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History of Italian Agriculture and Agricultural Landscapes in the Late Middle Ages

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Abstract: The history of agriculture and the countryside in Italy has a long tradition of studies. The deep historical and environmental diversity that characterizes Italian history, the wealth of archival sources and the cooperation above all with archeology have addressed studies on the medieval countryside, with a focus on regional specificities and the relationships between agrarian history and economic history: urban-rural relationships, agricultural structures and the countryside, reclamation and cultivation techniques, forms of farm management and work, animal breeding and transhumance, diet and the movement of goods. In recent years, the need has been felt for a comparative overview of the entire peninsula, able to highlight common traits and diversified paths precisely during the Middle Ages with different methods of agricultural rationalization and development, or the use and management of resources such as transhumant pastures. The investment in agricultural land and the different forms of land use represent a significant step in the economic history following the 14th-century crisis that affected individuals, cities and rural communities, and such public enterprises as charities. This interest in the comparison, in Italy and Europe, also featured various overview studies dedicated to the environment and landscapes, seeking to incorporate new kinds of research coming from the modern world.



1. Introduction

The time frame identified as the focus of these days dedicated to rural history takes in a significant shift in Italian agrarian historiography. Indeed, the past quarter century (1991-2015) represents an important period of studies for the rural world of our country. It is a period linked to a particular historiographic tradition, committed to delving into classical themes of study, new lines of research and comparative overviews, stimulated more recently by a new sensibility dictated also by the transformations in the rural world.

Following these courses of study and reflection, I plan to identify their original contributions, at least in my opinion, also in view of a comparison at a European level. I will start with some necessary references that place Italy's late medieval agrarian history in a more general environmental and historical context, before starting with the historiographic one.

2. Original Features: Environmental Factors

The first item to come to the attention of historians of agriculture is the influence of the peninsula's environmental features. Indeed, these natural factors (climate, soil, and environment) and their variants have significant differentiation in Italy (Rombai, 2002; IGM 2007), although the peninsula is not particularly large (301,278 km²). The current national perimeter measures 9,322 km, but what is significant is that about 80% of the border (7,500 km) is coastline, which in the past, especially along the Tyrrhenian coast and in the Po delta, had large pools of stagnant water, gradually turning into marshes. The relationship with water increases, considering the expanse of the major river basins and the broad surfaces of the main lakes. Italy's articulated orography and latitudinal development are responsible for significant differences in climate, as verified by the temperatures themselves. In fact, data recorded in the last three decades of the twentieth century show an average annual temperature of 9°C for the northern regions, compared to 16°C for the southern ones (a good 7°C of difference).

The country's topography is also marked by the great number of hilly areas (41.6%), the extensive Alp and Apennine mountain ranges (35.2%), and the limited plain areas (23.2%), corresponding mainly to the Po Valley. This articulation still had the same proportional relationships in the distribution of cultivated surfaces in the mid-twentieth century, with 37% of the productive surface area in the mountains, especially the Apennines; 41.7% in the hills; and 20.6% in the plains, with more than half in the Po Valley alone.

The impact of (fixed and variable) environmental factors is crucial to an understanding of each type of agriculture, and in particular that of Italy. Although these causes may not be considered exclusive, they are indeed factors that have strongly conditioned agriculture's developmental possibilities (Cherubini, 1984). Suffice it to recall the profound differences between the Po area, characterized by extensive water resources and a continental climate versus the strongly Mediterranean character of southern Italy.

These geographical features were also responsible for the different influence of climate variability between the Middle Ages and the modern age (from the Medieval Warm Period, or Medieval Climatic Anomaly, to the Little Ice Age) compared to continental Europe. Overall, the effects of these changes are considered by Italian historiography as one (but not the only)

component, especially in view of more decisive events of a strictly historical nature (society, economy, and politics)¹.

3. Original Features: Population and Settlement

A second factor characterizing the history of the Italian countryside is the early urban development as well as its quantitative and qualitative dimensions. We will return to this point, but some demographic data (population and settlement) should be highlighted here that clearly and unequivocally show the intertwining on several levels of medieval urbanization and the rural world². First, the total population increased from 5.2 million inhabitants at the beginning of the 11th century to 7.3 million in the early 13th century and then to 12.5 million in the first decades of the 14th century, when about 20% of Europe's population (excluding Russia) lived in Italy. In this period of greatest expansion (late 13th-early 14th century), it is estimated that as many as 20-25% of the population lived in larger urban areas compared to the rest of Europe: three of the medieval cities with over 100,000 inhabitants (the fourth was Paris) were in Italy, specifically Milan (increasing from 20,000 inhabitants in the 11th century to more than 100,000 in the 14th), Venice, and Florence (passing from 15-20 thousand to 90-130 thousand in the span of just one century, between the 13th century and the first half of the 14th). Genoa had 50-60 thousand inhabitants, while seven cities had 40-50 thousand inhabitants (Brescia, Cremona, Verona, Bologna, Pisa, Siena, and Palermo). There were ten cities with 20-40 thousand (Piacenza, Mantua, Parma, Padua, Lucca, Perugia, Ancona, Rome, Naples, and Messina), 60 with 10-20 thousand, and 70 with 6-10 thousand. The highest concentration can be seen in the Po Valley, in the Milan-Venice-Bologna triangle, and the Arno Valley. The explanation for this increased rate of urbanization, going from 5-8% in the 11th century to 20-25% at the beginning of the 14th century (but reaching 30% in Tuscany however), is attributed to a steady stream of people moving from the countryside to towns and cities.

To complete the demographic picture, we must direct our attention to data on the demographic crisis in the second half of the 14th century when plague waves took the Italian population levels two centuries back: about 7.3 million at the beginning of the 15th century (similar to the beginning of the 13th century). Nevertheless, the urbanization phenomenon was irreversible with the proportion of people living in urban centers still remaining high, about twice as many as two centuries earlier: 17-18% at the beginning of the 15th century versus 9.10% at the beginning of the 13th century. These population trends (strong growth, collapse, and new balances) and distribution (a remarkable urbanization rate) are essential to following agriculture's evolution in the late Middle Ages. In fact, in early modern times, the territorialization of states led to a redefinition of the balances: 16th-century Naples reached 150,000 inhabitants (about 30,000 in the early 14th century) as a result of the Aragonese centralization policy, with Rome also assuming a new dimension. If, before the 14th-century crisis, the primacy of the largest centers (Milan, Venice, Florence, and Genoa) had been based on "financial and trade intermediation in international markets", the dominance, beginning in the 16th century, of the new centers (Milan, Venice, Rome, and Naples) did not depend just on "international role", but also on the "hegemony in the state", and "political control over the economic and fiscal resources" of their territories (Epstein, 2006).

¹ There have been some scholars of the history of climate also in Italia: Pinna, 1984; Camuffo, 1990. On the effects of climate variability, see: Sereno, 1993; Pinto, 1993; Delogu, 2012; Nanni, awaiting publication.

² For the history of Italian cities and demographics, see: Franceschi, Taddei, 2012; Menant, 2011; Cherubini, 1991a, 2009; Ginatempo, Sandri, 1990; Pinto, 1996; Malanima, 2002; Epstein, 2006.

4. Original Features: Town and Country

Beginning in the centuries after the year 1000, we have seen how the rural world became deeply intertwined with the urban one and its developments, enough so as to render misleading any discussion that does not take into consideration these connections. But, connecting does not mean eliminating. In fact, talking about the “*terra di città*”, “land of towns”, does not mean minimizing the profound differences that exist between town and country (Piccinni, 2001), documented also by the literary, typically urban, satirical tradition on the world of peasants, shepherds, and mountain people.

A recent book dedicated specifically to this theme of the town’s integration or penetration into the country has collected the research of a number of authors and offers a comprehensive description for central and northern Italy in the 12th-14th centuries. Its revealing title – *La costruzione del dominio cittadino sulle campagne* or the Construction of the Town Domain over the Countryside (Mucciarelli, Piccinni, Pinto, 2009) – offers a very specific look at the topics of territorial control and organization, land ownership dynamics and organization, agricultural policy and economic elites, town and country, and mental attitudes. Supported by abundant documentation, these approaches to research have highlighted the social, economic, political and cultural aspects that characterized the projection of urban centers towards rural areas, with the “construction” of various countryside types: the extension of cultivated areas (the search for “bread lands”), as well as cropping systems and cultivation techniques. But the signs in the territory constituted by new settlements like the foundation of new towns (Friedman, Pirillo 2004) or the very settlement structures (Pirillo, 2001, 2005) are also not to be underestimated. The historiographic theme of “constructing” a countryside immediately highlights a historical reality that has characterized Italy’s most advanced agricultural areas (central and northern Italy, particularly the Po Valley and Tuscany), but also shows the mercantile, or “colonization”, influence (Cherubini, 1984) that they wielded in the rest of the peninsula.

