

Obroucheva, N.V.: **Seed Germination. A Guide to the Early Stages.** - Backhuys Publishers, Leiden 1999. 158 pp. NLG 80.00. ISBN 90-5782-040-4.

The seed germination remains an intriguing problem and much effort has been directed towards its understanding. In this monograph, particular attention is drawn to growth initiation. Throughout the four main chapters of this book, emphasis is laid upon the control that cell hydration exerts upon the sequence of the different and distinguishable emergence stages. The first chapter starts with brief description of the main types of seed germination occurring in different plant species, and then it is focused on contribution of cell division and cell elongation to growth initiation. The second chapter deals with activation of major metabolic system (*e.g.* respiration, synthesis of proteins and nucleic acids, mobilization of reserves) by gradually increasing water

content during seed imbibition. The importance of seed matric potential for initial water uptake is also shown. The third chapter is concentrated on two major requirements for cell elongation: an elevated content of osmotically active substances to provide the transport of water into the newly formed vacuoles, and cell wall loosening, involving an enhanced ability of the incorporation of synthesized cell wall constituents into the extending cell wall. The last chapter gives an overall picture of readiness of quiescent seeds for germination. The book is well written as it is based on author's own experience and detailed knowledge of literature in this field. The text is accompanied with many tables and figures offering a lot of interesting data.

J. POSPÍŠILOVÁ (*Praha*)