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THE OLIVE IN NORTHERN ITALY. A MEDITERRANEAN TALE

Introduction

The olive tree (*Olea europaea* L. subsp. *europaea*) is a species that characterizes the Mediterranean climate, and thrives in environments with mild winters. Traditionally¹ the northernmost latitude for its cultivation is considered to be 45° North, but only if in the proximity of seas or large lakes. In Italy its commercial cultivation is restricted to Central and Southern Regions, to Liguria and to Romagna; the only areas considered suitable to cultivation of this species in Northern Italy are those around the largest alpine lakes.

The definition of Mediterranean has been object of many studies, especially following the publication of Braudel's masterpiece, *The Mediterranean and the Mediterranean World in the Age of Philip II* in 1949², to the extent of suggesting unlikeness as the unifying feature of the area³. While this endeavour has been the object of historians, for environmentalists and agronomists it has been relatively easy to relate the Mediterranean to a number of spontaneous or cultivated species, which thrive from the sea level up to 800-1000 m asl all around the Mediterranean Basin. With ref-

¹ A. MORETTINI, *Olivicoltura*, Rome 1972, p. 220.

² F. BRAUDEL, *The Mediterranean and the Mediterranean World in the Age of Philip II*, 2 vol., english edition of 1972 Berkeley, pp. 725. «In general, the geographer's well-known observation must be accepted without question: the Mediterranean climate lies between the northern limit of the olive tree and the northern limit of the palm grove», p. 234. Braudel does not specify whether he means the oleaster or the cultivated olive, but since he writes of olives in Lombardy (p. 72), we are authorised to infer that for him it is the second type of plant to characterise the Mediterranean climate.

³ N. PURCELL, *The Boundless Sea of Unlikeness? On Defining the Mediterranean*, «Mediterranean Historical Review», vol. 18, no. 2, 2003, pp. 9-29.

erence to fruit crops, the most typical are figs, grape, pomegranate, olive, date palm, which were the first to be domesticated during the so called Neolithic revolution⁴, and which are, in their wild form, endemic in more or less wide areas of the region. Of the two main crops of the list, grapevine has its natural environment more shifted to the north, and can be grown only in the northernmost shores of North Africa (as the southern limit), while wild grape can be found in inland areas of Central and Eastern Europe; as concerns cultivation, fine wines are produced as far north as the Moselle Valley and Southern-Central England. The olive instead is grown on all the coastal areas of the Mediterranean, with few exceptions, from Andalusia and Morocco to Egypt's Suva Oasis, from Provence to Greek and Turkish Thrace. Italy is located at the centre of the Sea, and of the olive habitat.

This suitability of the olive to define the Mediterranean has been the object of many interventions of botanists, geographers and historians. According to the work of Zohary and Spiegel-Roy⁵, the limit of the wild olive (oleaster) is in coastal areas south of 42° N. Nevertheless the olive is cultivated, thanks to man's intervention, far north of this latitude, thanks to cultivation techniques, cultivar improvement, and careful choice of locations, and as concerns Italy traditional olive culture is present as north as in Liguria, Tuscany, Romagna, Istria, and on the shores of alpine lakes. For Morettini⁶ the olive can be grown in the Mediterranean between latitude 30° and 45°. He divides the area of cultivated olive in three subzones, of different suitability and productivity; while the first subzone coincides with the habitat of wild olive, the third includes all coastal areas of northern Mediterranean, most of Spain and Italy; with the exception of the lake districts, northern Italy is not included. A similar conclusion had been reached by Briccoli⁷. However the cultivated olive distribution includes quite varied climates, especially as concerns amount and distribution of rains⁸, and Morettini's subdivision simply mirrored the distribution of cultivated olive in the mid XX century.

It is therefore the cultivated olive that can, for many, define from a bio-agronomical point of view, the Mediterranean world. Starting with

⁴ D. ZOHARY, P. SPIEGEL-ROY, *Beginnings of fruit growing in the Old World*, «Science», 187 (4174), 1975, p. 319.

⁵ *Ivi*, pp. 320-321.

⁶ MORETTINI, *Olivicoltura*, cit., p. 220.

⁷ M. BRICCOLI, *Il clima dell'olivo in Italia*, «Nuovi Annali di Agricoltura», 1925, V, pp. 333-372.

⁸ D. S. WALKER, *The Mediterranean Lands*, London 1960, p. 32.

Shouw (1829), the subject was treated by Parlatore (1867), Durand and Flahault (1886), Koppen (1900), Fisher (1904)⁹, to mention only the earliest and most authoritative contributions. Among geographers, Blanchard¹⁰ acknowledges the olive as «one of the characteristic trees of the Mediterranean climate», although confined (in Provence and similar northern districts) to sites protected from northern winter winds. In those conditions it can survive well even at 600m elevations, irrespective of the precipitation regime. Similar altitude limits have also been indicated by Italian scientists¹¹, who mention the existence of cultivated olive trees up to 650m, in the vicinity of alpine lakes. Flahault¹² does not agree, on the grounds that the olive is not a spontaneous species of the most northern Mediterranean areas, and particularly of Provence. Toniolo, in describing the distribution of the olive in western Venetia¹³, considers the species suitable to indicate the limit of the Mediterranean area, since its presence indicates the normal occurrence of relatively mild winter temperatures.

The opinion of Blanchard and Toniolo has been accepted by more recent scientists, such as Birot and Dresch¹⁴ and Walker¹⁵; this latter geographer gives a synthetic but nevertheless complete and correct account of the environmental features of the species, when considered as marking the northern limit of the Mediterranean climate: «In trying to determine the extent of the Mediterranean climatic type the distribution of the olive, where it is grown without the aid of irrigation, has proved more useful than purely statistical criteria. It will flourish in almost all the soils likely to be encountered in the Mediterranean (...), but as regards its clima-

⁹ I. F. SCHOUW, *Tableau du climat et de la végétation de l'Italie*, Copenhagen 1839, pp. 441; F. PARLATORE, *Flora italiana*, Firenze 1867, p. 773; E. DURAND, C. FLAHAULT, *Les limites del la Région Méditerranéenne en France*, «Bull. de la Soc. Botan. de France», XXXIII, 1886, pp. 24-34. «...la limite de culture de l'Olivier coïncide exactement avec la limite générale de la flore méditerranéenne en France; cette limite peut être tracée d'une façon rigoureuse» (p. 33); W. KÖPPEN, *Versuch einer Klassifikation der Klimate, vorzugweise nach ihren Beziehungen zur Pflanzenwelt*, «Geogr. Zeitschrift», VI, 1900, pp. 593-611; TH. FISCHER, *Der Ölbaum. Seine geographische Verbreitung, seine wirtschaftliche und kulturhistorische Bedeutung*, «Pet. Mitt.», 1904, n. 147.

¹⁰ R. BLANCHARD, *La limite septentrionale de l'olivier dans les Alpes françaises*, Paris 1911, p. 323.

¹¹ C. OMODEO, *Il clima dell'olivo nella regione dei laghi alpini*, «La meteorologia pratica», XXI, 1944, pp. 199-211. G. CORRÀ, *La distribuzione e i limiti altimetrici del Quescus ilex e dell'Olea europaea nel versante meridionale del Monte Baldo*, «Studi trentini di Scienze Naturali», XLIII, 1966, pp. 236-252.

¹² C. FLAHAULT, *La distribution géographique des végétaux dans la région méditerranéenne française*,

¹³ A. R. TONIOLO, *La distribuzione dell'olivo e l'estensione della provincia climatica mediterranea nel Veneto occidentale*, «Rivista Geografica Italiana», XXI, fasc. I-IV, 1914, pp. 14-16.

¹⁴ P. BIROT, J. DRESCH, *La Méditerranée et le Moyen-Orient*, vol. I, Paris 1953, pp. 551.

¹⁵ WALKER, *Mediterranean Lands*, cit., p. 17.

tic requirements it is much more demanding. As long as there is enough sunshine in the daytime to warm it up, it will tolerate conditions in which the mean figure for the coldest month is as low as 39° F.; it demands a hot, dry summer sufficiently prolonged to ensure the maturation of the fruit (the harvest is in December); but a wet summer or foggy winter is fatal to it and although light snowfall does no serious harm a really severe frosty period ruins the tree by bursting the tissues and splitting open the trunk and branches. Its usefulness as a Mediterranean yardstick is enhanced by taking into account automatically the important modifications introduced by altitude and the limitations imposed by infrequent but none the less critical periods of exceptional weather. The olive takes many years to mature and the farmer is not likely to plant if he knows that once every ten years or so he runs the risk of fatally severe weather».

A more detailed account of olive ecophysiology is given by Baldy¹⁶: as a subtropical species, it is quite sensitive to cold; when night temperatures get to -5°C for several hours the plant suffers and its biology is altered; at -12°C it loses most leaves, and at -17°C even the woody aerial parts are seriously damaged. These are conditions that may occur in several northern areas where the olive has been, and is being, cultivated. However, being hilly districts, there may be profound differences between a given location (and microclimate) and another, even if close by, due mainly to exposure conditions.

Although this has been the situation in the past century, in the last decades planting olive trees has spread throughout the hilly areas of all Northern Italy, in view of an increased interest in olive oil, and of an increasingly visible climate change¹⁷.

This interest in olive cultivation in the North is not a modern event; the presence of the olive in Italy's North has not been in the past, over the span of the last two millennia, as it is today, and a discrete amount of evidence has accumulated on such a presence over the last decades. Object of this work is to document such a presence, the memory of which has been lost in most of Northern Italy countryside.

For most of the period covered by this survey Italy has not been politically united, and the occurrence of a number of states, often in a state of war, and anyway characterised by different political and economical conditions, determined equally varied conditions for olive cultivation; this is why the alternating fortunes of olive industry are here described region by

¹⁶ C. BALDY, *Le climat de l'Olivier*, «Ecologia Mediterranea», 1990, XVI, pp. 113-121.

¹⁷ A. FABBRI, *Il ritorno dell'olivo in Emilia*, «Frutticoltura», LXVII, 2015, 9, pp. 42-52.

region, although present day regional boundaries do not always represent the fluctuating political borders of Medieval Northern Italy.

Overview

The olive has been present in Italy in its spontaneous form for time immemorial, for some since before the quaternary period¹⁸. Some findings in North Italy are from prehistoric times¹⁹, although they cannot be attributed to cultivated olive²⁰. However, the presence of *Olea europaea* ssp. *oleaster*, the wild olive, is reported for the Bronze Age at Bor di Pacengo, Peschiera, on the banks of Lake Garda²¹, and in Pliocene layers a few kilometres north of Bologna²². The cultivated olive, although domesticated in the Middle East since the 4th millennium BC²³, actually seems to have reached the peninsula at the dawn of the first millennium BC thanks to Phoenician and Greek merchants and settlers. From Sicily, around the VII-VI century BC, probably through Etruria²⁴, is reported, by the classical historians, the passage of the olive to the Roman world²⁵.

The information about the presence of the cultivated olive North of the Apennines, beyond the Romagna provinces of Forlì-Cesena and Rimini, and the Liguria Region, which from an environmental point of view should be more appropriately considered as belonging to Central Italy, is scarce and scattered; a clear sign that the cultivation of this tree species has always been characterised, albeit with ups and downs, by reduced acreages and dramatic events that have influenced its fortunes. In any case, the first

¹⁸ A. BÉGUINOT, *Saggio sulla flora e fitogeografia dei Colli Euganei*, «Mem. Soc. Geogr. It.», Vol. XI, 1904, pp. 174-175.

