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OLIVE CULTIVATION IN CRETE AT THE TIME OF THE OTTOMAN CONQUEST

Evangelia BALTA

To Father Yorgis Anagnostakis,
priest at Gouves, of Candia

Our knowledge of olive cultivation in Crete in Ottoman times has so far been based on the texts of travellers and the documents of the *sicil defterleri* which were translated and published by the late Nikolaos Stavrinidis[1]. The latter refer mainly to the price of oil in the Candia market and to fiscal ordinances that regulated the conditions of its export. On the contrary, the material in the French archives concerning the conditions of purchase and transport of Cretan oil to markets in France in the eighteenth century, is both richer and continuous. Those studies concerned with oil-production and soap-making in Crete during the Ottoman period rely mainly on the above sources[2]. It should be noted however that, on account of the specific information in the sources, these studies focus their interest on the oil available for trade as an export product or as a raw material for the soap factories.

Investigation of the state of olive cultivation in Crete before its product was made available for trade remains an open question for historiography. This does

1 N. Stavrinidis, *Translations of Turkish Documents Concerning the History of Crete* (in Greek), Herakleion Crete, vol. 1 (1975), vol. 2 (1976), vol. 3 (1978), vol. 4 (1984), vol. 5 (1985) (in Greek).

2 Yolanda Triandaphyllidou-Baladié, *The Trade and Economy of Crete (1669-1795)* (in Greek), Herakleion 1988, p. 133-166 and V. Kremmydas, *The Soap-Factories of Crete in the 18th Century* (in Greek), Athens 1974.

not apply only to Crete but to the whole of Greek lands during the Ottoman period. The existing information on olive cultivation and its place in the agricultural economy of the period has not been gathered together. So a study of the geography of the olive is a desideratum, and any quantitative data gathered on the number of olive trees, the production of olives and of olive oil in Greek lands during the Ottoman period are therefore valuable.

These were the sectors in which I orientated my research regarding Crete. I considered it necessary to examine first the situation that the Ottomans took over when they conquered the island (1645-1669). As is well-known, the economy of Crete in the sixteenth and seventeenth centuries was based on viniculture, as dictated by the colonial policy of the metropolis, Venice, from early on[3]. Wine was considered to be the island's prime product throughout the period of Venetian rule and was replaced by oil in Ottoman times. This is the view held by P. Masson and Tr. Stojanovitch, and accepted by Triandaphyllidou-Baladié[4]. The last attributes the decline of viniculture firstly to the protracted Veneto-Turkish war, which ended in the Ottoman conquest of Crete, and secondly to the subsequent lack of Ottoman interest in wine. It should be mentioned however that in the late 16th century, according to the report of Alberto Loredan (1590), oil production in Crete was sufficient for the needs of two years and that there were possibilities of increasing production so that in 10-15 years the island would become a second Apulia[5]. In the same year

3 On the colonial policy of Venice towards Crete see F. Braudel, *La Mediterranee et le Monde Mediterraneen a l'epoque de Philippe II*, vol. I, Paris 41979, p. 143. On the subject see also the recent studies by M. Gallina, *Una società coloniale del trecento Creta fra Venezia e Bisantio*, Venezia 1989, and U. Tucci, "Il commercio del vino nell'economia cretese", *Venezia e Creta*, Atti del Convegno Internazionale di Studi (Iraklion-Chania, 30 settembre-5 ottobre 1997) ed. Gherardo Ortalli, Venezia 1988, p. 183-206. On Venice's policy towards oil, see Ch. Gasparis, "The olive tree and oil. Production and trade in Medieval Crete (13th-14th century)" (in Greek), *Olive and Oil*, IVth Three-day Workshop: Kalamata, 7-9 May 1993, Athens PTI-ETBA, Athens 1996, p. 151-158. On the wine of Crete, see Fr. Thiriet, "Villes et campagnes en Crète vénitienne aux XIVe-XVe siècles", *Etudes sur la Romanie gréco-vénitienne (X-XVe s.)*, Variorum Reprints 1977, XV, p. 450 and M. Papadakis, "Contribution on the study of agriculture and viniculture of Crete in 15th and 16th Centuries", *Kretologia* 4 (1977), p. 5-25.

4 Discussed analytically by Molly Green, "Commerce and the Ottoman Conquest of Kandiye", *New Perspectives on Turkey* 10 (Spring 1994), p. 95-118.

5 Maria Dourou-Eliopoulou, "Candia in the second half of the 16th Century based on the unpublished reports of Venitian Goverment Officials", *Parousia* 7 (1989), p. 52.

the inhabitants of Candia accused the Rectors of Siteia and Hierapetra of illegal trading in olive oil[6]. Consequently, during the Venetian Occupation not only did the production of olive oil in Crete cover local needs, but there were also excellent prospects fot its further development.

The present investigation of the state of olive cultivation on the morrow of the Ottoman conquest utilizes the information contained in the censuses conducted by the new masters as soon as their rule began. Specifically, in August 1999 I processed the data in the registers Tapu Tahrir 820 and Tapu Tahrir 825, which are in the *Başbakanlık Arşivi* of Istanbul.

