

on glass slides. They were coated with Ilford L4 Nuclear Emulsion and exposed for 3 or 20 days, depending on the ^{14}C -activity in the tissue. Sections were developed in a high contrast developer (Kodak D-19) for 3 min, fixed, washed, and air dried. Finally, they were mounted in paraffin oil and examined by phase contrast for silver grain distribution.

As can be seen from Figure 1, the phloem generally contained the highest density of silver grains. An exception was in the two lignified sieve elements, where only a few grains were present. This low count represents only the background level, such as that found in the xylem vessels, so it appears that the lignified sieve elements have no [^{14}C]assimilate activity.

It has been suggested by Kuo and O'Brien (1974) that lignified sieve elements might be involved in long distance translocation or in accumulation and storage of sugars whose rate of formation exceeds the rate of translocation. However, the absence of significant numbers of silver grains over these cells suggests they are not involved in storage, nor directly in translocation unless it is very rapid or very slow.

An attempt was made to identify those individual phloem cells with the highest silver grain density, by examining bundles with lower levels of ^{14}C -activity. Silver grains were found in all cell types, with most ^{14}C -activity in the companion cells and the normal sieve elements.

Special thanks are due to Dr. J. Kuo for continual patience and help.

References

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 Kuo, J., O'Brien, T.P., Canny, M.J.: Pit-field distribution, plasmodesmatal frequency, and assimilate flux in the mestome sheath cells of wheat leaves. *Planta (Berl.)* **121**, 97–118 (1974)
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Received 15 July 1975; accepted 15 November 1976

Erratum

M.J. Ford, P. Slack, M. Black, J.M. Chapman: A Re-Examination of the Reputed Control of Cotyledonary Metabolism by the Axis.

Planta **132**, 205–208 (1976)

Figure 1 on page 206 was printed incorrectly. The correct version is:

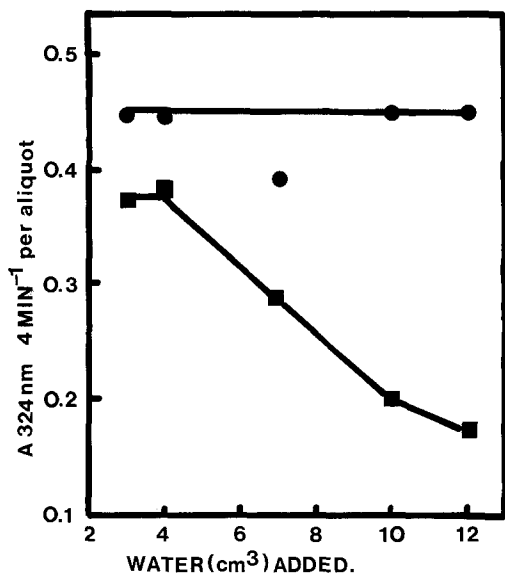


Fig. 1. The effect of increasing water level on the development of isocitrate lyase activity in cucumber cotyledons in the presence or absence of the axis: axis present ● axis absent ■. Material was incubated for 3 days in 9.0 cm³ Petri dishes with 2 Whatman No. 1. filter papers at 25° C. The testa was removed in all treatments and incubations were carried out in the dark. *Cucumis sativus* seeds cv. Ridge Long Green were used in this experiment. 0.1 cm³ aliquot of the cotyledon extract was assayed