Data on the previously mentioned demographic expansion also bring to mind specific differences between northern-central Italy and southern Italy, and the islands. In fact, the presence of an urban phenomenon appears more limited in size and distribution in the south of Italy, Sicily, and Sardinia. However, there are also qualitative differences in medieval urbanism that distinguish republican Italy from monarchical Italy (Cherubini, 2012) or Italy at the height of its development between the 13th and 14th centuries and the early modern age.

Turning our attention to the food supply (Cherubini, 2013b), or agricultural raw materials, the importance of those populous cities in the context of the entire peninsula is not to be undervalued. Many cities ate not just the food from neighboring areas, through complex networks of traders (De la Roncière, 2005) or producers from nearby boroughs (Naso, 2009; Nanni, 2015), but also foodstuffs which arrived through trade flows from more distant areas (Dini, 2002). The case of cereals, for instance, broadly illustrates a geography of production and consumption in the peninsula (Pinto, 1996): export zones (southern Italy and the islands, Patrimony of Saint Peter and some towns in the Marches and the Po Valley); self-sufficient cities capable of exporting in plentiful years (Arezzo, Siena, cities in Romagna and in the Po Valley); cities that turned to imports in varying degrees (Florence, Lucca, Pisa, Perugia, Bologna, Bergamo, etc.); and seaside towns, with limited hinterlands that were principally supplied by the marketplace (Genoa and Venice). An analysis of consumption and price trends is an essential intersection that places the history of the food supply within the broader context of an urban and rural history (Pinto, 2008a-c; Cortonesi, 1997).

5. Why and How to Study the Italian Countryside?

Environmental contexts, population and settlement, cities and markets (and their subsequent development with the creation of regional states) are therefore necessary for a satisfactory treatment also of the rural world in the late Middle Ages. Against this background, the questions of *why* and *how* to study the Italian countryside may seem unnecessary, given the medieval world's widespread rural character (Cherubini, 1984) and agriculture's obvious centrality at the base of the demographic, economic and social development³. Instead, justifying the importance (the *why*) and the perspectives (the *how*) that have emerged from studying the countryside is a fundamental step to highlighting the peculiarities of the rural world in medieval Italy. It is namely the Italian anomalies within the European context that the same contemporary historians have traced back to the centuries of urban and commercial expansion: the "original anomaly" (cities and markets) that distinguishes Italian agrarian history from many (not all) areas on the continent (D'Attorre, De Bernardi 1994; Bevilacqua 1989). In fact, those agricultural structures and phenomena that have had a long life in Italian history have their roots in the late Middle Ages, the 13th-15th centuries.

The sense of this long duration of the Italian peninsula's agricultural structures was very well-known among scholars who, in the 1960s and 1980s, set down the history of the countryside, motivated also by the desire to study a world that was gradually disappearing before the eyes of those who had experienced it. Under the agriculture heading in the *Enciclopedia agraria italiana* (1952), on the eve of the rural exodus⁴, Giuseppe Medici, then president of the National Institute of Agricultural Economics, described the Italian countryside as consisting of five major agricultural zones, which corresponded to the major economies and rural structures: from the Prealps to the irrigated Po Valley with its farmsteads (Piedmont, Lombardy); the non-irrigated Po Valley (Veneto, Emilia); the large block of central Italy (Tuscany, the Marches, parts of Lazio, Emilia Romagna, and Abruzzo) with sharecropping farms; southern Italy and the islands, with their "green islands" (specialized arboriculture), but above all the *masserie* (cereal and sheep farms). These do not include the last remnants of pluriactivity in mountainous areas and transhumant grazing, which linked mountain areas with the vast marshy plains in Tuscany and Lazio and with the Apulian tableland. These various "agricultural Italies" were still active in the 1950s and earlier, after the unification of Italy, had already been described in the monumental *Inchiesta agraria* (1878-1882) overseen by Senator Stefano Jacini.

But what must be stressed is the fact that these diverse agricultural Italies already existed in the late Middle Ages (Gensini, 1990; Rombai, Boncompagni, 2002; Cazzola, 2002). The various types of farming, (*cascine*, *poderi mezzadrili*, *casali*, *masserie*) and seasonal grazing inevitably refer to their origins and their consolidation, traceable to between the 13th and 14th centuries (Chiappa Mauri, 2002), amid crisis, transformation, and development.

In Tuscany's case, for example, it is one of the fundamental points of Elio Conti's studies since the 1960s, whom I would like to recall here, because of the recent republication of his studies on the formation of the agrarian structure in the Florentine countryside based on the land registers (Conti, 2014a-d). The meaning of these medieval origins was clear: "I had by then decided that the modern age had simply brought to completion a process already fully developed in the 15th century. In the countryside, the essential had already happened in earlier

³ The relationships between agriculture and economic development have been also recently the subject of consideration and comparison at the 2015 conference of the Italian Centre for the Study of History and Art in Pistoia, entitled *La crescita economica dell'Occidente medievale. Un tema non ancora esaurito* (awaiting publication) or the economic growth of the west in the Middle Ages. A topic still to be studied.

⁴ At the beginning of the 1950s, agricultural workers in Italy were still 42.2% of the working population, which fell to 29.0% in a decade (1961) and to 17.2% in the following one (1971). Del Panta, 2002.

centuries” (Conti, 2014b, VII). But through the study of agrarian structures, Conti was interested in investigating the origins of the success of Florence’s middle class (Francesconi, 2014). The rural world, in other words, has become the place to study general historical phenomena, also in the case of an Italy strongly characterized by its urban dimension.

Faced with these unique and original characteristics, Italian medieval studies have contributed with equal originality to answering these *whys*. Retracing historiographic accounts and perspectives from the 1970s and 1980s, despite their strengths and weaknesses, Giovanni Cherubini did not hesitate to define agrarian history as the “finest innovation in Italian historiography”, in which there was an “explosion of interest” by a new generation of historians, especially late-medievalists (Cherubini, 1989). In fact, since the 1990s, a large group of scholars has devoted themselves to this particular field of study (Montanari, 2001; Cortonesi, 2003), continuing to dig ever deeper into the opening created by those early experts⁵, one that should be specified to include some approaches to research: the *how* of Italy’s agrarian history.

6. A Historiographical Legacy

It is perhaps not a coincidence that the history of agriculture has been cultivated mainly by historians of the Middle Ages especially attentive to the general issues and problems that affected medieval society. One common trait that must unquestionably be recognized is the example and constant reminder to not consider the countryside as isolated from the more general problems of medieval history, from the early Middle Ages to the communal age, through the crises and transformations of the late Middle Ages up to the dawn of the Early Modern Age. Accordingly, Giovanni Cherubini wove an agrarian history for the late Middle Ages in the context of a general history of society as a whole, under the eloquent and thoughtful title of *Signori, Contadini, Borghesi* (1974). This volume can still today be considered full of implications for his firm statement that “any inquiry, even very particular ones, must contribute to solving general problems, and that indeed there is no useful examination of the “special” if not oriented towards these purposes” (Cherubini, 1974, XII; Piccinni, 2012). A task, I would almost say a responsibility of historical studies shines through these words with which, in a certain sense, he expressed also the commitment of other authors. It will be enough for me to recall Vito Fumagalli’s studies (Castagnetti, 2010), for which “the idea of change, of the gradual transformation of a society” was essential, even while discussing the rural societies of the early Middle Ages (Fumagalli, 1985).

The historiographic legacy that comes from the early scholars of Italian agrarian history has provided important knowledge on specific aspects: the fluctuations of cultivated areas, especially in relation to demographic trends; the integrations or divisions between agriculture and animal husbandry; forms of management (serfdom, land pacts, rent, and sharecropping) and cropping systems (mixed and rotated crops); the distribution of landed property and production relations (owners and peasants); rationing policies; cultivation techniques and productivity; the characteristics of mountain farming, the use of forests and the “*civiltà del castagno*”, or chestnut civilization; and rural communities and rights of common. Various studies have been devoted to the dynamics of settlement, the transformation of rural housing,

⁵ Published by Florence’s Georgofili Academy, the “*Rivista di storia dell’agricoltura*” (“*Journal of Agricultural History*”), has been a point of reference in Italy for the study of agrarian history since 1961, the year it was set up by Ildebrando Imberciadori. Today the periodical’s editor is Giovanni Cherubini (Nanni, 2000). In the 1970s and 1980s, Vito Fumagalli was at the center of an informal initiative, designed to “communicate and discuss the research of a group of scholars, young and old”, which took place in Bagni di Lucca between 1976 and 1987 (Montanari, 2001, 7). Those meetings were the basis of a new period for agrarian history, from which the Study Centre for the History of the Countryside and Peasant Labor, in Montalcino, was created in 1997.

and the very founding of new settlements – “*ville nuove*”, “*terre nuove*”, “*borghi franchi*”, and “*mercatali*” – planned by the towns for anti-feudal and commercial reasons. This does not include the wealth of local research that has multiplied, with the publication also of such sources as statutes, under pressure of interests also outside the world of studies.

