Preface

From ancient times up to date, agriculture has been the principle use of soil. It contributed in 2008 to the Greek economy at a percentage of 6.5% of the gross domestic product (GDP). About 3.8 million ha from the total area of the country (13.2 million ha) is agricultural land not including pasture (Ministry of Agriculture 2008). In addition, agriculture significantly contributes to other economic sectors such as industry, construction, wholesale and retail trade, and other services, although recent studies showed that agriculture followed independent course in relation to the other economic sectors not affecting them seriously (Kyrkilis et al. 2014). However, with the implementation of the new Common Agricultural Policy in European Union after 2006, agriculture started to decline and the agriculture outputs are at the present lower than in 1970, contributing to the GDP less than 2% (Kyrkilis and Semasis 2015). From the previously mentioned data, it becomes clear that soil, as one of the most important factors of the agricultural production, has played and continues to play an important role in the evolution of economy and society in Greece. Soils of Greece are cultivated for thousands of years intensively and under unfavorable conditions, as the Mediterranean environment has been seriously degraded, loosing much of their organic matter and being strongly eroded in the sloping areas. As it was pre-mentioned, agriculture constitutes a basic sector of the economy of Greece. Therefore, the maintenance of soil quality and soil sustainability, on which agricultural production is mainly based, constitutes a crucial factor for the economic and social development.

This book is consisted of 11 chapters as follows:

In Chap. 1 (Introduction), an extensive reference is made on the history of Greek agriculture in ancient times and the contribution and significance of soils in its performance. In addition, genetic trends and development of soils are described as they proceeded under the combined influence of the basic soil-forming factors, and the main threats of the soils of Greece are presented.

In Chap. 2, the characteristics of the main soil-forming factors such as climate, parent material, relief, the biotic factor, and the human actions are described.

In Chap. 3, the soil mapping and classification of the soils of Greece as they were produced by the respective authorities of the Ministry of Rural Development and Foods, the research institutes, and the universities based on the soil mapping and classification systems in use in the country and, internationally, are presented. In addition, a delineation of the soils according to their principal characteristics such as slope and depth through maps and tables is presented.

Chapter 4 describes the main characteristics and properties of the soils in mountainous and hilly areas formed under the strong influence of the geomorphology and surface geology and the climate. It is noticed that these soils cover more than 60% of the total country area being a significant soil resource for the Greek agriculture.

In Chap. 6, the soils developed on argillic deposits and conglomerates, which are extended in the whole country covering areas where geological and eroded soil materials were transferred from the original places and have been deposited on lower lands, are described.

Chapter 7 presents the inorganic soils that have been formed on recent lake beds and river deltas and usually coexist with recent alluvial deposits as well as organic soils.

In Chap. 8, characteristics and properties of soils developed on alluvial deposits which are the most productive soils of the country are presented in detail. These soils are distinguished in those formed on Holocene deposits and Pliocene deposits.

In Chap. 9, the management groups of the soils developed on alluvial deposits are described in detail, since these soils are the most important agricultural soils in Greece.

Chapter 10 is referred to the land degradation and desertification already happened or is about to occur due to the Greek conditions favoring these phenomena taking place from the ancient times to date. Measures of combating desertification are also discussed.

In the last Chap. 11, a brief presentation of the research carried out so far and its results is made. It includes the basic fields of soil science such as soil mapping and classification, soil genesis, soil degradation and protection, soil fertility and fertilization, soil physicochemical characteristics, soil quality, soil and water pollution, and waste management in relation to soils.

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