¹⁹ A. GOIRAN, *Sulla probabile introduzione sin dall'alta antichità di "Laurus nobilis L." e di "Olea europaea L." nel veronese*, «Boll. Soc. Bot. It.», novembre 1904, p. 292.

²⁰ M. ROTTOLI, *I resti vegetali*, in P. FRONTINI (ed.), *Castellaro del Vhò. Campagna di scavo 1995*, Milano 1997, pp. 141-158.

²¹ E. NEUWEILER, *Die prähistorische Pflanzenreste Mitteleuropas. Vierteljahresschrift d. naturforschenden Gesellschaft in Zürich*, 1905: Quoted by J. M. RENFREW, *Palaeoethnobotany*, London 1973, p. 132.

²² W. BALLY, J. D. FERWERDA and A. MORETTINI, *Tropische und subtropische Weltwirtschaftspflanzen*, II. Ölpflanzen, Stuttgart 1962.

²³ ZOHARY, SPIEGEL-ROY, *Beginnings of fruit growing in the Old World*, cit., pp. 319-320.

²⁴ J. BOARDMAN, *The olive in the Mediterranean: its culture and use*, «Phil Trans. R. Soc. Lond.», B. 275, 1977, pp. 187-196.

²⁵ G. ACERBO, *La marcia storica dell'olivo nel Mediterraneo*, «Atti della Società per il Progresso delle Scienze», Riun. XXV, 1937, vol. I, fasc. 2: 1-22.; N.W. SIMMONDS, *Olive*, in *Evolution of crop plants*, London 1988, pp. 219-221.

known report comes from Columella²⁶, who lived in the I century AD: he speaks of what in the previous century wrote Saserna, a Latin georgic writer belonging to a family of farmers of Etruscan origin, who run a family farm in the Piacenza area: he wrote at the beginning of the I century BC an agronomy treatise, fragments of which are reported by Columella, and which indicate that in Northern Italy the climate was much changed compared to the past, so that regions where it was previously impossible to cultivate grapes and olives were, at the time of the author, rich in fertile olive groves and vineyards²⁷. Actually a period of relative warming occurred from the III century BC until the III century AD²⁸. The time of actual introduction of the olive in the North is indeed difficult to establish, since the beginning of the Etruscan colonization of the Western Po Basin dates back to the first half of the first millennium BC. For some authors the Etruscans would have gone as far as Piedmont since the beginning of such colonization²⁹. An Etruscan site dating from the V century BC was also excavated in Lombardy at Bagnolo S. Vito (Mantua province)³⁰.

In the following centuries the Romans spread the culture in all territories of their empire, and with it also the technique of oil extraction, production and trade; evidence of widespread oil production are the discovery of the remains of mills in rural villas such as the Villa of Desenzano, and that of another Villa of the I century AD recently excavated in the province of Reggio Emilia³¹, in which are visible remains of presses and a jar deposit. Also carpological and crop residues finds, and well as archeopalynological studies indicate the presence of *Olea europaea* L. in Romanic Age Lombardy³². Other archeobotanical studies have reported traces of pollen from olive trees dating back to the I century BC and to century

²⁶ L. J. M. COLUMELLA, *De Re Rustica*, Cura & Sumptibus Societatis literatae, Mannheim, 1781, I, 1, p. 16.

²⁷ «Quae regiones antea propter hiemis adsiduam violentiam nullam stirpem vitis aut oleae depositam custodire potuerint, nunc mitigato iam et interpescente pristino frigore largissimis olivatis Liberique vindemiis exuberent» (*ibidem*).

²⁸ M. PINNA, *Le variazioni del clima, dall'ultima grande glaciazione alle prospettive per il XXI secolo*, Milano 1996, pp. 118-124.

²⁹ E. CAVALLERO, *Gli olivi in Piemonte: cenni storici*, Convegno Biodiversità olivicola del Piemonte e del Monferrato casalese, Casale Monferrato 19/3/2005, (2006) p. 1.

³⁰ D. BASSI, *Il germoplasma dell'olivo in Lombardia. Descrizione varietale e caratteristiche degli oli*, «Quaderni della ricerca», n. 25, Milano 2003, p. 1.

³¹ G. BADINI, G. CERVI, F. CORBETTA, A. FRESTA, L. PATROCINI, L. RONDANINI, A. TINCANI, *La collina reggiana: ambiente naturale, vicende storiche e patrimonio culturale del medio Appennino reggiano*, Reggio Emilia 1992, pp. 143-144.

³² PINNA, *Le variazioni del clima, dall'ultima grande glaciazione alle prospettive per il XXI secolo*, cit., pp. 123-125.

V-VI AD, in the countryside of Bologna³³. Of the same period are the writings of Flavius Cassiodorus (V-VI century AD), a Roman politician and writer, which attest to the presence of lush olive groves on the banks of alpine lakes, and documents on land purchase mentioning olive groves in Classe and the Ravenna hinterland³⁴.

The olive tree, however, does not seem to be very popular in the Po Basin in the roman age, thanks to the ease of commodity transport from other regions of the Empire. If, therefore, the few existing trees resist the economic recession occurring in the second half of the IV century, which heavily involves the grapevine, their presence seems to be threatened by the profound devastations caused firstly by the greek-gothic war, and then by the Lombard invasion. Invaders who quickly realise the importance of the crop, and eventually facilitate its diffusion. The olive tree therefore soon becomes part of the landscape of large areas of Northern Italy, acquiring a relatively important role, if the *Edictum Rothari* (643)³⁵ provides high fines for those who damage olive trees.

Until then, however, oil supply had been provided to Italy mainly from northern Africa; a discrete presence of African oil in Rome is documented until the first decades of the VII century³⁶. An important information, since oil production and trade is considered one of the best indicators of long distance trade in the Mediterranean³⁷, and oil is often a substitute of currency, especially for the payment of tithes and rents³⁸.

³³ M. MARCHESINI, *Il paesaggio vegetale nella pianura Bolognese in età romana sulla base di analisi archeopalinologiche e archeocarpologiche*, Doctoral Dissertation, Florence University, 1998.

³⁴ F. M. A. CASSIODORUS, 540. *Variae*, XI, 14; A. I. PINI, *Due colture specialistiche del Medioevo: la vite e l'olivo nell'Italia padana*, in *Medioevo rurale. Sulle tracce della civiltà contadina*, Ed. V. FUMAGALLI, G. ROSSETTI, Bologna 1980, pp. 129-130.

³⁵ M. TOSI, *L'Edictus Rothari nei manoscritti bobiensi*, «Archivum Bobiense», 1982, 4, pp. 11-72.

³⁶ T. LEGGIO, *L'olivo e la Sabina tra età romana e medioevo*, in *L'olivo in Sabina e nel Lazio. Storia e prospettive di una presenza culturale*, Atti del convegno, Palombara Sabina, 25/3/1995, pp. 13-77. See also C. WICKHAM, *Sul mutamento sociale ed economico di lungo periodo in Occidente (400-800)*, «Storica», VIII, 23, 2002, pp. 7-27, where the author describes the trend of tunisian oil trade on an archeological basis, with reference to the amphorae retrieved.

³⁷ A. BRUGNOLI, G. M. VARANINI, *Olivi e olio nel medioevo italiano*, in *Olivi e olio nel medioevo italiano*, Bologna 2005b, pp. 10-11.

³⁸ A. BRUGNOLI, *Una specializzazione agricola altomedievale. L'olivicoltura veronese nel sistema curtense dell'Italia padana*, «Civiltà Padana. Archeologia e Storia del Territorio», 4, 1993, pp. 137-139; G. M. VARANINI, *L'olivicoltura e l'olio gardesano: aspetti della produzione e della commercializzazione dall'VIII al XV secolo*, in *Olivi e olio nel medioevo italiano*, cit., pp. 168-169; M. MONTANARI, *Tra lardo e olio: i grassi nell'alimentazione contadina e signorile dell'alto medioevo*. In: *Olivi e olio nel medioevo italiano*, Bologna, 2005, p. 383; F. BATTIGELLI, *Ai limiti dell'areale. L'olivo in Friuli tra passato e presente*, in G. LONGO, P. SCARPI (Ed.), *Tutte le sfumature del verde. Qualità dell'olio e purezza del paesaggio*, Padova, 2002, p. 77.

The arab conquest of Tunisia was undoubtedly a spur to initiate or give a renewed importance to local productions, all over the country; and as a matter of fact in the following century (VIII) the historical traces intensify in the north: numerous are those relating to the lakes of Como, Iseo and Garda. Studies on the production of Dressel 6b amphorae in Venetia indicate a recovery of oil production in the subalpine valleys of the north³⁹. The first toponyms relating to olive are recorded: in the venetian lagoon there is a village called Olivola, or Olivolo; it is quoted in 840 by Lothair I and in the pact of Charles III the Fat (883). Its name will eventually be changed in Castello⁴⁰. The Brescian historian Paolo Guerrini reminds us that the Pieve di Manerba (on Garda Lake) in the IX century belonged to the Abbey of Leno and that the monks of Leno plowed these swamps and hills for planting vineyards and olive groves⁴¹.

It is in the centuries IX-XI that more abundant mention is made, in notary deeds, of olive groves in the foothills of Piedmont, Lombardy, Emilia-Romagna and Venetia⁴²; moreover, mention is made of olive growing in the Cremona area (in the centre of the plain, a quite unsuitable environment)⁴³, probably along the banks of the river Po. The same can be said of olive oil produced by the Monastery of S. Sisto of Cortenova, near Guastalla⁴⁴, in the first decade of the XII century.

Other toponyms, relating to the olive tree, are recorded and eventually disappear: this is the case of a location in the Valpolicella (at Pozzo of Val di Marano)⁴⁵, which in 1084 was called Olive, of Castro Oliveto and Corte Monte Oliveto in the Reggio Emilia province⁴⁶, and of the still existing Madonna dell'Uliveto at Borzano (Reggio Emilia).

Similar toponyms are found in the same period in Friuli-Venezia Giulia, some of which have survived until today: Ronco degli Ulivari, Braida

³⁹ R. ERCOLINO, S. MAZZOCCHIN, *La coltura dell'olivo nell'area pedemontana trevigiana e bassanese tra età antica e basso medioevo: un'ipotesi dalle fonti scritte e materiali*, «Quaderni di Archeologia del Veneto», 16, 2000, pp. 172-183.

⁴⁰ G. PAVANELLO, *La storia della Laguna fino al 1140*, in *La Laguna di Venezia*, vol. II, p. III, tomo VI, Venezia 1935, p. 53.

⁴¹ Quoted in BASSI, *Il germoplasma dell'olivo in Lombardia*, cit., p. 2.

⁴² G. CHERUBINI, *Olio, Olivo, Olivicoltori*, in *L'Italia rurale del basso medioevo*, Bari 1985, p. 186; PINI, *Due colture specialistiche del Medioevo*, cit., pp. 129-131.

⁴³ L. CASTELLETTI, E. CASTIGLIONI, M. ROTTOLI, *L'agricoltura dell'Italia settentrionale dal Neolitico al Medioevo*, In: *Le piante coltivate e la loro storia*, a cura di O. Failla e G. Forni, Milano 2001, p. 76.

⁴⁴ O. ROMBALDI, *L'agricoltura nell'area matildica: l'Emilia*, «Studi Matildici», biblioteca, nuova serie, n. 44, Modena 1978, p. 352.

