
Preface

Formosa, the original name of Taiwan, was given to the island in 1535 by Portuguese sailors who spotted the main island of Taiwan, and named it “Ilha Formosa” which means beautiful island, a fitting epithet for an island with a great natural beauty. Taiwan is an island where a high variation in climate conditions produces a great biodiversity of vegetation types while, at the same time, it is situated on a complex convergent boundary between the Euroasian and Pacific plate which causes a spectacular landscape with amazing mountain ranges, one of the highest elevations of Taiwan being near 4,000 m, deep gorges, and breathtaking valleys. Taiwan has almost all the major soil types of the world except permafrost soils. In other words, Taiwan is a beautiful open air museum of world soils.

Taiwan’s modern soil research was started by the Japanese in the 1920s, who published a soil texture and soil pH map for soil management on crop production. The real soil survey project was under the auspices of American experts, while the soil classification system of the U.S.A. was used to conduct the reconnaissance and detailed soil survey of Taiwan which started in 1946. The more soil survey projects were undertaken, the more soil information about rural soils, hill lands, and high mountain forest soils of Taiwan was provided in order to satisfy the need for food security, economic growth, and environmental quality in the last 4–5 decades. The members of the Chinese Society of Soil and Fertilizer Sciences also continued their contributing research on Taiwan soils. Nowadays, climate change and industrial development form a great challenge to the prevention of soil degradation, the remediation of already contaminated soil, as well as retaining the protection and continuity of food safety. This book can provide the most typical soil characteristics as well as basic soil information through soil survey reports and the new soil information system of Taiwan.

Land uses and land management in Taiwan are major influential factors in relation to Taiwan’s economic growth, industrial development, and the degradation of the environmental quality of soil, especially in the 1970s–1990s. The rural soils were contaminated by the illegally discharged wastewater from industrial parks, while hill lands were reshaped by the production of high economic fruit crops both of which caused serious soil erosion and soil degradation during the last two decades. Therefore the protection of soil resources, including soil and water conservation, remediation of contaminated soils, and the conservation of high mountain forest regions must become more and more important in the future.

In the last decade, the development of soil quality monitoring projects and a soil information system combined together in a geographical information system have become increasingly important since, as a result, real-time database is able to provide vital information to predict where highly contaminated soils are likely to be situated, thus preventing the production of food crops that could endanger the health and, at the same time, maintaining the food safety. This is why, different governmental offices in Taiwan share their data of air quality, irrigation water, soil, groundwater, and the location of industrial plants with soil researchers and communities in Taiwan.

Therefore, studies in Soil Science are more important than ever before. The government must also continue to provide scholarships and funds to attract more students to study topics like soil amendment, soil remediation, and soil degradation in the future. At the same time, the

exhibition of soil monoliths for farmers and a regional center and soil museum for both students as well as communities have been established in Taiwan since 2000. Still, for all these activities we need strong governmental support to be able to retain Taiwan's beauty with all its varied soils, landscapes, flora, and fauna.

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