

# Agriculture on Hvar During the Venetian Occupation: a Study in Historical Geography

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This paper presents the results of research of the development of agriculture on the island of Hvar during the Venetian occupation. Archaeological findings were used together with other archival materials and sources. By a combination of various sources information was obtained on the organization of agricultural production and how the land was utilized on Hvar during the Venetian occupation.

**Key words:** Hvar Island, Historical Geography; Venetian occupation, Agriculture.

**Poljoprivreda otoka Hvara tijekom venecijanske vladavine: historijsko-geografska studija.**

U ovom radu iznijeti su rezultati istraživanja razvoja poljoprivrede otoka Hvara za vrijeme Venecijanske vladavine. U tu svrhu korišteni su arheološki nalazi, te druga arhivska građa i izvori. Kombinacijom različitih izvora dobijena je slika o tome kako je za vrijeme Venecije bila na Hvaru organizirana poljoprivredna proizvodnja i kakav je bio način iskorištavanja zemljišta.

**Ključne riječi:** Otok Hvar, Historijska geografija, venecijanska vladavina, poljoprivreda.

## INTRODUCTION

One of the basic objectives during the 1980's of the Hvar Survey Project, (Bintliff 1989) containing academics of various disciplines from Croatia, Slovenia, Serbia, Britain and Canada, was to establish the role of agriculture on the island's development. (Figs. 1+2). Obviously some of the earlier evidence was based on archaeological evidence, but later periods could be supported by documentary material and secondary published sources. Here the role of historical geography has been applied; namely the recrea-

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tion of part of the island's geographical past through the use of historical records. In this article it is hoped to trace the influence on Hvar's agriculture of the Venetian occupation, which lasted intermittently for eight hundred years, i. e. from 1000 A. D. to the fall of the Venetian Republic in 1797.

### EARLY MEDIEVAL AGRICULTURE

The island was first occupied by Venice in 1000 A. D. in an early attempt to control the hegemony of the Adriatic, only to be replaced by the Kingdom of Croatia and again by Venice during the twelfth century. A short period was spent under Byzantium (1164–1180 A. D.), then under the Croatian–Hungarian king, finally reverting to Venetian protection in 1278. Such political changes disturbed the island's economic development, but calmer waters in the early twelfth century saw the growth of a small settlement named Hvar, on the southern coast, develop into an important medieval town.

The island's local inhabitants followed the former Roman agricultural practice, which consisted of nurturing vines, olives, figs and other southern fruits, together with cereal production. During the early medieval period the extension of cereal production led to the introduction of better wheat varieties, as well as barley, oats, rye and millet. (Ožanić 1955:13) The cereals were cut with a sickle or plucked from the ground and placed in sheaves, ready for transport to some sort of thresher. Later improvements for threshing cereals, utilized oxen and much later horses. The grain was milled into ground husks or flour from which bread, cakes and unleaven bread were made. The fields were dug with ploughs containing sharp knives, together with other tools for cultivation including scythes, sickles, hoes and spades, forming a technological advance on former arable methods. Transport consisted of carts and wheelbarrows. (Ožanić 1955:13) This was also a period of settlement consolidation, in which the Slavic tribal organisation favoured the establishment of villages and hamlets, usually located on the hill slopes well above the precious agricultural land. The hamlets consisted of loosely clustered houses in between villages sites, where close contact with the agricultural land was essential, and local inhabitants formed extended families known as 'zadruga'. (Violich 1972:154)

A significant event in the island's history came with the publication of its communal statute in 1331. (*Statuta Communitates Lesina* 1643) This was an expression of the island's evolution with its own independent administrative system, similar to other nearby places like Brač, Vis, and Korčula, as part of a sustained effort to maintain local autonomy in the face of foreign domination up to 1358 by Venice. The island statute of 1331 was granted by the Venetians as a charter for the whole commune and largely concerned with religion, a criminal code etc, but it was to be administered wit-

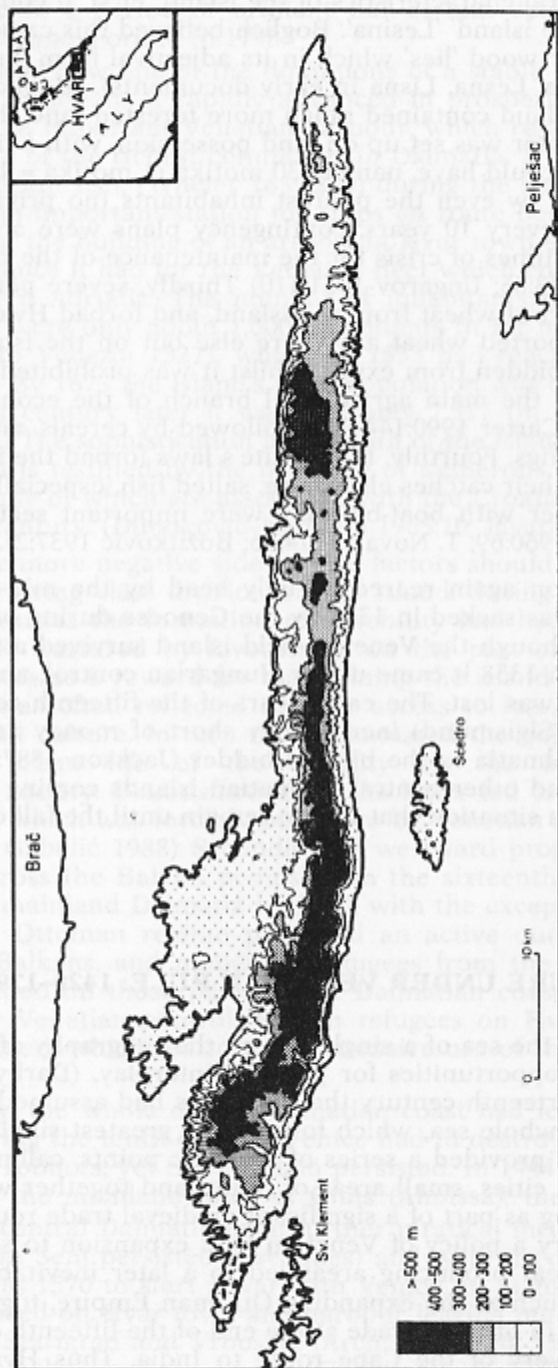


Fig. 1 Relief of the island of Hvar. Key: Heights in metres: 1. 500 and higher; 2. 400-500; 3. 300-400; 4. 200-300; 5. 100-200; 6. 0-100.