⁴⁵ TONIOLO, *La distribuzione dell'olivo*, cit., p. 70

⁴⁶ A. CORRADINI, *Immagini della storia di Albinea documenti e fotografie inedite della nostra terra*, Reggio Emilia 1979, p. 34.

degli Olivi, Oleis (the latter to name a whole town, still existing and that was already a *villa* in XI century), etc.⁴⁷.

In 1151 Vincenzo of Prague by describing the progress toward Garda of the army of Frederick I Barbarossa, writes that he marched «inter olivas splendidissimas» (among splendid olive trees) and that his soldiers cut «olivas preciosissimas ad focum et ad equorum stabula...» (precious olives utilised for fire and horse fodder); which apparently enraged the people of Verona⁴⁸.

The reason for the increasing interest for olive oil between Antiquity and Middle Ages is the extensive use made in catholic liturgy of the olive oil (unctions, church lighting) and of olive leafy branches (Palm Sunday), which add to the use as food, which was quite limited and confined to the upper classes, especially in Northern Italy⁴⁹. Its use as everyday lighting does not seem to have been very widespread, as night illumination was not common⁵⁰. The liturgical use of oil instead was very important and required large oil supplies, if we consider the constant illumination that large churches required⁵¹, and that one litre of oil would give 250-300 hours of lighting⁵². Another aspect to be considered is that until the Reformation also Northern Europe churches were supposed to utilise olive oil, and Northern Italy oil production participated to the trade towards the North. Minor, but locally relevant (as in Florence), uses of oil were in the wool industry, to lubricate the fibers of wool before carding and spinning, in medicine, in skin care, in candle and soap-making⁵³.

It is demonstrated that in the centuries in which olive cultivation spread in the North its consumption as food had not increased⁵⁴, although its presence must have determined a return to some culinary use.

⁴⁷ BATTIGELLI, *Ai limiti dell'areale*, cit., p. 77.

⁴⁸ VARANINI, *L'olivicultura e l'olio gardesano*, cit., p. 153.

⁴⁹ The issue of oil use in Antiquity and Middle Ages is complex and depending on locations, social groups, and time, but its consumption as food has always been present. An example is given by a donation of the Bishop of Brescia, Ramperto, to the church of S. Faustino, in 841, of land by Garda «propter oleum vero ad luminaria aecclesiae et fratrum necessitatem» (hence as food). *Ivi*, p. 135, footnote 16.

⁵⁰ BRUGNOLI, VARANINI, *Olivi e olio nel medioevo italiano*, cit., p. 86.

⁵¹ In larger churches up to several thousands of lamps were continuously lit; the Laterano Basilica in the V century had 8730 lamps: G. ARNALDI, *Preparazione delle lampade e tutela del Signore: alle origini del papato temporale*, «La Cultura», 24, 1986, p. 43.

⁵² M. C. AMOURETTI, *Le pain et l'huile dans la Grèce antique: de l'aire au moulin*, Paris 1986, p. 190.

⁵³ I. NASO, *L'olio nell'alimentazione e nella medicina medioevale*, in *L'alimentazione negli stati sabaudi*, «Cahiers de Civilisation Alpine», 1979, 8, pp. 7-29; G. PINTO, *Olivo e olio*, in: *Storia dell'agricoltura italiana*, vol. II, Firenze 2002, pp. 492-493.

⁵⁴ MONTANARI, *L'alimentazione contadina nell'alto medioevo*, cit., pp. 396-403.

An increase took place of oil trade after the XI century⁵⁵. This is likely to be the reason for a gradual shift of the culture, starting in the XI century, towards small and medium properties, when the large monasteries begun their decline; the same happened with the non ecclesiastical production, which until then had been rigorously reserved to the *curtes* and directly managed by the property⁵⁶.

Piedmont and Val d'Aosta

In the High Middle Ages the olive is relatively widespread in the North, and in the XII and XIII centuries there are numerous reports of olive groves in the entire arc of the Po plain: if in the VI century olive groves are reported in present day Swiss Canton Valais⁵⁷, it may not come as a surprise to learn that little more to the South, in the Val d'Aosta and Piedmont, olive trees are cultivated a bit everywhere; in the Val d'Aosta in Donnaz, Verres, Pont St. Martin it is generally on the left bank of the river Dora: the presence of trees in these territories is testified for the first time in an act of donation of 515, where Sigismund, king of Burgundy, just converted to Christianity, donates various lands among which olive groves in Val d'Aosta⁵⁸. By the end of the XVIII century the olive was still cultivated in the Basin⁵⁹.

In Piedmont trees are in the Canavese district and around Biella (Ivrea, Biella heights), where numerous documents and land registers are available between 1200 and 1700: an order of Credenza (Council) of Ivrea stated that all who were owners of heaths or vineyards on the morainic hills of the Serra were required to grow at least one plant of olive or almond for each *sapatura* (the *sapatura* is an ancient measure of land area in Piedmont, equivalent to the amount of land that a man can hoe in one day, and equals approximately 300 square meters)⁶⁰. The Municipality, for each plant reaching the fruiting stage, promised a prize of two deniers (pence), and for their protection forbade the pasture in soils with olive

⁵⁵ BRUGNOLI, VARANINI, *Olivi e olio nel medioevo italiano*, cit., p. 29, and 68-81.

⁵⁶ *Ivi*, p. 24.

⁵⁷ G. DONNA D'OLDENICO, *Notizie storiche sulla coltivazione dell'olivo in Piemonte*, «Annali dell'Accademia di Agricoltura di Torino», 1944, 87, pp. 61-63.; P. PEOLA, *La coltivazione dell'olivo in Valle d'Aosta*, «Malpighia», XXIV, 1911, pp. 156-157.

⁵⁸ CAVALLERO, *Gli olivi in Piemonte: cenni storici*, cit., p. 1.

⁵⁹ J. P. TRÈVES, *Petite flore médicale piémontaise*, Torino 1904, p. 285.

⁶⁰ PEOLA, *La coltivazione dell'olivo in Valle d'Aosta*, cit., p. 157

trees and almond trees. Again in Ivrea an edict of 1329 forbade the sale of olive plants to foreigners, and another of 1341 ordered the landowners of more than one *jugerum* (a quarter of an hectare) in the municipalities of Bollengo, Palazzo, Burolo and Piverone to plant 10 olive and almond trees⁶¹. The presence of trees in the Canavese area is also documented for the following century: an edict of 1449 promised awards to the owners of fruiting olive groves, while in Chiaverano a statute sanctioned, among the various rules, the distance to be kept between private soil and public roads, quoting the olive as one of the species cultivated in such soils⁶². Again, in the XV century the land register of Chivasso recorded in the municipalities of Vestignè, Strambino and Parella toponyms such as Regione d'Oliva and Giardino d'Oliva⁶³.

The olive was also present in the Turin district, where olive groves are reported in Castelvechio of Moncalieri, Rivoli, Val di Susa and Val Pellice⁶⁴: it was in a period of rising temperatures, between 1545 and 1564, that the olive tree appears to have been introduced in Val Pellice. According to a study of Malan⁶⁵ the material arrived from the nearby Provence in mid XVI century, and olive culture was still there in the XVII century: this is a quite unique occasion, in which the origin of the plant material is documented. In Turin on February 7, 1369 a statute is issued which requires olive trees and almond trees to be planted by anyone who owns vineyards⁶⁶; the Criminal Statutes of Chieri, of the same century, impose serious penalties on whoever uproots, steals or damages olive trees, and if he cannot pay the fine «ponatur ad berlinam sine remissione per tres dies continuos» (be put in the pillory uninterruptedly for three consecutive days)⁶⁷.

The maximum diffusion of the cultivation of the olive tree in Piedmont, as indeed in most of the northern areas where it had been introduced, occurred in the second half of the XIII century, when many statutes ordered the planting of olive trees in the foothills that go from Langhe to Monferrato, reaching, more to the north, areas with microclimates more

⁶¹ NASO, *L'olio nell'alimentazione e nella medicina medioevale*, cit., p. 419.

⁶² CAVALLERO, *Gli olivi in Piemonte: cenni storici*, cit., p. 4.

⁶³ *Ivi*, pp. 4-5.

⁶⁴ DONNA D'OLDENICO, *Notizie storiche sulla coltivazione dell'olivo in Piemonte*, cit., pp. 74-75.

⁶⁵ C. E. MALAN, *La presenza dell'olivo (Olea europaea L.) nella Val Pellice (Alpi Cozie)*, «Nuovo Giornale Botanico Italiano», 1938, XLV, pp. 228-230.

⁶⁶ NASO, *L'olio nell'alimentazione e nella medicina medioevale*, cit., p. 420.

⁶⁷ P. GRIBAUDI, *Olive e zafferano sulle colline di Torino*, «Bollettino storico-bibliografico Subalpino», 1897, 3, pp. 298-299.

compatible with olive growing, such as the Lakes Viverone and Orta, and the xerophitic Susa valley⁶⁸.

Olive trees have also been cultivated, more to the south, in the province of Cuneo in Saluzzo and Alba areas (Vezza d'Alba), at S. Stefano Belbo, in the Monferrato area, and in the province of Alessandria, if we must rely on toponyms in the municipalities of Avolasca and Frassinello⁶⁹. A document of February 20, 1167, testifies to the arrival of olives in Rocca delle Donne, when Guglielmo, Marquis of Monferrato, made a donation of several olive trees to the Church, and in particular to the Monastery of Santa Maria della Rocca, which had several possessions in Maranzana and Ronco, nearby locations⁷⁰. The importance acquired by the olive in the Casale area of Monferrato between the XI and XIII century is witnessed by the legal strifes, lasted several decades, between the municipalities of Gabiano, Fontanetto, Palazzolo and Rocca delle Donne for the possession of a vast territory called Giara or Oliveto, in which the olive trees were grown⁷¹.

In the region, however, the most numerous and ancient reports concern the Northeast, the lake district and the provinces of Novara and Verbania: documents that mention olive groves on Mont'Orfano near Lake Mergozzo are of 885, and of 1148 are those for Val d'Ossola; a little more recent are others that between the centuries X and XV testify to the presence of olive cultivation on Lake Maggiore (Cannero, Griffa and the Isola Maggiore of the Borromee Islands, named as «insula olivarum» in 998), on Lake Orta (Cureggio and Gozzano), and also in the surroundings of Novara (Cerano)⁷². On Lake Maggiore was also the small abbey named Masino or Missino («abbatiola in Italia sita, vinearum et olearum ferax») that the emperor Charles the Fat donated to the Monastery of St. Gallen (Switzerland) in 883⁷³. A relevant number of olive trees were likely to be cultivated in the riparian areas of Novara, where their presence in the XII and XIII centuries coincides exactly with the favourable climatic curve. At that time, Bishop Giovanni de Urbe, renewing the invitation to plant olive and almond trees on agrarian land to the extent of a plant for each pertica

⁶⁸ CAVALLERO, *Gli olivi in Piemonte: cenni storici*, cit., p. 2.

⁶⁹ *Ivi*, p. 5.

⁷⁰ *Ivi*, p. 3.

⁷¹ *Ivi*, p. 4.

⁷² DONNA D'OLDENICO, *Notizie storiche sulla coltivazione dell'olivo in Piemonte*, cit., pp. 78-79.