Tapu Tahrir 820 inventories the tax-payers and the tax levied on the production of the villages distributed in 17 *nahiyes*[7]. The tax on cereals, oil and wine was a tithe and is recorded in kind and in monetary value. "They pay a tithe for the oil" is recorded in the *kanunname* accompanying the census, in which the proportion is also defined; tithe and salariye corresponded to 2/15 of the yield[8]. Consequently, on the basis of this proportion, it is possible for us to deduce an indicative size of yield.

From this same source I collected the monetary sums that the villagers paid as tax on the wine and the oil they produced. By correlating these sums with the population data and the total tax obligation, it is possible to estimate the percentage participation of the production of these commodities in the income of the Cretan peasantry in the late seventeenth century, at least in those regions where the new masters of the island had consolidated their position.

6 *ibidem.*

7 This is a 703-page register which Ersin Gülsoy dated around 1650. See Ersin Gülsoy, *Girit'in Fethi ve Adada Osmanl_ Idaresinin Tesisi (1945-1670)*, Istanbul 1997, p. XXVI- XXVII (unpublished doctoral thesis, Marmara Universitesi).

8 TT 820, 4.

Table I. *Tithe on oil and winē*

Nahiye	Popula-tion	oil tax aspers	%	wine tax aspers	%	total tax aspers	mean oil tax	mean wine tax
Candia	236	9720	8.5	10320	9.0	115000	41.2	43.7
Pediada	3743	123800	9.8	103960	8.2	1268102	33.1	27.8
Monofatsi	2786	64600	6.9	63380	6.7	940703	23.2	22.7
Kainourya	1960	30560	3.9	37120	4.7	783649	15.6	18.9
Pyryotissa	575	15160	6.2	15760	6.4	245100	26.4	27.4
Temenos	793	25900	6.9	28160	7.6	370900	32.7	35.5
Malevizi	800	14600	5.9	15840	6.5	244999	18.2	19.8
	10893	284340	7.2	274540	6.9	3968453	26.1	25.2
Siteia	2041	87580	10.7	69320	8.5	816177	42.9	34
Hierapetra	601	14200	6.9	13280	6.4	205950	23.6	22.1
Merambelou	2065	57800	13.2	41680	9.5	436890	28.0	20.2
Lasithi	710	21400	4.7	27360	6	456000	30.1	38.5
Rizou	2847	87300	8.6	96700	9.6	1009903	30.7	34
	8264	268280	9.2	248340	8.5	2924920	32.5	30.1
Sfakia	759	11800	5.8	12160	6	202000	15.5	16
Vakif villages	2050	70800	9.5	68400	9.1	748550	34.5	33.4
Rethymnon	1718	49940	7.9	53920	8.5	632000	29.1	31.4
Mylopotamou	2824	69440	8.6	61072	7.6	802500	24.6	21.6
Hagh. Vasileios	296	13280	8.1	14600	9	163000	44.9	49.3
Amari	2022	54920	7.5	55680	7.6	727900	27.2	27.5
	6860	187580	8.1	185272	8	2325400	27.3	27.0
Chania	1295	55440	10.4	41600	7.8	534910	42.8	32.1
Apokorona	1299	28400	5.7	31740	6.4	494400	21.9	24.4
Kissamo	2340	56320	6.5	56040	6.4	869950	24.1	23.9
Selimou	887	51080	9.1	45520	8.1	562000	57.6	51.3
	5821	191240	7.8	174900	7.1	2461260	32.8	30.0
TOTAL	34647	1014040	8.0	963612	7.6	12630583	29.3	27.8

We observe that at the level of *livas* the percentage tax on oil exceeds by a small margin the corresponding tax on wine. Consequently, already in 1650 –if we accept this as the date of the account– the results of the Serinissima's policy of disseminating olive cultivation were beginning to show. Photis Baroutsos is

right in arguing that the Cretan olive grove was flourishing before the outbreak of the *Guerra di Candia*[9]. Well known is the Venetian Decree of 1623 which emphasizes that in order to avoid her dependence on other countries, the Serenissima should take advantage of the suitability of the soils in its possessions for the propagation and proliferation of the olive tree[10]. This is the period in which Corfu turned towards olive cultivation. According to Ph. Baroutsos, it is not unlikely that there was a change in land use in Crete at this time, particularly since this island was an exporter of oil –with tendencies to increase– from the early sixteenth century; indeed, he notes that if economic incentives existed, then the cultivation of the olive possibly developed at the expense of the vine. This transformation continues, of course, to be a hypothesis, since no specialist studies have been made of the issue. Nevertheless there is one testimony on the turn towards olive cultivation in Crete from the late sixteenth century, in the report of the *provveditore generale del regno di Candia*, Zuanne Mocenigo[11]. This is noted by Molly Green in her study[12]. The provveditore generale, commenting in 1589 on the poor yields of cereals in Crete, notes the following:

> The most important cause of the reduction in grain-growing over the past years was, undoubtedly, the low price of grain and the lack of demand for it. On the contrary, wine, which is exported to various lands, sells at good prices, and consequently everyone takes care to plant vines. Today, if this state of affairs changes so that the [demand for] wines falls and the price of grain rise, it is obvious that grain-growing will increase as much as vine-planting has already increased and as much as the planting of olive trees is apparently increasing now. This planting of olive trees was increased after the prohibiting of viticulture and they continue to increase in such a way that I am afraid the need will arise to take measures on this issue, that is to halt the planting of olive trees, because otherwise this will end up to the detriment of

9 Ph. Baroutsos, "Per il viaggio de ponte, Cretan wine beyond Gibraltar, 16th century)" (in Greek), *Proceedings XI Symposium of History and Art* (Monemvasia 23-25 July 1998), in press. I wish to express my gratitude to the author for allowing me to consult his study prior to its publication.