Sl. J. *Reljef otoka Hvara. Legenda: Visine u metrima: 1. 500 i više; 2. 400-500; 3. 300-400; 4. 200-300; 5. 100-200; 6. 0-100.*

hout respect for rank or class. (Boglich 1873:79–95) Certainly it revealed some of the agricultural characteristics of the island. First, it confirmed the Venetian name for the island 'Lesina'. Boglich believed this came from the old Slavonic word for wood 'lies' which in its adjectival form 'lisna' meant woody (hence Liesena, Lesna, Lisna in early documents). (Boglich 1873:31) It also suggests the island contained much more forested land than at present. Secondly, a register was set up on land possession, with a limit set on the amount a person could have, namely 30 motika (1 motika = 436 m<sup>2</sup>) i. e. 1.3 ha and obtainable by even the poorest inhabitants (no private ownership) but renewable every 10 years; contingency plans were also laid for storing wheat during times of crisis for the maintenance of the population. (Stat. Comm. Les. 1643:85; Ungarov 1951:110) Thirdly, severe penalties existed against the export of wheat from the island, and forbade Hvar boat owners from selling imported wheat anywhere else but on the island. Other cereals were also forbidden from export, whilst it was prohibited to import wine. Viticulture was the main agricultural branch of the economy (Stat. Comm. Les. 1643:187; Carter 1990:144–145) followed by cereals, and to a lesser extent olives and figs. Fourthly, the statute's laws forbade the island's fishermen from selling their catches elsewhere; salted fish, especially sardines and mackerel, together with boat-building were important sectors of the economy. (G. Novak 1960:69; T. Novak 1974:96; Božitković 1937:2).

Political disruption again reared its ugly head by the mid-fourteenth century when Hvar was sacked in 1354 by the Genoese during one of their wars with Venice; although the Venetian-held island survived attacks from mainland Dalmatia, in 1358 it came under Hungarian control, and much of its former autonomy was lost. The early years of the fifteenth century saw the Hungarian king (Sigismund) increasingly short of money and in 1409 he decided to sell Dalmatia to the highest bidder (Jackson 1887:209; Tadić 1968:14) with Hvar and other central Dalmatian islands coming under Venetian rule in 1420 – a situation that was to remain until the fall of the Lion of St Mark in 1797.

### AGRICULTURE UNDER VENETIAN RULE: 1420–1797

The Adriatic was the sea of a single power, the geography of its hinterlands providing few opportunities for political interplay. (Darby 1932:145) By the end of the thirteenth century the Venetians had assumed sovereign jurisdiction over the whole sea, which formed the greatest single factor in her history. Dalmatia provided a series of strategic points, calling stations, merchant quarters in cities, small areas of hinterland together with numerous islands all linking as part of a significant medieval trade route. During the fourteenth century a policy of Venetian land expansion to secure control of cereal and meat producing areas led to a later inevitable conflict with inland powers such as the expanding Ottoman Empire, together with the loss of monopoly in oriental trade at the end of the fifteenth century after da Gama's discovery of the Cape route to India. Thus Hvar was re-

-joining the Venetian Republic after the latter's zenith, when the Lion of St Mark entered a period of brilliant but certain decline, ending with the treaty of Campo-Formio in 1798.

Hvar was now one of the dominions of a stable European power, and under the Venetians it rapidly advanced in prosperity. The town of Hvar contained an important Venetian harbour, which resulted in the island becoming one of the richest communes in Dalmatia. It exported wool, sheep, cheese and salt fish; (Wheler 1689:210) during the sixteenth century the island was an important station for ships en route between Venice and the Levant, and the building of an arsenal in Hvar town emphasized the strategic significance it had for the Venetian fleet which controlled commerce in the southern Adriatic. The number of inhabitants on the island rose: in 1525 there were only about 1,000 inhabitants fit for military service (Archivio di Stato Venezia 1527), which by 1553 had reached 1,300. (Arch. Stat. Ven. 1553) By 1673 the island's total population was 6,115, (Kuničić 66-67), but over a century later it was still only 7,517 (in 1740). (Državni Arhiv Hvar, 1740) The sophistication and wealth of the island's inhabitants during this period is testified by the presence of numerous churches and private houses, many of which are associated with the Croatian Renaissance of the sixteenth century. (Duboković-Nadalini 1965:10; Javarek 1962).

On the more negative side several factors should be noted. First, there was the growing class division on the island: during the twelfth and thirteenth centuries the formation of a nobility had been in progress, which was further nurtured by favouritism on the part of Venice towards the upper classes as a reward for maintaining the island's law and order. This partiality was often reflected in their access to learning through science, the arts and culture. In turn this accentuated the gulf between the predominantly urban life of the nobility on the island, and the poorer rural society. Dissatisfaction by the latter led to an uprising between 1510-1514, which was forcibly put down by Venetian armed forces. (Kasandrić 1978; Gabelić 1988) Secondly, the westward progress of the Ottoman Empire across the Balkan peninsula in the sixteenth century led to their control of mainland Dalmatia by 1540, with the exception of Venetian-held cities. The Ottoman regime provoked an active out-migration of people from the Balkans, and numerous refugees from the mountainous hinterland re-settled on those parts of the Dalmatian coast and nearby islands, still under Venetian control. Balkan refugees on Hvar increased the demand for food, which led to more intensive use of the karst land for supplies.