⁷³ A. BRUGNOLI, *Una specializzazione agricola altomedievale. L'olivicoltura Veronese nel sistema curtense dell'Italia padana. Archeologia e storia del territorio*, IV, Modena 1993, p. 118; B. ANDREOLI, *Paesaggi della vite e paesaggi dell'olivo nell'Italia dell'Alto Medioevo*, in *Olio e vino nell'alto medioevo*, Spoleto 2007, p. 324; G. M. VARANINI, *Viti e ulivi nei grandi patrimoni monastici*, in *Olio e vino nell'alto medioevo*, Spoleto 2007, p. 360.

(1/5 of an acre), threatened to inflict severe penalties on contraveners: 5 imperial denarii for each plant omitted⁷⁴. The presence of trees in Novara is however antecedent: in March 1100 the directives of Anselmo, Bishop of Novara, indicated as a canon in kind for the properties of Gozzano a certain amount of olive oil⁷⁵.

At least until the end of the XIV century the olive was well present throughout the Piedmont, and was reported in Buttigliera, Camino, Ceresole d'Alba, Corneliano and in the whole area of Roero, which was recovering from the struggles with Asti, dedicating all its resources to the cultivation of the hills, where the inhabitants had been forced to move⁷⁶. At Gabiano and Montiglio olive groves were frequent, but the presence of olive trees was also reported in Villadeati, Vignale, Viale, Viarigi, Ozzano, Revigliasco, Rosignano, Lu, Santo Stefano Belbo, Sinio and even in Murazzano, at a high elevation, but with a sunny and mild microclimate⁷⁷.

The fortunes of the olive seem to have lasted long: in 1566, on the occasion of the banquet offered for the coronation of Pius V, Tortona olives are served as a special treat. Some scholars believe that still in early 1700 in Piedmont olive growing was more important than viticulture, and that however olive oil was surely produced in considerable quantities, both for food use, although less than walnut oil, and as lamp oil for lighting⁷⁸.

In the first half of the XIX century the abbot Goffredo Casalis compiles a monumental dictionary of Piedmont sites in which the olive tree was cultivated, and notices that it is no longer present⁷⁹. The intense cold spells of the previous century (famous the one of 1709), and the fierce competition of other tree crops, all contribute to the neglect and abandonment of the culture. The final blow was determined by the winter frosts occurred between the end of the XVIII century and 1812: the winters were so rigid as to freeze the wine in the vats⁸⁰.

Such climatic conditions continued until the accomplishment of Italian unity; but although by 1860 the period of the great cold spells had ended, the olive stands were no longer renewed as commercially viable orchards, due to the successful and irreversible establishment on the slopes of

⁷⁴ CAVALLERO, *Gli olivi in Piemonte: cenni storici*, cit., p. 4.

⁷⁵ *Ivi*, p. 4.

⁷⁶ *Ivi*, p. 5.

⁷⁷ *Ibidem*.

⁷⁸ I. NASO, *Usi alimentari, dietetici e medicinali dell'olio alla fine del medioevo*, in *Olivi e olio nel medioevo italiano*, Bologna 1979, pp. 426-427.

⁷⁹ G. CASALIS, *Dizionario geografico storico statistico commerciale degli stati di Sua Maestà il Re di Sardegna*, vol. I e succ., Torino 1833-1856.

⁸⁰ CAVALLERO, *Gli olivi in Piemonte: cenni storici*, cit., p. 6.

the Piedmont hills of the grapevine, whose product proved to be far more profitable. In addition, the achievement of national unity would reduce the interest in producing olive oil in the north; as we will see also for the other northern regions, the railway connections, especially with Apulia, made the oil a far cheaper product, putting out of the market the less productive groves north of the Apennines.

Lombardy

The presence of the olive in Lombardy is less documented, in part because the region is far less hilly than Piedmont, in part, possibly, because the species was not considered as important as in other regions. The presence of etruscan settlements in the vicinity of today's Mantua in the V century BC might mean that olive was introduced at that time, but a certain presence of the tree is only documented for the roman period, i.e., starting in the II century BC⁸¹. The presence of olives is mostly recorded around the main lakes: Maggiore, Lugano, Como, Iseo and Garda; in a roman villa of the IV century excavated at Desenzano, on Lake Garda, was found an oil mill⁸². However, the alpine foothills, in particular those in the province of Brescia, appear to have been dotted with olive trees⁸³. The presence of olive trees on the shores of alpine lakes between Antiquity and Early Middle Ages is confirmed by a number of documents⁸⁴. The oldest mentions are of Claudian⁸⁵ (V century AD) and of Cassiodorus⁸⁶, of the VI century, with reference to Lake Como. In Campione (Lake Lugano) in the following century lived Totone, a Lombard lord who owned numerous olive trees on the shores of the lake, which allowed him to trade and make donations in oil to nearby churches⁸⁷. Such donations are relatively numerous in the Lombardy of the time⁸⁸. Nevertheless, olive culture does not seem to develop out of the lake districts in the following centuries.

⁸¹ CASTELLETTI, CASTIGLIONI, ROTTOLI, *L'agricoltura dell'Italia settentrionale dal Neolitico al Medioevo*, cit., p. 75.

⁸² G. AMIOTTI, G. LUCARNO, *L'olivicoltura in Lombardia*, Brescia 2014, p. 37.

⁸³ G. CHERUBINI, *Olio, Olivo*, Olivicoltori, cit., p. 186.

⁸⁴ BRUGNOLI, VARANINI, *L'olivo nei beni di una famiglia di tradizione longobarda del nord Italia*, cit., pp. 103-119.

⁸⁵ C. CLAUDIANUS, *De bello Pollentino sive Gothico*, 26, 319. Stilicho, heading to Raetia to fight the Goths (402), passed by the Larius (Lake Como) «protinus, umbrosa vestit qua litus oliva Larius».

⁸⁶ F. M. A. CASSIODORUS, 540. *Variae*, XI, 14.

⁸⁷ BRUGNOLI, VARANINI, *L'olivo nei beni di una famiglia*, cit., pp. 103-119.

⁸⁸ MONTANARI, *Tra lardo e olio*, cit., pp. 377-378.

Reports of Gallo and of Clementi⁸⁹ show that in Lombardy, as early as the Renaissance, the intensive use of morainic hills led to important works of terracing, used for the cultivation of vines, olives and citrus fruits⁹⁰. Besides, as far back as in 1288 Bonvesin de la Riva writes in «De magnalibus urbis Mediolani» that «olive berries are harvested in a number of places in our county although they are not extremely abundant»⁹¹. Certainly at that time the presence of the olive was far more widespread than today, if we are to trust reports mentioning the presence of the olive tree even in the Cremona area, plains close to the river Po⁹². But the main oil producing area remains the Lake Garda, which belongs for the most part to the Republic of Venice; Venetian officers, in the XVII century, a period of decline due to the recurrence of cold spells, describe the beauty of the olive groves around the lake, and the fact that its oil production is mostly destined to the German market⁹³.

Emilia Romagna

With regard to the Emilia-Romagna region, a testimony of the year 541 mentions olive groves in Rimini⁹⁴, and the documents concerning the presence of an olive industry in the eastern part of the region, Romagna, are abundant, such as those listed for the area of Castrocaro, from the X to XVI centuries⁹⁵. The area, though, as stated above, due to the proximity of the Adriatic Sea, has a climate and a position more similar to those of Central Italy regions; although Emilia and Romagna are parts of the same administrative unit, we will therefore concentrate on the former. The Romagna province of Ravenna though, in its Apennine districts, is more similar as to climate to Emilia, and nevertheless can boast a uninterrupted presence of the olive; in the years 1951-1962 under a church in Brisighella a roman oil mill was excavated, going back to the II century A.D.⁹⁶.

⁸⁹ Quoted in: O. MILESI, *Olivi ed olio in Terra Bresciana*, Brescia 1986, pp. 23-29.

⁹⁰ See also: D. BASSI, *Il germoplasma dell'olivo in Lombardia*, cit.

⁹¹ BONVESIN DE LA RIVA, *De magnalibus urbis Mediolani*, Milano 1974, pp. 84-85.

⁹² CASTELLETTI, CASTIGLIONI, ROTTOLI, *L'agricoltura dell'Italia settentrionale dal Neolitico al Medioevo*, cit., p. 76.

⁹³ P. LANARO SARTORI, *L'agricoltura e la pesca*, in *Atlante del Garda*, vol. II, Brescia 1992.

⁹⁴ L. RUGGINI, *Economia e società nell'Italia annonaria. Rapporti fra agricoltura e commercio dal IV al VI secolo d. C.*, Milano 1961, p. 431.

⁹⁵ E. CARUSO, *Note storiche sull'origine dell'olivicoltura a Castrocaro*, in *Oleum Castrocarj. L'oro verde nel cuore della Romagna*, Cesena 2009, pp. 15-35.

⁹⁶ P. MALPEZZI, *Relazione storica*, Brisighella 1992, pp. 1-2.

In a notarial deed of the VIII century found in the papers of Nonantola Monastery (Modena province), there are hints of an olive grove located near Monteveglio, between Modena and Bologna⁹⁷, and in particular it locates a place called “Casale Sociolo”, which in the following centuries will be referred to as Oliveto. In this deed (dated 6 March 776) Duke Giovanni of Persiceto transferred to the Monastery of Nonantola ownership of some lands «in pago Montebelio» (Monteveglio) specifying that the location was «oliveto circumdato»⁹⁸.

In this same territory olive growing was also attested by other documents such as, for example, a donation of the duke Orso dated December 30, 789, a similar act of the bishop Warino dated July 15, 1016⁹⁹ and a document of donation by Charlemagne in favor of the Church of Modena. In this latter document, dated 822, is clearly specified the donation of an olive grove located next to the castle of Monteveglio¹⁰⁰.

A document of 878 implies the presence of an olive grove in the Piacenza territory, as it mentions a rent paid in oil, like a *polittico* (inventory) of Bobbio Monastery of the X century, which similarly describes a payment from the Parma area; in particular, this testimony, though fragmentary, is almost unique since it specifies the production of the olive grove, which is around 500 pounds of olive oil¹⁰¹. Bobbio Monastery also owned in the same Parma province a small grove producing 30 pounds of oil; what makes this information interesting is the location, a small hamlet called Calice, near the town of Bedonia, which spans between 727 and 874 m asl¹⁰².

In this historical period with ever greater frequency there are passages of ownership, due to the systematic hierarchical rotation, typical of the Middle Ages. The documents drawn up as a result of the arrangements between parts often report the presence of toponyms directly linked to olive growing; such is the case of Castro Oleriano, passed over to Parma in 944¹⁰³. The presence of olive trees in the Parma area is confirmed, in the same period, by a donation of Lothair II of Italy to the earl Manfredi, in 948¹⁰⁴. In the province of Reggio Emilia, in the surroundings of Albinea, there is

⁹⁷ A. GAUDENZI, *Il monastero di Nonantola, il ducato di Persiceto e la Chiesa di Bologna*, «Bull. Ist. Stor. Ital.», 1916, XXXVI, pp. 19-24.

⁹⁸ R. PASSERI, *La seconda Canossa. Storia di Monteveglio e di Montebudello*, Bologna 1978, p. 185.

⁹⁹ *Ibidem*.

¹⁰⁰ E. P. VICINI, *Registro della chiesa cattedrale di Modena*, Modena 1931.

¹⁰¹ PINI, *Due culture specialistiche del Medioevo*, cit., p. 130.

