

Cambridge University Press

978-0-521-10881-2 - The Wild and the Sown: Botany and Agriculture in Western Europe, 1350-1850

Mauro Ambrosoli

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This book describes the spread of new agricultural practice in the half millennium after 1350, and reconstructs a neglected part of Europe's agricultural past: the introduction of fodder crops, and the continuous reorganization of traditional botanical inputs within a new system of farming.

New agricultural systems, based on convertible husbandry, clovers, turnips and other roots, were introduced to some areas of Europe from the 1750s, and gave new impetus to productivity. This so-called 'agricultural revolution' involved a learning process in which recourse to ancient and medieval botany helped farmers and scholars to overcome a situation of stalemate in early modern technology.

The book breaks entirely new ground by showing the distant historical origins of a major transformation in land potential and farm productivity. A vast range of evidence is cited from Italy, France, England and elsewhere to produce in effect an economic, social and cultural history of Europe in which the focus is on the long-distance consequences of the 'agricultural revolution'.

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The wild and the sown

*Botany and agriculture in Western Europe:
1350–1850*

MAURO AMBROSOLI

University of Turin

TRANSLATED BY MARY McCANN SALVATORELLI



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To my parents

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Foreword

JOAN THIRSK

It is only rarely that a book on a familiar subject manages to open up wholly new vistas in every direction. This is one such treasure. We English readers and writers treat the introduction of clover onto the farming scene as a piece of relatively straightforward history. We know that the process was slow, because farmers were cautious. We have discovered that some of the more adventurous were experimenting in the 1630s, and a few more summoned up the courage to try clover in the 1660s and 1670s. But it was well after 1700 before any considerable number of farmers grew it in the country as a whole. It was then absorbed into a thoroughly satisfactory four-course rotation, of turnips, barley, seeds (i.e. mostly clover), wheat, and farmers from the Continent of Europe visited England to admire the system. Only after 1800 did it become a routine, and the wheel had turned to complete a revolution in arable farming.

This England-centred account is eventful enough, but, in fact, it uncovers only a few layers of the full story. We have never penetrated to the deeper layers of men's efforts to identify and separate different legumes, test their merits, and exploit their virtues. Nor do we have any inkling of the devious route by which success was finally achieved. Clover was not the only choice for a nitrogen-fixing legume, which would restore fertility to the soil after more exhausting cereal crops; we might have chosen lucerne, as farmers on the European Continent preferred, or sainfoin. At the beginning, the issue was open and undecided.

This book from an Italian historian peels away the deeper layers of the story, and carries us to the heart of the matter. It reveals the most fruitful cooperation across Europe among botanists, herbalists, landowners, diplomats who travelled with their eyes and ears open, and observant, practical farmers. It pays full tribute to the vital contribution of small

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peasants, who, by virtue of their very situation, observed small things closely, and attended to detail. For them, riches were counted not in the extent of their land but in the quantity and quality of the family labour given to cultivating it. All these many different people contributed to the solution of a vital farming problem, managing to carry agricultural production forward to new heights, without abusing the land; the new regime kept it in good heart for future generations. Through the alliance of these many different people, the several legumes were finally correctly identified and named, the best growing procedures were established in the different countries of Europe, and sufficient pure seed was supplied to sustain the system. It comes as a shock to realize that the clover revolution in England and northern Europe depended heavily, throughout the nineteenth century, on the supply of seeds gathered by small peasants in southern Europe. It anticipated by two centuries the present situation when the Third World is deprived of its own germoplasm in order to sustain the productivity of the Western economy.

This is a timely book in many different senses. It reveals the truly European dimension of agricultural progress in one farming sector. But the lesson has much broader significance. It shows how new ways forward are always sought in the dark, without certainty of success, amid conflicting information and among conflicting viewpoints. Many different people, with different interests, and different training, make unexpected contributions. No one can foretell the outcome. The historian comes along at the end, traces the sequence of events, and identifies the major milestones. But even historians, with assumptions inculcated in one period, do not always see all the issues involved in a world ruled by other assumptions. As this book vividly shows, a new interpretation of our past is always possible, offering a challenge to the present.

This story of the legumes in farming, of lucerne, sainfoin, and clover, builds up a rich tapestry of events and people linking Italy with France, Spain, Germany and England. The partnership of humanist scholars, curious travellers, scientists, small farmers and large, was essential for their ultimate success. But it illuminates an experience from the past, which it is also of great moment for us to understand in the present. While it enriches our historical understanding with a multitude of original insights, it should prompt many sober reflections on the practical lessons to be remembered when we Europeans take decisions about our future.

