústria i Comerç durant el segle XIX* (Martorell, Esclasans & Mas, Ed., pp. 26–53).
- Martorell Pañella, A., R. Esclasans, & C. Mas Jornet. (2010). *El Penedès al segle XIX*. Vilafranca del Penedès: Institut d'Estudis Penedesencs.
- Mateu Giral, J. (2012). *El castell del Remei. Terra, aigua i cultura del vi a la plana d'Urgell*. Lleida: Pagès Editors.
- Mayayo Artal, A. (1991). *La Destrucció del món rural català 1880–1980 de pagesos a obrers i ciutadans*. Barcelona: Universitat de Barcelona.
- Medina Albadalejo, F. J. (2014). *Crisis, coopeartivas y estado en e sector vitivinícola español durante el franquismo*. Workshop “Estado y agricultura en España (1920–1960). Continuidad y cambios: Universidad Carlos III.
- . (2015). *El desenvolupament dels cellers cooperatius a Catalunya a la segona meitat del segle XX<sup>o</sup>* (Colomé, Planas, & Valls, Ed., pp. 517–546).
- Moreno Claverías, B. (1995). *La contractació agrària a l'Alt Penedès Durant el segle XVIII. El contracte de rabassa morta i l'expansió de la vinya*. Barcelona: Fundació Noguera.
- . (1997). «Del cereal a la vinya. El contracte de rabassa morta a l'Alt Penedès del segle XVIII». *Estudis d'Història Agrària*, 11.

- Nadal, J., & X. Tafunell. (1992). *Sant Martí de Provençals. Pulmò industrial de Catalunya (1847–1992)*. Barcelona: Columna.
- Nagel, K.-J. (2000). *¿Tiene sentido hablar de una vitivinicultura catalana? Aspectos económicos, sociales y políticos, 1870–1940* (Maldonado & Ramos, Ed., pp. 365–382).
- Oliva Ricos, B. (2009). «1702–1714: el negoci del vi fou austracista». *XXVI Sessió d'Estudis Mataronins*, 93–105.
- Olivé Serret, E. (1991). *La Chartreuse de Tarragona. De la fàbrica al convent*. Barcelona: Generalitat de Catalunya.
- Parés, S. (1944). «Contratación notarial agraria en el Alto Penedés durante el siglo XIX». *La Notaria*, 366–387.
- Pascual Doménech, P. (2015). *El tràfic de vins i derivats a Catalunya (1855–1935). El rol dels ferrocarrils en competència amb carros i barques* (Colomé, Planas & Valls, Ed., pp. 279–336).
- Planas Maresma, J. (2013). *Viticultura i cooperativisme. La comarca d'Igualada (1890–1939)*. Barcelona: Publicacions de l'Abadia de Montserrat.
- . (2015). *Els inicis del cooperativisme vitivinícola a Catalunya* (Colomé, Planas & Valls, Ed., pp. 369–402).
- Plans Maestra, J. (2010). «Els establiments a rabassa morta probable causa de la construcció de tines al Bages al segle XVIII i XIX». *Coordinadora Entitats de Pedra Seca. Butlletí Digital*, 3, 15–19.
- Pomés, J. (1998). *Sindicalisme pagès i republicanisme popular a Catalunya (1918–1930)*. *La Unió de Rabassaires*. Barcelona: Universitat Autònoma de Barcelona.
- Pujol Andreu, J. (1984). «Les crisis de malvenda del sector vitivinícola català entre el 1892 i el 1935». *Recerques*, 15, 57–78.
- . (1986). *Las crisis vinícolas en cataluña. Los precios del vino común (1892–1935)* (González, Maluquer, & De Riquer, Ed., pp. 181–195).
- . (1988). *Les transformacions del sector agrari català entre la crisi finisecular i la Guerra Civil*. Bellaterra: Universitat Autònoma de Barcelona.
- Querol, J. (2001). *La vinya al Baix Penedès a partir dels contractes de rabassa morta (1750–1800)* (Arnabat, Ed., pp. 151–174).
- Roca Fabregat, P. (2015). «L'expansió vitícola dels segles XVIII i XIX com una etapa en l'evolució del paisatge i del poblament rural en el Vallès Oriental» (Colomé, Planas, & Valls, Ed., pp. 209–244).
- Roig Armengol, R. (1890). *Memoria acompanyatoria al Mapa Regional Vinícola de la Província de Barcelona*. Barcelona.
- Rovira Gómez, S. (1987). *Els Ixart. Una nissaga setcentista de botiguers i comerciants valencs*. Valls.

- . (1994). *La burgesia mercantil de Reus ennoblida durant el segle XVIII*. Tarragona: Diputació de Tarragona.
- . (1995). *L'anticipació de diners a productors d'aiguardent per part dels comerciants de Reus (1750–1799)* (D. D.A.A., pp. 795–810).
- . (2012). *Botiguers i comerciants setcentistes de Torredembarra*. Torredembarra: Centre d'Estudis Sinibald de Mas.
- Sánchez Martínez, M. (2001). «Vino y fiscalidad en la Edad Media. El caso de los municipios catalanes» (Maldonado & Ramos, Ed., pp. 303–419).
- Saumell Soler, A. (2002). *Viticultura i associacionisme a Catalunya. Els cellers cooperatius del Penedès (1900–1936)*. Tarragona: Diputació de Tarragona.
- . (2003). *L'associacionisme agrari al Baix Penedès a principis del segle XX. La Cooperativa Agrícola i Caixa de Crèdit de Llorenç del Penedès (1889–1936)*. Llorenç del Penedès: Cooperativa Agrícola de Llorenç del Penedès.
- Segarra Blasco, A. (1994). *Aiguardent i mercat a la Catalunya del segle XVIII*. Vic: Eumo.
- Segura, A. (1993). *Burguesia i propietat de la terra a Catalunya en el segle XIX. Les comarques barcelonines*. Barcelona: Curial.
- Soler Becerro, R. (2003). *De magatzems a cellers. Recuperació de la producció i transformacions empresarials al Penedès, 1940–2000* (Colomé Ferrer, Ed., pp. 183–222).
- . 2007. «Les exportacions de vins catalans durant la segona meitat del segle XX». *Recerques*, 127–152.
- . 2014. *El plet dels rabassaires. Desenvolupament i dimensió del conflicte rabassaire al districte de El Vendrell, 1931–1936. Una primera aproximació* (D.D.A.A., Ed., pp. 275–292).
- Torras Elías, J. (1995). *Productes vitícoles i integració mercantil a Europa, ss. XVI–XVIII* (D.D.A.A., Ed., pp. 527–535).
- Valls Junyent, F. (1996). *La dinàmica del canvi agrari a la Catalunya interior. L'Anoia 1720–1860*. Barcelona: Publicacions de l'Abadia de Montserrat.
- . (1997). «Contractació a rabassa morta i conjuntura vitícola a Catalunya 1720–1850». *Estudis Històrics i Documents dels Arxius de Protocols*, XV, 299–334.
- . (2003). *La indústria del cava. De la substitució d'importacions a la conquesta del mercat internacional* (Colomé Ferrer, Ed., pp. 143–182).
- . (2004). *La Catalunya atlàntica. Aiguardent i teixits a l'arrencada industrial catalana*. Vic: Eumo.
- . (2007). «Compitiendo con el “champagne”. La industria española de los vinos espumosos antes de la Guerra Civil». *Revista de Historia Industrial*, XVI: 33, 47–80.