by October 30. One side light of this is that we've just completed a fiscal inventory and used the #403 to do the calculating involved. I estimate that we have saved 40 to 50 hours of labor in doing our inventory in this manner.

In the planning stage for November, is a conversion of payroll to the machine. When this is done, we will not only be able to do payroll much faster and more accurately, but we will have a good set of labor costs. Also in the planning stage, but some months away, is machine-operated accounts payable.

What are our conclusions regarding IBM data processing for the nursery industry?

1. We are no different than other industries — we have a product to produce and sell, and our accounting and related chores can be done with data-processing.

2. Our present size of operation is such that we feel we are approximately breaking even, cost wise, comparing manual operation to data processing. The advantage is that we have ample room for expansion without increasing our machine or labor costs. Further growth of our company will be the payoff.

3. The accuracy of the equipment is 100%. There is no error. This has made each of us at Oki Nursery increase our own accuracy and efficiency.

We at Oki have found the last year most challenging and interesting in making this conversion to IBM. It has made us change our thinking and to come up with new concepts of operation. In doing so, we are proud that we are the first nursery to entirely convert to IBM data-processing.

# PROPAGATION PROCEDURES USED BY OKI NURSERY PROPAGATION DEPARTMENT

EDWIN S. KUBO
Oki Nursery, Inc.
Sacramento, California

# Collection of Cuttings

1. Use sharp shears

2. Use clean polythylene sheets to collect cutting material.

3. Protect the cutting wood against direct sunlight when working in the open.

4. Take cutting wood to propagation shed as often as necessary to prevent desiccation.

# $Cutting\ Procedures$

- 1. Wash cutting wood on rack as soon as it is brought in from the field.
- 2. Keep cutting wood moist with mist until time of use.

3. Use sharp shears or knife to make the cuttings.

4. Length of cuttings are 3-4 inches long.

5. Dip finished cuttings for 10 minutes with Morton's Soil Drench C at the rate of 1 tsp. per 5 gallons of water.

- 6. Cuttings are placed in a wire bottom box after treated and drained.
- 7. Cuttings are treated with Hormodin powder 1, 2, 3, or the quick dip method using I.B.A. crystal with 50% alcohol.
- 8. Sterilized rooting medium is used for sticking cuttings.
- 9. Types of rooting media:
  - a. Perlite 100%
  - b. Perlite 75% Peat Moss 25%
  - c. Propagation grade sand 100%
- 10. All tools are disinfected twice daily with 1 quart of 37% commercial formaldehyde diluted with 5 gallons of water.
- 11. Cutting benches and floors are also washed with the formaldehyde solution.
- 12. Rubber gloves are worn whenever any chemical is handled.

### Liner Planting Procedure

- 1. The rooted cuttings or seedlings must be well hardened off before planting in pots.
- 2. Rooted cuttings are washed with Morton's Soil Drench C solution after they are lifted from the flats.
- 3. Soil must be sterilized before using.
- 4. Soil moisture content must be checked before rooted cuttings or seedlings are planted in the pots.
- 5. Irrigation interval is determined greatly by temperature and humidity.
- 6. All tools are sterilized wtih formaldehyde solution 1 quart to 5 gallons of water.
- 7. Benches where liners are placed must be washed and sprayed with one part 8% copper naphthenate with five parts of paint thinner solution after each crop.

### SOILS AND STERILIZATION: Mixing, Sterilization Methods

JAMES TAKEHARA

Oki Nursery, Inc. Sacramento, California

- 1. Initially Oki Nursery was predominantly a bare root and B & B grower with a few acres of container grown stock. The requirements, at that time, for soil of container grown stock was met under the following conditions:
  - A. Equipment: Stationary five yard cement mixer and scoop loader tractor.
  - B. Sterilization: Methyl Bromide.
  - C. Type of soil: U.C. Mix.
- 2. When Oki Nursery underwent the transition to complete container growing, 50 acres of containers necessitated a greater volume of soil under the U.C. Mix specifications.