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Landmarks of History of Soil Science in Sri Lanka

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ABSTRACT

Sri Lanka is a tropical Island in the Southern tip of Indian subcontinent positioned at 50 55' to 90 50' N latitude and 790 42' to 810 53' E longitude surrounded by the Indian Ocean. It is an island 435 km in length and 224 km width consisting of a land are of 6.56 million ha with a population of 20 million. In area wise it is ranked as 118th in the world, where at present ranked as 47 in population wise and ranked 19th in population density. The country was under colonial rule under Portuguese, Dutch and British from 1505 to 1948. The majority of the people in the past and present earn their living from activities based on land, which indicates the important of the soil resource. The objective of this paper is to describe the landmarks of the history of Soil Science to highlight the achievements and failures, which is useful to enrich our present understanding of Sri Lankan soils.

The landmarks of the history of Soil Science in Sri Lanka can be divided to three phases namely, the early period (prior to 1956), the middle period (1956 to 1972) and the present period (from 1972 onwards). During the early period, detailed analytical studies of coffee and tea soils were compiled, and these gave mainly information on up-country soils which led to fertilizer recommendations based on field trials. In addition, rice and forest soils were also studied in less detail. The first classification of Sri Lankan soils and a provisional soil map based on parent material was published by Joachim in 1945 which is a major landmark of history of Soil Science in Sri Lanka. In 1959 Ponnamperuma proposed a soil classification system for wetland rice soils. From 1963 to 1968 valuable information on the land resource was collected and documented by aerial resource surveys funded by Canada-Ceylon Colombo plan aid project. This covered 18 major river basins and about 1/4th of Sri Lanka, which resulted in producing excellent soil maps and information of the areas called the Kelani Aruvi Ara and Walawe basins. The provisional soil map was updated by many other workers as Moorman and Panabokke in 1961 and 1972 using this information. The soil map produced by De Alwis and Panabokke in 1972 at a scale of 1:500,000 was the soil maps mostly used during the past years

During the present era, the need for classification of Soils of Sri Lanka according to international methods was felt. A major leap forward in Soil Survey, Classification leading to development of a soil data base was initiated in 1995 with the commencement of the "SRICANSOL" project which was a twining project between the Soil Science Societies of Sri Lanka and Canada. This project is now completed with detail soil maps at a scale of 1:250,000 and soil classified according to international methods for the Wet, Intermediate and Dry zones of Sri Lanka. A digital database consisting of soil profile description and physical and chemical data is under preparation for 28, 40 and 51 benchmark sites of the Wet, Intermediate and Dry zones respectively. The emphases on studies on Soil Science in the country at present is more towards environmental conservation related to soil erosion control, reducing of pollution of soil and water bodies from nitrates, pesticide residues and heavy metal accumulation.
Key words: Sri Lanka, Provisional soil map