

- SMITH, T. A.: N-carbamylputrescine amidohydrolase of higher plants and its relation to potassium nutrition. — *Phytochemistry* **4** : 599—607, 1965.
- SMITH, T. A.: The biosynthesis of putrescine in higher plants and its relation to potassium nutrition. — In: HEWITT, E. J., CUTTING, C. V. (ed.): *Recent Aspects of Nitrogen Metabolism in Plants*. Pp. 139—146. Academic Press, London and New York 1968.
- SMITH, T. A.: Agmatine iminohydrolase in maize. — *Phytochemistry* **8** : 2111—2117, 1969.
- SMITH, T. A.: The biosynthesis and metabolism of putrescine in higher plants. — *Ann. N. Y. Acad. Sci.* **171** : 988—1001, 1970a.
- SMITH, T. A.: Putrescine, spermidine and spermine in higher plants. — *Phytochemistry* **9** : 1479 to 1486, 1970b.
- SMITH, T. A.: The occurrence, metabolism and functions of amines in plants. — *Biol. Rev. Camb. philos. Soc.* **46** : 201—241, 1971.
- SMITH, T. A.: Amine levels in mineral-deficient *Hordeum vulgare* leaves. — *Phytochemistry* **12** : 2093—2100, 1973.
- SMITH, T. A., RICHARDS, F. J.: The biosynthesis of putrescine in higher plants and its relation to potassium nutrition. — *Biochem. J.* **84** : 292—294, 1962.
- SMITH, T. A., STEVENS, R. A. J.: Polyamine oxidase in higher plants. — *Biochem. J.* **122** : 17, 1971.
- SUZUKI, Y.: Some properties of the amine oxidase of soybean seedlings. — *Plant Cell Physiol.* **14** : 413—417, 1973.
- WEBER, E., BEAUCAMP, G., SCHIRREN, V.: Über die Aminoxydase von Erbsenkeimlingen und ihre Bedeutung für die Keimung. — *Planta* **53** : 125—133, 1959.

L. PAPRSKÁŘOVÁ a J. MINÁŘ (Brno): Vliv deficiencie draslíku na aktivitu hrachové diamin-oxidázy. — *Biol. Plant.* **18** : 99—104, 1976.

Rostliny hrachu kultivované v živném roztoku, ve kterém byly ionty K^+ ekvimolárně nahrazeny ionty Na^+ , NH_4^+ nebo Rb^+ , nevykazovaly morfologické příznaky deficiencie draslíku. Tyto rostliny měly v nadzemní části vyšší aktivitu diaminoxidázy. Obdobně vykazovaly vyšší aktivitu diaminoxidázy rostliny kultivované v úplném živném roztoku, do kterého byl přidán putrescín.

BOOK REVIEW

HESS, D.: **Plant Physiology. Molecular, Biochemical, and Physiological Fundamentals of Metabolism and Development.** — Springer-Verlag Berlin—Heidelberg—New York 1975. 333 S. 36.30 DM.

The second edition of the book by Professor D. HESS (University of Hohenheim, Stuttgart, F.R.G.): *Pflanzenphysiologie. Molekulare und biochemisch-physikalische Grundlagen von Stoffwechsel und Entwicklung*. Uni-Taschenbücher Band 15, Verlag Eugen Ulmer, Stuttgart 1972 (cf. review in *Biol. Plant.* **15** : 302, 1973) has recently appeared in the translation of Dr. D. JARVIS at Springer-Verlag in the series "Springer Study Edition". The book deals with metabolism and development of higher plants based on molecular biology. Methodological details were mostly omitted for economy of space.

The metabolic part of the book (10 chapters) starting with the control of character formation by nucleic acids, continues with chapters on primary and secondary processes of photosynthesis and the chloroplast as the site of photosynthesis, on carbohydrates, biological oxidation and other components of plants and plant metabolism as fats, terpenoids, phenols, amino acids, alkaloids and porphyrins. In the second part of the book the developmental physiology of higher plants (9 chapters) is treated. It is for instance cell division, differential gene activity as principle of differentiation, regulation by internal and external factors, polarity and unequal divisions as fundamentals of differentiation, cell elongation, the formation of seeds and fruits, germination, the vascular system and its differentiation and function (including transport phenomena, transpiration), and flower formation (including vernalization and photoperiodism).

This *Plant Physiology* is modern, untraditional and didactically very well arranged. It presents a new, logically written review of the whole-plant physiology. The book is very well produced. It contains 248 instructive, mostly two-coloured figures, which profited much in this edition from being larger than in the German manual. A short bibliography (unusual is omitting the mutation sign "Umlaut" in German words), sources of illustrations and subject index are added.

The book is mainly intended to undergraduate students and biology teachers at secondary level as well as to research workers to provide them with digested basic information from relative fields.

INGRID TICHÁ (Praha)