10 M. Constantini, "The mercantile policy of Venice towards its possessions in the Eastern Mediterranean" (in Greek), *Proceedings of the International Conference Corfu, a Mediterranean Synthesis: Insularity, Networks, Human Milieux, 16th-19th c.*, Corfu 1998, p. 76.

11 S. Spanakis, *Monuments of Cretan History* (in Greek), vol. I, Herakleion 1940, p. 185.

12 Molly Green, *"Commerce", op. cit.*, p. 103.

> grain-growing, exactly as happened with viticulture. Because today they are planting olive trees not only in other good fields, but even in the *soccori*, which are the best of all, primarily in the province of Siteia.

There is thus no doubt that the Cretans had already turned to olive cultivation in the closing decades of the sixteenth century and register TT 820, which was compiled in the years of the Cretan War, verifies this turn with numbers. Examination of Table I shows that the percentage of tax on oil is higher than that on wine in 10 out of the 22 administrative districts covered by the census. The deviation observed in the values of the two percentages in the *nahiyes* of Pediada, Siteia, Merambelou, Mylopotamou, Chania and Selimou points to their development into olive growing regions in the following years.

According to the data in the Ottoman register TT 820, the oil production of Crete was 190,132.5 measures; the source notes that one measure of oil is priced at 40 aspers. The 'measure' should be identified as the mistato, which was used for measuring oil and wine from the years of Venetian Rule and was of capacity 10 okas and 9-12 okas respectively, depending on the region[13]. Consequently the oil production of the island reached 1,901,325 okas, that is about 2,500 tonnes[14].

The second document I studied, TT 825, is a register made for taxation purposes, immediately after the Fall of Candia[15], in which the inhabitants of East Crete and their property, that is the fields, vineyards, orchards, gardens, olive trees owned by each villager are recorded in minute detail. This census of the land property of the inhabitants of the village is followed by information on the overall area of cultivated land (fields, vineyards), the area of uncultivated land –which was also taxed– and the number of olive trees. It concludes with the taxes reckoned in kind and in monetary values.

The importance of this particular source as well as the difficulties encountered in reading it were mentioned in the late nineteenth century by

13 N. Stavrinidis, *Translations*, *op. cit.*, vol. I, p. 5.

14 E. Gülsoy estimates 185, 654 measures or 1, 904, 067 litres. See E. Gülsoy, *op. cit.*, p. 243.

15 For details on the dating of the register see Molly Green, *Kandiye 1669-1720: the Formation of a Merchant Class*, 1993, p. 166 n. 17 (unpublished Ph.D., University of Princeton). See also E. Gülsoy, *op. cit.*, p. XXVII-XXVIII.

Andreas Androulidakis, a Cretan literatus, Secretary General of the General Administration of Crete and later Governor of Samos. He was the first to publish in Greek a study of the Ottoman taxation system in Crete[16]. In his short essay he writes:

> These cadasters have an historical importance whose significance should not be underestimated, since apart from the description, albeit incomplete, of the fields, both public and private, it is possible to acquire from the two long preambles at the beginning of them, exact knowledge of the taxation system introduced on Crete in the first years of its conquest, and of the reforms subsequently introduced, as well as of the exemptions, through which this Great Island henceforth became a privileged province of the Ottoman Empire.
>
> For this reason I considered it good to publish various interesting data extracted from the said cadasters, which kept in Candia for over two hundred years, were unknown to the people of Crete and particularly to the Christians, since they are written in the Turkish language, of which few Christians in Crete have knowledge, and in old Turkish script, so illegible and cryptic (in a note he adds: This kind of script is called siyakat by the Turks and has its own special, alphabet) that even of those Ottomans who knew the language well, few were able to read it.'

Androulidakis-Kopasis mentions that a census was made of the 'taxable population and the lands subject to taxation were recorded after the conquest of Crete'[17] and that 'the first cadaster was prepared in two volumes, one of which was lost, where and when is unknown'. The one volume that survived in his day contained 'the inventory of those properties lying in the districts of Pediada, Merambelou, Rizou, Malevyzi, Kainouryo, Siteia, Hierapetra, Mesa

16 Andreas Androulidakis, *The Taxation System Introduced in Crete During the First Years of Its Capture by the Turks* (in Greek), Chania 1882 . I am very grateful to my colleague Kostas Tsiknakis for his willingness to provide me with a photocopy of this rare pamphlet, which I had been seeking for years. Extensive excerpts from this booklet are published by N. Stavrakis, *Statistics of the Population of Crete*, (in Greek), Athens 1890 (reprint by N. Karavias 1978), p. 149-152. On Andreas Androulidakis-Kopasis' work as an author see J. Strauss, "The Millets and the Ottoman Language: The Contribution of Ottoman Greeks to Ottoman Letters (19th-20th Centuries)", *Die Welt des Islams* 35/2 (1995), p. 240-243.