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Preface

In the late 1960s, when research on this volume was begun, one could still approach the question of ‘agricultural revolution’ with reasonable optimism, as a necessary precondition for the transformation of traditional economies into so-called modern industrial society. Since the 1750s new agricultural systems had increased productivity, first in certain parts of Europe and thence in other areas of the world. Today, however, there is no escaping from the fact that these two hundred years of capitalist agriculture have created large, agriculturally uniform regions competing for economic priority, yet have failed miserably to free mankind from the shackles of starvation. Many valuable agricultural practices and cultivars have been abandoned. As a result, mankind still depends on the plants developed at the time of the first agricultural revolution, which took place between 7500 and 3500 BC, in Central Asia, South-East Asia and Mesamerica.

The so-called ‘nouvelle agriculture’ or ‘agricultural revolution’, founded on convertible husbandry, clovers, turnips and other roots, highlights the value of botanical input, originating outside, but rapidly absorbed into, the framework of capitalist farming. However, a process of innovation is always linked to a process of learning, involving continual choice between two or more solutions. Historians of innovation have often forgotten these choices, describing historical events as if there had been only one possible solution, whereas, in practice, the present position of industrial (or post-industrial) society has been reached largely thanks to errors, delays and/or rearrangements which in no way followed a linear progression.

Despite my apparent reluctance to hand over the final script, I warmly welcome the opportunity offered to me by the Cambridge University Press, to make this work available to English-speaking readers, since I believe that changes in the public’s attitudes may eventually make a

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significant contribution to the defence of our common agricultural assets. Unquestionably, the present edition would never have been brought to press without the continuous support and encouragement of Dr Joan Thirsk, to whom I am deeply grateful. We have been discussing its contents over the years, since we met in Oxford in 1977. The many hours she has devoted to the revision of the translated text go beyond anything one could hope for from the most generous of editors. While never failing to respect the thinking of the original, her suggestions have greatly helped to present the book in a form more familiar to the English reader. Obviously, I alone am responsible for the views and judgements expressed in it.

Of the many colleagues and friends who have given me their support during these years I particularly wish to mention the late Professor Franco Venturi, who followed most attentively, with the interest and curiosity for which he was distinguished, each new step of my research. Marino Berengo and Carlo Poni have read earlier versions of the text; Diego Moreno has always been very ready to back up my interest in the history of agriculture. Giovanni Levi, Edoardo Grendi, Gianni Toniolo and Patrick O'Brien have all devoted a great deal of their time to me. Many specialists have shared their knowledge with me, as did the late Frank Emery, who presented me with his unpublished paper on matters closely related to my studies. Much of the work has been the subject of lectures and seminars with my students at the University of Turin and other distinguished institutions, such as the Institute of Historical Research, London 1977, Ca' Foscari, University of Venice 1988, the Berenson Foundation, I Tatti, Florence 1989. The University of Oxford and Magdalen College, Oxford, honoured me with an invitation to give the Waynflete lectures in 1987 and granted me a Fellowship which provided an opportunity to revise all the material that I had been collecting over so many years and to insert many missing links. Conversation with J. Stoye, C. Grayson, M. Gilsenan, D. Norbrook, A. Boltho, J. Enos and L. Brockliss was always interesting. Unfortunately, Angus MacIntyre, then acting President of Magdalen College, who had the rare gift of turning an academic event into an occasion for lively communication between scholars of different extractions, is no longer with us. His recent, untimely death is a sad loss to all who benefited from his friendship.

I also wish to thank Monsieur Gilles Postel-Vinay, of the Institut National des Recherches Agronomiques, Paris, and Dr Anna J. Schwartz, of the National Bureau of Economics, Washington DC, for valuable

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indications of sources; as well as those many librarians and archivists who have patiently met my countless requests. Documents from the Samuel Hartlib Papers, University of Sheffield, are quoted here with the permission of their owner, Lord Delamere. The Ministero degli Affari Esteri, Rome, the British Academy, London, the Consiglio Nazionale delle Ricerche, Rome, Magdalen College, Oxford and the Italian Fondi Universitari per la Ricerca, Rome, have all met some of the expenses incurred in the years 1973, 1977, 1980, 1986–87, 1981–90. The Dipartimento di Storia of the University of Turin has also generously granted permission to use some of their local Fondi Universitari per la Ricerca, to cover part of the translation expenses. Gian Felice Mura of the same Dipartimento has helped me a great deal with the preparation of this manuscript.