Thirdly, the whole of the Dalmatian coast had long been troubled by piracy: during the tenth century Venice had to destroy strongholds held by Dalmatian robbers, yet the problem persisted. In 1444 the Venetians finally conquered the mainland town of Omiš (Almissa), the main pirate centre, and freed central Dalmatia from further piratical incursions. Nevertheless, pirates from Senj persisted (Uscoques) and were used by the Ottomans as an excuse in 1570 to start a war with Venice. In August 1571, the Ottoman fleet advanced on Hvar town and harbour leaving much of them in flames, as well as Starigrad and Vrboska, (Arch. Stat. Ven. 1573), which was followed by an outbreak of the plague. (G. Novak 1960:107).



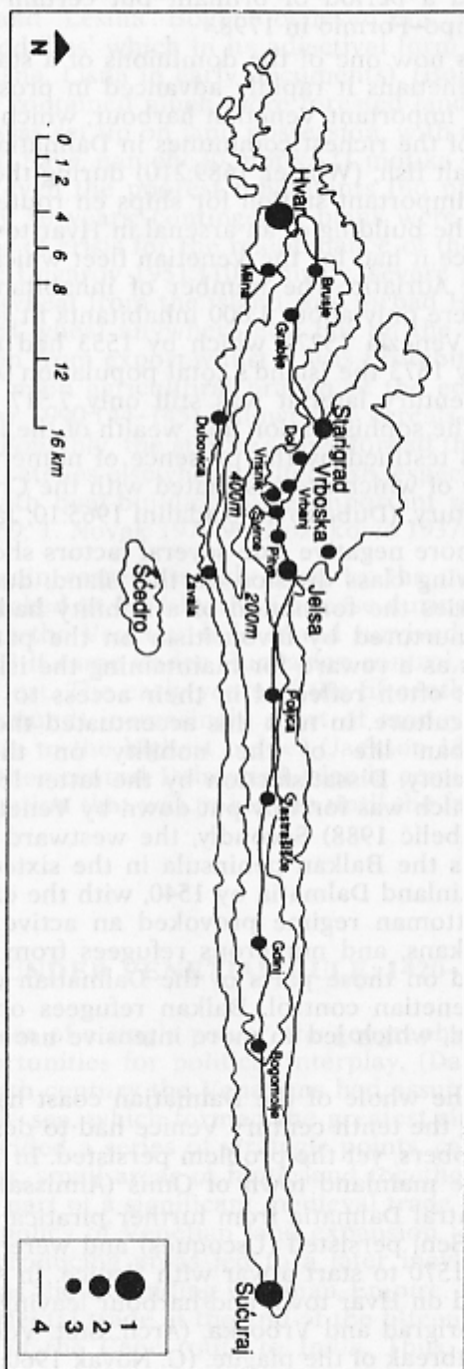


Fig. 2 Settlements (1989) and main roads on the island of Hvar. Key: 1, settlements with more than 1,500 inhabitants; 2, settlements with more than 1,000 inhabitants; 3, settlements with fewer than 1,000 inhabitants; 4, main roads.

Sl. 2. Naselja (1989.) i glavne ceste otoka Hvara. Legenda: 1. naselja s više od 1.500 stanovnika; 2. naselja s više od 1.000 stanovnika; 3. naselja s manje od 1.000 stanovnika; 4. glavne ceste.

Given this brief background scenario of Hvar during the Venetian period, it should be stressed that the growing importance of agriculture was paramount, not only to support a developing urban society and its upper classes, but also to sustain Hvar's inhabitants during times of emergency or external threat. For example, the island suffered a food crisis after the bad harvest of 1557. (Arch. Stat. Ven. 1557) Critical in this development was the structural organization of agriculture. The survival of documentary material in Hvar (Drž. Arh. Hvar) from the fifteenth, seventeenth and eighteenth centuries, gives some indication of how this was organized.

#### a). Agricultural Organization

The Venetian officials adopted the system first confirmed in the statute of 1331, whereby communal land could be obtained for up to ten years before application renewal had to be made by anyone on the island. Maximum holding was 30 motika per person (i. e.  $436 \text{ m}^2 \times 30 = 13,080 \text{ m}^2$  or 1.3 ha) and the relationship between the commune (as land owner) and the renter was known as 'gratia'. The person hiring the land paid a rent equivalent to one sixth of his/her agricultural production, with some paying less for undertaking services to the Venetian state etc. It also meant that several members of one family could each obtain 30 motika of land, leading to some families renting several hundred motikas for agricultural purposes. Unproductive hilly and mountainous land was excluded from the system. If the hired land was arable, rent was paid in produce, (one sixth) but building land and pasture was accounted for in money. Kasandrić has calculated from the extant archival material, that the average surface area under the system totalled 1,956 ha. (i. e. 44,970 motikas). When placed against the area under agriculture in 1990 (12,120 ha. i. e. 38.88%) this figure improves its standing. Furthermore, if this were to be related to the 1990 area of arable (4,647 ha i. e. 14.8%) then the former system covered over two fifths (42%) of the tilled area. Nine-tenths (89.62%) of those profiting from the system were peasants, the remainder divided between the nobility, town citizens and the church. (Kasandrić 1976, 1978:39).

The period when land was allowed to be utilised for fodder production varied from one to five years. Finally, as Kasandrić believes, if sixteenth century data was available it may show that arable land existed in areas which today are under forest, or pasture. (Kasandrić 1978:39) Finally the system provided the Hvar commune with substantial profits and also forced it to rigorously prevent any usurping or appropriation of its land.