17 It is noted in the *kanunname* accompanying census TT 825 (205) that a census was made of the population liable to harac and a census of the taxable land-holdings. On the publication of the said kanunname see below. It seems that there were also kanunnames in the copy seen by Androulidakis- Kopasis in Chania, because this is implied by the phrase "it is possible to acquire from the two long preambles at the beginning of these. exact knowledge of the taxation system introduced on the island in the first years of its conquest ...". See A. Androulidakis-Kopasis, *op. cit.*, p. 3.

Lasithi, Temenos, Pyryotissa and Monofatsi[18]. Antonis Sifakas[19] refers to the fate of this codex in one of his studies, declaring that it existed until 1898 and was destroyed by fire, in the mansion housing the General Administration of Crete, in Chania. Sifakas also notes that it included the districts of Pediada, Temenos, Malevizi, Pyryotissa, Kainouryo, Monofatsi, Rizou, Mesa Lasithi, Merabello, Hierapetra and Siteia. By cross-checking this information I deduced that the codex to which the two nineteenth-century scholars refer was the copy of the original register which is nowadays kept with the cote Tapu Tahrir 820 in the Presidential Archive of Istanbul.

The second volume of the cadaster, the one already lost from the Archive of the General Administration of Crete in Androulakis-Kopasis's day, is a copy of the register Tapu Tahrir 822, which I did not manage to study during my three-week mission to the Ottoman Archive of Istanbul. It is of the same type as TT 825 and includes the livas of Chania and Rethymnon. that is the west part of Crete[20]. The processing of the data in this register would of course have given a full picture of the geography of the olive tree in newly-conquered Ottoman Crete[21]. For this reason the present article should be considered a preliminary study, the aim of which is to point out the possibilities of the sources and the

18 A. Androulidakis-Kopasis, *op. cit.*, p. 10.

19 Antonis G. Sifakas, "The taxation system introduced in Crete under the Turks" (in Greek), *Annual of the Society of Cretan Studies* 3 (1940), p. 166, describes the information-yielding potential and comments on the important of this cadaster as a historical source. I yield to the temptation to cite the relevant excerpt: "In conclusion I remark that these cadasters were compiled mainly in order to facilitate the collection of taxes, and consequently neither the locations of the various fields nor the boundaries limiting them are described in these, and that these were therefore incomplete, and that it was impossible apart from the above significant information concerning the taxation system they contained, and that was unknown until the publication of the relevant study by Andreas Androulidakis, to be used also as a guide to find a) the number of Muslim and non-Muslim property owners in that period, from which it would be possible to estimate approximately the population of the island then, because the books of the census made of the taxable population of the island have not survived: b) the area of land-holdings then cultivated and the number of fruit-bearing trees, and it is therefore impossible to deduce also the state in which local agriculture was then, and c) the amount of the taxes collected by village, by province and by the whole island', see *ibidem*, p. 173.

20 E. Gülsoy, *op. cit.*, p. XXVII.

21 E. Gülsoy gives in his thesis the total numbers of olive trees in the livades of Candia, Siteia, Chania and Rethymnon. According to his calculations, the total of olive trees on the island, on the basis of the two registers, was 666, 105, see *ibidem*, p. 224.

prospect of results, so that a research project can be funded to complete the work begun here.

I close this excursus concerning the content of the two registers compiled after the Fall of Candia and return to the census of East Crete as presented in TT 825, in order to examine the picture of olive cultivation in this part of the island in 1670, the time when the Ottomans succeeded the Venetians[22]. As mentioned above, the number of olive trees in each village was recorded. It is therefore possible for us to present graphically the spatial diffusion of the olive tree in this period as well as to estimate approximately the production of oil and to correlate it with the production of cereals and viticulture. The testimony of the Ottoman registers on the number of olive trees in this early period is invaluable, particularly our only other information on the number of olive trees in Crete is for the late nineteenth century. According to Androulidakis-Kopasis's estimates, there were 6,000,000 olive trees on the island in the late nineteenth century[23], while the number had reached 8,000,000 by the early twentieth century[24].

A total of 255,686 olive trees is inventoried in the 11 *nahiye*s included in TT 825[25]. But the information in this register does not stop at the number of trees. Noted alongside is the oil production (*mahsul*) in each village, the result of multiplying the number of trees by five. Consequently the Ottoman state had estimated the mean oil yield per tree as 5 okas and the tax that corresponded to 1/5 of the production was 1 oka of oil. Also entered unfailingly in the register is the monetary value of the tax, determined by the taxation price of the oka: 3 aspers. The ratio of tax to production, one oka to five, is is also entered in the kanunname that accompanies TT 825 and which was published by Ö. L.

22 The invaluable information on the population and the crops cultivated in the villages recorded in the census will be presented in a study being prepared by the author.

23 The information is drawn from the doctoral dissertaion by A. Nukhet Adīyeke, *Osmanl_ Imparatorlu_u ve Girit Bunalimi (1896-1908)*, Smyrna 1994, 116 ff., which will soon be available from Türk Tarih Kurumu publications.

