

S. LEWAK, B. BRYZEK, Botanický ústav, Varšavská universita, Polsko: Vliv cytokinínů na fotosensitivitu embrya jabloně a na aktivitu kyselé fosfatázy během stratifikace. — Biol. Plant. 16 : 334–340, 1974.

Kinetin (KIN) a benzyladenin (BA) stimulují různou měrou klíčení jabloňových embryí izolovaných z dormantních semen anebo ze semen podrobených stratifikaci. KIN je mnohem aktivnější při nahrazení požadavku na světlo při klíčení. Oba cytokininy snižují fotosensitivitu embryí izolovaných ze semen stratifikovaných méně než jeden měsíc, ale pouze BA urychluje objevení se druhého maxima fotosensitivitu, které se normálně vyskytuje po 70 dnech stratifikace. Oba cytokininy stimulují aktivitu kyselé fosfatázy mezi 30 a 50 dnem stratifikace jabloňových semen. Mezi 50 dnem a koncem stratifikace má stimulační účinek pouze KIN.

Tyto rozdíly umožňují úvahy o specifičnosti účinku jednotlivých cytokinínů během zrání a klíčení jabloňových embryí.

BOOK REVIEW

FOGG, G. E., STEWART, W. D. P., FAY, P., WALSBY, A. E.: *The Blue-green Algae*. Academic Press, London—New York 1973, 459 pp., 8.50 £.

Blue-green algae are attracting attention of scientists all over the world. The authors emphasize the fact that this interest is modified geographically. While in eastern countries efforts are made to raise the production of blue-green algae as a factor of soil formation and fixation of nitrogen at the disposal of crop plants, especially rice, the huge areas occupied by blue-green algae in fishponds and reservoirs of drinking water cause considerable economic damage in western countries (including Central Europe). In order to cope with these problems the physiology of these organisms should be better understood.

The present work is one of three books concerned with these topics which were published last year. It is very modern and topical but will not lose its value even in later years because of its conception. The authors deal in 18 chapters with the anatomy and cytology of blue-green algae, with cell biology, the mechanism and cause of their special movement, nutrition including photosynthesis and fixation of molecular nitrogen characteristic for a certain part of the blue-green algae, differentiation, ecology, pathogens (a novelty), symbiosis and probable theories of their evolution and phylogenesis. In each chapter comparable structures or processes found in bacteria, other algae or higher eukaryotes are quoted. The single processes are not treated isolatedly but in their dialectic relation to the other processes. Thus, the links between photosynthesis, respiration, heterotrophy, nitrogen fixation and metabolism *etc.* are shown, *e.g.* For a full appreciation of the book, it is, therefore, not endeavour of the authors to introduce an objective criterion based on the biochemical characteristics into the hitherto completely artificial system of the algae, a problem which has hardly been attacked until now, is also interesting. The book is supplemented with 1104 quotations from literature. Papers having appeared quite recently and even some still unpublished results are cited. However, even very old findings are not omitted and aptly confronted with newer ones. The authors do not avoid a number of logic hypotheses which can serve as working stimuli to the reader.

The book includes 234 very instructive illustrations. A more detailed description is missing only in chapter 17. The excellent electron microscopic photographs are especially valuable. For this credit is due only to the authors but to the outstanding reproduction in print, as well.

34 tables excellently summarize the data given in the text. The way of numbering the figures and tables with their order in the pertinent chapter quoted may be recommended because of its clear arrangement. Though last not least the book is written in a precise and clear style which will be appreciated especially by those whose mother-tongue is not English. This work will be welcomed and read by specialists and pedagogues with an interest in algology, physiology, biochemistry and genetics but also workers engaged in the philosophical evaluation of the results of biological disciplines will find its study worth while.

JIŘINA DVOŘÁKOVÁ-HLÁDKÁ (Praha)