#### b). Agricultural Produce

The next question refers to what crops and other produce were provided by Hvar's agricultural system. The best agricultural land on the island was located in the plain (polje) between Starigrad and Jelsa, and an area to the east of Hvar town. Much of these two areas belonged to the commune, which controlled two-thirds of the island's surface area, the rest belonging to private owners. The latter were often town citizens who had small plots in the urban periphery.

## 1) Viticulture

Viticulture was the island's major occupation, as sufficient wine had to be exported to import wheat for supplementing the island's meagre domestic production of one month's supply each year. (Monumenta spectantia 1877) A report (Angelo Diedo & Giovanni Batista Giustiniano) on Dalmatia in 1552 reported that Hvar produced about 80,000 kvarts (1 kvart = 0.67 litres of wine (Mon. spec. 1877:221)). If the total population of the island was about 7,500 at that time, it would represent a production figure of over 10 kvarts per person, much of it going for export to purchase wheat. The vine plants were usually sown about the end of March and the harvest gathered in late August/early September (Čremosnik 1933:18); the poorer quality wine was consumed locally often with water (bevanda) or used for making vinegar, marinating and cleaning purposes. (G. Novak 1960:127).

The importance of wine production continued throughout the Venetian period. Evidence from the eighteenth century supports this view; a document from about 1700 states that the island produced 5,000 barrels of wine annually, although grain was only sufficient for two months a year. (Biblioteca Nazionale Marciana, Venezia c.1700) However a document from 1745 complains about Hvar's wine having a strong taste of nitrate and difficult for people to drink. (Bibl. Naz. Marc. Van. 1745) (Fig. 3) Nevertheless, twelve years later an order from the Venetian Senate dated 25/VIII/1757, stated that Hvar and the other Dalmatian islands of Brač, Vis and Korčula, must export their wine according to government decree. (Arch. Stat. Ven. 1757) The second half of the eighteenth century experienced some economic and social decline for the Venetian Republic in Dalmatia. (Berengo 1954:474) Hvar appears to have been atypical of this trend, for Alberto Fortis recorded in 1774 that the island had the least number of poor people and richest variety of products in the Adriatic, all of good quality. (Fortis 1774:249).

## 2) Figs and Olives

The second important source of agricultural income on the island was figs, closely followed by olives, the latter having been known on Hvar since Greek times. Both were susceptible to the vagaries of climate and at the beginning of 1550, central Dalmatia experienced a severe frost which killed many fig and olive trees. Hvar had to import oil from Pulia, but the fig trees soon recovered, such that in 1552 the Venetian visitors (Diedo & Giustiniano) noted that considerable income was again being received from fig sales, in spite of a disease that dried the trunks. (Mon. spec. 1877 Vol. II:223) By 1559 two other Venetian officials (Michiel Bon & Gasparo Erizzo) recorded that agricultural production on Hvar totalled nearly 80,000 ducats, of which wine and figs contributed nearly two-thirds (50,000 ducats). (Mon. spec. 1877, Vol. II:223). Hvar's figs were extremely popular in Venice in both natural and dried form, where they were sent in small boxes covered with rosemary and vine leaves. (G. Novak, 1960:127). Even before 1550 the production of olive oil was widespread throughout Dalmatia. (Raccolta di Memmoire 1742:22). However, a deeper clearing of stones was necessary



when olive trees replaced fig trees or vineyards; this involved cutting the stones off down to a depth of between 80–10 cm. (Gams 1987a:69) In 1774, Fortis also mentioned the good quality figs and olives obtainable on the island. (Fortis 1774:149).

### 3) Fishing

The other source of agricultural income came from fishing, which after viticulture was probably the most important branch of the island's economy. The art of fishing had been known on Hvar since prehistoric times, and the great wealth and variety of fish in the Adriatic meant this was a significant branch of economic exploitation for most of the coastal areas under Venetian control. (Colak 1961:399–400; G. Novak 1953) The main types fished for were pilchard, mullet, cuttle fish, mackerel, picarel, and sea bream. Many fish were salted, a technique already known on Hvar in the thirteenth century but of increasing importance during Venetian times. Salted fish were a major food source on the island, not only for the locals, but also as supplies for the many naval and trading ships calling in at Hvar's harbours. For example, in 1512 during the peasant uprising, the Venetian commander at Vrboska, Sebastian Giustiniano, confiscated between 4,000–5,000 barrels of salted sardines and mackerel. (one barrel = 40 litres). (T. Novak 1974:98–99). Data from 1559, states that sardines alone provided the Hvar economy with a value of 30,000 ducats. (Mon. spec. Vol. II:121). Salted fish was the most sought after article of food in Venice, and by their having a monopoly hold on salt production the republic could control the fish market. Greatest fishing activity on Hvar came at the end of the fifteenth and early sixteenth centuries, (Hektorović 1568) but by the time of Fortis' visit in 1774 demand for salted fish from Venice had declined. (Fortis 1774:249).

### 4) Other Agricultural Products

Various other agricultural products had their significance for the Hvar economy and included livestock, wood, southern fruits, honey and wax, and rosemary oil. The island abounded in pasture suitable for keeping sheep and goats. The Statute of 1331 issued various laws on the use of pasture and set fines on straying animals. (Mažurančić 1908) Small shepherd's houses may still be seen today in the Zavala region on the south coast dating from the sixteenth century; built from local stone, often without mortar, they had few windows, a well in the courtyard, a door to the roof and a single room; some remain distinctive today as a feature of the landscape. (Duboković–Nadalini 1955:23) Although much of the island was earmarked for livestock rearing during the early part of the Venetian period, gradually it became squeezed out in preference to vineyards, as revealed by the '**Liber gratiarum**' particularly from the seventeenth century onwards. (Kasandrić 1978:44) This process was probably further aggravated in 1622 by the Venetian imposition of customs tolls on all livestock goods, which was extended to include all livestock in 1721. (Ožanić 1955:16) Nevertheless, a document from 1745 mentions sheep pasture and the pre-

sence of many lambs, some providing dried (salted) meat. There were 246 horses and mules on Hvar, and the tradition of pasturing animals sent by boat to Torcola (Šćedro Island) is also mentioned. (Bibl. Naz. Marc. Ven. 1745) Fortis in 1774 states that wool, mutton and cheese brought a small financial reward annually to the island. (Fortis 1774:249)