24 I. Kokkinakis, "Coin and society in Crete (1899-1906)" (in Greek), *Historika* 13, fasc. 30 (June 1999), p. 95.

25 According to E. Gülsoy's calculations, the olive trees in the provinces of Candia and Siteia numbered 160, 430. See E. Gülsoy, *op. cit.*, p. 244 (Table XLII).

Barkan[26]. The text of this fiscal legislation entered in a religious judiciary codex in Candia was translated into Greek by N. Stavrinidis in 1947[27]. The tax of one oka of oil per tree seems to have been levied until 1705, when a new census of the island was carried out[28]. Then the peasants were obliged to pay one-seventh of the yield. This information is drawn from a firman of 1711, which was entered in the *sicil defter* no. 2 in the Turkish Archive of Herakleion[29].

So on the basis of the data in TT 825, I relied on the average production of five okas per tree –which was accepted by the Ottoman state– in order to estimate the volume of oil produced in the administrative provinces of Candia and Siteia.

Table 2: *Olive trees and oil yields in East Crete*

Nahiye	olive tree	oil yield
Pediada	22.091	110.455
Monofatsi	6.270	31.350
Siteia	27.051	135.255
Hierapetra	78.017	390.085
Lasithi	138	690
Temenos	622	3.110
Pyryotissa	11.437	57.185

26 O. L. Barkan, *XV ve XVIinci As_rlarda Osmanl_ _mparatorlu_unda Zirai Ekonominin Hukuki ve Mali Esaslar_, I: Kanunlar*, Istanbul 1943, p. 350-353. According to the text of the kanunname, the land-holdings of Crete were considered *araz-i haraciye* and the Ottoman state collected one kile for every five of their incomes. On the vineyards they imposed h*arac-i mukata'a* of 120 aspers per *tzerip* (=60 square cubits). Comments on and an interpretation of the fiscal ordinances of the text of the kanunname are given by Molly Green, *Kandiye, op. cit.*, p. 76 ff. The transcription of the kanunname, excluding the introductory text which is in Arabic, is published without reference to Barkan's publication of it, by E. Gülsoy, *op. cit.*, p. 266-268.

27 N. Stavrinidis, *op. cit.*, vol. I, 307-311.

28 This census (H 1117) is kept, like the previous one of 1080 (1671), in two volumes in the Archive at Ankara (Tapu ve Kadastro Genel Mudurlu_u): The register Tapu Kadastro 1 includes the livas of Chania and Rethymnon, and Tapu Kadastro 4 the livas of Siteia and Candia.

29 S.N. Stavrinidis, *op. cit.*, vol. III, p. 377-378.

Malevizi	2.533	12.665
Merambelou	64.139	320.695
Rizou	30.231	151.155
Kainourya	13.157	65.785
TOTAL	255.686	1.278.430

According to my calculations, the production of olive oil in East Crete on the morrow of the fall of Candia was around 1650 tonnes. This figure is an accounting estimate of the production for taxation purposes only, which means that the assumed 1650 tonnes was the minimum production that was used as a basis for collecting the tax. It is known that the olive tree gives a good yield of oil every other year and what interested the Ottoman state was collecting at least one oka per tree.

The census of the land property of the peasants in Pediada and Malevizi in the province of Candia, and Merambelou and Hierapetra in the province of Siteia (see Appendix) shows clearly that in the villages of the liva of Siteia, where plantings were made from the mid-sixteenth century –according to the testimony of the provveditore generale Zuanne Mocenigo, there was systematic cultivation of the olive in olive groves, as opposed to dispersed trees. On the contrary, in Pediada and Malevizi, villages renowned for their vineyards and wine production in the period of Venetian Rule, there were few to hardly any olive trees. The following table presents the total numbers of population and olive trees in the four districts selected.

Table 3: *Ratio of olive trees per inhabitant*

Nahiye	**inhabitants**	**olive trees**
Pediada	8.657	22.091
Malevizi	2.412	2.533
Merambelou	5.206	64.139
Hierapetra	4.292	78.017

To summarize, the Ottoman registers examined in this preliminary study not only provide an *ad hoc* description of the particular time they were compiled, but also permit us to follow the development of olive cultivation over time. They give us the possibility of evaluating the scattered information on olive cultivation in the years of Venetian Rule or the data on the production and exports of oil in the eighteenth century. In other words, the processing of the two registers of 1671 as well as the corresponding ones of 1705 is an essential precondition for furthering our research on the history of olive cultivation and oil production in Crete during the Ottoman period.

