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## Tropical Soils

**H. Greene**

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## TROPICAL SOILS

H. GREENE

In August 1954 H. Greene led the United Kingdom delegation at the Second Inter-African Soils Conference, which was held in Léopoldville, Belgian Congo. The meeting was convened by the Commission for Technical Co-operation in Africa south of the Sahara, and was attended by over 100 scientists, including representatives of the signatory powers, Belgium, France, Portugal, the Federation of Rhodesia and Nyasaland, the Union of South Africa and the United Kingdom. Further progress was made towards implementing the recommendations of the earlier Conference (Goma, 1948). It is recognized that in the wisely concerted development of the African continent, soils and agriculture have an important place. Of the many technical papers, a good proportion was contributed by British delegates.

This inter-governmental conference was succeeded by the Fifth International Congress of Soil Science. Attended by nearly 200 scientists, this congress, held in the Belgian Congo, has probably made an important contribution to soil science in the tropics. H. Greene presented a paper entitled "Fertilizer prospects in Africa". This stressed the possibilities of increasing agricultural production by application of major and minor plant nutrients: the pioneer work of Lawes and Gilbert and of Brenchley and Warington has not yet come to fruition in tropical agriculture.

During the latter half of 1954 H. Greene also visited the Gambia, Sierra Leone, Rhodesia, Nyasaland, Tanganyika, Kenya and, with the help of C. A. H. Hodge, did some field work in the protectorates of Aden and Somaliland.

In Nyasaland a visit was paid to Lake Shirwa, where projected cultivation of rice will involve irrigation with water of doubtful quality. Clay soil already affected by repeated contact with this water was found to be in a bad physical condition, so that prospects are not good. However, before abandoning the project it is intended to carry out some practical tests with rice, using very small plots irrigated with the suspect water.

In Western Aden Protectorate a successful irrigation scheme is threatened in some areas by waterlogging and consequent salinity. It seemed possible that the water is held up by a layer of impermeable clay which is exposed here and there in deeply eroded canals. Field tests of lateral permeability, made with equipment of special design, supported this view. The work continues, and it is hoped to ascertain whether the clay layer coincides with the present occurrence of waterlogging.

In Somaliland possibilities of irrigation in the Qabri Bahar area were investigated. This area is extremely difficult of access, is malarial and has no agricultural population. Inspection on the ground with aid from air photos gave no encouragement for early development: a false analogy had been drawn with the Abyan delta in Aden Protectorate. Elsewhere in British Somaliland there are interesting exposures of a major kind of soil not yet described.

It is hoped that C. A. H. Hodge will make a further study of this in a year's time.

When in England the Adviser on Tropical Soils is mainly engaged in receiving inquiries and reports from soil scientists overseas and in passing out to them news about books or techniques that seem likely to be of use. He has also to assist the Colonial Office in the recruitment and training of scientists for work overseas. The carrying out of these duties is much facilitated by the personal contacts that are possible at Rothamsted.