rope. These types are likely to be more amenable to potted culture in addition to providing a greater color range.

Richard A Criley
Associate Horticulturist

NURSERY NOTES

COMPOSTING IS COMING BACK—At least two states and Canada have been working on composting—Ohio, Ontario and Pennsylvania. It is reported that the University of Guelph has, by forcing air through the pile, produced “a good product” in 7 days rather than several months or a year. Ohio reports that when ammonium nitrate, etc. was added to a sand-bark compost and the pile was turned once after 4 weeks, the temperatures ranged from 100° to 130°F and no Phytophthora was recovered from the pile. The progressive grower will try out composting with the materials available to him.

Geiger News
September 1975

ROOT PRUNING—Researchers at the University of California report that root pruning and care during the first two nursery transplantings of four tree species significantly increased the percentage of plants with good root systems. The earlier the plants were moved from the seed-flats into peat pots and then into gallon cans, the higher the percentage of plants with good root systems, and the larger they grew in caliper and height. Plants root-pruned during the early moves were larger than those not pruned. However, later root pruning resulted in smaller plants than those moved earlier, or than those moved at the same time but not root-pruned.

California Agriculture
Vol 25 (12), 1971

GROWTH OF DWARF EUGENIA—In attempts to improve the growth rate of some extremely dwarfed Eugenia cultivars developed at UCLA by Dr. V. Stoutemeyer, experiments have demonstrated an influence by the soil mixture used. Undesirable growth resulted from treatments with GA3. Whenever these plants are propagated and cultivated, a highly organic soil mixture should be used.

California Agriculture
Vol 30(2), 1976

SURFACTANTS—Surfactants, or wetting agents increase the ease of wetting peat moss and mixes high in organic matter such as peat-lite. They also aid in wetting of mixes during the growth of the crop. A small quantity added to water will provide more uniform distribution and better penetration of applied water. Products on the market that have been tested and, when used at the recommended rates, are non-toxic to plants are Aqua Gro and Triton B-1956.

An effective method for applying these surfactants is to blend 3 oz. of the wetting agent into 1 qt. of vermiculite and mix this amount of vermiculite with 1 cu. yd. of peat-lite mix. Granular formulations are also available.

If used as a liquid, dilute the 3 oz. in 5 to 10 gal. of water and add to 1 cu. yd. of mix. For use with dry mixes after preparation, use a drench of 1 pt. surfactant per 100 gal. water applied to 1 cu. yd. of peat-lite mix. For small amounts of peat-lite, this rate converts to 1 tsp. surfactant per gal. water.

Aqua Gro is available in a granular formulation which is convenient and easy to use.

Focus on Floriculture
January, 1976

INDUCTION OF FRUIT ABSCISSION OF TROPICAL ORNAMENTAL TREES WITH ETHEPHON AND CHLORFLURENOL

It is desirable to remove the fruits of trees, if these fruits are disagreeable in appearance, odor, or constitute a safety hazard. These experiments involve studying the effects of 2 growth regulators on abscission of fruits of tropical ornamental trees.

Species chosen for this experiment were the monkeypod (Samanea saman Jacq.), the golden shower (Cassia fistula L.), and 5 ornamental fig trees; the fiddle leaf fig (Ficus lyrata Warb.), the Indian laurel fig (F. retusa L.), the palauan fig (F. palauanense Merrill), the Moreton Bay fig
(F. macrophylla Desf.), and the comose fig (F. benjamina var. comosa Kurz.). These species were selected because of accessibility, abundant fruit set, and because they are among those species that produce fruit that is often undesirable.

S. saman, C. fistula, and F. retusa were treated with single application of (2-chloroethyl) phosphonic acid (ethephon) at 400, 600, and 800 ppm, and an untreated control. F. retusa, F. macrophylla, F. palauanse, and F. benjamina var. comosa received treatments of ethephon at the 3 concentrations mentioned above with 2-chloro-9-hydroxyfluorene-9-carboxylic acid (chlorflurenol) at 20 ppm added to each of these 3 concentrations in an attempt to enhance the abscission effect. S. saman also received this treatment when the pods were very small, less than 5 cm long, following a seasonal flush of new vegetative growth. F. benjamina and S. saman also received a chlorflurenol control at 20 ppm. F. lyrata received 2 applications of ethephon alone, at 400, 600, and 800 ppm, as well as an untreated control.

Data were analyzed 2 and 3 weeks following treatment on the percentage of fruits remaining in the branches.

With monkeypod the abscission response was only mildly significant. Ethephon caused only a darkening of the pods of the golden shower. F. retusa when treated with ethephon alone responded very well, with only 8.4% of the fruit retained by the branches 3 weeks after treatment with ethephon at 800 ppm. The addition of chlorflurenol to the ethephon spray enhanced abscission with F. retusa, causing complete abscission of all fruit 3 weeks after treatment. The ethephon, and ethephon with chlorflurenol treatments were also effective with the other species of Ficus tested. With F. benjamina var. comosa, ethephon at 400, 600, and 800 ppm with chlorflurenol at 20 ppm caused complete abscission of all fruit 3 weeks after treatment. The treatment of young fruits of monkeypod with the ethephon and chlorflurenol combination also resulted in complete abscission only 2 weeks following application. This, however, resulted in severe defoliation.

With most species tested very little phytotoxicity was observed. With F. retusa there was a small amount of terminal die back when treated with ethephon at 600 and 800 ppm and with chlorflurenol at 20 ppm. With combined treatments of ethephon and chlorflurenol to F. benjamina, the 800 ppm concentration of ethephon caused a slight amount of leaf drop, and 600 ppm caused a slight yellowing of the leaves.

With most species, the highest concentration, 800 ppm produced the greatest amount of fruit abscission. However, in a number of cases this increase was not significant when compared to the 2 lower concentrations, 400 and 600 ppm.

Gordon A. Stevens Jr., Graduate Student
Richard A. Criley, Associate Horticulturist

**AGRIFORM SHOWS PROMISE FOR FOLIAGE PLANTS**

Considerable interest has been shown in recent years in methods to reduce labor requirements in nursery production. Recently introduced controlled release fertilizers offer an opportunity to reduce labor requirements by reducing the number of times the plants require fertilizer application.

A trial was conducted at a cooperating nursery to evaluate the potential of using agriform container tablets under conditions in Hawaii. Recently potted 5-inch container plants of selected tropical foliage plants (Table 1) were arranged in a randomized block design with 5 replications. Agriform tablets (14-4-6) were applied at the recommended rate, \( \frac{1}{2} \) and 2x recommended rate. This was compared with Osmocote (18-6-12) and Foliar 63 at the recommended rate along with a treatment receiving no additional fertilizer. The medium used was a 1:1 mixture of peat moss and black cinder amended with treble superphosphate.

**TABLE 1. Selected tropical foliage plants used in fertilizer trial.**

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<td>Sheffler</td>
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Evaluation of the increase in plant height after 18 weeks showed no difference between any of the fertilizer treatments on dwarf ti plants (Table 2). Two agriform tablets resulted in the best growth of shefflera plants while Osmocote fertilizer resulted in significantly better growth of dracaena. There was no significant difference in growth of croton and panax comparing the 2 controlled release fertilizers.

As might be expected, plants receiving no additional fertilizer at planting time (except residu-
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