¹⁰² A. CASTAGNETTI, M. LUZZATI, G. PASQUALI, A. VASINA, *Inventari altomedievali di terre, coloni e redditi*. Roma 1979, pp. 132, 154.

¹⁰³ O. ROMBALDI, *L'agricoltura nell'area matildica: l'Emilia*, Modena 1978, p. 353.

¹⁰⁴ ANONYMOUS, *I diplomi di Ugo e Lotario, di Berengario II e di Adalberto*, Roma 1924, p. 269.

an undisputable presence of olive groves, confirmed by several testimonies: that of Henry II of Germany, a diploma of 1002, again mentioned in 1072 by Pope Alexander II, which confirms to the monastery of St. Prospero the property of «S. Maria di Pissignano coll'oliveto attiguo (with the adjacent grove)», that only a year later, in 1073, the Reggio Emilia bishop Gandolfo cites as «S. Maria de Oliveto»¹⁰⁵. Another document of 1258, while entrusting to a Giacopino da Regnano a grove in the same area, specifies «super quam sunt X pedes olivarum» which will provide the Cathedral of Reggio Emilia «septem libras grossas olei boni et puri et bene mensurati et conductum regii»¹⁰⁶. The main activity of these monks was likely to be olive cultivation, which «was once abundant in the valleys of Montericco and Borzano exposed to south-east and sheltered from the winds and the frosts»¹⁰⁷. Even today in these areas trees can be found that for centuries have provided valuable lamp oil to the churches of Reggio and twigs to the parishioners of Montericco during the Easter period¹⁰⁸. Another location of the same territory in which oil is produced is Cortenova (1102), and in a document of Nonantola Monastery of 1115 are mentioned Castro Oliveto and Corte dei Monti Oliveti¹⁰⁹.

A measure of 1136, decreed by the archbishop of Ravenna, to whom at the time the church of Bologna was subject, granted to the priests of Santa Maria del Reno the privilege on all possessions which they already controlled in the area of Bologna, including some «...vineas et oliveta...»¹¹⁰.

Payments in oil are mentioned in agrarian contracts of 1161 relating to the territory of Montecatone (near Imola, Bologna province)¹¹¹, while documents that date back to the XII and XIII centuries mention the cultivation of olives in plots of land belonging to the parish of San Cassiano (Imola)¹¹².

The existence of a lively olive cultivation in the area of Reggio Emilia is documented by a transaction preserved in the Capitulary Archives of the

¹⁰⁵ P. BIGI, *San Geminiano in Montericco*, Reggio Emilia, Tip. Notari, 1975, p. 9. The same seal indicates the purpose of the oil obtained from the grove «ad luminaria eidem Ecclesiae datum esse dignoscitur».

¹⁰⁶ *Ivi*, p. 9. The presence of producing olives must have been continuous through the centuries, if only in 1930 the owner of a large estate was relieved from the payment of a tithe of one barrel of olive oil to the Cathedral. *Ivi*, p. 15.

¹⁰⁷ CORRADINI, *Immagini della storia di Albinea documenti e fotografie inedite della nostra terra*, cit., p. 33.

¹⁰⁸ *Ivi*, p. 34.

¹⁰⁹ ROMBALDI, *L'agricoltura nell'area matildica*, cit., p. 350.

¹¹⁰ Investitura eccl. N. 93, anno 1136, Archivio Diocesano di Bologna, in BALDINI, *Notizie sull'ovicoltura Bolognese*, cit.

¹¹¹ S. GADDONI AND G. ZACCHERINI, *Chartolarius Imolense*, Imola 1912, p. 271.

¹¹² P. MANCINI ET AL., in BALDINI, *Notizie sull'ovicoltura Bolognese*, cit., pp. 9-10.

Cathedral of Reggio: in the act (no. 553) is mentioned a sale «in Vergnano on December 29, 1212, of a land with olive trees» by Guido of Marclochi from Borzano¹¹³. Living testimonies of the presence of the species are still present today in the vicinity of the old Church of Montericco of Albinea (called “Madonna dell’Oliveto”), near the Bianello Castle and in the area of Canossa, in the form of centuries old trees¹¹⁴.

In 1258, a statute of the Republic of Parma ordered the planting, in the villas of the whole territory excluding the plains, of olive trees: 20 plants the first year, then 10 each year. The specifications imposed by the *podestà* (mayor) Giberto da Gente also indicated all the localities in which the trees had to be cultivated, most of which can still be identified today¹¹⁵.

As a result of this statute Bianchedi, in 1880, writes that «after a few lusters you could see the slopes of many of our hills populated of a lush vegetation of trees which thrived for more than two centuries»¹¹⁶.

The presence of olive cultivation in the Parma State is also witnessed by mentions that are made of it together with other admittedly important crops: «in 1234 the frost causes freezing of grapevines, figs and olives»¹¹⁷. Cold spells are the main cause of the alternating fortunes and presence of olive trees in Emilia; climate monitoring from XII to XVII century in the Bologna area¹¹⁸, and afterwards until the XIX¹¹⁹, indicates the occurrence

¹¹³ I. BASENGHI, U. PELLINI, *Alberi a Scandiano*. Casalgrande 2003, p. 61.

¹¹⁴ A. FABBRI, *Olivo in Italia settentrionale*, in M. PISANTE, P. INGLESE, G. LERCKER (eds.), *L'ulivo e l'olio*, Milano 2009, pp. 312-325.

¹¹⁵ «Capitulum quod Potestas teneatur facere plantari et allevari, beneficiari et manteneri XX pedas olivarum in primo anno et proquolibet foco infrascriptarum terrarum, et post modum in singulis annis X pedes. Quae villae sunt istae: Bazanum, Guardaxonum, Traversetulum, Castilionum, Rivalia, Mulazanum, Cazola de Rivalta, Lisignanum, Torclarea, Arolis, Casaticum, Langhiranum, Mataletum, Castrum, Rignanum, Strognum, Padernum, Cirlianum, Castrum de Felino, Castrum de Tullorio, Munte Pallerium, Sanlarium, Ceretulum, Sanctis Vitalis Bagantiae, Limide, Maliatricum, Nivianum, Segalaria, Furnovum, Casellae de Furnovo, Fosium et omnes aliae terrae ultra Taronum et ultra Cenum usque ad planum per totam parmexanam». A map has also been drawn on the distribution of the crop in the province, see: P. BETTA, *Parma e il suo contado nel XIII secolo*, fasc. 1, 1973, pp. 22-41.

¹¹⁶ C. BIANCHEDI, *L'Olivo sulle colline parmensi*, Parma 1880, p. 21.

¹¹⁷ M. DALL'ACQUA, M. LUCCHESI, *Parma città d'oro*, Parma 1979, p. 243

¹¹⁸ BALDINI, *Notizie sull'olivicultura Bolognese*, cit., pp. 28-29.

¹¹⁹ P. PREDIERI, *Intorno la variazione che sembra venuta nel clima bolognese. Saggio storico-meteorologico*. in *Mem. Ace. Sci.*, Bologna 1860, p. 118; L. RESPIGHI, *Notizie sul clima bolognese dedotte dalle osservazioni meteorologiche fatte nell'osservatorio della Pontificia Università di Bologna nel quarantacinquennio 1814-1843*. in *Memorie dell'Accademia delle Scienze dell'Istituto di Bologna*, Memoria II, 1861, p. 3; G. BORTOLOTTI, *Le nevicate del 1829-30 a Bologna nelle cronache del Rango e nelle illustrazioni del tempo*, Bologna 1958; M. BRUNETTI, L. BUFFONI, G. LO VECCHIO, M. MAUGERI, T. NANNI, *Tre secoli di meteorologia a Bologna*, Milano 2001, p. 95.

of exceptional climate events (some off season), with particular reference to temperature and snowfall.

In the XIV century two Bologna authors, Pier de Crescenzi and Paganino Bonafede, write two agronomy treatises which receive relevant interest, and both devote particular attention to the olive tree. Paganino Bonafede, in his *Thesaurus rusticorum* of 1360, gives a thorough and original description of the practice of grafting as a method of propagation, but argues that for the olive the propagation by cuttings is to be preferred; then he gives advice on pruning and manuring¹²⁰. And finally, if it is true what he writes as a conclusion of his poem, that all things he writes on have been tested and corrected, we must argue that in Bologna and the surrounding areas there was a relatively relevant number of olive trees. As a matter of fact, for other authors, throughout the middle ages the Reno valley until Vedugghe-to was «covered with olive groves»¹²¹.

In 1387 in Albinea (*ad Puzalium*) for five years a land is rented that is «casamentiva, clausurativa, vineata, olivata, figata», i.e., a house, closed with vineyards, olive and fig trees¹²². The Reggio Emilia hills appear, in this period, to be cultivated with olive and fig trees; one of these locations is even called Figarium: in 1390 six *bifolche* (about two hectares) of land are given as sharecropping for one year, renewable, land that is «olivata figata in loco dicto ad Figarium»; in the document specification is made that the sharecropper will give to the landlord half of the wheat, oil and figs, and will receive five florins for *auxilium laborandi*¹²³.

An example of the alternating fortunes to which this culture was subject in time is the fate of three groves owned by the monastery of San Procolo in Bologna at the end of the XIII century (two of them located on the hills just south of the urban area, the third in a hilly area of Casalecchio dei Conti); less than a century later nothing was left of them but a «olivetum satis desolatum et triste»¹²⁴. A similar fate was to befall a grove located in the Savio valley, which in the XVI century had disappeared to give way to vineyards and woods¹²⁵.

¹²⁰ P. BONAFEDE, *Thesaurus rusticorum*, 1360, lines 51-58: «De li olivi; de le grane di olive chative 51 ogni arboro che voi aledamare 52 ledame schietto mai non li dare 53 ma meseda cun tanta terra in prima... 54 li olivi vecchi si volon potare d'ogni seccume 55 ...poi mitti su una stuora (le olive) 56 e ben d'intorno le fassa 'lora 57 sì che non tochino la terra né 'l muro. 58».

¹²¹ M. RUBBINI, *Il borgo del Sasso tra Medioevo e contemporaneità: da Castel del Vescovo a Sasso Marconi*, Bologna 1999, p. 71.

¹²² U. PELLINI, *Alberi nella storia di Reggio*, Reggio Emilia 1996, p. 41.

¹²³ *Ivi*, p. 42.

¹²⁴ PINI, *Due colture specialistiche del Medioevo*, cit., p. 133.

¹²⁵ *Ivi*, p. 133.

As a result of the generalized reduction of olive growing in the whole of Northern Italy, analysed elsewhere, the historical records become increasingly sporadic and olive growing is cited in the works of a few authors, such as Alberti¹²⁶, mentioning olive trees in the Bologna province, which produced «those olives which are highly considered all over Italy, and particularly in Rome».

Mentions of this sort of events are made by Garzoni (1503), Bussato (1578) and Tanara (1644)¹²⁷; the latter reports on the complete abandonment of olive growing in the Bologna province, due to the displacement of agriculture toward the plain. In 1688 in a pen sketch is shown the presence of trees between the church of S. Maria di Monteveglio and the new road called Via del Calvario¹²⁸.

The winter of 1709 was characterized by an exceptional frost, according to Calindri¹²⁹, and caused the death of over 5000 trees in Bologna alone.

