SUGGESTED EXPERIMENT

(a) Deliberately over-lime a measured amount of the medium, and label all the containers that have been treated in this way, and place them in your growing area (with a plant in it, of course).

(b) Under-lime a measured amount of medium and treat as above.

(c) Measure out and lime correctly a given amount of medium and leave out a major plant element:
   1. One for nitrogen
   2. One for phosphorus
   3. One for potash
   4. One for magnesium

   Label these securely and carefully, and place in growing area, but away from the possible inadvertent addition of the element in which we wish to observe a deficiency.

(d) You may now proceed to experiment with all the test media in appropriate ways.

(e) Over-limed ones may exhibit micro-nutrient deficiency. Try foliar sprays, etc., of the different metals that are suspect.

(f) The under-limed ones may exhibit toxicities and deficiencies. Experiment with the surface addition of lime etc., but weigh or measure and record the materials used in each experiment.

(g) Experiment with the ones where elements have been deliberately omitted with small and progressive amounts of the elements to determine their effect on your crop.

All your results will be visible and, what is more, you will now be able to formulate your medium to suit your crop, in your own growing conditions, and based on sound practices.

PREPARATION OF BARK POTTING MIXES

RAY WADEWITZ

Wadewitz Nursery
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We first started using bark as a component in our potting mix in a small way, using a shovel to mix it by hand. As it proved to be a successful mix and its usage increased, a paddle type cement mixer was used for mixing. Finally we have gone to a front end loader for mixing to fulfill our own requirements and for custom mixing of media for others.

Our present system is as follows: Bark is transported from the mill to Adelaide in 78 cu.yd. loads. It is hammer milled and screened into four sizes for use in landscaping and nursery potting media. To make the media, the fine screenings are spread on the ground and sand or loam is added according to the specific requirements of the client. This is mixed by a series of picking up and dropping with the front end loader. This mix is returned to the vibrating screener and the required amount of premixed fertilizer is added to the top and vibrated down through the mix. To reduce the dust problem and improve handling of the mix, water can be added to the bark. With this system we can handle 40 to 50 cu.yds per hour. (During this talk an 8 mm film was shown explaining the processing of bark and soil mixing as it is done today.)

COMMERCIAL APPLICATION OF TISSUE CULTURE IN ORCHID NURSERIES

SYD MONKHOUSE

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Since 1960 tissue culture has revolutionized the orchid industry, both in making top show cultivars available in great quantity and also in revolutionizing the cut flower section of this industry. French tissueculturist, Prof. Georges Morel, together with the orchid firm of Vacherot and Lecoufle, realized the commercial prospects in this field and quickly established the first orchid tissue culture commercial laboratory in the world from which they produced plant divisions by meristematic tissue culture and offered them for sale. The word, "meriClone", was coined to describe plants propagated by this method. This has been a most successful venture for this French firm and naturally most other orchid propagating nurseries in the world have followed suit.

Further advances in tissue culture technique have enabled the production of virus-free plants from infected stock; however, this expensive process has been limited to very few cultivars. With tissue culture for virus eradication in orchids, there is also a very large degree of luck, as the procedure is by no means foolproof.

Of late, the treatment of orchid tissue with chemicals such as colchicine has allowed ploidy doubling in many clones and this is proving an advantage to orchid growers, especially the hybridists. It is now possible to convert very desirable diploid parent stock to tetraploid stock by this process. The actual me-