7. For a History of the Rural World

For the time span identified as the focus of these study days, the 1997 Montalcino conference dedicated to Italian Medieval Studies and Agrarian History constitutes an important reference point. Reading those papers again, one early historiographic characteristic to clearly emerge is that it was mainly the historians of the Middle Ages who focused attention on the world of the medieval countryside and not the economic historians. This trend and these sensibilities have directed the research towards an approach more interested in those aspects of society as a whole, the events that characterized specific historical contexts, and regional varieties as well as the different mindsets, largely using documentary sources that, especially for northern and central Italy, are rich in information, including those from such invaluable sources as land registers and cadasters (see, for example, the cases of Siena, 1315-18, and Florence, 1427). It must however be pointed out that these research approaches have never neglected to focus on comparison and interdisciplinary – but perhaps it would be more correct to say interpersonal – enrichment, especially with the archeological sector as documented by the Sienese school tied to Riccardo Francovich and the work of the journal “*Archeologia Medievale*”. Research questions and methods, the insight of individual scholars and specific historical and geographical contexts of medieval Italy have led to adopting levels of regional or territorial study, following their respective, not easily generalized characteristics. The book thus has a good nine *regional itineraries*⁶ that rightly start with Tuscany, the cradle of these studies, to then arrive at *intersections*⁷ with other historical and historiographical dimensions.

Overall, the last twenty-five years have been so full of contributions as to make an exhaustive historiographical reconstruction very difficult. Considering the main study topics, let us mention some of the main regional overviews that include the history of landed property (Cortonesi, 2004; Carocci, 2004); peasant labor and agrarian contracts⁸, rural seignories (Violante, Ceccarelli Lemut, 1997; Chittolini, 1996); rural communities (Cherubini, 1992; Guglielmotti, 2001; Galetti, 2005) and common good (Rao, 2005, 2012a-b; Bicchierai 1995); the minor centers (Barlucchi, 2013; Francesconi, 2013); the history of food⁹, food administration policies (Pinto, 1996), the history of vineyards (Gaulin, Grieco, 1994); of olive trees (Brugnoli, Varanini, 2005); and of woods (Andreolli, Montanari, 1990; Cavaciocchi, 1996); natural resource management¹⁰, political and commercial places (Redon, 1999; Barlucchi, 1997; Bicchierai, 2005); the characteristics of southern Italy, and the specific nature of the

⁶ *Toscana* (G. Pinto); *Umbria e Lazio* (A. Lanconelli); *Mezzogiorno tirrenico* (G. Vitolo and M. Pucci); *Mezzogiorno adriatico* (R. Licinio and S. Russo); *Sicilia* (R.M. Dentici Buccellato); *Sardegna* (B. Fois); *Italia nord-occidentale* (R. Comba and A.M. Rapetti); *Area veneta e friulana* (M. Zucchigna); *Emilia, Romagna, Marche* (G. Pasquali).

⁷ *Storia agraria e storia economica* (A. Grohmann); *Storia agraria e storia delle istituzioni* (G. Sergi); *Storia agraria e storia delle città* (A. I. Pini); *Storia agraria e selvicoltura* (P. Piussi and O. Redon); *Storia agraria e gestione del territorio* (G.F. Di Pietro).

⁸ Piccinni, 1992; Cortonesi, 1995; Cortonesi, Piccinni, 2006; Cortonesi, Pasquali, Piccinni, 2002; Andreolli, 1999; Comba, Panero, 2000; Panero, 1999; Lanconelli, 1994; Nanni, 2012a.

⁹ Montanari, 1988, 1993; Flandrin, Montanari, 1996; Capatti, Montanari, 1999; Cavaciocchi, 1997.

¹⁰ Malanima, 1990; Fantoni, 1990; Lanconelli, De Palma, 1992; Malvolti, Pinto 2003. See also the essays dedicated to woods (M. Zanarini) water (F. Roversi Monaco) in Montanari, Vasina, 2000. More recently, Canzian, Simonetti, 2012.

relations between town and country in northern and central Italy¹¹. Building further on the local and regional insights (Guglielmotti, 2005; Varanini, 2011, 2012), while also paying attention to comparison, important working sessions have taken place in recent years, like, for example, those dedicated to vineyards and wine (Da Passano et al., 2000; Archetti, 2003), sheep farming (Mattone, Simbula, 2011), milk (Archetti, Baronio, 2011), fruit (Naso, 2012) and honey (Prosperi, 2010).

8. The Need to Lay the Bases for a Comparison

This very wealth of general and territorial information has rekindled an ambition that never died out starting with Imberciadori and continuing with Cherubini: the idea of providing an overall discussion of Italy's long agrarian history, capable of gathering facts and offering a possibility of comparison. Namely, is it possible to carry out an overall synthesis of agricultural Italy, specifically for the centuries between the Middle Ages and the modern age? How should the peninsula's radical geographical differences and the different histories be evaluated? Do elements exist that can be considered common traits (and what are they)? What are the important variations? These are the questions that have continually arisen, even only for the need and the difficulty of determining homogeneous regional areas (Rapetti, 2006).

At the end of the 1990s, after a difficult start, the review committee of the "*Rivista di storia dell'agricoltura*" (Journal of Agricultural History), edited by Giovanni Cherubini, decided to embark on this demanding initiative. There were many difficulties, including that skepticism which is typical when people are asked to leave the comfort of their tradition of study in view of a lengthy and wide-ranging work. In particular, the two critical issues were the creation of a thematic interpretation able to maintain the same common basis from the Roman era up to the contemporary age and the composition of the various languages and specific issues in order to allow not only an easy reading of this wide-ranging work, especially for the centuries regarding the Middle Ages and the Modern Age, but also a possibility for comparison.

Despite the possible criticism for the choices made, Cherubini himself clearly stated the purpose and task in the presentation of the work: to fill a historiographic gap; to offer "the possibility to follow a common thread from antiquity up to today and to set up analogies and comparisons between the conditions, structures and aspects of our countryside"; to present a "vast harvest of facts and knowledge and a clear outline for the history of our countryside". So, the five thick volumes of the *Storia dell'agricoltura italiana* (History of Italian Agriculture) were published in 2002¹², organized according to the same table of contents to allow a "vertical" reading: 1. *Popolazione, popolamento, sistemi colturali, spazi coltivati, aree boschive ed incolte* (population, settlement, cropping systems, forests and uncultivated areas); 2. *Colture, lavori, tecniche, rendimenti* (crops, labor, techniques, yields); 3. *L'allevamento* (breeding); 4. *L'uso del bosco e degli incolti* (the use of forests and uncultivated areas); 5. *La proprietà della terra, i percettori dei prodotti e della rendita* (land ownership, the beneficiaries of products and income); 6. *La circolazione dei prodotti* (movement of goods); 7. *Il sapere agronomico* (agronomic expertise). As can be inferred from the chapter titles, the scheme is not

¹¹ Cherubini, 2003, 2013a; Pinto, 1993, 2002; Pini, 1993. For southern Italy: Franceschi, Taddei, 2012; Licinio, 2009; Cherubini, 2012; Carocci, 2014.

¹² Two other volumes were added to the initial plan of three volumes, the opening volume dedicated to prehistory and a final one dedicated to recent developments (the second half of the 20th century). The part dedicated to the Middle Ages was carried out by authoritative historians of the medieval countryside (L. Chiappa Mauri, M. Montanari, A. Cortonesi, B. Andreolli, G. Piccinni, B. Dini, A. Saltini) and supplemented with in-depth studies on *Vite e vino*, or vineyards and wine (A.I. Pini), *Olivo e olio*, or olive trees and oil (G. Pinto), *L'orticoltura e i Giardini*, or horticulture and gardens (M. Ambrosoli), *Le piante tintorie*, or dyeing plants (U. Tucci), *Strumenti e macchine agricole* or agricultural tools and machines (G. Forni).

exceedingly rigid but it contains some deep convictions: an overall view capable of keeping together the various factors making up the environmental and historical picture (through which to highlight constants and variables); an in-depth discussion of the various agrosilvopastoral activities, sometimes integrated, sometimes separate; a reconstruction of man's relations with the land (property and use), relationships of labor, and the distribution of products and incomes; and finally the market for agricultural products, commercial networks and agronomic expertise.