Between 1772 and 1785 the average olive production in the province of Bologna was 6000 pounds per year, it reached the 8000 pounds in 1829, but in 1837 a collapse of production (3800 lbs) took place. Very interesting is the existence, in 1831 in Bologna, of three «mole da olio» (oil stone mills)¹³⁰. The importance of olive oil was still present among the agronomists, if a few years before national unification a recovery of the industry is advocated, with technical considerations that can be shared even today¹³¹. Also in the Piacenza province up to two hundred years ago there were mills, according to a document of 1821 of Napoleonic Cadastre preserved in the Piacenza Historical Archive in which, for tax reasons, are listed all the possessions of the Municipality of Nibbiano: in it the existence of at least an oil press in Trevozzo is recorded¹³². Very rare are mentions of oil mills, although in Fontanellato (Parma) the existence of two oil presses is mentioned in a book of 1696, although whether the oil was of olive

¹²⁶ F. L. ALBERTI, *Descrittione di tutta Italia nella quale si contiene il sito di essa, l'origine e le signorie delle città & delle castella*, 1550, carta 293.

¹²⁷ G. GARZONI, *Commentari de rebus bonionensibus*, Bologna 1503; M. BUSSATO, *Prattica historiatà dell'instare gli arbori in diversi modi, in varij tempi dell'anno e conservarli in più maniere*, Ravenna 1578; V. TANARA, *L'economia del cittadino in villa*, Bologna 1644, p. 608.

¹²⁸ BALDINI, *Notizie sull'olivicultura Bolognese*, cit. pp. 12-13.

¹²⁹ S. CALINDRI, *Dizionario corografico, georgico, orittologico, storico ecc. della Italia*, 6 vol., Bologna 1785.

¹³⁰ BALDINI, *Notizie sull'olivicultura Bolognese*, cit., p. 16.

¹³¹ A. RANUZZI, *Sulla opportunità di promuovere la coltivazione dell'olivo nella provincial Bolognese. Discorso letto alla Società Agraria di Bologna, il 18 febbraio 1844, dal socio onorario Conte Annibale Ranuzzi*, «Mem. della Società Agraria della Prov. di Bologna», II, 1844, (1845), pp. 243-252.

¹³² ANONYMOUS, *Gli ulivi dei colli piacentini*, Ziano Piacentino 2002.

or from other sources is not specified¹³³. However, the presence of 2 oil presses in a small medieval town of Parma province is further testimony of the importance of local oil production in XVII century hinterland states of northern Italy.

In Reggio Emilia province, more precisely in the area of Quattro Castella (Bianello castle), around 1850 olive trees are planted around the castle as a response to the increase in the price of oil by the Duke of Pontremoli, the main supplier at the time¹³⁴.

Finally, the work of eng. Camillo Bianchedi should again be mentioned, who in 1880 wrote, with the intention of promoting olive cultivation, the pamphlet «L'olivo sulle colline parmensi»; for him this ancient crop, of which in the Parma hills remained as a testimony «scattered olive trees, and not a few also lush and secular, undoubtedly indicating the chance for a more extended and profitable cultivation of the fruit crop», could be profitably restored¹³⁵.

Bianchedi's wish had a recent follow up, in a 15 year research which involved 4 provinces of West Emilia (Piacenza, Parma, Reggio Emilia and Modena), which located hundreds of ancient olive trees, belonging to both known and unknown cultivars, representing an inexhaustible source of useful characters for the improvement of the adaptation of the fruit crop to northern environments¹³⁶.

Venetia and Trentino-Alto Adige

In Veneto the cultivation goes well north of the current growing areas of Lake Garda and of the Sarca plain, to reach the lakelet of S. Massenza, and hills near Bolzano (Adige valley)¹³⁷. The Lake Garda, however, which

¹³³ C. G. FONTANA, *Ragguaglio della Rocca di Fontanellato e d'ogni altra sua circostanza*, in: *Pallade segretaria o sia prima spedizione di lettere missive scritte da Carlo Giuseppe Fontana, accademico faticoso di Milano ed Errante di Brescia*. Parma, 1696, p. 382.

¹³⁴ U. PELLINI, Personal communication, 2006.

¹³⁵ BIANCHEDI, *L'Olivo sulle colline parmensi*, cit., p. 23.

¹³⁶ T. GANINO AND A. FABBRI, *Genetic characterization of Olea europaea L. germplasm in Northern Italy*. Proceedings of the 5th International Symposium on Olive Growing, «Acta Horticulturae», 791, 2008, pp. 459-464; D. BEGHÈ, A. FERRARINI, T. GANINO, A. FABBRI, *Molecular characterization and identification of a group of local Olea europaea L. varieties*, «Tree Genetics & Genomes», 7 (6), 2011, pp. 1185-1198.

¹³⁷ G. CHERUBINI, *Olio, Olivo, Olivicoltori*, in *L'Italia rurale del basso medioevo*, Bari 1985, p. 186; G. MARCUZZI, *Il rapporto uomo-olivo: un problema di ecologia umana*, «Ann. Mus. Civ. Rovereto», vol. 12, 1996, p. 34. A. BRUGNOLI, *Dal Mediterraneo all'Europa: L'olivicultura di frontiera nell'alto medioevo*, in *Olio e vino nell'alto medioevo*, Spoleto 20-26 aprile 2006, 2007, pp. 125-129.

in the first centuries of the Christian era does not seem to host olive cultivation, becomes in a few centuries one of the most important areas of oil production in the Early Middle Ages. In the centuries IX and X is documented the existence around the Lake of olive groves belonging to the bishoprics of Verona, Vicenza and Reggio Emilia, to the monasteries of S. Colombano of Bobbio, S. Martin of Tours (France), and of S. Zeno and S. Maria in Organo, the latter two of the Verona Province (the earliest document attesting the presence of olives is of 771)¹³⁸. The monastery of S. Giulia of Brescia had nine *curtes* producing oil, five of them on Lake Garda, three around Brescia, and one on Lake Iseo; their production was around twelve quintals of oil per year¹³⁹.

The olive trees remain relatively abundant on the Verona and Vicenza hills, in the Colli Berici and Colli Euganei, and east to Bassano and the slopes of the Brenta Valley, places in which olive growing has never been interrupted, and indeed is presently enjoying a vigorous revival. In acts of land lease of 1238, concerning the possessions of S. Maria in Organo in Valpantena near Verona, the rent of two crofts is mentioned, one with grapevines and olive trees, and the other with olive trees only¹⁴⁰. The Statute of Castelnuovo Veronese, located on the morainic amphitheatre of Lake Garda, of 1260, contains a chapter in which a heavy fine is threatened against those who «... faciet ire aquam oliue in alias terras»¹⁴¹, i.e., for those who pour out the vegetation water derived from oil extraction on other people's land, since vegetation waters are considered polluting. Documents relating to Panego (1334) and Clozago (1343) in the Verona area testify to the presence of trees also in these areas, where the olive was usually supporting grapevines. Reports of olive cultivation can be found with increasing frequency in the XV century in the whole districts of Garda and Verona, where up to then, favoured by laws, it had apparently reached a large extension¹⁴². On the Brescia side (west) of Lake Garda Marin Sanudo¹⁴³ writes that between Salò and Maderno «you ride all the time among olive groves, they seem forests». A lease of sharecropping of 1458 in the Verona district obliges the sharecropper not to sow under the

¹³⁸ G. M. VARANINI, *Olio ed olivi del Garda veronese*, Verona, pp. 3-6; VARANINI, *L'olivicultura e l'olio gardesano*, cit., pp. 132-138.

¹³⁹ PINTO, *Olio e olio*, cit., 2002, p. 494.

¹⁴⁰ TONIOLO, *La distribuzione dell'olivo*, 1914, cit., p. 71.

¹⁴¹ *Ivi*, p. 72.

¹⁴² *Ivi*, p. 73.

¹⁴³ MARIN SANUDO IL GIOVANE, *Itinerario per la terra ferma veneziana nel 1483*, Padova 1848, pp. 87-88.

olive trees, which proves that there were also specialized olive groves, and not just scattered trees. Verona olive groves were badly hit by the frosts of 1431 and 1549, together with grapevines and other trees¹⁴⁴.

In the Bassano (Vicenza) district the diffusion of olive cultivation is thought to have started during the roman age, with the settlement in the area of the "Gens Bassia", which possessed the roman agrarian culture¹⁴⁵. In the transmission of "levels" (land leases), recorded in medieval documents of the Pieve di Solagna, we find the statement that a number of olive trees were at the parish disposal¹⁴⁶. A similar testimony can be found later in the annals of the parishes, a confirmation of the presence and the importance of this culture. Even the popular tradition is particularly fond of this plant: the sacred and miraculous crucifix of Pove, carved in a single night by a mysterious pilgrim, is in olive wood¹⁴⁷.

Another important district where olive growing has been widespread, and above all uninterrupted until present, is the group of hills of volcanic origin located in the middle of the plain just south-west of the city of Padua, the Colli Euganei. The documents attesting the presence of olive cultivation in this area date back to the XI century, and the olive is later mentioned in the famous Marin Sanudo travel report of 1483: «...bellissimi et alti monti i qualli sono fructiferi fino alla summità del cacumine de olivari et de vigne perfecte...»¹⁴⁸. In 1840 the surface covered with olive groves was still considerable, 343.8 hectares, which by 1990 had shrunk (little more than 100 ha.), but not disappeared¹⁴⁹.

Beyond the Piave river, although various literary sources¹⁵⁰ document the importance of Aquileia as a centre for oil trade in Roman times, we must wait for the year 1140 to have an undisputed record on the presence

¹⁴⁴ L. MOSCARDO, *Historia di Verona*, Verona 1668, pp. 218, 276 and 416.

¹⁴⁵ G. MACULAN, *L'olivicultura nella leggenda, nella storia, nella tradizione*, in *L'olivo nella pedemontana del Grappa e del bassanese*, 2005, p. 4. <http://www.comunitamontanadelbrenta.vi.it/ambiente/olivo.htm>

¹⁴⁶ *Ivi*, p. 4.

¹⁴⁷ Tradition wants the crucifix, cm 132x110, carved in one night by a czech (or austrian, or flemish) pilgrim, on his journey to Rome for the jubilee of the year 1300, to thank for the hospitality received.

¹⁴⁸ A. TODARO, *L'olivo nei Colli euganei tra storia e leggende*. Proceedings, Convegno: L'olivo ecologia e filosofia di un albero, Abano Terme, 19/1/1996, 1996, pp. 13-28; MARIN SANUDO IL GIOVANE, *Itinerario per la terra ferma veneziana nel 1483*, cit., p. 92.

¹⁴⁹ M. FERASIN, P. TONUTTI, *Al di là dei confini di Toscana: tradizione e sviluppo dell'olivicultura nei Colli Euganei*, in G. LONGO, P. SCARPI (ed.), *Tutte le sfumature del verde. Qualità dell'olio e purezza del paesaggio* Padova 2002, p. 64.

¹⁵⁰ Such as STRABO, *Geographica*, in *Della geografia di Strabone*, Milano 1833. Vol. 3, V, pp. 1. 8; PLINIUS, *Naturalis Historia*, XV, p. 8.

of olive trees growing in Friuli, which is a donation to a monastery¹⁵¹. In the following centuries (XIII-XV) the documents become numerous, even if the acreages and yields listed remain modest, a clear sign, after all, of the importance attached to the culture and the product, which are safeguarded in spite of obvious environmental difficulties and low productivity. The cultivation of the olive tree appears to be present along the piedmont arc that goes from the western hills of the Pordenone province, to the lower Carnic and Giulie Alps, encompassing the morainic amphitheatre located between S. Daniele, Gemona and Udine. In the Collio (far east), in particular, the olive seems to have found a relatively favourable environment already in the XII century¹⁵², and oil was still produced there in the XIX century; an activity that began to flourish again only in recent decades.