### c). Forests

Forest exploitation had taken place on Hvar certainly since Illyrian times, not just for making fires. Illyrian preoccupation with livestock rearing meant that trees were deliberately cut down because the grass growing under pines was not eaten by the sheep and goats. (Zaninović pers. comm.) The illyrians also cleared forest from the higher ground to build their tumuli. (Gams pers. comm.) During the Venetian period, local wood sources were also used to make barrels, for which there was a large demand both for storing wine and salted fish. In 1559, the island's income exceeded 70,000 ducats, of which the wine trade provided 15,000 ducats, sardines 14,000 ducats and cooperage 6,000 ducats. (Mon. spec. Vol. II:121) Šćedro island was an important source for firewood. (Bibl. Naz. Mar. Van. 1745) More generally the commerce in wood throughout Dalmatia was considerably developed, with the exploitation of stands of oak, elm, fir, jasmin, lime, hornbeam etc. In Hvar, as elsewhere, forests were cut down with little attempt at re-afforestation, leading to the growth of maquis (bush) vegetation. Venetian demands also aggravated the problem: for example, in 1722 there was an order for the cutting of 24,000 tree trunks in central Dalmatia for export to Venice to construct a large wall in the lagoon. (Ožanić 1955:17) Fortis records that wood was cut down on Hvar, but each year there was less for exploitation because of poor control limits on its forests, and an increase in the area under fallow. (Fortis 1774:249) There may have been other reasons; for example it has been suggested that the local inhabitants deliberately destroyed young trees, to avoid obligatory time cutting down trees for the Venetians to supply wood for the navy of St Mark. (Marmont 1850:57) Further the presence of goats on the island stunted tree growth by devouring young leaves and shoots.

### d). Southern fruits

A variety of southern fruits were also subject to commercial exploitation. Like other parts of the Mediterranean basin, Hvar had crops known collectively as 'southern fruits'. Both almonds and carob (also known as St John's bread) were important export crops to Venice and other parts of the Adriatic coastlands. (G. Novak 1960:127) They were specifically mentioned by Fortis, together with oranges and dates, as well as saffron and mulberry leaves (for feeding silk worms). (Fortis 1774:249).

### e). Apiculture

Apiculture (bee-keeping) has a long tradition in Dalmatia, especially on the nearby island of Šolta. Honey was an important source of sweetener

and bees wax was used for polishing, lighting etc. The decline of apiculture on Hvar as elsewhere has been attributed to de-afforestation, the increase in limestone quarrying for house construction etc, and no systematic replacement of destroyed trees. (Racc. Mem. 1783:12) Honey was mentioned by Fortis in 1774 as of excellent quality on Hvar, (Fortis 1774:249) but production was not so prodigious as in former years: the island's exporters had to contend with strong competition in Split from supplies acquired on the Dalmatian mainland, and Ottoman hinterland – particularly Bosnia. (Mon. spec. Vol. VIII:215).

#### f). Lavender and Rosemary Oil

Finally, Hvar was well known for its lavender and production of rosemary oil. In the Statute of Lesina of 1420, in which the Venetians sanctioned the former document of 1331, besides mentioning bees they also referred to flowers used for oil. (Liber Stat. Comm. Les. 1420; Boglich 1873:129; Gildmeister & Hoffman 1928) In 1692, Evidence from northern Dalmatia referred to a legal dispute by one Zanetti-Covacevich for the harvest of rosemary twigs to manufacture lavender, (Drž. Arh. Zadar) but there is no definite evidence of its production on Hvar till 1717, when 'Queen's water (acqua della regina) as it was known, was sent from the island to nearby Vis to help cure asthma. (G. Novak 1961:165) It is specifically mentioned in a document of 1745 which gives a description of the island and refers to 'rosemary growing' (Bibl. Naz. Marc. Ven. 1745) whilst Hvar town was a centre for the production of its essence. (Fortis 1774:249) Interestingly, Fortis fails to include it in his list of the island's agricultural products, but does mention the distillation of plums to make brandy ('šljivovica'). (Sabalich 1907:50) Nevertheless, it is mentioned in documents from 1781 and 1784, whilst a dowry from Hvar written in 1786 proves the continuing sale of rosemary in Brusje collected from the surrounding area. Another document from this time criticises the large number of factories built for distilling lavender in Hvar town which on average amounted to 80 barrels annually for the whole island. (G. Novak 1960:195).

### DEMISE OF THE VENETIAN REPUBLIC

Venice's commercial greatness sharply declined in the eighteenth century and with it the prosperity of her dependencies such as Hvar. This was the situation when Austria received the island under the Treaty of Campo Formio in 1798. The inherited administrative system on Hvar was left intact, but now Vienna was to control the island for over a century except for a brief French interlude when Hvar was occupied by Napoleonic forces between 1805 and 1813.

For agriculture the early years of the nineteenth century displayed little progress. The torpor initiated by Venetian decline was further aggravated by the disruption of trade through naval conflicts in the Adriatic. The economic prosperity under Venetian rule had been dominated by agricultural produce, livestock and fishing, whereas the nineteenth century was to

witness increased commercial activity. Proximity to Split, the major port in central Dalmatia, provided Hvar with links to many other Dalmatian harbours with their access to the hinterland of the Austro-Hungarian Empire.

