

Tinkering with plant cells

Robert Shields

Plant Cell, Tissue and Organ Culture: An International Journal on *in vitro* Culture of Higher Plants.

Editor-in-Chief Donald K. Dougall.
Martinus Nijhoff/Dr W. Junk. 4/yr.
F1165, \$66.

Plant Cell Reports.

Managing editors Klaus Hahlbrock and Oluf L. Gamborg.
Springer. 6/yr. DM196, \$77.80.

Plant Molecular Biology: An International Journal on Fundamental Research and Genetic Engineering.

Editor-in-chief R.A. Schilperoot.
Martinus Nijhoff/Dr W. Junk. 4/yr.
F1185, \$90.

PLANT Cell, Tissue and Organ Culture describes itself as an international journal on *in vitro* culture of higher plants. About two thirds of the articles are on clonal propagation and the rest are cell culture related. It has even less science than *Plant Science Letters* and less physiology than *Zeitschrift für Pflanzenphysiologie* both of which could be seen as competitive journals. The journal is well produced and the articles good of their kind; publication time is between three and six months.

The problem with *in vitro* propagation is that it is an art and not a science. So articles in this journal are often little more than a description of how this or that plant was propagated and little in the way of general

Plant Cell, Tissue and Organ Culture

principle emerges. This is not a criticism of the journal which faithfully reflects the state of the art. But I am uncertain that plant tissue culture needs another glossy cookbook containing much the same recipes as before.

Plant Cell Reports is devoted to the rapid publication of short communications on various aspects of plant cell biology. The articles are submitted as camera ready copy (which means the reproduction is rather uneven and photographs sometimes poor). About a third of the articles published to date are on synthesis of natural products by plant cells, one third on aspects of plant cells in culture and the rest are mainly articles on plant regeneration. Although the journal will accept papers on molecular biology very few have appeared so far. The camera ready format seems to be more of an advantage to the publisher than the authors or readers; papers are published two to three months after receipt of the final version, which can be six months after

initial receipt. This is no doubt partly due to the inconvenience of making alterations to camera ready copy.

A refreshing feature of the journal is the brevity of the articles; nothing seems to be as effective as a page limit for concentrating the authors' minds. The standards



of the articles are rather variable but anyone interested in plant cell biology will find something interesting to read. This is not a journal for first-rank science (nor does it claim to be) but it is a useful forum for publishing results which do not justify a full length paper. It would be a better place to put recipes for plant cell culture than a more ponderous journal such as *Plant, Cell and Tissue Culture* for instance.

When the idea of a journal for plant molecular biology was being touted I must admit I was rather sceptical that it could succeed. It seemed that if the molecular biology was worth publishing then it should find a place in one of the established

molecular biology journals, if not then it was probably not worth publishing anyway. *Plant Molecular Biology* does not claim to be a first-line molecular biology journal and some of the early issues are patchy but the quality of papers seems to be improving; perhaps this is unfair, compared to most of the plant journals the quality is high.

Very few traditional plant journals publish any plant molecular biology (although *Planta* is making an effort) and it is clear that there is room for a journal devoted to the subject. One feature I particularly liked is the *Plant Biotechnology News and Views* which gives interesting snippets from recent papers, meetings and so on. It is a feature which other journals should take up. For a journal with only four issues a year the publication time of five months seems on the slow side, the quality of production is high and if the standard of papers continues to improve the journal will fill a gap in the market. □

Robert Shields is at Unilever Research, Sharnbrook, Beds. and is European editor of *Cell*.

Growing power

C.R.W. Spedding.

Energy in Agriculture.

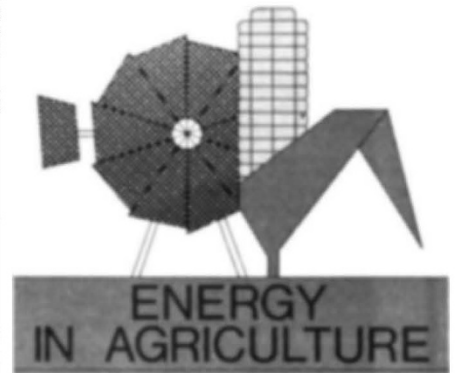
Editor-in-chief B.A. Stout.
Elsevier. 4/yr. F1186, \$71.50.

IT WAS not until the early 1970s that it was recognized how dependent modern agricultural systems have become on 'support' energy, i.e. inputs of fossil fuels both directly and indirectly. This is in addition to the essential dependence of the biological processes of agriculture on incoming solar radiation.

Very often, the use of 'support' energy allows more solar radiation to be used, as is markedly the case with nitrogenous fertilizers, and allows resources such as land and labour to be used with greater efficiency. The possibility of increasing scarcity and cost of fossil fuels focused attention on the need to minimize or increase the efficiency of their use in farming and to explore ways in which agriculture could actually produce fuel energy, as well as dietary energy for man and livestock.

It is this whole area that *Energy in Agriculture* is intended to cover and it is useful to all those interested in agricultural energetics to have a channel for communication in both directions. The justification for a separate journal is that those interested cover a very wide range of disciplines. They may be essentially concerned with plants, animals, people, machinery or even the economics of agriculture.

There should be no shortage of material for such a journal and no shortage of readers. Indeed, the coverage could have been even wider, for it is often impossible to consider energy use in production agriculture, in a balanced way, without reference to the further energy inputs required during processing and distribution. The journal is published quarterly, with a high standard of production, clear illustrations, including an occasional photograph, book reviews and short communications as well as some four papers in each issue.



Papers have appeared within 6-8 months of acceptance. To date, there has been no correspondence commenting on papers previously published but there has hardly been time and such correspondence is invited. The editor contributed an editorial in the first issue and guest editorials are planned. □

C.R.W. Spedding is Professor of Agricultural Systems, University of Reading.