The heights of Gorizia and Monfalcone continue the thin strip of olive culture that, through the well-positioned Trieste area¹⁵³, merges with the traditional Istrian olive industry.

Ups and downs of the olive industry in northern Italy

The virtual absence of olive tree cultivation in the Po valley during the Roman period was due to the fact that olive oil could be imported quite easily from regions where these trees were more productive and easier to grow. This condition came to an end when the Roman commercial network collapsed, together with the overland transportation system. As a consequence in loco production remained the only alternative, if olive oil was to continue to be used in this area during the Early Middle Ages.

It is not clear to which extent the consumption of oil as food was important in the Po valley in Roman times. The use of animal fats was widespread, especially since the arrival of Celts, and this habit would certainly be reinforced by the settlement of Germanic populations. The use of lard for cooking has since been present in Italian culinary habits until relatively recent times, also in the Centre and South of the country. Nevertheless, it appears as a paradox that in the North there was, in the passage from Antiquity to Early Middle Ages, a tendency towards a more or less ca-

¹⁵¹ BATTIGELLI, *Ai limiti dell'areale*, cit., pp. 76-77.

¹⁵² *Ivi*, p. 78.

¹⁵³ In spite of the Bora, the gusty northern wind. Even for Trieste a medieval statute exists, of 1318, regulating the use of presses for olives, M. RONDÌ, E. PAROVEL, *L'ulivo, un albero dalle radici antiche*, in *Trieste, la tradizione a tavola*, Trieste 2011, pp. 131-132; BATTIGELLI, *Ai limiti dell'areale*, cit., pp. 80-81.

pillary presence of the olive in all suitable environments. This apparent paradox can be explained by the fact that this oil continued to be needed for a whole series of liturgical or para-liturgical purposes and thus could hardly be replaced with anything else. These uses went from the purely symbolical quantities needed for administering various sacraments to the much greater ones needed for church illumination and the diet practiced by the monastic orders¹⁵⁴. This explanation is more reliable than that based on the onset of the medieval climatic optimum (VIII-XIII centuries)¹⁵⁵. As a matter of fact it does not appear to exist a close connection between climate variations and olive diffusion: stages of expansion occur in periods of uncertain or worsening climate, while those of reduction of plantings appear more closely related to major economical and political events¹⁵⁶. It must also be remembered that a rigid definition of climatic periods, valid for large areas, and homogeneous in their characteristics, have recently been questioned by several authors¹⁵⁷.

At any rate, during the centuries from the decline of the Roman Empire until the dawn of the new millennium, references to the olive tree are relatively rare. This does not appear to depend on just a shortage of documents; wherever olive and olive oil are mentioned, as a rule only a small number of trees are reported, with productions of few pounds of oil per soil unit. If compared to the republican and imperial Roman times, olive diffusion had drastically shrunk all over Italy, also due, if anything, to a marked reduction of population, to the advantage of abandoned lands, forests, pastures, swamps¹⁵⁸.

Although in the VIII century there are small olive oil productions among Lombard farmers, the recovery of olive growing in the Early Middle Ages mainly depends on the large monasteries, particularly in the Carolingian Era in the IX and X centuries. In the Po Valley the product is a fundamental one for the export towards urban markets, more so than wheat, which gives poor yields. Along the alpine lakes, above all those of Como, Iseo and Garda, which enjoy a milder climate, *curtes* specialised in

¹⁵⁴ CHERUBINI, *Olio, Olivo, Olivicoltori*, cit., p. 181.

¹⁵⁵ PINNA, *Le variazioni del clima, dall'ultima grande glaciazione alle prospettive per il XXI secolo*, cit., p. 126; ANDREOLLI, *Paesaggi della vite e paesaggi dell'olivo nell'Italia dell'Alto Medioevo*, 2007, cit., p. 333; MONTANARI, *L'alimentazione contadina nell'alto medioevo*, cit., p. 457.

¹⁵⁶ BRUGNOLI, *Dal Mediterraneo all'Europa: L'olivicultura di frontiera nell'alto medioevo*, cit., pp. 123-124.

¹⁵⁷ P. NANNI, *Per un quadro ambientale e biologico: il periodo caldo medievale e la variabilità climatica*. 2017, in press.

¹⁵⁸ PINTO, *Olivo e olio*, cit., p. 489; A. J. GRIECO, *Olive tree cultivation and the alimentary use of olive oil in Late Medieval Italy (ca. 1300-1500)*, BCH Suppl. XXVI, 1993, p. 299.

oil production are founded by important ecclesiastical owners, such as the abbeyes of Santa Giulia of Brescia and of Bobbio¹⁵⁹.

Oil productions must be particularly important, and apparently of high value, if the groves are as a rule managed directly by the property, and when the peasants cultivate them under a type of sharecropping system, oil is usually delivered in full to the property: in the polyptic of Olona monastery is reported, concerning the share of crops the *famuli* and peasants are to give to the monastery, «granum tercium, vinum medium, oleum totum»¹⁶⁰.

Olive and grapevine are the great protagonists of the agrarian economy of Northern Italy between mid-VIII century and the end of the X, far more than in the rest of Italy, where the recovery of these fruit crops is slower. At the beginnings of this period the presence of olive trees in Liguria and Tuscany is still marginal¹⁶¹. The situation undergoes a change during the High Middle Ages (XI-XII centuries); in the Po Valley olive growing is still present along lakesides, but the former economic importance fades. The change is gradual: in the last quarter of the XIII century olive cultivation is the second most important in the surroundings of Como¹⁶². In the next century Garda's olive oil is still an important commodity, although for local markets only¹⁶³; but at this time it is no longer competitive with Southern oil. Oil production starts spreading in the South between the XI and the XII centuries¹⁶⁴; in the latter century, though, Sicily still imports olive oil from other Mediterranean regions. In Apulia, on the contrary, the olive expands rapidly since Norman times thanks to the intense trade with Venice¹⁶⁵. The central and coastal regions (Liguria, Tuscany, Umbria), presently renowned for the quality of their oils, are the last to develop the crop, in the XV century and after.

In the Po Basin olive growing reaches, as we have seen, its maximum diffusion in the period from the XII century to the first half of the XIV century¹⁶⁶. This is due to the interest of the ruling classes to extend the

¹⁵⁹ R. RAO, *I paesaggi dell'Italia medievale*, Roma 2015.

¹⁶⁰ A. RAPETTI, *Dalla curtis al dominatus loci: la proprietà fondiaria nel Milanese tra IX e XII secolo*, in *Aziende agrarie nel medioevo*, Cuneo 2000, pp. 13-14.

¹⁶¹ C. WICKHAM, *La montagna e la città. Gli Appennini toscani nell'Alto Medioevo*, Torino 1997.

¹⁶² P. GRILLO, *La viticoltura in area lariana alla fine del duecento*, in P. DUBUIS, D. REYNARD (eds.), *Vignes et viticulteurs de montagne: hispoire, pratiques, savoirs et paysages. Valais, Alpes occidentales, Pyrénées, Mont-Liban*, Sion 2010, pp. 77-88.

¹⁶³ VARANINI, *L'olivicoltura e l'olio gardesano*, cit., pp. 132-138.

¹⁶⁴ PINTO, *Olivo e olio*, cit., p. 495.

¹⁶⁵ P. TOUBERT, *Dalla terra ai castelli. Paesaggio, agricoltura e poteri nell'Italia medievale*, Torino 1995.

¹⁶⁶ PINI, *Due colture specialistiche del Medioevo*, cit., pp. 121, 131.

culture; countless are the statutes, edicts and ordinances that force farmers to plant olive trees, such as those of Valsolda (Lake of Lugano) of 1246, Parma, 1258, Castelnuovo Veronese, 1260, Vicenza, 1264, Este (Colli Euganei), 1276 (renewing a previous statute of 1212 that forced the settlers to plant 12 trees per village), Novara, 1276-1286, Riviera d'Orte, 1357, Ivrea, early XV century, until the subsidies offered by the city of Turin in 1377 for whoever planted trees on the banks of the river Po¹⁶⁷.

In the following centuries (XIV-XVI century) the Lake Garda area produces enough oil to export it to Bergamo, Mantua and to the other Northern States, and through Trentino to Germany; Marco Dandolo in 1629 writes «the riviera each year produces better than six thousand modii of oil, of which about four thousand are sent to Germany and of the remainder a share goes to Brescia and another share is consumed by the subjects»¹⁶⁸.

Unfortunately this thrust would soon wreck on a series of adverse factors that were accumulating on the path of the olive tree. One of them was undoubtedly the demographic collapse due to the worsening of the climate and the famines that followed, and then the plagues of which that of the XIV century was only the most famous and devastating, causing widespread abandonment of land and villages and the concentration of the population in towns; many villages were abandoned and therefore also part of the less productive land, thus favouring staple food crops and pastures. Another was what has been called the «revolution of medieval transportation», which began to move away from tariffs that were calculated according to the weight of the goods to be transported, in favour of tariffs based on their value. This different way of calculating tariffs was responsible for stimulating the circulation of an increasing amount or heavy but cheap goods (timber, wine, etc.) which also included olive oil¹⁶⁹. The crisis in olive culture did not apparently reverse the alimentary use of olive oil, which had increased in the last medieval centuries: new trade routes brought oil to the north, mainly from central regions¹⁷⁰.

From the point of view of the climate the XIV and XV centuries were characterized by extreme cold spells, events to which the olive is vulnerable. From *Spilimbergo Chronicles*: «In the year 1432 the frost dried olive

¹⁶⁷ A. C., *L'olivo sui colli del Parmense*, «Giornale di agricoltura della Domenica», n. 18, IX, 1931; TONIOLO, *La distribuzione dell'olivo*, cit., p. 15; DONNA D'OLDENICO, *Notizie storiche sulla coltivazione dell'olivo in Piemonte*, cit., p. 71; PINI, *Due culture specialistiche del medioevo*, cit., p. 132.

¹⁶⁸ LANARO SARTORI, *L'agricoltura e la pesca*, cit., p. 77.

¹⁶⁹ PINI, *Due culture specialistiche del Medioevo*, cit., p. 121.

¹⁷⁰ *Ivi*, p. 133; CHERUBINI, *Olio, Olivo, Olivicoltura*, cit., p. 184.

trees along with the laurels and the fig trees»¹⁷¹. A similar report was given for Cividale del Friuli in 1490: «In the year 1490 it was extraordinarily cold, with large amounts of snow that lasted from December to April, and olive, fig, laurel and grape trees dried up»¹⁷². Incidentally, from these reports we can infer that the olive was also present in plains, which are not geographically favourable to its cultivation; this olive presence in plains or on slight elevations does not only concern Spilimbergo, it is apparently present in other similar northern locations; some of them were favoured by the presence of the sea nearby, such as Aquileia, Jesolo, Venice, Pomposa Abbey¹⁷³, but in other instances [Cremona, S. Giovanni in Persiceto (Bologna), Guastalla (Reggio Emilia), Corteleona (Pavia)]¹⁷⁴ had been the mildness of the climate to extend the culture in areas that today would be unimaginable for the olive. The climatically worst period since antiquity, called Little Ice Age, extended from the XVI to the XIX centuries¹⁷⁵. In the course of the winter of 1709 the temperature fell to -17°C, and the damages were serious because the dead olive trees were uprooted and quickly substituted by grapevines, rather than cut back to the collar and subsequently regrown from the pollards the stump would certainly produce the next year¹⁷⁶. Another similar event occurred in 1788.