Perhaps the legacy of Venetian rule is best summed up by an interesting vignette of Hvar written by Jacques de Concina in 1804. 'The population of Lesina totals about 10,000. Sardine fish are abundant and the manufacture of olive oil is sufficient for four months annually, but cereals for only three months. There is an abundance of figs, and almonds whilst the locals make rosemary essence: bees produce lots of fresh wax. The Dominicans produce excellent wine and exquisite fruit.' (de Concina 1831:76) This rather parochial description of Hvar was to change dramatically over the ensuing decades. Hvar had been subjected to Venetian mentality, dominated as it was by the sea and all things maritime. The Austrians were a land-based nation obsessed with improving the island's internal transport facilities. This would enable Hvar to engage in more intensive agricultural specialisation of fruits, olives and wine, a process already apparent from the first Austrian cadastral survey of 1835. (Gams 1987b:81; Ivin 1923:168).

## CONCLUSION

This appraisal of Hvar's agricultural development during the years of Venetian occupation has been made possible through the survival of archival documentary sources in Hvar town, Dalmatia and above all in Venice. These combined with secondary sources including travel accounts, have helped to build up a picture of how the Venetian-held island organized its agriculture, what crops were grown and how the forests were utilized. A heritage of village settlements set up during the early period of Slavic colonization, culminated in the orderly structure of Hvar society imposed by the Statute of 1331. Utilisation of the Starigrad plain for agricultural crops, the higher less fertile land for livestock rearing and the abundance of fish in the surrounding sea, gave stability to the economy and was to provide a basis for such an organised society.

Two major characteristics of the island's agricultural geography were linked to colonization and the concept of frontier. Colonization resulting from the early Slavic invasions introduced new agricultural techniques to the island. With the advent of Venetian control a greater sense of security emerged as Hvar was attached to a major European power; perhaps less appealing was the fact that Hvar's agriculture now had to supply not only its own inhabitants, but the demands for wood and victuals, from a large naval empire, as well as Venetian control of its export markets on far-distant shores. Venetian rule was also to accentuate the division between Hvar's urban ruling class and its inland rural population.

The concept of frontier came with Hvar's location on the central, eastern Adriatic coast. The island became a western vanguard of Slavic penetration, often aggravated by the threat of piratical attacks from the mainland. As part of the republic of the Lion of St. Mark it then found itself in the frontier region between the Christian and Muslim worlds, through







Venetian-Ottoman conflict. A frontier position can lead to fear and instability on an area's economic development, as witnessed by attacks on Hvar on several occasions during Venetian rule e.g. by the Genoese and in 1571 by the Ottomans. Under such conditions basic agricultural produce, such as grain, can take on a strategic significance; this was always part of the age old problem of insufficient home-grown cereals, not being able to support the local inhabitants.

Finally, the historical geography of Hvar's agricultural growth has illustrated the need to adapt its economy to the demands over time of both local and distant markets. In turn this was controlled by external influences, whether in competition with other local islands, the Dalmatian mainland, Balkan peninsula or some more distant power.

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## REFERENCES

- Archivio di Stato Venezia, Relatio nobilium Leonardi Vinerio et Hieronymi Contareno syndicorum ad partes Dalmatiae, Presentata 27 October, 1527, p. 18-19.
- Archivio di Stato Venezia, Relatione del sindaco di Dalmatia et Albania nell' 'Eccellentissimo Senato per il magnifico messer Antonio Diedo, p. 12; (dated 1553).
- Archivio di Stato di Venezia, Relatio Aloysii Ferro, Com. et Cap. Spal. ed Comm. et Rel. Ven. II 215, Collegio, Relazioni v. Judice 322, (Collegio V (Secreta) Relazione Ba 72. (dated 28/8/1557)
- Archivio di Stato Venezia, Relatione del N H Andrea Michiel ritornato conte di Spalato-presentata nell'ecc-mo coll-o a 28 Maggio 1573. (Collegio V (Secreta) Relazioni Ba. 72
- Archivio di Stato Venezia, Senato Deliberazioni Rettori Ba. 70 dated 25/vii/1757
- Berengo M. (1954): 'Problemi Economico-Sociali della Dalmazia Veneta alla fine del '700', *Revista Storica Italiana*, No. 4, p. 469-510
- Biblioteca Nazionale Marciana, Venezia, Fortezze della Republica di Venezia, M. S. IT. VIII 2453 (10493) (dated c. 1700)
- Biblioteca Nazionale Marciana, Venezia, Doc. Sign. IT. VI 195 (10054) C1. VII, MMCCCVII, 8107 (dated 1745), Foretino Brascuglia Atlante della Dalmazia, p. 68, Descrizione del sito, stato, forza del Terro, di Lesina, and Descrizione del sito, state e forza pnte. della citta di Lesina.
- Bintliff J. et al. (1989): *The Hvar Project: Procedure and Documentation Manual*, Ljubljana, 20 p.p.
- Boglich G. (1873): *Studi Storici sull'Isola di Lesina*, Vol. I (Seconda Edizione), Brzotisk Narodna Tiskara, Split, 200 pp; p. 129; Rosemary oil was first produced by Arnoldus Villanovus (1250-1314) and written up and published by his apprentice Raimund Dullus in 1330;
- Božičković J. (1937): 'Zakon o ribanju općine grada i otoka Hvara od 1408 godine', *Jadranski dnevnik*, (27/III/1937), No. 73, p. 2
- Carter F. W. (1990): 'Viticulture on Hvar Island, Yugoslavia', *Journal of Wine Research*, Vol. 1, No. 2, p. 144-145.
- Concina J. de (1831): *Voyage dans la Dalmatie Maritime en 1804*, (2nd Edt.), Venise, 1831, 84 pp.
- Colak N. (1961): *Naše ribarstvo do pada mletačke republike*, *Pomorski Zbornik*, Vol. I, p. 399-400, 419.
- Cremonnik G. (1933): *Vinogradarstvo i vino u Dalmaciji srednjega veka*, *Glasnik zemaljskog muzeja u Bosni i Hercegovini*, Vol. XLV, p. 15-35.
- Darby H. C. (1932): *The Medieval Sea-State*, *Scottish Geographical Magazine*, Vol. XLVIII, No. 3, p. 136-149.
- Devetak Z. (1977): *Proizvodnja eteričnog ulja od ružmarina na Hvaru in Hvar u Prirodnim Znanostima: Simpozij Jug. akademije znanosti, razrad za prirodne znanosti*, D. Miličić, J. A. Z. U. Zagreb, p. 109-123.
- Državni Arhiv, Hvar, *Libor gratiarum 1428-1483; 1614-1648; 1657-1681; 1723-1734; 1767-1792; 1798-1806; 1815-1816*. Much of the archival material from the sixteenth century was destroyed by the Ottoman attack on Hvar town in 1571.
- Državni Arhiv, Zadar, *Biblioteca Comunale Paravia di Zara, 'Miscellanée'*, No. 11197 (dated 1692).
- Državni arhiv, Hvar, *Arhiv Boglič-Božić, (Ivanić-Boglič-Božić)*. (dated 1740).
- Duboković-Nadalini N. (1955): *Stvaranje i razvoj zemljišnog posjeda u Zavali*, *Anali Instituta Jugoslovenska Akademija u Dubrovniku*, Vol. IV-V, 1955, 55 pp.
- Duboković-Nadalini N. (1965): *O fazama razvitka kulture na Hvaru*, *Zbornik Historijskog Arhiva Hvar*, No. 14. Hvar, p. 10-21.
- Fortis A. (1774): *Vlaggio in Dalmazia dell'abate Alberto Fortis*, Venezia, 369 pp. *Ibid.*, Put po Dalmaciji (1984): (Priredio J. Bratulić), Zagreb, 303 pp.
- Gabelić A. (1988): *Ustanak hvarskih pučana (1510-1514) (Izvori tokovi dometi)*, Split, 1988, 691 pp.
- Gams I. (1987): *Adaption of the Karst Land for the Agrarian Use in the Mediterranean. Problems of Research and of Conservation (A Survey)*, *Endins*, No. 13, p. 65-70.

