

Experiments in Plant Tissue Culture, Second Edition

by J.H. Dodds and L.W. Roberts

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The experiments described in this book introduce most of the techniques required for both the practice and understanding of plant tissue culture. In addition to the practical instruction, the authors attempt to survey the literature, introducing the classic experiments as well as those in the forefront at the time of writing. Inevitably in a book of this size, this often results in little more than a reference without discussion or correlation but if readers follow up the citations, the chapters in general provide an interesting introduction to what tissue culture is and what can be done using it. There is little discussion of, nor any experiments on, the biochemistry or metabolism of plant cells and surprisingly the short chapter on cell suspension cultures lacks any mention of airlift (pressure cycle) growth systems, in many ways the easiest method to use even for undergraduate experiments. Another notable omission is somaclonal variation, a phenomenon of some importance in plant propagation and modification to which about five chapters are devoted.

I would have preferred more positive instructions ('do this' instead of the 'you may do this') and the tendency to use negative commands ('do not start timing at' instead of 'start timing when') is not helpful. More positive and less fussy instruc-

tions, plus some progression in the experiments (as late as page 162, the user is still being told which method to use to sterilise instruments, etc.) would have made the book more useful as a practical laboratory manual. As it is, it provides a useful background of information and source of class or introductory experiments, though Reinert and Yeoman [1] provide better protocols and Ingram and Helgeston [2] more (though largely specific) information. In spite of its shortcomings, I shall continue to recommend this book to students as a readable one-volume introduction to the subject. As a footnote, can I enter a plea that any further editions of this book (or any others on the subject) use molar quantities rather than milligrams. It not only makes it easier to compare, for example, the effect of different auxins, but also facilitates the preparation of media from stock solutions.

- [1] J. Reinert and M.M. Yeoman (1982) *Plant Cell and Tissue Culture - A Laboratory Manual*, Springer, Berlin.
- [2] D.S. Ingram and J.P. Helgeston (1980) *Tissue Culture Methods for Plant Pathologists*, Blackwell Scientific, Oxford.

K.W. Fuller