This different attitude towards the olive was a sign that, more than that by climatic events, the species was threatened by socio-economic transformations: the Middle Ages were ending, the class of merchants had expanded and with it trade and communications, increasingly efficient and fast. To make more difficult on-site production of olive oil was the occurrence of freight rate differentiation in the course of the XV century, for which the cost of transport of goods was no longer linked to weight or size, but to their value¹⁷⁷. This made long-distance transport of agricultural products

¹⁷¹ ANONYMOUS, 1241 to 1489. *Chronicon Spilimbergense*. Note 104.

¹⁷² BATTIGELLI, *Ai limiti dell'areale*, cit. p. 77.

¹⁷³ G. GURRIERI, *Notizie e problemi della storia di Pomposa nei secoli X-XIV*, Ferrara 1965, I, pp. 143-163. The presence of olives in the Po delta area is reported in a diploma of Otto II of 982 (A. I. PINI, *Vite e vino nel Medioevo*, Bologna 1989, p. 43).

¹⁷⁴ CASTELLETTI, CASTIGLIONI, ROTTOLI, *L'agricoltura dell'Italia settentrionale dal Neolitico al Medioevo*, cit., p. 76; MARCHESINI, *Il paesaggio vegetale nella pianura Bolognese*, cit.; O. ROMBALDI, *L'agricoltura nell'area matildica*, cit., p. 352; A. BRUGNOLI, *Dal Mediterraneo all'Europa: L'olivicultura di frontiera nell'alto medioevo*, cit., p. 148.

¹⁷⁵ E. LE ROY LADURIE, *Histoire du climat depuis l'an mil*, Paris 1967, pp. 102-215.

¹⁷⁶ S. CIRIACONO, *Olio ed ebrei nella Repubblica Veneta del Settecento*, in *Deputazione di Storia Patria per le Venezia. Miscellanea di studi e memorie*, 1975, vol. 16, p. 107.

¹⁷⁷ F. MELIS, *Note sulle vicende storiche dell'olio d'oliva (secoli XIV-XVI)*, in G. CAVALLI ET AL., *Dell'olivo e della sua coltura*, Firenze 1972, p. 13.

less expensive, and the advantage of locally producing foodstuffs which were produced at a lower cost elsewhere gradually disappeared. Included in this type of foods was olive oil. Therefore, as for many reasons the olive trees disappeared or died back, they were no longer replaced but rather substituted by other fruit crops, which guaranteed more rapid onset of production and certain profits: grapevine and mulberry were the most common choices.

To the decline of the culture also contributed the new economic policy initiated in the first half of the XVII century by the Republic of Venice, which, while favouring olive growing on the coasts and islands of its Mediterranean empire, burdened with fiscal measures the same cultivation when made in the Italian mainland (which at the time comprised the north-east and part of Lombardy), to maintain the market for the more abundant and reliable product from overseas; the supply of oil to the hinterland began then to increasingly depend on Venice¹⁷⁸.

In the adjacent eastern Friuli (under Austrian administration) the olive cultivation, on the contrary, in the XVIII Century is object of an intense campaign of incentives promoted by Hapsburg authorities, which are interested in spreading a production of relevant economic interest in the territory of Gorizia which was the far south of the Empire. Thus, in the years 1768-69 the Royal Society of Agriculture of Gorizia undertakes to pay «florins 4 for every 25 olive trees planted, on hills or on plains, two years after they have taken root»¹⁷⁹, also to favour a recovery of the culture after the disastrous frost of 1763. Among the initiatives to encourage planting is also the distribution of «olive trees ... free to the poor peasants of these counties»¹⁸⁰. But the olive tree was now entering a phase of irreversible recession.

In some areas of the Veneto (valleys of Illasi, Chiampo and Agno) it is proven that the production went, in the XIX century, declining mainly for economic reasons; the construction of the railway actually facilitated the competition of other olive oils imported from Tuscany and from Apulia¹⁸¹. Of course this is a phenomenon that certainly affected the entire Northern Italy, and was completed in the recent past (XX century).

¹⁷⁸ CIRIACONO, *Olio ed ebrei nella Repubblica Veneta del Settecento*, cit., pp. 106-109; PINTO, *Olivo e olio*, cit., p. 498.

¹⁷⁹ BATTIGELLI, *Ai limiti dell'areale*, cit., pp. 79-80.

¹⁸⁰ M. FORMENTINI, *Olii et alcoli de iste bone terre...*, Monfalcone, 1993, pp. 73.

¹⁸¹ TONIOLO, *La distribuzione dell'olivo*, cit., pp. 78-79; LANARO SARTORI, *L'agricoltura e la pesca*, cit. p. 79.

Recent vicissitudes of olive growing

Another event that interested not only Northern Italy, but also all Mediterranean olive culture, was the appearance about 1840 of the olive fly (*Bactrocera oleae* Gmelin), which caused, and causes, heavy damage to oil production¹⁸². Not in all Northern zones it was equally pernicious; in the Vicenza area it was an additional reason for the substitution of olive with the more profitable fruit crops, grape and mulberry.

When trade was further intensified the scrubby Northern olive culture kept regressing or, more exactly, it concentrated and developed in the most suitable areas: Alpine lakes from Piedmont to Veneto, Verona and Vicenza hills, Colli Euganei (Padova) and Romagna. Less known was the existence, until a few decades ago, of a relatively large number of individual trees, near country churches, villas, or buried and forgotten amid vegetation gone wild, in the Apennines hill belt stretching in the Emilia provinces of Piacenza, Parma, Reggio Emilia, Modena and Bologna. In these areas it survived until today¹⁸³. Equally little known has been the stubborn presence of the olive, either as individual trees and as stands of numerous plants, often very old, in all the valleys of western Piedmont¹⁸⁴.

There is not much information on the characteristics of northern olive growing, at least if compared to that of the rest of Italy. Since the Early Middle Ages, as a rule the olive was not entrusted to peasants but rather managed directly by the property, be it of nobles or, more often, monastic¹⁸⁵. This link between olive trees and the catholic church was constant, especially in areas in which the culture survived with difficulty; in its survival a voluntaristic component is perceptible, which made possible the overcoming of the environmental and economic difficulties which would otherwise have determined the disappearance of the culture; even today, remote farms, monasteries, and small isolated churches of hilly areas of the north often possess, sheltered by walls or by buildings, more or less ancient trees which represent potential sources of rare or unknown germplasm.

¹⁸² G. CLEMENTI, *Cenni sul verme dell'olivo*, «Giornale di agricoltura, orticoltura, industria, commercio ed economia comunale per le provincie venete», 1847, 5 (I), p.33.

¹⁸³ A. FABBRI, T. GANINO, C. PLESSI, V. UGHINI, *Ricerche sul germoplasma emiliano di Olea europaea L.*, Italus Hortus, 2006, 13 (2), pp. 227-229; T. GANINO, D. BEGHÈ, S. VALENTI, R. NISI, A. FABBRI, *RAPD and SSR markers for characterization and identification of ancient cultivars of Olea europaea L. in the Emilia region*, «Genetic Resources and Crop Evolution», 2007, 54, pp. 1531-1540; FABBRI, *Olivo in Italia settentrionale*, cit.

¹⁸⁴ G. CHARRIER, *Dati inediti sulla presenza dell'olivo nella zona basale delle Alpi Cozie*, «Arch. Botan. XXVII», 1951, pp. 112-119.

¹⁸⁵ BRUGNOLI, VARANINI, *Olivi e olio nel medioevo italiano*, cit., pp. 22-25.

The spread of the olive tree in Northern Italy was obviously influenced by climatic events. We have seen that the plain was reached by the culture only in extremely favourable periods, while the norm has always been of hill slopes, well sheltered from incursions of masses of cold air from the north, especially those that occur toward the end of the winter, when the plant tissues begin to rehydrate and are more vulnerable to low temperatures. Within certain limits, instead, neither altitude or latitude seem to be a limiting factor. Olive trees have been cultivated, and still are today, with fruiting, at unexpected altitudes, as at Chiesa in Val Malenco (900 m asl), or at Olivone in Val Leventina, Canton Ticino (890 m asl); as to latitude, olive trees are still grown well beyond the 46° N: without leaving the Italian national boundary, trees were and are cultivated at S. Massenza (Trento), on the Collio hills (Udine), on the shores of the lakes of Como and Maggiore (Como and Verbania), in Valtellina (Sondrio)¹⁸⁶.

There are very few differences, historically recorded, from a point of view of the management technique between olive growing in the North and in the rest of Italy; under this aspect, northern olive culture is comparable to that of central regions, and in particular of Tuscany, where identical situations may occur as concerns climate. Hence typical adaptations of the technique to the marginal environment are adopted: pruning carefully and regularly, for a better use of the light and to escape the diseases promoted by humidity stagnation; protection limited to carving away plant parts affected by olive knot, and to the elimination of branches and shoots most affected by diseases and insects; harvest performed by direct hand picking (browsing, combing)¹⁸⁷; preservation and sanitary reasons, which in the end are quality reasons, make it necessary to harvest early, when fruits are retained with force by the shoots, much earlier than in the South. Therefore no hitting the branches with sticks is customary, nor is picking fallen fruit from the soil¹⁸⁸. The yields are lower than in the more climatically suited southern Mediterranean regions, but are acceptable and quality is very high, more or less at the levels of Tuscany and Umbria¹⁸⁹.

Today a recovery of olive culture is well on its way in Northern Italy, due to a number of reasons including the widespread knowledge of the nutraceutical properties of extravirgin olive oil, the appreciation of olive

¹⁸⁶ AMIOTTI, LUCARNO, *L'olivicultura in Lombardia*, cit. pp. 47-68

¹⁸⁷ CHERUBINI, *Olio, Olivo, Olivicoltori*, cit., p. 191.

¹⁸⁸ BRUGNOLI, VARANINI, *Olivi e olio nel medioevo italiano*, cit., p. 50.

¹⁸⁹ CHERUBINI, *Olio, Olivo, Olivicoltori*, cit., pp. 191-192.

impact on landscapes, and possibly the feeling of the occurrence of climate change. In the North most olive culture is still a part time activity, and plots are rarely larger than one hectare, but the enthusiasm we can perceive in the oil districts is a good omen for the extension of the crop on a wider scale; although it should be remembered that the olive beyond the Apennines has always had a hard time, and the environments are beyond those of the natural area of origin and diffusion. This means that management techniques, environments and plant material must be chosen with great attention; the olive science developed in the past century must certainly be taken to heart to cope with hardships, together with the experience of centuries of tenacious olive culture in the North, including the rich amount of germplasm that is only starting to disclose its treasures.

The olive has been uninterruptedly present in the whole the Po valley, in appropriate locations, over the millennia of its presence in the rest of Italy, and there have been periods in which the share of the North in oil production has been relevant. It can therefore be considered a typical crop of the country in its entirety, and this presence up to the great Alpine divide makes Northern Italy rightfully part of the Mediterranean Area, provided that what we have described here is sufficient to qualify the cultivated olive tree as the most typical Mediterranean plant, able to define its boundaries.

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