

efficiency as they are well known for their protective role to the chlorophylls. Lutein and 5,6-monoepoxy lutein were found only at the maturity stage in all the three species, while auroxanthin and flavoxanthin were noted during the senescence stage in general and the distribution of other carotenoid was general and common almost at all stages and in all species.

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1. Goodwin, T. W., *Distribution of carotenoids: Chemistry and biochemistry of plant pigments*, Academic Press, London, New York, San Francisco, 1976, Vol. 1.

2. Sestak, Z., *Photosynthetica*, 1982, 16, 568.
3. Yadav, S., Singh, S. P., *Proc. Second Ann. Conf. Nat. Environ. Sci. Acad.*, 1986, (In press).
4. Yadav, S., Dwivedi, P. D., Tewari, M., Rana, R., *Seasonal variation of carotenoid contents in Maidenhari tree Ginkgo biloba-environment and ecology*, 1985, 3, 446.
5. Dwivedi, P. D., Yadav, S., *b. J. Plant Nature*, 1986b (In press).
6. Osman, M. E., Mummery, R. S., Valadon, L. R. G., *Ann. Bot.*, 1984, 53, 21.
7. Valadon, L. R. G., Mummery, R. S., Kates, M., *Plant Sci. Lett.*, 1984, 34, 253.
8. Reeves, S. G., Hall, D. O., *Methods Enzymol.*, 1980, 69, 85.
9. Jensen, S. L., Jensen, A., *Methods Enzymol.*, 1971, 23, 586.
10. Marshall, J. H., Cregeory, *J. Bacteriol.*, 1981, 143, 900.

NEWS

INFLUENZA VACCINES FOR 1987-1988—MODIFIED COMPOSITION RECOMMENDED

Representatives of the World Health Organization (WHO) Collaborating Centres for Reference and Research on Influenza have completed their yearly meeting to formulate their recommendations concerning the influenza vaccines to be manufactured for the 1987-1988 season. Having studied the prevalence and antigenic character of the various viruses isolated during the current season, they recommended that the vaccine for use in the 1987-1988 season be trivalent and contain the following antigens:

- an A/Singapore/6/86(H1N1)-like antigen
- a B/Ann Arbor/1/86-like antigen, and
- an A(H3N2) antigen, to be recommended

During the 1986-1987 season, influenza A(H1N1) viruses have predominated and in most countries have been the only type of influenza virus to be isolated. Almost all of them were similar to the A/Singapore/6/86-like strains isolated in Asia from April to July 1986, which has been recommended in August 1986 in addition to the three components chosen in February 1986. There were few influenza B viruses isolated and all were similar to the type used in the previous vaccine.

(Press Release WHO/9, 27 February 1987; WHO, Media Service 1211, Geneva 27, Switzerland)
