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BOOK REVIEW

HANKS, R. J., ASHCROFT, G. L.: APPLIED SOIL PHYSICS. SOIL WATER AND TEMPERATURE APPLICATIONS. Advanced Series in Agricultural Sciences 8. — Springer-Verlag, Berlin—Heidelberg—New York 1980. Pp. 159. DM 39.50, US $ 22.20.

At the present time the Advanced Series of Agricultural Sciences is well known to every reader and this book devoted to soil moisture and temperature as the factors affecting crop production is the eighth volume of it.

It is divided into five parts. The first part deals with the soil water as a component of hydrological cycle. The main attention is paid to measurement and calculation of the soil water content. The second part is devoted to the soil water potential, the pressure potential, the solute potential and the matric potential, and to the relationships between these potentials and the soil water content. Also in this section particular attention is given to the methods. Practical utilization of them in scheduling irrigation is taken into account, too. The steady-state and transient-state water flow, the horizontal and vertical infiltrations are the main items considered in part three. In addition, evaporation and the movement of water vapour in soils are also discussed. The fourth part "Soil-Plant-Atmosphere Relations" deals mainly with the evapotranspiration, methods of its estimation, relation of evapotransporation to soil moisture and effect of it on the plant growth and production. The steady-state and nonsteady-state heat flow, the soil temperature and factors influencing it are discussed in the fifth part.

The authors, university professors of soil physics, bring a wealth of thirty years' knowledge gained in research and teaching and this book is an excellent example of a text-book. It is characterized by a modern approach to the problems to be solved, presented in an easy, understandable form. The other advantages are: numerous figures, tables and practical examples. It is only a pity that SI units are not used consistently.

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