APPENDIX

PEDYA

Villages	Population	Cropland		olive	Vineyards			Vegetables	Orchards			Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens	Grade A	Grade B	Grade C	lands
nefs-i Pedya	164	1167	300	56	20	4.5		1.5				
Haghioi Apostoloi	198	1189	600	23	71.5	19	9					10
Sambas	183	590.5	294	38	161	43	21	2				
Amaryano	142	462.5	231	1378	107	36	18	1	8.5			
Piskopyano	49	310	154	31	3							51
Licheni	60	193	91	922	50.5	14	7					
Askoi	98	642.5	321	2907	72.5	19.5	9.5					
Galatas	124	228.5	114	11	114	28	15	2				
Embaros	286	842.5	421	2143	59.5	16	8	10				
Martha	77	210	104.5	541	31.5	4	2					
Mochos	238	722	361	155	321.5	93	47	1				
Krasi	172	161	87	21	250	75	38	5.5	7.5			
Mesomouri	98	103	51	133	200	137.5	103	5	3.5			
Filisyu	35	94.5	47	284	20	6.5			9			29
Potamioi	240	507	253	376	282.5	145	138					
Sfendili	175	207	103	19	111.5	58	54					
Avdou	178	581.5	292	769	134.5	18	7					
Ayi Elendis	82	390	194	401	38.5	10	5					
Panaya	159	887	443	1818	85	22.5	11.5	2.5				664

Villages	Population	Cropland		olive	Vineyards			Vegetables	Orchards			Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens	Grade A	Grade B	Grade C	lands
Thrapsano/Tsoukalaki	218	701	350	81	64.5	17	8	2				169
Mesovouni	28	190.5	95						245	65	32	50
Galanyano	26	159	79		1.5	1	1					
Karteros	12	190.5	95					6	245	65	32	50
manastir-i Spiliotissa	4	177	88									20
metoh Kaloni	9	268	133	25	2							80
metoh Dandolou	5	83	42									
manastir-i Efendi Christo		27	13									
metoh Kera Prasa	2	58	29									125
metoh Parparigo	2	100	50	3								50
metoh Kamino	3	49	24									
Patsidi Epano	14	271	135									20
Patsidi Kato	16	503	251		5	2		1				10
Makritichos	10	325	162					5		33.5		
Gouves	128	408.5	234	168	125.5	35	16					
Vorou	75	167.5	83	131	136.5	37	18	2.5				
Varvaro	159	330.5	220	54	171.5	96	23					275
Sklavochori	83	182.5	90	12	65	15.5	8					
Dyavarde	59	198	98	61	48.5		6	3				
Ayitanya Epano	69	46	22		55.5	15	7					10
Ayitanya Kato	35	88	43		27.5	8.5	3					
Askopoula	91	176	88	144	72.5	20	9					44
Tzedid	72	212.5	105	105	85	24	11					94

Villages	Population	Cropland		olive	Vineyards			Vegetables	Orchards			Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens	Grade A	Grade B	Grade C	lands
Piga•douri	284	891.5	445	717	177	48	23	4	13.5			
Stravorina	40	172.5	88	37	18	5	2					
Nira	65	270.5	135	208	95	26	12		11			
Astritsi	48	181	90	27	50.5	13	6					
Karouzanoi	20	56.5	28	15								
Koutouloufari	24	134	66									26
Tsapanyana	50	187	93									85
Chersonisos	46	442.5	216	10								475
Xidas	130	460.5	350	1866	59.5	29.5	28.5	3	9			
Mathya	66	557.5	278	69	10.5	8		4				
Roussochori	141	1141.5	578	1103	73	20	10	2.5	0.5			500
Mouchtaroi	224	734	416		168.5	56	12					114
Lilyano	53	141.5	70		56	17	7					
Haghia Paraskevi	28	126.5	62									
Asmari	201	738	369	212	197	34.5	12.5	4.5				
Lagou	15	72.5	29	7	1			1				
Pitzouni	81	232	115		95.5	22	11					
Peza	103	383	191	46	190	50	25	7.5				2
Koxari	72	179	95	390	83	22	11					40
Charasso	59	234.5	117	108	57	16	7	2	2.5			12
Galifa	91	229.5	114	328	87.5	23.5	11.5	1				
Elya	58	334.5	166		81	21	11	1.5				156
Anopoli	100	241.5	120		151	40	20					12

Villages	Population	Cropland		olive	Vineyards			Vegetables	Orchards			Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens	Grade A	Grade B	Grade C	lands
Stamnioi	72	189	94	44	61	16	8					40.5
Vatheia Epano	35	154.5	77	273	35	9	4	0.5				149
Vatheia Kato	77	346	181	66	61.5	9.5	3.5	1				32
Hagios Vasileios	58	71	35		115	30	15	55				13
Varvaroi	48	174	87		17	4.5	2.5					26
Kellia	53	94	47		36.5	10	5					10
Skillous	85	120.5	59		200.5	53	27	44				5
Skalani	40	342	171	9	60	16	8					37
Galipe	133	233.5	116	205	166	45	22					
Skoteino	44	93	46	24	60.5	16	8					
Komes	32	192.5	96	247	1.5			2	14			
Spilya	15	55.5	27	135	1				11.5			
Avli	37	349.5	175	875	10	3	1.5	5.5	10			20
Geraki	128	977.5	493	125	85	22	11	4.5				
Zoforoi	204	470.5	235	78	156	41	21	2				
Armacha	53	526.5	263	44	24	10	5					
Nipiditos	39	280	140	279	4			3				
Gonyes		251.5	125	646	58.5	12	7					
Choudetsi	74	165	79	11	176	40	23	1	12			29.5
Fanari	22	59.5	25		16	6	3	0.5				27
Kasteli	37	123.5	61		7.5		1.5					75
Katalagari	30	89	45		75	20	10	0.5				6
Astrakos Epano	91	424	201		72.5	25	12	5	7.5			

