

Krállová, M. a kolektiv: **Vybrané Metody Chemické Analýzy Půd a Rostlin**. [Selected Methods of Soil and Plant Chemical Analysis.] - Academia, Praha 1990. 152 pp.

The handbook written by scientific workers from the Institute of Experimental Botany, Czechoslovak Academy of Sciences deals with selected chemical methods of soil and plant analysis. The aim of this handbook was to present the selected methods applied in the Institute for studying the physical and chemical nature of soil and plant. This methodical manual describes a number of mostly original or modified analytical methods. The first chapter is devoted to the analysis of soil samples. It describes the physical properties of soil by a mechanical analysis, the soil aggregates distribution, separation and determination of clays. Further chapters describe the methods used for determining the soil physical and chemical properties (soil water, cation and water exchange capacity, soil porosity, pH, soil exchange acidity pK, etc.). The chemical characteristics of the soil also include the soil carbon determination by different methods. This is followed by the description of the soil humus fractionation, gel permeation chromatography and the optical properties of soil humic acids determining. The chemical characteristic of the soil also include the methods of soil proteins, phenolic compounds, nitrogen, ammonium nitrogen, nitrates and $(\text{NO})_x$ determining. The method of molecular nitrogen determining by means of mass spectrometry is described in full detail. A brief chapter is devoted to the soil biomass determination, including soil nitrogen utilization. An extensive part of the handbook contains the methods of nitrogen determining in plants, of separating and identifying different proteins. They include gel permeation chromatography, gel electrophoretic methods of prolamins, albumins, globulins and other proteins. An extensive chapter describes the methods used for sugar and starch determination. Attention is paid to different enzymes. That chapter is devoted to nitratoreductase, nitritoreductase. Their presence and determination are described which will certainly attract the reader's attention. Moreover, the same chapter is devoted to glutamatdehydrogenase, glutaminsynthetase, glutamatsynthase and aminotransferase, and their purification.

References sufficiently demonstrate the present state of soil and plant analysis. This publication will be in the centre of the interest the soil chemists and biochemists.

F. POSPÍŠIL (Praha)

Šesták, Z., Čatský, J. (ed.): **Photosynthesis Bibliography**. Volume 19 (1988). - SPB Academic Publishing, The Hague 1992. 454 pp.

The 19th volume of "Photosynthesis Bibliography" continues this first-rate bibliographic series. The scientists, who are concerned with photosynthesis, cannot renounce this series anymore. Every scientist has to be full informed on former research before starting his further work. As to the contents: the bibliography enters with a detailed instruction for use, and brings more than 4200 references arranged in alphabetical order with three indexes (authors, subjects, plant names) listed alphabetically. The letter indexing supplementing the references is very useful, since the themes become distinct and enable the user to find quickly special subjects.

The editors and contributors checked most citations and obtained the information reported with the references and in the indexes directly from the relevant original papers, which stresses the quality of this bibliography, too. The team of editors and contributors from the Institute of Experimental Botany of the Czechoslovak Academy of Sciences (Z. Šesták, J. Čatský, J. Pospíšilová, J. Solárová, I. Tichá) supply already 18 years with a detailed collection of data all interested scientists.

G. BAAB (Ahrweiler)