



## **A general overview of the history of soil science**

Eric C. Brevik (1) and Artemi Cerdà (2)

(1) Dickinson State University, Natural Sciences, Dickinson, United States (eric.brevik@dickinsonstate.edu), (2) SEDER Soil Erosion and Degradation Research Group, Department of Geography, University of Valencia, Valencia, Spain

Human knowledge of soil has come a long way since agriculture began about 9000 BCE, when finding the best soils to grow crops in was largely based on a trial and error approach. Many innovations to manage and conserve soil, such as the plow, irrigation techniques, terraces, contour tillage, and even the engineering of artificial soils, were developed between 9000 BCE and 1500 CE. Scientific methods began to be employed in the study of soils during the Renaissance and many famous scientists addressed soil issues, but soil science did not evolve into an independent scientific field of study until the 1880s. In the early days of the study of soil as a science, soil survey activities provided one of the major means of advancing the field. As the 20th century progressed, advances in soil biology, chemistry, genesis, management, and physics allowed the use of soil information to expand beyond agriculture to environmental issues, human health, land use planning, and many other areas. The development of soil history as a subfield of the discipline in the latter part of the 20th century has promise to help advance soil science through a better understanding of how we have arrived at the major theories that shape the modern study of soil science.