9. Common Traits and Variants

The discussion of the various topics permitted making some clarifications for the centuries between the early and late Middle Ages. Firstly, there were common traits, like the extensive agricultural development that occurred not because of an increase in unit productivity but rather through an expansion of cultivated areas, reducing forest or uncultivated areas; or the strong push toward cereal production, especially of wheat. Secondly, productivity data were specified, that had mistakenly been considered excessively low by historiography that had dealt with European scenarios. A correct interpretation of these sources (Montanari, 2002) fixed the seed-yield ratio at 1:3-4 also in the centuries around the year 1000, not 1:2 as was reported also in manuals. What emerges is a picture of a Middle Ages less "dark" than the scarcity of sources permits documenting, characterized by innovations like the manorial system in the 9th century.

These data have enabled taking a new look at those elements of "agricultural revolution" often attributed to the 13th-14th centuries, in support of greater consideration for the Roman legacy (e.g., the differentiation in plows already in the Imperial era: Forni, 2002; or previously known practices for crop rotation or the use of green manure) and for the slow but progressive transformations that took place during the centuries between the early and the late Middle Ages (greater use of iron in agricultural tools or the spread of water mills for grinding). Thus returning to environmental conditioning, "there is a logic as to why certain things happen," Montanari stated, "even if the technological immobility of the Italian agricultural system left our country on the sidelines of the innovations triggered in other areas of Europe, in many cases it was the only possible solution. With those climate and soil conditions, multiplying the plowings was the method most widely used to attempt to increase the land's fertility" (Montanari, 2002, 69).

The crisis in the 14th century offered new opportunities for rationalization (property layout and administration methods), the result also of new economic and business approaches (investment and profit). Since the 14th century, there had already been slow, but generalizable increases in productivity (1: 4-5); new agricultural forms like irrigated agriculture, made possible by territorial works, new farm structures (*mezzadrili*, share-cropping and *cascine*); new crops (rice); and regional specializations like pasture areas (field and grass system) along the Tyrrhenian and Apulian coasts. Between the 14th and 15th centuries, there reappeared agricultural treatises, like those by Pietro de' Crescenzi, Corniolo della Cornia and Michelangelo Tanaglia, which were signs of a new attention to production, but also of new perceptions regarding the world of the countryside, set between *utilitas* (usefulness) and *delectatio* (pleasure) (Gaulin, 2007).

Returning to the outline proposed for a general discussion on the world of the Italian countryside, it serves, as stated, as a sort of functional knowledge filter, not a fixed interpretation tool, in the knowledge that regional-level varieties and the assorted wealth and composition of the archival sources are essential elements for the history of the Italian countryside. It will provide guidelines for agricultural production rationalization and enhancement even in the most general economic and social contexts. Given these basics,

remarks can more easily be made on the broader field of Italian economic development between the late Middle Ages and the modern age, especially in light of more recent reconsiderations on the general economic development (Franceschi, Molà 2005; Grohmann, 2011), the land market, and the relations between economics and the biological environment (Cavaciocchi, 2004, 2010). The same economic analyses relating to the previously mentioned new balances on a regional bases in the peninsula (Epstein, 2006) can be put to the test by specific elements that regard agriculture together with its related environment and history.

10. Agriculture and Economic Development: the Turn of the Late Middle Ages

One central element for the history of the Italian countryside thus comes out. In fact, in the field of agriculture, the Middle Ages did not end in an “irremediable depression”, an assumption that is contradicted by the “concentration of land assets in fewer hands and of the remaining laborers in the cultivation of the best lands. These two facts made it possible, especially on the more extensive properties, to reorganize the crops, rendering them more productive” (Piccinni, 2002, 161). The general drop in wheat prices, caused by the decrease in population and consequently in demand was actually compensated by the presence in Italy of those urban centers that, though reduced in size, were nonetheless of a certain size. The bargaining power of workers was also short-lived (Mucciarelli, Piccinni, 1995; Cherubini, 2008), in the face of an economic restructuring by the town-based owners who looked at landed property with renewed interest. On these issues, Gabriella Piccinni has made remarkable contributions of synthesis, illustrating the “undiscovered crossroads” that was tackled by landowners and governments: preparing a “recovery of value, calling for land to produce more as well as for things that would sell better – in other words, strengthening agriculture, or settling for what could be provided without too much effort, thus favoring grazing and widespread grain farming “ (Piccinni, 2002, 164-165; Piccinni 1993). The first solution was the one adopted in those areas with more cities and towns, abounding with capital and commercial networks, and with the spread of *poderi mezzadrili* and the first Tuscan *fattorie* (Cherubini, 1991b; Pinto, 1993) and of irrigated agriculture and Lombard *cascina* (Chiappa Mauri, 1990, 1997; Menant, 1993); or the *casale romano* (Cortonesi, 2005). In other areas, instead, there was the beginning of crop specializations (Montanari, 2002), various forms of forest and uncultivated land management (Andreolli 2002); and the codification of the main transhumant areas, like those in the marshy lowlands of Tuscany and Lazio and in the Apulian tableland¹³.

Although these solutions were strongly related to specific environments and climatic zones (the orography, soil, and morphology of the territory, coastal areas, water supply), which are profoundly diversified on the Italian peninsula, there were also, whether prudent or myopic, significant choices made by individuals, communities, and governments. Not to be underestimated, for example, is the role of the agricultural land valuation introduced by 14th-15th century cadasters (where present). Beyond the fiscal policies and aspects, they created a sort of land “accounting”, which was of some consequence in ensuring assessments for the land market and in maintaining the farm network in the countryside.

In addition, interest has been growing more recently in a particular player in land ownership that differs from landed property and from ecclesiastical or monastic holdings (Salvestrini, 1998; Comba, Merlo, 1999; Caby, 1999). I am referring to charities, which became a kind of public enterprise, whose economic foundation was based on land management and the marketing of foodstuffs. It is a theme that has already been discussed, for instance, by Epstein regarding the Ospedale di Santa Maria della Scala in Siena (Epstein, 1986; Romby, 2001).

¹³ Regulations relating to transhumance were almost concurrent: Siena’s *dogana dei Paschi* (1419), the Patrimony of Saint Peter’s *Dogana del bestiame* (1402-1424), the *Dohana Menae Pecudum* in Aragonese Apulia (1443): Cortonesi, 2002; Licinio, 2009.

However, interest in the chagrohmrities has also been revived in the more comprehensive context of their capacity to invest in production (Pinto, 2013; Gazzini, 2013) and for the role of hospitals within the various towns and their works of solidarity (Piccinni, 2013a-b, 2014; Nanni, 2014).

11. New Interests, “Ancient” Beliefs: Agrarian Landscapes

Returning to the close mutual relation between the environment and historical events, the term “landscape”, as the synthesis of natural factors and man’s toil, is very often found in Italian historiography, among regional descriptions and local situations. However, new interests today have turned towards the history of the landscape and of the agrarian landscape¹⁴. There is in fact a tendency to flatten out the meaning of the transformations as we gradually go backwards in time until we identify “historical landscapes” with those seen at the dawn of the contemporary age. The continuing and slow change in the countryside must not overshadow the fact that there has always been discontinuity and change, even in more distant periods (Nanni, 2010). Not to mention that, in the same definition of “landscape”, especially in a complex situation such as Italy’s, the sensible elements (forms and types) must be combined with other aspects such as natural (hydrography, soil properties, climate) or historical ones (agricultural structures, rural economies, local works) that are necessary to clarify what we can reconstruct in our visual restoration of the past.

Even in this context, the medieval centuries represent an important step for the history of the landscape as the events that we have pointed out have left indelible marks on the forms of settlement, on the rural dwellings, and in the radication of particular crops or cropping systems that have had a long history. Riccardo Rao’s recent book (2015), offers numerous insights into the various Italian landscapes and their formation in the Middle Ages.