My translator, Mrs Mary McCann Salvatorelli, has edited a number of papers for international meetings and articles on agriculture published in English and American reviews. She approached the daunting task of translating this volume with the insight that stems from her Oxfordshire farming background and many years of delving into the intricacies of Italian thought patterns. Thanks to her powers of persuasion the reader has been spared much of the obsolete, archaic language to which I have decided leanings, natural and acquired.

This new edition, too, owes a great deal to the intelligent support, tempered with affection and a large measure of English humour, which my wife Vanessa has always given to me. I am also grateful to Stefano for the many interests he likes to share with his parents and the many more he wishes to develop in the coming years.

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Abbreviations

Avignon	
AADD	Archives Départementales du Rhône
MC	Musée Calvet
Bologne	
AA	Biblioteca Archiginnasio
BU	Biblioteca Universitaria
Brescia	
AS	Archivio di Stato
BQ	Biblioteca Queriniana
Cambridge	
UL	University Library
Carpentras	
AACC	Archives Comunales
BI	Bibliothèque Inguibertine
Die	
AACC	Archives Comunales
Florence	
BL	Biblioteca Laurenziana
BM	Biblioteca Marucelliana
BN	Biblioteca Nazionale
BR	Biblioteca Riccardiana
London	
BL	British Library
GL	Guildhall Library
PRO	Public Record Office
Milan	
AS	Archivio di Stato
BA	Biblioteca Ambrosiana
BN	Biblioteca Nazionale Braidense

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Modena	
BE	Biblioteca Estense
Montpellier	
EM	Ecole de Medecine
Oxford	
BO	Bodleian Library
DPS	Department of Plant Sciences
Paris	
AANN	Archives Nationales (now known as CARAN)
BM	Bibliothèque Mazarine
BN	Bibliothèque Nationale
Sheffield	
UL	University Library
Turin	
AS	Archivio di Stato
BC	Biblioteca Comunale
BN	Biblioteca Nazionale
BR	Biblioteca Reale
Valence	
AADD	Archives Départementales de la Drôme
Venice	
BN	Biblioteca Nazionale Marciana
MC	Museo Correr
Winchester	
CL	College Library

Libraries which are quoted in full in the text do not appear in this list.

NOTE ON BOTANICAL NOMENCLATURE, CHRONOLOGY, METRIC SYSTEM

We have adopted the Linnean system for naming botanical species. Wherever another nomenclature has been used, the fact has been indicated, unless it is clear from the context that it derives from the nomenclature of Dioscorides, from Italian, French or English, or from botanists earlier than Linnaeus.

English local plant names follow C. E. Hubbard, *Grasses*, Harmondsworth 1968 and W. Keble Martin, *The Concise British Flora in Colour*, London 1969.

The measures used in agriculture are those in use in the place in

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question in the past, unless the source of the conversion is specifically indicated.

The prices are always given in local currency (£ s d), without repeating the obvious references to the *livre* of Tours for France, the pound sterling for England, or the *lira* of Venice or other Italian States, for Italy.

The spelling of old English, French and Italian documents has been kept, while abbreviations have been replaced by the full form. English dates are given according to the Old Style Calendar when necessary, with the New Year beginning on 15 March, not 1 January.

Metric conversions of ancient measures used in the text:

Volume:

1 pint = 0.57 l; 2 pints = 1 quart = 1.14 l; 4 quarts = 4.55 l; 2 gallons = 1 peck = 9.09 l; 4 pecks = 1 bushel = 36.37 l.

1 *quarta* = 12.16 l; 1 *somata* = 146 l; 1 *carra di fieno*, Brescia = 11 mc, Turin = 5.022 mc.

1 *éminée* = 23 l.

Weight:

1 pound = 0.45 kg; 1 quarter = 12.60 kg; 1 hundredweight = 50.80 kg.

1 load of hay = 18 cwt = 914 kg; 1 load of hay = 12 cwt = 610 kg.

1 *carra di fieno*, Turin = 553.26 kg.

Land:

1 acre = 0.40 ha; 1 *arpent* = 0.34 ha; 1 *arpent commun* = 0.42 ha.

1 *piò* = 0.32 ha.

1 *éminée* = 0.05–0.08 ha.

1 *tese* = 0.00 ha.

1 *pertica* (perch) = 2.85 m.

1 *pertica* = 0.065 ha.