Gams I. (1987): A Contribution to the Knowledge of the Pattern of Walls in the Mediterranean Karst (A Case Study on the N. Island Hvar, Yugoslavia), International Symposium on Human Influence, on Karst, 11-14, p. 77-88

Prof. I. Gams, personal communication.

E. Gildmeister & F. Hoffman, Die ätherischen Öle, Bd. I, Leipzig, 1928, p. 199; Bd. III, 1931, p. 621; Bc. VII, 1961, Berlin, p. 2.

P. Hektorović, Ribanje i ribarsko prigovaranje i razlike stvarine, složene po Peteru Hektoroviću Hvaraninu, Venezia, (Gioanfrancesco Camotis), 1568, is perhaps the most famous piscatorial eclogue extolling the life of Hvar's fishermen in the sixteenth century, (written 1555-1556).

Ivon, K. (1923): Osvrt na razvitak katastra u Dalmaciji, Ch. 11 in Dalmacija: Spomen-knjiga (Izdana o kongresu udruženja jugoslavenski inženjera i arhitekta, Split, p. 163-174.

Jackson, T. G. (1887): Dalmatia, The Quarnero and Istria with Cettigne in Montenegro and the Island of Grado, Vol II, Oxford (Clarendon Press), 1887, 214 pp.

Javarek V. (1962): Three 16th-Century Dalmatian Poets Slavonic and East European Review, Vol. 61, (96), 1962, p. 17-24.

Kasandrić I. (1976): Agrarni odnosi u staroj hvarskoj komuni, Hvarski Zbornik, Vol. 4, p. 189-196.

Kasandrić I. (1978): Hvarski Pučki Ustanak, Mogućnosti, 201 pp.

Kirigin B. & B. Slapšak (1986): Starigradsko polje na otoku Hvaru, Arheološki Pregled, Vol. 26, p. 10-23.

Kuničić P. (1924): Petar Hektorović, njegov rod i Tvrđalj Dušrovnik, 80 pp.

Liber Statutorum Communitatis Lesinae, 1420, Libro V, Statutorum de datis Trentesimo, Capitolo III, 'Item che cadanno attadin overo abitator di Lesina, possa vender et alienar tutte sue intrade cioe di Terreni, Animal, Ape et puossanze trar fuori ecc.;

Ljubić S. (1873): Faria città Vecchia e non Lesina, Pietro Hektorović Cittavecchiano e non Lesigno, Zagabria, 1873, 68 pp.

Marmont M. (1850): Mémoires du duc de Raguse de 1792 à 1832, Tome III, livres X-XIV, Paris, 161 pp.

Mažuranić V. (1908): Prinosi za hrvatski pravno-povijesni rječnik, Vol. I, Zagreb, Statut Hvara, lib. V, caps. 17-19, 26, 32-34.

Monumenta spectantia historiam Slavorum meridionalium. Commissiones et relations Venetae, S. Ljubić (Ed), Tome I, Vol. VIII, Zagreb, 1877, p. 217-223 (Itinerario di Giovanni Batista Giustiniano).

Ibid., Vol. II, p. 121; Relatione di noi Michiel Bon et Gasparo Erizzo gia sindici in Dalmatia, 1559, p. 121.

Monumenta spectantia op. cit., p. 221. One Venetian quart (kvart) contained 6,708 decilitres.

Novak G. (1921): Split u svjetskom prometu, Split, 207 pp.

Novak G. (1953): Dokumenti za povijest ribarstva na istočnoj obali Jadranskog mora, Vol. I, Otoci Vis i Hvar, Građa za gospodarsku povijest Hrvatske. Knjiga 4, Zagreb, 343 pp.

Novak G. (1960): Hvar kroz stoljeća, Zagreb, 243 pp.

Novak G. (1961): Vis od VI st. pr. n. e. do 1941 godine, Zagreb, 281 pp.