This special attention and necessary perspective, combining agricultural, historical, and environmental aspects, was behind an important conference dedicated to *Europe’s Agrarian Landscapes* during the late Middle Ages, organized in 2013 by the Centro Italiano di Studi di Storia e d’Arte (Pistoia). The topic chosen and the continental dimension clearly expressed the interest in addressing the most important aspects of the countryside in Europe, even facing these new interests but with a determination to keep the “ancient” beliefs alive. These include the geographical area chosen (from the Atlantic to the Urals), a look at a Europe characterized by elements of unity in diversity (comparison but not particularism), the centrality of general historical events and their effects on rural areas and on the same landscapes. Here too, the titles of the sections were sufficiently explicit: the study *perspectives* (geography, archeology, sources for the narration of the landscape) were followed by speeches on *demolishing events, politics and effects on landscape* (the Mongolian invasion, the fall of Byzantium, the Reconquista, the Hundred Years’ War, the German advance in the East, the Aegean, and the demographic crisis); then by *economies, techniques and landscapes* (transhumance, mills, irrigated agriculture in Italy and Spain, and forests); the *representation of landscapes* in iconographic sources; and the *countryside inside and around towns* (the Netherlands, northern Italy and Tuscany, and central Italy)¹⁵.

In addition to the substantial contents of synthesis collected in the book, the problems that arose for the definition of landscape itself (Cortonesi, 2015) and the crucial points for a correct

¹⁴ The European Convention on Landscape, signed in Florence in 2000, was the catalyst of these new interests, also from a historical point of view, although with some critical elements (Nanni, 2012b).

¹⁵ This is the list of speakers in order: A. Cortonesi (introduction), L. Rombai, J. Burnouf, G. Piccinni, L. Pubblici, M. Gallina, A. Malpica Cuello, M. Arnoux, M. Matheus, E. Basso, A. Grohmann, G. Cherubini, P. Racine, F. Menant e M. Campopiano, A. Furió, B. Andreolli, P. Mane, E. Neri, M. Boone, P. Nanni, A. Lanconelli and T. Leggio, and P. Iradiel (conclusions).

discussion of the topic (Iradiel, 2015) can be mentioned: the difficulty coming from the many levels of observation, the integration of objective and subjective dimensions, the search for a rigorous approach to the study of landscapes from an interdisciplinary perspective (history, archeology, art, geography, and ecology).

12. Concluding Notes

New interests and new sensibilities, originating from the challenges facing our world, have turned today to history with new attention to the intersections between agriculture and landscape, or between agriculture and the environment (Matheus et al., 2010). Although not new terms, they are being addressed with a new sensibility, requiring interdisciplinary skills and collaborations. In particular, the history of the environment or of climate today call for new approaches to history, making use of various types of sources (documentary data and proxy data).

Today we have a wealth of knowledge that enables us to collect and compare various types of data and to intercorrelate them within specific economic or ecological theories. In this context, historical studies cannot ignore these new sensibilities and methods of study, nor can they give up their responsibilities and specific contributions.

It is ultimately to those historical reasons (purposes, contingencies, needs, formulating responses, choices of people and communities) that we continually turn our attention, because we understand that there is always something that escapes mere description or data analysis. It is something we can focus on, investigate and assess in the short or the long run, but which always leaves something unresolved in our eyes. Besides, predictable outcomes belong to fictional reconstructions, not to the unpredictable twists of human life. Moreover, landscapes cannot be imagined without those who lived there. And it is this that, in hindsight, forms the emerging point of interest in history.

REFERENCES

- Andreolli, B. (1999) *Contadini su terre di signori*. Bologna: Clueb.
- Andreolli, B. (2002) 'L'uso del bosco e degli incolti', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana, II, Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 123-144.
- Andreolli, B. and Montanari, M. (1985) *L'azienda curtense in Italia. Proprietà della terra e lavoro contadino nei secoli VIII-XI*. Bologna: Clueb.
- Andreolli, B. and Montanari, M. (ed.) (1990) *Il bosco nel Medioevo*, 2nd edn. Bologna: Clueb.
- Archetti, G. (ed.) (2003) *La civiltà del vino. Fonti, temi e produzioni vitivinicole dal Medioevo al Novecento*. Brescia.
- Archetti, G. and Baronio, A. (ed.) (2011) *La civiltà del latte. Fonti, simboli e prodotti dal Tardoantico al Novecento*, Atti dell'Incontro nazionale di Studio (Brescia, 29-31 maggio 2008), FCB, Brescia 2011.
- Barlucchi, A. (1997) *Il contado senese all'epoca dei Nove. Asciano e il suo territorio tra Due e Trecento*. Firenze: Olschki.
- Barlucchi, A. (2013) 'I centri minori della Val di Chiana', in Pinto, G. and Pirillo P. (ed.) *I centri minori della Toscana nel Medioevo*. Firenze: Olschki, pp. 57-95.
- Bevilacqua, P. (1989) *Tra Europa e Mediterraneo. L'organizzazione degli spazi e i sistemi agrari*, in Id. (ed.) *Storia dell'agricoltura italiana in età contemporanea, I, Spazi e paesaggi*. Venezia: Marsilio, pp. 5-36.

- Bicchierai, M. (1995) 'Beni comuni e usi civici nella Toscana del basso Medioevo?', in Bicchierai, M. (ed) *Beni comuni e usi civici nella Toscana tardomedievale*. Venezia: Marsilio, pp. 13-50.
- Bicchierai, M. (2005) *Ai confini della repubblica di Firenze. Poppi dalla signoria dei conti Guidi al vicariato del Casentino*. Firenze: Olschki.
- Brugnoli, A., and Varanini, G.M. (ed.) (2005) *Olivi e olio nel Medioevo italiano*. Bologna: Clueb.
- Caby, C. (1999) *De l'éremitisme rural au monachisme urbain. Les camaldules en Italie à la fin du Moyen Âge*. Roma: École Française de Rome
- Cammarosano, P. (1991) *Italia medievale. Struttura e geografia delle fonti scritte*. Roma: La Nuova Italia.
- Camuffo, D. (1990) *Clima e uomo. Meteorologia e cultura: dai "fulmini" di Giove alle previsioni via satellite*, Milano: Garzanti.
- Canzian, D. and Simonetti, R. (ed.) (2012) *Acque e territorio nel Veneto Medievale*. Roma: Viella.
- Capatti, A. and Montanari, M. (1999) *La cucina italiana. Storia di una cultura*. Roma Bari: Laterza.
- Carocci, S. (2004) 'Poteri signorili e mercato della terra (Italia ed Europa occidentale, secc. XI-XIV)', in Cavaciocchi, S. (ed.) (2004) *Il mercato della terra. Secc. XIII-XVIII*, Firenze: FUP, pp. 193-221 (Settimana dell'Istituto Internazionale di Storia economica "F.Datini", 2003).
- Carocci, S. (2014) *Signorie di Mezzogiorno. Società rurali, poteri aristocratici e monarchia (XII-XIII secolo)*. Roma: Viella.
- Castagnetti, A. (2010) 'La storia agraria dell'alto Medioevo nel Novecento fino ai primi contributi di Vito Fumagalli (1966-1971)', in Nanni, P. (ed.) *Agricoltura e ambiente attraverso l'età romana e l'alto Medioevo*. Firenze: Accademia dei Georgofili-Le Lettere, pp. 41-65 (Quaderni della "Rivista di storia dell'agricoltura", 8).
- Cavaciocchi, S. (ed.) (1996) *L'uomo e la foresta. Secc. XIII-XVIII*. Firenze: Le Monnier (Settimana dell'Istituto Internazionale di Storia economica "F.Datini", 1995).
- Cavaciocchi, S. (ed.) (1997) *Alimentazione e nutrizione. Secc. XIII-XVIII*. Firenze: Le Monnier (Settimana dell'Istituto Internazionale di Storia economica "F.Datini", 1996).
- Cavaciocchi, S. (ed.) (2004) *Il mercato della terra. Secc. XIII-XVIII*, Firenze: FUP (Settimana dell'Istituto Internazionale di Storia economica "F.Datini", 2003).
- Cavaciocchi, S. (ed.) (2010) *Le interazioni fra economia e ambiente biologico nell'Europa preindustriale. Secc. XIII-XVIII*, Firenze: FUP (Settimana dell'Istituto Internazionale di Storia economica "F.Datini", 2009).
- Cazzola, F. (2002) 'Colture, lavori, tecniche, rendimenti', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana, II, Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 223-253.
- Cherubini, G. (1974) *Signori, contadini, borghesi. Ricerche sulla società italiana del basso Medioevo*. Firenze: La Nuova Italia.
- Cherubini, G. (1985) *L'Italia rurale del basso Medioevo*. Roma Bari: Laterza.
- Cherubini, G. (1989) 'La storia dell'agricoltura fino al Cinquecento', in *La storiografia italiana degli ultimi vent'anni, I, Antichità e Medioevo*. Roma Bari: Laterza, pp. 331-354.
- Cherubini, G. (1991a) *Le città italiane dell'età di Dante*. Pisa: Pacini.