Villages	Population	Cropland		olive	Vineyards			Vegetables	Orchards			Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens	Grade A	Grade B	Grade C	lands
Haghies Paraskes Epano	42	66	33	18	27	8	3					
Haghies Paraskes Kato	58	151	75	62	73.5	20	10					
Gayidourianoi	40	428	213	23	4	1.5	0.5					
Kastelo	63	195.5	97	76	78.5	23	11	1				
Trapezaki	79	166.5	82	16	93	22	11					
Komanoi	53	378	189	3	13.5	3.5	1.5					
Kounavoi	56	794.5	396	20	110.5	29	14	1				
Melesses	130	508.5	253	279	234.5	62	31					
Sgourokefala	70	212	105	125	56.5	16	7					
Founaroi	64	126.5	62	17	44.5	12	5					15
Gournes	37	584	292	186								186
Malia	125	920.5	459		3	1		5.5				60.5
Pi(skopi?)	261	832	415	63	401.5	98	63					47
Voni	284	738.5	369	189	528	219	109	3				41
Skopelo	11	116	58					0.5	30	8	4	
TOTAL	8657	34541	17197.5	22091	7813.5	2375	1276.5	216.5	640	171.5	68	3992.5

The surface area under cultivation is estimated in tzerip (=60 square cubits)

MERAMBELOY

Villages	Population	Cropland		olive	Vineyards			Vegetables	Meadows	Orchards	Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens			lands
Nefs-i Merambelou	275	432.5	215	264	3						451
Mesa Lakonya	168	503	259	1369	5						60
Kritsa	687	716.5	357	7816	65	17	8	20.5			
Limnes	322	518.5	264	4073	71	18	8				149
Prina	98	48	1535	7.5							76
metoh Strota (?)	39	87.5	43	1362							
Krousta	125	212.5	105	671	17	7					40.5
Azimo	88	372	188								108
Milatos	76	745.5	371.5	615	34	12		5			353
Vruhasi	164	304.5	151	1915	199	48	24	16		1.5	251.5
Latsida	401	401.5	202	6476	332.5	88	44	4			218
metoh Sisi	22	102	51	35							150
Voulismeni	296	634.5	305	5312	55.5	17	8	13		1	207
Tzedid	877	1101.5	547	12111	266	70	35	3.5			164
metoh Kalia, Makri	84	664	332	99							278
metoh Geratilou (?)	17	32	15								
Platanea	105	77	42	3276	5	1					
Vryses	52	56.5	28	1046	19	6		23			
metoh Drasi	110	60	30	730	73	19	9				
Platipodi	208	280.5	112.5	3679	132.5	36	17	8	4		63.5
Choumeryako	509	748.5	379	12328	344.5	91	45	35.5	11.5		395
Epano, Kato Fournoi	437	1517.5	689	954	120	20.5	16	10.5			1345
metoh Kurunyes	46	190	105								63
TOTAL	5206	9806	6326	64138.5	1742	450.5	214	139	15.5	2.5	4372.5

The surface area under cultivation is estimated in tzerip (=60 square cubits)

HIERAPETRA

Villages	Population	Cropland		olive	Vineyards			Vegetables	Orchards	Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens		lands
Hierapetra	540	932.5	465	8540	11	2		8.5		999
Kavousi	507	680	339.5	4283	83.5	22	10	9.5	2.5	523.5
Episkopi	253	479.5	239	6732	0.25			2.5		765
Kapistri	103	261	130	3559				1		580.5
Vasiliki	30	114	56	1132	2.75			1.25		120
Asari	31	82	41	310				0.25	0.5	260
Monastiri	43	160.5	80	1734				10.5		133.5
Epano Horyo	277	471.5	235	5581	22.25			6.25	3.25	169.5
Kalamafka	164	116	58	2678	26	6	2	30.25	8.5	25.5
Meseleroi	168	209	104	1277	10.5	4		2		149.5
Makrilia	111	180	90	1361						135
Anatoli	165	336	167	4167	36	8	4	8.5		7.5
Haghios Yorgis/ Potamos	139	162.75	81	3854	7			6.75		100
Apostolyana	65	86	42	1119	12.25					35
Haghios Yannis	42	58	29	632				2.25		33
Kato Horyo	474	526.75	262	7241				43.5		64
Kendri	326	830	414	5398						110
Giannitzi	430	870	434	7659	9.75			5	1	33.5
Males	424	821	410	10760	44	11	5	41.5		682
TOTAL	4292	7376.5	3676.5	78017	265.25	53	21	179.5	15.75	4926

The surface area under cultivation is estimated in tzerip (=60 square cubits).

