

the new rhizome, and (3) redeposition of starch as amylose and amylopectin. Since starch is considered to be synthesized primarily by starch synthase which uses ADP-glucose as the preferential substrate⁴, there is a requirement for large amounts of ATP, and hence respiration in the developing rhizomes. This requirement for O₂ would still persist in later stages when sucrose derived from photosynthesis of the aerial shoot would reach the rhizome. Thus, the gloriosa-type air passage might be an adaptation for the supply of O₂ from the aerial atmosphere. The stomata present in the air passage could recapture the CO₂ released by the developing rhizome during respiration. Interestingly, both *Gloriosa* and *Iphigenia* are colchicine-accumulating plants. Whether the air passage might also serve some function related to colchicine metabolism is unknown. The gloriosa-type air passage offers an interesting system for the study of gas exchange and its relation to source-sink relationship in rhizomatous plants.

ACKNOWLEDGEMENT

The authors are grateful to Profs. H. Y. Mohan Ram and Katherine Esau for their encouragement, Prof. C. Devadas for suggestions and G. Abraham Ebenezer, P. Parameswaran and M. Amirthalingam for collection of specimens.

13 November 1985

1. Haberlandt, G., *Physiological plant anatomy*, Today and Tomorrow's Printers and Publishers, New Delhi, 1965, p. 432.
2. Esau, K., *Anatomy of seed plants*, John Wiley, New York, 1977, p. 48.
3. Bell, A. D. and Tomlinson, P. B., *Bot. J. Linn. Soc.*, 1980, **80**, 125.
4. Preiss, J. and Levi, C., In: *The biochemistry of plants*, Vol. 3, (ed.) P. K. Stumpf and E. E. Conn, Academic Press, New York, 1980, p. 371.

NEWS

THE SPACE INDUSTRY—TRADE RELATED ISSUES

The report now published by OECD provides in a summary form an economic view of the space industry and its markets. It attempts to give a clear definition of the sector and its links with the aeronautics and electronics industries and sets out details of medium-term market developments in the space industry—telecommunications satellites, direct broadcasting, observation satellites and other space applications.

The report highlights: 1. disparities in the space commitments of Member countries and provides comparable figures on budgets and on space related industrial activities; 2. the factors determining firms' competitiveness. The report notes that, in numerous instances, the consequences of scale are often more critical than the technology gaps; 3. the complementarity of or competition between different technologies available, e.g. recoverable or expendable launch ve-

hicles for geostationary satellites, the choice of high or low powered direct broadcasting satellites, also the use of optical fibre or satellite technology for communications; 4. the co-operative and competitive strategies of firms in Europe, Japan and the United States.

The report, as its title indicates, throws light on the problems raised by trade in space products and shows how trade is affected by the lack of standardisation and by the persistence of policies based on national or regional preferences.

The report examines national policies and recent development in the marketing of space products—privatisation, deregulation, joint industry-agency involvement in space R & D work, also procurement policy. (OECD-Information Service, Paris, December 1985, OECD Press Division, 2, rue Andre Pascal, 75775, Paris).