- Cherubini, G. (1991b) *Scritti toscani. L'urbanesimo medievale e la mezzadria*. Firenze: Salimbeni.
- Cherubini, G. (1992) *Fra Tevere, Arno e Appennino. Valli, comunità, signori*. Firenze: Editoriale Toscana.
- Cherubini, G. (2003) *Città comunali di Toscana*. Bologna: Clueb.
- Cherubini, G. (2008) 'L'Italia', in Bourin, M., Cherubini, G. and Pinto, G. (ed.) *Rivolte urbane e rivolte contadine nell'Europa del Trecento. Un confronto*. Firenze: FUP, pp. 93-104.
- Cherubini, G. (2009) *Le città europee del Medioevo*. Milano: Bruno Mondadori.
- Cherubini, G. (2012) *Scritti meridionali*. Firenze: Accademia dei Georgofili-Le lettere (Quaderni della "Rivista di storia dell'agricoltura", 7).
- Cherubini, G. (2013a), *Firenze e la Toscana. Scritti vari*. Pisa: Pacini.
- Cherubini, G. (2013b) 'L'approvvigionamento alimentare delle città toscane tra XII e XV secolo', in Id. *Firenze e la Toscana. Scritti vari*. Pisa: Pacini, pp. 39-55.
- Chiappa Mauri, L. (1990) *Paesaggi rurali di Lombardia. Secoli XII-XV*. Roma Bari: Laterza.
- Chiappa Mauri, L. (1997) *Terra e uomini nella Lombardia medievale*. Roma Bari: Laterza.
- Chiappa Mauri, L. (2002) 'Popolazione, popolamento, sistemi colturali, spazi coltivati, aree boschive ed incolte', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana, II, Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 23-57.
- Chittolini, G. (1996) 'Per una geografia dei contadi alla fine del Medioevo', in Id., *Città, comunità e feudi negli stati dell'Italia centro-settentrionale (secoli XIV-XVI)*. Milano: Edizioni Unicopli, pp. 1-18.
- Comba, R. and Merlo G.G. (ed.) (1999) *L'abbazia di Staffarda e l'irradiazione cistercense nel Piemonte meridionale*. Cuneo: Società per gli Studi Storici, Archeologici ed Artistici della Provincia di Cuneo.
- Comba, R. and Panero, F. (ed.) (2000) *Aziende agrarie nel Medioevo. Forme della conduzione fondiaria nell'Italia nord-occidentale (secoli IX-XV)*. Cuneo: Società per gli Studi Storici, Archeologici ed Artistici della Provincia di Cuneo.
- Conti, E. (2014a) *I catasti agrari della repubblica fiorentina e il catasto particellare toscano (secoli XIV-XIX)*. 2nd edn. Roma: Istituto Storico Italiano per il Medio Evo.
- Conti, E. (2014b) *La formazione della struttura agraria moderna nel contado fiorentino, I, Le campagne nell'età precomunale*. 2nd edn. Roma: Istituto Storico Italiano per il Medio Evo.
- Conti, E. (2014c) *La formazione della struttura agraria moderna nel contado fiorentino, III.1, Fonti e risultati sommari delle indagini per campione e delle rilevazioni statistiche (secoli XV-XIX)*. 2nd edn. Roma: Istituto Storico Italiano per il Medio Evo.
- Conti, E. (2014d) *La formazione della struttura agraria moderna nel contado fiorentino, III.2, Monografie e tavole statistiche (secoli XV-XIX)*. 2nd edn. Roma: Istituto Storico Italiano per il Medio Evo.
- Cortonesi, A. (1995), *Ruralia. Economie e paesaggi del Medioevo italiano*. Roma: Il Calamo.
- Cortonesi, A. (1997) 'I cereali nell'Italia del tardo Medioevo. Note sugli aspetti qualitativi del consumo', in Cavaciocchi, S. (ed.) *Alimentazione e nutrizione. Secc. XIII-XVIII*. Firenze: Le Monnier, pp. 263-275 (Settimana dell'Istituto Internazionale di Storia economica "F.Datini", 1996).

- Cortonesi, A. (2002) 'L'allevamento', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana*, II, *Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 83-121;
- Cortonesi, A. (2003) 'La storia agraria dell'Italia medievale negli studi degli ultimi decenni. Materiali e riflessioni per un bilancio', *Società e storia*, 100-101, pp. 235-253.
- Cortonesi, A. (2004) 'Espansione dei coltivi e proprietà fondiaria nel tardo Medioevo. L'Italia del Centro-Nord', in Cavaciocchi, S. (ed.) (2004) *Il mercato della terra. Secc. XIII-XVIII*, Firenze: FUP, pp. 57-95 (Settimana dell'Istituto Internazionale di Storia economica "F.Datini", 2003).
- Cortonesi, A. (2005) 'Il casale romano fra Trecento e Quattrocento', in Esposito, A. and Palermo, L. (ed.) *Economia e società a Roma tra Medioevo e Rinascimento. Studi dedicati ad Arnold Esch*. Roma: Viella, pp. 123-145.
- Cortonesi, A. (2015) 'Introduzione. Note sugli elementi ordinatori di alcuni paesaggi italiani (secc. XIII-XV)', in *I paesaggi agrari d'Europa (secc. XIII-XV)*. Pistoia: Viella-Centro Italiano di Studi di Storia e d'Arte, pp. 1-32 (Centro Italiano di Studi di Storia e Arte).
- Cortonesi, A. and Piccinni, G. (2006) *Medioevo nelle campagne*. Roma: Viella.
- Cortonesi, A., Pasquali, G. and Piccinni, G. (2002) *Uomini e campagne nell'Italia medievale*. Roma Bari: Laterza.
- D'Attorre, P.P. and De Bernardi A. (1994), *Il "lungo addio": una proposta interpretativa*, in D'Attorre, P.P. and De Bernardi A. (ed.) *Studi sull'agricoltura italiana. Società rurale e modernizzazione*. Milano: Feltrinelli, pp. XI-LVI: XIV.
- Da Passano, M., Mattone, A., Mele, F., Simbula, P.F. (ed.) (2000) *La vite e il vino. Storia e diritto (secoli XI-XIX)*. Roma: Carocci.
- De la Roncière, Ch. M. (2005) *Firenze e le sue campagne nel Trecento. Mercanti, produzione, traffici*. Firenze: Olschki.
- Del Panta, L. (2002) 'Popolazione, popolamento, sistemi culturali, spazi coltivati', in Cianferoni, R., Ciuffoletti, Z. and Rombai, L. (ed) *Storia dell'agricoltura italiana*, III, *L'età contemporanea*, 1, *Dalle «rivoluzioni agronomiche» alle trasformazioni del Novecento*. Firenze: Accademia dei Georgofili-Polistampa, pp. 19-52
- Delogu, P. (2012) 'L'ambiente altomedievale come tema storiografico', in Nanni, P. (ed.) *Agricoltura e ambiente attraverso l'età romana e l'alto Medioevo*. Firenze: Accademia dei Georgofili-Le Lettere, pp. 67-108 (Quaderni della "Rivista di storia dell'agricoltura", 8).
- Dini, B. (2002) 'La circolazione dei prodotti (secc. VI-XVIII)', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana*, II, *Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 383-448.
- Epstein, S.R. (1986) *Alle origini della fattoria toscana. L'ospedale della Scala di Siena e le sue terre (metà '200 – metà '400)*. Firenze: Salimbeni.
- Epstein, S.R. (2006) 'I caratteri originali. L'economia', in Salvestrini, F. (ed.) *L'Italia alla fine del Medioevo*, I, *I caratteri originali nel quadro europeo*, Firenze: FUP, pp. 381-431.
- Fantoni, G. (1990) *L'acqua a Milano. Uso e gestione nel basso Medioevo (1385-1535)*. Bologna: Cappelli.
- Flandrin, J.L and Montanari, M. (ed.) (1996) *Storia dell'alimentazione*, Roma Bari: Laterza.
- Forni, G. (2002) 'Strumenti e macchine agricole dal Medioevo al Rinascimento', in , pp. 579-632.