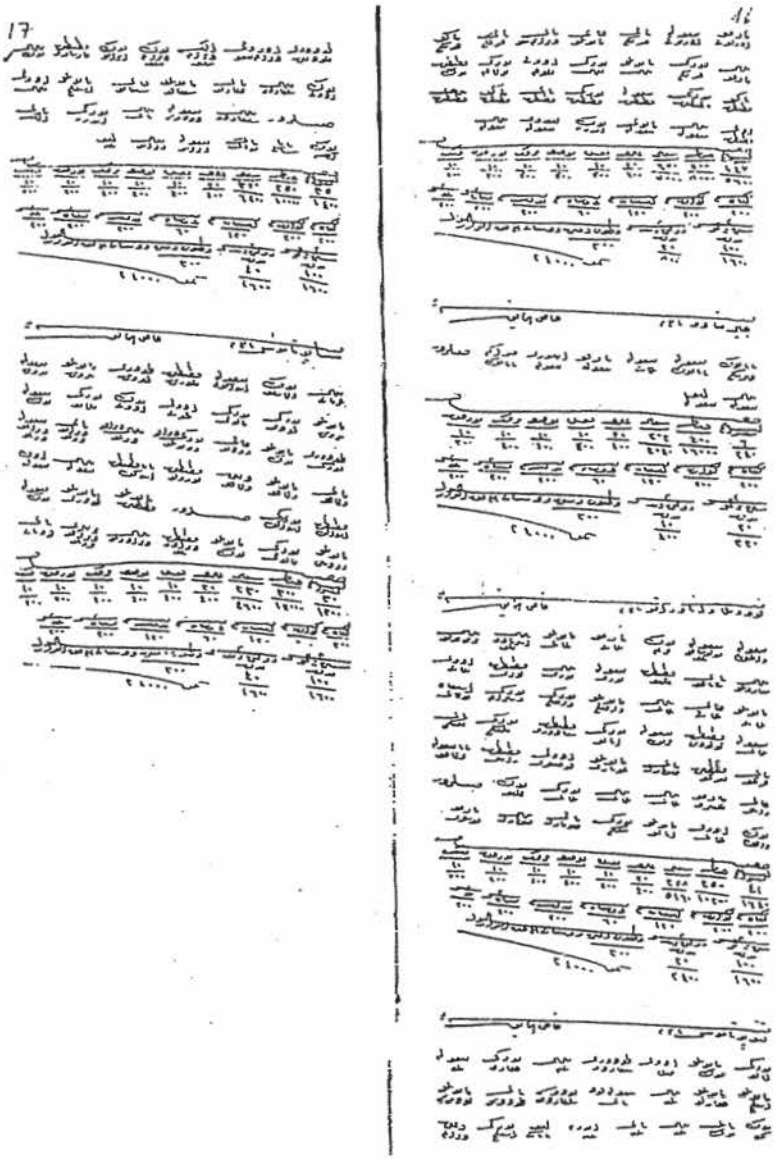
MALEVIZI

Villages	Population	Cropland		olive	Vineyards			Vegetables	Meadows	Orchards	Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens			lands
Nefs-i Malevizi	10	81	40								52
Yofirakia	9	397.5	198								25
Tilisos	179	887	443	94				1.5	18		62
Avgeniki	104	262.5	131	726	205	54	27	6			20
Epano, Kato Asites	176	451	226	275	368.5	98	49	3.5			21
Moni	33	182	91	36	17	5	2	2			
Gonyes	62	167.5	83	129	70	19	9	1			
Epano, Kato Stavrakia	98	370	184	5	291	78	38				6
Voutes	91	307	153	29	87	20	10				53
Krousonas	125	413	194	343	50	9	5	4			
Kirnou	79	12.5	6		114.5	30	15				
Loutraki	57	238	119	202	60	16	7				20
Haghios Miron	219	550	275	201	356	95	47	1			
Pirgou	129	264.5	132	67	190	41	20	1.5			11
Sounia	62	132	66	40	79.5	21	10				10
Kitharida	28	72	36	7	15	4					
Kamari	71	316.5	158	39	106	28	14				50
Ahladi	32	102	50	16	9						
Kantinou	35	183.5	91		3						40

Villages	Population	Cropland		olive	Vineyards			Vegetables	Meadows	Orchards	Non arable
		Grade A	Grade B	trees	Grade A	Grade B	Grade C	Gardens			lands
Gazi	25	1383.5	691								530
Radya (?)	27	580.5	289								187
Kerasya	108	443.5	221	48	133	36	17				
Siva	132	378	189	151	167	44	22	1.5			30
Pentamodi	72	357	178	21	65	18	8				140
Petrokefali	54	212.5	106	7	42.5	12	5				30
Trapezaki	54	146	72		30	8	4				25
Korfes	75	392	195	5	58.5	16	7				36
Surhos	90	188.5	94	73	126.5	34	16	6	3		42
Keramoutsi	42	344.5	171	16	24.5	6	3	2			80
Kalesia Epano	40	318	158	2	22.5	6	3				80
Kalesia Kato	25	338.5	168		12.5	5					25
Rodya	26	221	110	1	13						30
Kavrohori	43	4432	2215			9	5			17	270
Perdika, Koskari		150	75								
TOTAL	2412	15275	7608	2533	2716.5	712	343	30	21	17	1875

The surface area under cultivation is estimated in tzerip (=60 square cubits)

Belge 1



Lezante: Tapu Tahrir 820, p. 16-17. Population and taxes of the villages Tzermiado, Koutoumalya and Anavrako (Anavrakondes), Kato Potomos and Mesa Potomos in the nahiye Lasithi