Novak, G. (1974): Ribarstvo i ribari u staroj hvarskoj komuni, Hvarski zbornik, Vol. 2, p. 95-102.

Ožanić S. (1955): Poljoprivreda Dalmacije u prošlosti, Split, p. 11-36.

Raccolta di Memoire delle Pubbliche Accademie di Agricoltura, Arte e Commercio, Venezia, 1742, p. 17-42.

Raccolta di Memorie della pubblica societa economica di Spalato, Venezia, (Coleti), 1783, 'Liesa, Lesina e Brazza come anche 10 siglio picciolo di Zirona, danno un miele, che si avvicina a quello do Solta'. p. 12.

Sabalich G. (1907): La Dalmazia nei Commerci della Serenissima, (Prem. Tip. Vitaliani), Zara, p. 147.

Statuta Communitates Lesinae, Venetia, Typis Marci (Ginammi), 1643, (Fondiche Cini - B1 M STA), Venice 240 pp; p. 187, 'Consistendo tutte le loro speranze (nel vino) e con questo si procacciano il pane e restito'.

Tadić J. (1968): Venecija i Dalmacija u srednjem veku, Jugoslavenski Istorijski časopis, Vol. 3-4, p. 5-17.

Ungarov B. (1951): Stare mjere u Dalmaciji, Geodetski list, Vol. 2, p. 110-117.

Violich F. (1972): An Urban Development Policy for Dalmatia, Part I: The Urban Heritage to the time of Napoleon, Town Planning Review, Vol. 43, No. 2, p. 150-170.

Wheler G. (1678): Voyage de Dalmatie, de Grèce et du Levant (Jean Wolters), Amsterdam, p. 210, with reference to the situation in 1678. 304 pp.

Prof. M. Zaninović, Personal communication.

#### SAŽETAK

### Poljoprivreda otoka Hvara tijekom venecijanske vladavine: Historijsko-geografska studija

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U ovome radu istražuje se uloga poljoprivrede na otoku Hvaru za vrijeme venecijanske vladavine. Ta vladavina je uz prekide trajala 800 godina, počevši od 1000. godine naše ere, a neprekidno od 1420. do 1797. godine. Jedan od ciljeva međunarodnog projekta o Hvaru, izvedenog 1980. godine, bio je ispitati njegov poljoprivredni razvoj tokom stoljeća. U tome su se koristili dokumenti iz raznih izvora iz venecijanskih do dalmatinskih arhiva skupa s dodatno publiciranim i izvedenim materijalima.

Nakon davanja ocjene o ranoj srednjovjekovnoj poljoprivredi i njezinoj tehnologiji, rasprava se usredotočuje na Statut otoka Hvara iz 1331. godine, koji je među ostalim razmatrao stanje u poljoprivredi. Za vrijeme neprekidne venecijanske uprave (1420-1797) poljoprivreda otoka se razvila i bila usmjerena na potrebe velike pomorske sile. Hvar je bio na putu da postane jedna od najbogatijih zajednica u Dalmaciji, s rastom naseljenosti, razvijenom kulturom i rastućim bogatstvom. Doživio je i unutrašnju podjelu društva na bogatije gradsko plemstvo i siromašniji sloj stanovnika, imigraciju iz balkanske pozadine koja je bila pod upravom Turaka i bio izložen stalnoj prijetnji od napada gusara.

Opisane su pojedinosti o otočnoj organizaciji poljoprivrede po pitanju udjelbe zemlje, dokaza o korištenju zemlje, procjene o površinama pod kulturama, i učinjena je usporedba s današnjim stanjem. Vinogradarstvo je uvijek bilo glavno zanimanje na otoku, a vino se moralo izvoziti da se kupi žito; nedostatna proizvodnja žitarica neprekidno se javljala kao problem. Hvarske smokve i masline predstavljale su važne izvozne artikle, a ribarstvo je po važnosti za otočno gospodarstvo, slijedilo odmah za vinogradarstvom. Venecija je bila značajno tržište za hvarsko ribarstvo. Uz ostale poljoprivredne proizvode spominju se stočarski proizvodi, južno voće, med, vosak i ružmarinovo ulje.

Hvarske su šume također bile izvor prihoda. Drvo se koristilo u bačvarstvu (usklađivanje vina i ribe), kao gorivo i za građevinarske radove u Veneciji. Badem i rogač, šafranova boja i dudovo lišće (dudov svilac) izvozili su se također, dok je pčelarstvo uglavnom zadovoljavalo potrebe otočana. Na kraju treba spomenuti da je Hvar bio poznat po lavandi i po ružmarinovom ulju koje je imalo primjenu u medicini i druge namjene.

Opadanje moći Venecijanske Republike u osamnaestom stoljeću pogodilo je gospodarstva svih njezinih posjeda, pa tako i otoka Hvara. Austrijska, nakratko i francuska uprava, doprinijele su promjeni načina proizvodnje u poljoprivredi i modernizirale su otočno gospodarstvo pripremivši ga za proizvodnju na veliko - osobito vinogradarstvo - za devetnaesto stoljeće.

U zaključku se može reći da su dva glavna čimbenika utjecala na razvoj otočne poljoprivrede za vrijeme venecijanske uprave. Prvo, politička pripadnost Veneciji donijela je sigurnost življenja unutar jedne velike europske sile, ali istovremeno podredila Hvar željama venecijanske administracije i potrebama venecijanskog tržišta. Drugo, geografski položaj Hvara na rubovima

kršćansko-muslimanskog svijeta rezultirao je u davanju važnosti poljoprivrednoj proizvodnji, kako bi se žiteljstvo u vremenima opsada i pomorskih ratova održalo na životu. Povijesna geografija Hvara pokazala je kako se njegovo poljoprivredno gospodarstvo u svojem razvoju moralo prilagoditi zahtjevima kako bliskih tako i dalekih tržišta u vremenima političke nestabilnosti na istočnoj obali Jadrana.

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