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A SELECT BIBLIOGRAPHY OF REFERENCES ON SOIL HORIZON DESIGNATION

Compiled by:
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INTERNATIONAL SOIL REFERENCE AND INFORMATION CENTRE

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A Select Bibliography of References on Soil Horizon Designation

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The basis of soil study by pedologists in virtually all countries of the World is the soil profile with its constituent horizons and layers. The soil profile results from the dynamic interaction of one or more soil forming processes in which chemical, physical and biological activities are combined. The effect of these processes is to produce the sequence of horizons which comprise the soil profile. The character and arrangement of these horizons provides the morphological information which is the basis for distinguishing one soil from another and which enables soils to be classified and mapped.

To be able to recognise the succession of horizons in a soil profile and to identify a soil in the field is a fundamental skill which all pedologists must acquire, and is highly desirable in practicioners of all other branches of soil science. Although the succession of horizons in a profile does not have to be labelled, the usefulness of any description is greatly enhanced by the proper use of horizon designations as these add the investigators interpretation of soil genesis to the bare bones of the soil morphology. So, the system of soil horizon designations in all its various forms has evolved with pedological studies to aid discussion and identification of the features of soil profiles.

Soil horizons are the key to many, if not all aspects of soil science, and particularly of pedology, so their identification and designation is an important feature of the discipline. Marbut (1922) listed ten criteria concerning the differentiation of soils at the level of the soil type. Nine of these criteria were concerned with the number, arrangement, thickness, colour, texture, structure, and composition of horizons or the soil profile, the tenth referred to the parent material. Although many innovations have been made and new concepts developed since Marbut's time, his appraisal of the importance of soil horizons remains valid today. The concept of the soil horizon is fundamental to pedological studies and central to the understanding of soil genesis.

A soil horizon designation may be described as:

> 'an interpretative symbol, based upon horizon morphology and implied genesis that is used to identify and label a soil horizon'.

This select bibliography is an attempt to bring together many of the references in which the reader may find information about the development and use of soil horizon designations. Virtually every soil survey report has a statement on soil horizon designations, so an inclusive bibliography on the subject would be an impossible task. This bibliography accompanies a discussion document prepared for the International Soil Reference and Information Centre on Soil Horizon Designations. This work was made possible by the grant of a Fellowship through the International Agricultural Centre and a period of Sabbatical leave from the University College of Swansea, Wales. This support has been greatly appreciated as has the encouragement and good fellowship of the permanent Staff of ISRIC.

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