- Franceschi, F. and Molà, L. (2005) 'L'economia del Rinascimento: dalle teorie della crisi alla preistoria del consumismo', in Fantoni, M. (ed.) *Il rinascimento italiano e l'Europa*, I, *Storia e storiografia*. Vicenza: Fondazione Cassamarca-Angelo Colla Editore, pp. 185-200.
- Franceschi, F. and Taddei I. (2012) *Le città italiane nel Medioevo XII-XIV secolo*. Bologna: Il Mulino.
- Francesconi, G. (2013) 'Un contado miniaturizzato e una valle-sistema: il Pistoiese e la Valdinievole', in Pinto, G. and Pirillo P. (ed.) *I centri minori della Toscana nel Medioevo*. Firenze: Olschki, pp. 217-239.
- Francesconi, G. (2014) *Elio Conti e la società fiorentina del Quattrocento: un'incompiuta di successo*, Roma: Istituto Storico Italiano per il Medio Evo.
- Friedman, D. and Pirillo, P. (ed.) (2004) *Le terre nuove*. Firenze: Olschki.
- Fumagalli, V. (1985) 'Introduzione', in Andreolli, B., Fumagalli, V. and Montanari, M. (ed.) *Le campagne italiane prima e dopo il Mille. Una società in trasformazione*. Bologna: Clueb, pp. 9-11.
- Galetti P. (ed.) (2012) *Paesaggi, comunità, villaggi medievali*. Spoleto: Centro Italiano di Studi sull'Alto Medioevo.
- Gaulin, J.-L. and Grieco, A. J. (ed.) *Dalla vite al vino. Fonti e problemi della vitivinicoltura italiana medievale*. Bologna: Clueb.
- Gaulin, J.L. (2007) 'Trattati di agronomia e innovazione agricola', in Braunstein, Ph. And Molà, L. (ed.) *Il rinascimento italiano e l'Europa*, III, *Produzione e tecniche*. Vicenza: Fondazione Cassamarca-Angelo Colla Editore, pp. 145-163.
- Gazzini, M. (2013) 'La fraternita come luogo di economia. Osservazioni sulla gestione delle attività e dei beni di ospedali e confraternite nell'Italia tardo-medievale', in Ammannati F. (ed.) *Assistenza e solidarietà in Europa. Secc. XIII-XVIII*. Firenze: FUP, pp. 261-276 (Settimana di Studi dell'Istituto Internazionale di Storia Economica "F. Datini", 2012).
- Gensini, S. (ed.) (1990), *Le Italie del tardo Medioevo*. Pisa: Pacini.
- Ginatempo M., Sandri L. (1990) *L'Italia delle città. Il popolamento urbano tra Medioevo e Rinascimento (secoli XIII-XVI)*. Firenze: Le Lettere.
- Grohmann, A. (2011), 'Vecchie e nuove sensibilità nella storiografia economica italiana: le tematiche', in Ammannati, F. (ed.) *Dove va la storia economica? Metodi e prospettive. Secc. XIII-XVIII*. Firenze: FUP (Settimana dell'Istituto Internazionale di Storia economica "F. Datini", 2010).
- Guglielmotti, P (2005) *Ricerche sull'organizzazione del territorio nella Liguria medievale*. Firenze: FUP.
- Guglielmotti, P. (2001) *Comunità e territorio. Villaggi del Piemonte medievale*. Roma: Viella.
- IGM (2007), *Italia. Atlante dei tipi geografici*. Firenze: Istituto Geografico Militare.
- Iradriel, P. (2015) 'Consideraciones conclusivas', in *I paesaggi agrari d'Europa (secc. XIII-XV)*. Pistoia: Viella-Centro Italiano di Studi di Storia e d'Arte, pp. 627-639 (Centro Italiano di Studi di Storia e Arte).
- Lanconelli, A. (1994) *La terra buona. Produzione, tecniche e rapporti di lavoro nell'agro viterbese fra Due e Trecento*, Bologna: Clueb.
- Lanconelli, A. and De Palma, R.L. (1992) *Terra, acque e lavoro nella Viterbo medievale*. Roma: Istituto Storico Italiano per il Medioevo.

- Licinio, R. (2009) *Uomini e terre nella Puglia medievale. Dagli Svevi agli Aragonesi*. 2nd edn. Bari: Edizioni dal Sud.
- Malanima, P. (1990) 'L'energia disponibile', in Romano, R. (ed.) *Storia dell'economia italiana, I, Il Medioevo dal crollo al trionfo*. Torino: Einaudi, pp. 117-136;
- Malanima, P. (2002) *L'economia italiana. Dalla crescita medievale alla crescita contemporanea*. Bologna: Il Mulino.
- Malvolti, A., Pinto, G. (ed.) (2003) *Incolti, fiumi, paludi. Utilizzazione delle risorse naturali nella Toscana medievale e moderna*. Firenze: Olschki.
- Matheus, M., Piccinni, G., Pinto, G. and Varanini, G.M. (ed.) (2010) *Le calamità ambientali nel tardo Medioevo europeo: realtà, percezioni, reazioni*, Firenze: Fup (Centro di Studi sulla Civiltà del Tardo Medioevo, San Miniato).
- Mattone, A. and Simbula, P.F. (ed.) (2011) *La pastorizia mediterranea. Storia e diritto (secoli XI-XX)*. Roma: Carocci.
- Menant, F. (1993) *Campagnes Lombardes au Moyen Âge, L'économie et la société rurales dans la région de Bergame, de Crémone et de Brescia du Xe au XIIIe siècle*. Roma: École Française de Rome.
- Menant, F. (2011) *L'Italia dei comuni (1100-1350)*. Roma: Viella.
- Montanari M. (2002) 'Colture, lavori, tecniche, rendimenti', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana, II, Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 59-81.
- Montanari, M. (1988) *Alimentazione e cultura nel Medioevo*. Roma Bari: Laterza.
- Montanari, M. (1993) *La fame e l'abbondanza. Storia dell'alimentazione in Europa*. Roma Bari: Laterza.
- Montanari, M. (2001) 'Dalla parte dei *laboratores*', in Cortonesi, A. and M. Montanari, M. (ed.) *Medievistica italiana e storia agraria. Risultati e prospettive di una stagione storiografica*. Bologna: Clueb, pp. 7-10.
- Montanari, M. and Vasina, A. (2000) *Per Vito Fumagalli. Terra, uomini, istituzioni medievali*. Bologna: Clueb.
- Mucciarelli, M., Piccinni, G. and Pinto, G. (ed.) (2009) *La costruzione del dominio cittadino sulle campagne. Italia centro-settentrionale, secoli XII-XIV*. Siena: Protagon.
- Mucciarelli, R. and Piccinni G. (1995) 'Un'Italia senza rivolte? Il conflitto sociale nelle aree mezzadrili', in Cherubini, G. (ed.) *Protesta e rivolta contadina nell'Italia medievale, Istituto Alcide Cervi. Annali*, 16, pp. 173-205.
- Nanni, P. (2000) 'Note sui primi quarant'anni della "Rivista di storia dell'agricoltura" (1961-2000)', *"Rivista di storia dell'agricoltura"*, XL(2-supplemento), pp. VII-XXIII.
- Nanni, P. (2010), *Conclusioni*, in Id. (ed.) *Agricoltura e ambiente attraverso l'età romana e l'alto Medioevo*. Firenze: Accademia dei Georgofili-Le Lettere, pp. 140-149 (Quaderni della "Rivista di storia dell'agricoltura", 8).
- Nanni, P. (2012a) *Uomini nelle campagne. Agricoltura ed economie rurali in Toscana (secoli XIV-XIX)*. Firenze: Accademia dei Georgofili-Le Lettere (Quaderni della «Rivista di storia dell'agricoltura», 9).
- Nanni, P. (2012b) 'Paesaggio e Storia', *Ri-Vista. Ricerche per la progettazione del paesaggio*, 2, pp. 26-33.

