

The American Steppes: The Unexpected Russian Roots of Great Plains Agriculture, 1870s-1930s

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In *The American Steppes: The Unexpected Russian Roots of Great Plains Agriculture, 1870s-1930s*, David Moon offers a new perspective on the environmental history of the American Great Plains. Starting from the mixed reactions of the Mennonite migrants of the Eurasian steppe grasslands on their way to their new home in the plains, Moon explains why many aspects of agricultural practices in the Great Plains take, surprisingly, their origin across the Atlantic from the Russian steppes, an area of similar soils and climate. Between the 1870s and 1930s the movement of people: Germanic including Mennonites and Russian Jews from the steppes, facilitated the transfer of experience in cultivating in semi-arid grasslands, but also of plants and variety of grains, fodder crops, trees and weeds. At around the same time, agricultural scientists interested in the two regions introduced more plants, soil science and techniques such as planting shelterbelts of trees to protect the land from the wind. Among these scientists were Russian Jewish émigrés from the Tsarist empire whose language skills assisted with the dissemination of Russian crop sciences and innovative science of studying the soil devised by the Russian scientists led by Vasilii Dokuchaev.

The first part of the book explores the context of the transfers between the steppes and the Great Plains. The similarity in environmental conditions between the two regions was an important factor, but Moon emphasizes that it was human choice to engage a European-style agriculture that shaped the plains. When Russian immigrants arrived in the plains, they continued to practice a similar form of agriculture to that they had practised in their homeland, they brought plants, seeds, and their experience in cultivating in semi-arid lands. The Russian immigrants also helped overcoming the language barrier faced by American and Russian agricultural scientists. On the other hand, Moon enumerates possible obstacles to the reception of Russian ideas: communism, competition in the world grain market or simply the resistance to

change. In particular, Moon evaluates the negative perceptions of America towards Russia. The persecution of Jews, the technological inferiority of Russian agriculture and the famines due to the successions of bad harvests fed perceptions of Russian “backwardness” in the USA. What could the prospering America learn from the Russian agricultural experience?

All of this serves as a background for the subsequent six chapters, where Moon analyses how the transfers made their way from the steppes to the Great Plains of the United States. The transfers are the “useful” crops, the soil science expertise, the science and techniques of planting shelterbelts of trees, and finally, the unwanted tumbleweed. Anyone with interest in environmental history will find the chapters on crops, shelterbelts and tumbleweed a worthwhile investment of time.

Moon relates the various routes by which wheat varieties had reached the Great Plains. The hard-red winter wheat was introduced by the cereal specialist explorer Mark Carleton and the Mennonite Bernhard Warkentin, among others. Warkentin was successful in shipping substantial quantities of wheat from Odessa and in retooling local mills to accommodate the hard wheat. Moon also examines the story of Mennonite immigrants bringing in their baggage the same variety of wheat. The opportunity to introduce a resistant variety of crops in the Great Plains was also acknowledged by crop scientists such as Niels Hansen. Both Carleton and Hansen deliberately travelled to regions of present-day Kazakhstan to find crop varieties that could adapt to the climate of the American plains.

The readers of this journal may find specific interest in two remarkable chapters on soil science. The two chapters can be read separately from the rest of the book, provided that the context is elucidated beforehand with Chapters 1–3. Chapter 5 is headed “Soil Science I.” Here Moon used publications, personal correspondence and the scientific literature to draw an overview of the development of Russian innovative soil science in the United

States. There was interest among American scientists in the Dokuchaev soil formation theory. George Coffey and Eugene Hilgard were two of them. Coffey had experience in the Great Plains and read translations of Russian soil science articles. Hilgard corresponded with Russian scientists. For most of the late nineteenth and early twentieth century, the government soil investigations was headed by Milton Whitney who provided stubborn resistance to the application of Russian soil science in the USA. One reason for his attitude was the radical opposition between the soil classification scheme that he devised in 1899 and that developed by Dokuchaev. Whitney's soil survey was based on local and physical soil characteristics such as texture, which precluded soil classification into larger groups. Moon's description of this period is astonishing and reveals Whitney's efforts to marginalize American works that differed from his definition of soil classification based on physical soil characteristics.


The dissemination of Russian soil science in the USA and its application to the Great Plains was made possible by the combination of conferences, the translation of Glinka's book into German in 1914 and the persistence of Custis Marbut, who, after Whitney's death in the late 1920s, applied the Russian approach to the US soil survey. Marbut had accomplished extensive fieldwork in the plains and rapidly saw the similarities with the Russian steppes, but it was after the publication of Glinka's book that he became convinced by Russian soil science and tried to change the methodology of the US soil classification. Moon describes Marbut's enthusiasm for soil science but also aspects of his personality. He was entirely devoted to his work and lived away from his family for most of his life. The correspondence between Marbut and his daughter Louise is a major source of this chapter.

My brief account of the three last chapters does not reflect the quality of their content. Two chapters are

about the Shelterbelt Project launched in 1934 to address the Dust Bowl. There were hopes that planting trees across the Great Plains would protect the land from erosion, drought and eventually moderate the climate of the region. Introduction of Russian expertise on forestry and shelterbelts into the steppes was led by Raphael Zon, a Russian-Jewish émigré. Moon shows how Zon, with other scientists, built on Soviet studies to obtain funds which eventually led to the project launch.

The last chapter relates to the introduction of an invasive plant species: the iconic mid-west tumbleweed, originally from Russia and brought by mistake in sacks of flax seed in the 1870s. Tumbleweed invaded large areas of neglected fields and quickly posed a serious problem to the farmers of the plains. Moon describes the spread and the attempts to control and eradicate the tumbleweed using early ploughing, or the use of cattle to eat the young plants. The USDA recommended reseeding lands by grasses, both native and introduced, to preclude the growth of tumbleweed sprouts.

In summary, this remarkable book will satisfy those interested in cultural environmental history and soil science history alike. I was fascinated by Moon's constant change of "historical scale" by linking personal events and individuals' histories to the agricultural history of two regions, far distant geographically but close in many aspects. More importantly, Moon's book provides a historical perspective to many of the twenty-first century debates on the human impact on soil, agriculture, land use and land planning. Surely this book is an essential contribution that will assist soil scientists and graduate students in thinking with enhanced perspective on the new challenges of soil science.

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