

BOOK REVIEW

Martino Lorenzo Fagnani. *The Development of Agricultural Science in Northern Italy in the Late Eighteenth and Early Nineteenth Century*. Cham: Palgrave Macmillan, 2023, 277 pp.

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Pedro Mota Tavares

Institute of Contemporary History, NOVA School of Social Sciences and Humanities,
Lisbon, Portugal

pfmtavares@gmail.com

This book explores the understudied dynamics of the relationship between the State and science during the Age of Enlightenment and the Napoleonic Era, specifically emphasizing agricultural science in northern Italy. It sheds light on the active involvement of institutions, experts, and landowners in shaping the European knowledge network and influencing the trajectory of agricultural science as it transitioned into the nineteenth century. While there is a consistent body of historical literature on agricultural science, the book identifies an overlooked dimension that it endeavors to fill: the international relevance of northern Italian agricultural science.

The historiographical context spans from the 1760s to the 1810s, when Italian agricultural science experienced a significant advancement, adopting principles from natural sciences, technology, and socioeconomics to drive rural development. Thus, this period witnessed focused efforts by institutions, governments, scientists, and intellectuals toward enhancing agriculture, animal husbandry, and the general well-being of rural communities, considering aspects such as nutrition, health, and education.

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Still, during this period, institutions and experts within northern Italy—which included the Kingdom of Sardinia, as well as the Republic of Venice and some extensions of the Grand Duchy of Tuscany and the Papal States—profited from accepting and endorsing agricultural experiments, made possible by enhanced knowledge sharing and increased access to various plant and animal species. This advancement marked the culmination of an extensive process initiated many decades prior.

This historical investigation by Martino Lorenzo Fagnani relies mainly on unpublished primary sources from Italian, French, and Spanish historical archives to examine the relationship between northern Italian agricultural science and other European countries from the late eighteenth to the early nineteenth centuries. The book's structure comprises an introductory section (chapter 1) followed by four main chapters addressing distinct aspects of the subject matter, and conclusions (chapter 6).

In chapter 2, titled “Institutions and State Policies,” the book examines the pivotal role played by academies, economic and agricultural societies, universities, and botanical gardens in propelling the progress of agricultural science. The analysis includes exploring the dynamic interactions between these institutions and governments, considering the impact of geopolitical shifts on the agricultural landscape by comparing the changes between the “fragmented context in the late Old Regime and the more homogeneous situation in the Napoleonic Era” (p. 6). This historical period also reflects the evolution of European agriculture, marked by the “Agricultural Enlightenment” (to quote Peter Jones, *Agricultural Enlightenment. Knowledge, Technology, and Nature, 1750-1840*, Oxford: Oxford University Press, 2016) involving agronomic knowledge, technology, and governmental initiatives in response to economic and demographic changes.

Chapter 3, “Knowledge Network,” focuses on the direct engagements between Italian and European naturalists and agriculturists. The chapter emphasizes the exchange of knowledge and materials during this period, shedding light on the interconnectedness within the European scientific community.

During the emergence of agricultural science, a critical discourse centred on a significant dilemma: whether to allocate resources to acclimating foreign plant species or to fortifying the cultivation of established European crops. Notably, colonial powers such as France, Spain, Great Britain, and the Low Countries possessed prior expertise in the study and experimentation of foreign plant species, predominantly from overseas. In contrast, although the Italian States did not directly connect to the New World, their well-established knowledge network facilitated a thorough examination of exotic species and an evaluation of their viability for acclimatization.

Transitioning to chapter 4, “Experimentation,” the book explores the structural elements of locations designated for agricultural research in northern Italy, encompassing botanical gardens,

agricultural gardens, experimental fields, model estates/farms, and their related infrastructure. It outlines the progression of experimentation from smaller-scale cultivation to broader areas, often achieved through collaboration with local landowners. While it thoroughly probes these experimental domains' foundation, structure, and upkeep, it offers a detailed examination of particular instances in the Po Valley. Special emphasis is placed on cereal cultivation and oil and sugar production. To unravel the intricate dynamics involved, historical plans, reports, and operational records serve as valuable sources for this exploration.

Finally, chapter 5, "Didactics," explores the educational dimension of agricultural science. It covers establishing teaching and experimental agricultural gardens within universities and other educational institutions, highlighting the integration of veterinary medicine education and agricultural science in primary education. It also provides a comprehensive view of the educational infrastructure that contributed to the advancement of agricultural science during the late eighteenth and early nineteenth centuries.

The advancements in agricultural education in northern and central Italy aligned with prevailing European trends. The chapter is structured into three sections: the training of individuals involved in agricultural education, the significant role played by the University of Pavia in promoting agricultural science, and the enduring influence of eighteenth-century and Napoleonic educational reforms. Additionally, the chapter subtly points to potential research avenues exploring the symbiotic relationship between veterinary education and agricultural pedagogy.

On the whole, the book represents a significant contribution to the historical comprehension of agricultural science and its pivotal role in driving the economic expansion of northern Italy during the eighteenth and early nineteenth centuries. The book also promotes an interdisciplinary perspective, delving into the intricate interplay between the environment, local communities, and knowledge circulation. It underscores the region's reliance on a broad spectrum of technical and natural sciences, a departure from the more specialized British approach of the era. Additionally, it highlights the often-overlooked contributions of "invisible technicians" and provides valuable insights into the cultural milieu surrounding agricultural education and innovation in northern Italy. Nonetheless, broadening the comparative scope beyond Italy—namely with other regions and countries in the European context, particularly the Mediterranean—while balancing the State view with a more community-centric (bottom-up) approach could further enhance the book's overall significance for the history of agriculture and rural history within a larger spectrum of the history of science and technology.