- Nanni, P. (2014) 'Impresa pubblica e proprietà fondiaria: il «Ceppo pe' poveri di Cristo» di Francesco di Marco Datini (Prato, XV secolo)', *Rivista di storia dell'agricoltura*, LIV(2), pp. 93-130.
- Nanni, P. (2015) 'Spazi verdi urbani e campagne periurbane nell'Italia settentrionale e in Toscana', in *I paesaggi agrari d'Europa (secoli XIII-XV)*. Pistoia: Viella-Centro Italiano di Studi di Storia e d'Arte, pp. 537-586 (Centro Italiano di Studi di Storia e Arte)
- Nanni, P. (ics) 'Quadro ambientale e biologico: il "periodo caldo Medievale" e la variabilità climatica', in *La rescita economica dell'Occidente. Un tema storico non ancora esaurito*. Pistoia: Viella-Centro Italiano di Studi di Storia e d'Arte, pp. ... (Centro Italiano di Studi di Storia e Arte).
- Naso, I. (2009) 'Spazi agricoli nel contesto urbano. Gli orti del Piemonte tardo medievale', in Mucciarelli, M., Piccinni, G. and Pinto, G. (ed.) (2009) *La costruzione del dominio cittadino sulle campagne. Italia centro-settentrionale, secoli XII-XIV*. Siena: Protagon, pp. 555-586;
- Naso, I. (ed.) (2012) *Le parole della frutta. Storia, saperi immagini tra Medioevo ed età contemporanea*. Torino.
- Panero, P. (1999) *Schiavi, servi e villani nell'Italia medievale*, Torino: Paravia.
- Piccinni, G. (1992) *Il contratto di mezzadria nella Toscana medievale*, III, *Contado di Siena (1349-1518)*. Firenze: Olschki.
- Piccinni, G. (1993) 'L'evoluzione della rendita fondiaria in Italia: 1350-1450', in *Italia 1350-1450: tra crisi, trasformazione, sviluppo*. Pistoia: Centro Italiano di Studi di Storia e d'Arte, pp. 233-271.
- Piccinni, G. (2001) 'Contadini e proprietari nell'Italia comunale: modelli e comportamenti', in *Ceti, modelli, comportamenti nella società medievale (secoli XIII-metà XIV)*. Pistoia: Centro Italiano di Studi di Storia e d'Arte, pp. 203-237.
- Piccinni, G. (2002) 'La proprietà della terra, i percettori dei prodotti e della rendita', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana*, II, *Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 145-168.
- Piccinni, G. (2012), 'Signori, contadini, borghesi. Una recensione tardiva', in Balestracci, D., Barlucchi, A., Franceschi, F., Nanni, P., Piccinni, G., Zorzi, A. (ed.) *Uomini, paesaggi, storie. Studi di storia medievale per Giovanni Cherubini*. Siena: SeB Editori,, vol. II, pp. 1193-1206.
- Piccinni, G. (2013) 'Documenti per una storia dell'ospedale di Santa Maria della Scala di Siena', *Summa*, 2-5, pp. 1-29.
- Piccinni, G. (2013) 'Siena, il grano di Maremma e quello dell'ospedale. I provvedimenti economici del 1382', *Bullettino senese di storia patria*, CXX, pp. 174-189;
- Piccinni, G. (2014) 'Siena 1309-1310: il contesto', in Giordano, N. and Piccinni, G. (ed.) *Siena nello specchio del suo Costituto in volgare del 1309-1310*. Pisa: Pacini, pp. 15-36;
- Pini, A.I. (1993) *Campagne bolognesi. Le radici agrarie di una metropoli medievale*. Firenze: Le Lettere.
- Pinna, M. (1984) *La storia del clima. Variazioni climatiche e rapporto clima-uomo in età postglaciale*. Roma ("Memorie della Società Geografica Italiana", XXXVI)
- Pinto, G. (1993) 'Le trasformazioni ambientali nella penisola italiana nel basso Medioevo', in Segre, L. (ed.) *Agricoltura, ambiente e sviluppo economico nella storia europea*. Milano: Franco Angeli, pp. 125-135.
- Pinto, G. (1993) *Toscana medievale. Paesaggi e realtà sociali*. Firenze: Le Lettere.

- Pinto, G. (1996) 'Dalla tarda antichità alla metà del XVI secolo', in Del Panta, L., Livi Bacci, M., Pinto, G. and Sonnino, E. *La popolazione italiana dal Medioevo ad oggi*. Roma Bari: Laterza.
- Pinto, G. (1996) 'L'annona: aspetti e problemi dell'approvvigionamento urbano fra XIII e XV secolo', in Id. *Città e spazi economici nell'Italia comunale*, Bologna: Clueb, pp. 77-96;
- Pinto, G. (2002) *Campagne e paesaggi toscani del Medioevo*. Firenze: Nardini.
- Pinto, G. (2008a) 'Alimentazione e livelli di vita', in Id. *Il lavoro, la povertà, l'assistenza*. Roma: Viella, pp. 71-92.
- Pinto, G. (2008b) 'L'annona: un caso particolare. L'ufficio fiorentino dell'Abbondanza negli anni 1411-1412', in Id. *Il lavoro, la povertà, l'assistenza*. Roma: Viella, pp. 97-122.
- Pinto, G. (2008c) 'Le città italiane di fronte alle grandi carestie trecentesche: percezione della crisi e politiche annonarie', in Id. *Il lavoro, la povertà, l'assistenza*. Roma: Viella, pp. 147-161.
- Pinto, P. (2013) 'Formazione e gestione dei patrimoni fondiari degli istituti assistenziali cittadini (Italia, secoli XIII-XV)', in Ammannati F. (ed.) *Assistenza e solidarietà in Europa. Secc. XIII-XVIII*. Firenze: FUP, pp. 169-178 (Settimana di Studi dell'Istituto Internazionale di Storia Economica "F. Datini", 2012).
- Pirillo, P. (2001) *Costruzione di un contado. I fiorentini e il loro territorio nel basso Medioevo*. Firenze: Le Lettere.
- Pirillo, P. (2005) *Forme e strutture del popolamento nel contado fiorentino, I, Gli insediamenti nell'organizzazione dei popoli (prima metà del XIV secolo)*. Roma: Viella.
- Prosperi, L. (2010) *Il miele nell'Occidente medievale*. Firenze: Accademia dei Georgofili-Le Lettere (Quaderni della "Rivista di storia dell'agricoltura", 6).
- Rao, R. (2005) *I beni comuni di vercelli. Dalla rivendicazione all'alienazione (1183-1254)*. Vercelli: Socieà Storica Vercellese.
- Rao, R. (2012a) 'Beni comuni e identità di villaggio (Lombardia, secoli XI-XII)', in Galetti P. (ed.) (2012) *Paesaggi, comunità, villaggi medievali*. Spoleto: Centro Italiano di Studi sull'Alto Medioevo, pp. 327-343.
- Rao, R. (2012b) 'I beni comuni nel Piemonte bassomedievale', in Ortolani, M., Vernier, O. and Bottin, M. *Propriété individuelle et collective dans les États de Savoie*. Nice: Serre Editeur, pp. 169-183.
- Rao, R. (2015) *I paesaggi dell'Italia medievale*. Roma: Carocci.
- Rapetti, A.M. (2006) 'Paesaggi rurali e insediamenti nell'Italia del Basso Medioevo', in Salvestrini, F. (ed.) *L'Italia alla fine del Medioevo, I, I caratteri originali nel quadro europeo*, Firenze: FUP, pp. 25-56
- Redon, O. (1999), *Lo spazio di una città. Siena e la Toscana meridionale (secoli XIII-XIV)*, Roma: Viella.
- Rombai, L. (2002) 'Clima, suolo, ambiente', in Forni, G. and Marcone A. (ed), *Storia dell'agricoltura italiana, I, L'età antica, 1, Preistoria*. Firenze: Accademia dei Georgofili-Polistampa, pp. XVII-LXIII.
- Rombai, L. and Buoncompagni, A. (2002) 'Popolazione, popolamento, sistemi colturali, spazi coltivati, aree boschive ed incolti', in Pinto, G., Poni, C. and Tucci, U. (ed.) *Storia dell'agricoltura italiana, II, Medioevo ed età moderna*. Firenze: Accademia dei Georgofili-Polistampa, pp. 171-221;

- Romby, G.C. (2001) *Le proprietà dell'ospedale degli Innocenti di Firenze. Documenti a cartografia sec. XVI-XVIII*. Pisa: Pacini.
- Salvestrini, F. (1998) *Santa Maria di Vallombrosa. Patrimonio e vita economica di un grande monastero medievale*. Firenze: Olschki.
- Sereno, P. (1993) 'Crisi climatiche e crisi di sussistenza: qualche considerazione sulle interazioni tra ambiente geografico e agricoltura nelle economie d'antico regime', in Segre, L. (ed.) *Agricoltura, ambiente e sviluppo economico nella storia europea*. Milano: Franco Angeli, pp. 137-155
- Varanini, G.M. (2011) 'La Terraferma veneta nel Quattrocento e le tendenze recenti della storiografia', in Viggiano, A. and Del Torre, G. (ed.) *1509-2009. L'ombra di Agnadello. Venezia e la Terraferma*. Venezia: Ateneo Veneto, pp. 13-63.
- Varanini, G.M. (2012) 'Per la storia agraria della pianura bresciana nel Quattrocento', in Chittolini, G., Conti, E. and Covini M.N. (ed.) *Nell'età di Pandolfo Malatesta. Signore a Bergamo, Brescia e Fano agli inizi del Quattrocento*. Brescia: Morcelliana, pp. 83-108.
- Violante, C. and Ceccarelli Lemut, M.L. (ed.) (1997) *La signoria rurale in Italia nel Medioevo*. Pisa: ETS.
- Zanoboni, M.P. (1997) 'Frutta e fruttaroli nella Milano sforzesca', *Archivio storico lombardo*, CXXIII, pp. 117-151