

considered useful by some were (1) removal of dead leaves and debris that accumulate during the rooting process, (2) general clean-up of the entire propagating house annually, and (3) mixing media on a clean concrete surface.

The importance of the environment on the diseases and their control was illustrated with the problem of basal rotting of *Taxus*. If the medium temperature was maintained between 60 to 70° F., very little basal rot was observed; however, increasing the temperature to 80 and 90° F. resulted in a much greater incidence of the basal rot. It was also noted that adequate light and proper manipulation of other environmental factors might be of definite value in preventing many disease problems.

And finally, a question of commercial importance, "to what extent do all the sanitation measures improve your chances of success in the propagation phase?" In one case, drenching junipers with Morton Soil Drench was estimated to decrease basal rotting 25 to 40%. Many believed that definite improvement would be obtained with good sanitary procedures. The statement that seems to summarize the opinion of most on this question was that the cost of precautionary sanitary measures was small in comparison to the cost of losses that could be incurred from a serious disease problem.

MR. TOM PINNEY, JR.: Thank you, Fred. Now for the final report, Wayne Lovelace will summarize the discussion on cost control in propagation

## **COST CONTROL IN PROPAGATION — LOWERING COSTS**

Moderator: GEORGE ROSE

Recorder: WAYNE LOVELACE

Our discussion group opened by asking, "What is meant by cost control in propagation?"

Does this mean to produce smaller cuttings, grafts, or seedlings, or to crowd more cuttings into a given area, or to produce cheaper, easier to grow varieties. It could mean to use cheaper, less experienced help, or to use cheaper, more easily worked understock regardless of the quality of the resulting plants, or to increase the volume of propagation to cut the cost of the individual item and then hope that the material produced can be sold.

We concluded that cutting the cost of propagation is only a very small part of the answer to production cost control.

The following points were presented to be of prime consideration along with actual propagation costs.

1. Change in consumer demand.
2. Change in marketing procedures and outlets.

These enter into cost control much more than trying to produce a plant cheaper than your competitor.

The following discussion proceeded concerning the change in consumer demand.

We must determine what the man on the street wants and what he will want in the next five years. We must examine ourselves and see if we have changed with our consumers. In these rapidly changing times we can no longer grow just what dad grew, or what is easy, or what we like.

There are, however, a few constants in our favor, as Martin Van Hof indicated. Our customers will always demand quality in our product. Charles Tosovsky suggested that the trend appears to be toward the small sized plant unit. He feels that a large volume of plant sales will be to the working class consumer who, now more than ever, has leisure time to spend gardening. They want a lower cost item and are willing to wait for it to grow.

Don Hartman agreed and indicated that as an industry we will have to produce on a volume basis to remain competitive. He further pointed out that this will mean a more concentrated production as a means of cost cutting.

Hank Skinner commented that the change in consumer demand has to be created by those of us selling the product. Sam Lambo agreed that we must educate the public as to what they want. He currently determines his customer demands by traveling, keeping abreast of new plant materials, working closely with landscape architects and observing current trends such as the Japanese influence. Dave Dugan commented that we should observe today's teenagers — their likes and dislikes. A short time in the future they will be our consumer.

Our second main point discussed was the change in marketing procedures and outlets.

Tom Pinney, Jr. stated that analyzing our markets largely comes down to educating ourselves through our various associations and all means available to make good decisions. He further stated that we must understand the market and just where we are going. We should then get an edge on the market. By this he meant to have various channels into different markets along the production route in case the original market no longer looks good.

Moderator Rose asked, "How can we look to a future market?"

Hank Skinner stated that prior to producing a plant much time and effort must be spent on studying previous market acceptance. His marketing procedures include previous stock records, customer acceptance on a small scale and examining whether he can produce the item cheaper than he can buy it.

Ed Davis commented that the key to profits is production control. They look to past records of plants produced and sold, along with customer trends and plant shortages combined with what other producers are doing.

The question was asked, "How many present are producing

items that do not pay?" There was virtually a 100% show of hands.

The following reasons were given for producing these items.

1. There is a small customer demand.
2. They are easy to grow.
3. The grower just liked the item.

Don Hartman commented that by keeping general areas of cost accounting they have been able to eliminate some of these items.

Hans Hess stated that nurserymen will have to pool resources in given areas to promote and develop their markets and get our share of the American dollar. His remarks were echoed by Case Hoogendoorn.

Moderator Rose in closing stated that 8% of the nation's farmers produce 85% of the total farm product. The remaining 90 - 95% produce but 15% of the total production. If the current trend continues 2,000 farmers who have not kept abreast of various cost cutting procedures and current markets will go out of business in the next 10 years.

This points to the necessity of gauging our markets as a propagation and production cost.

MR. TOM PINNEY, JR.: I certainly want to thank Wayne, Fred, and Jack for the fine job they have done in summarizing the morning's round-table discussions. Are there any questions?

MR. AART VUYK: Do you notice a difference in rooting between cuttings taken from the field with normal fertilization and those grown in containers with a high level of fertilization?

MR. JACK HILL: Although we have not done a detailed, statistical study, we find that cuttings taken from plants grown in containers invariably root better than similar cuttings taken from field grown plants.

MR. AART VUYK: In regard to storing rooted cuttings, we have had good success by placing the cuttings in a heated cold frame. It has just top heat, not bottom heat. The temperature is kept at about 40° F.

MR. AL LOWENFELS: Is there any benefit from dipping hardwood cuttings in a root promoting substance before or after storage?

MR. JOHN ROLLER: You do get a stimulation, but on easy-to-root plants, you sometimes run into a problem. The roots start to come out in storage and dry out during planting or are broken off. So you have to be careful about the type of cutting you treat.

MR. JAMES WELLS: In Holland, very good results were obtained with hardwood cuttings of *Laburnum Vossi* which had been treated with a Captan-hormone dip before being stuck in the field in the fall.

MR. ARIE RADDER: Is there anyone who has any information about storage of B. and B. stock?

MR. JACK HILL: I can comment on the experience of another nursery which has had excellent results. It does not seem to matter when the plants are brought in — whether it is in fall or just before freeze up. The plants are placed in a barn and are arranged so the foliage does not touch. The balls are packed in moist shingletoe, with care that the shingletoe does not get into the foliage. During warm periods in the winter the doors are opened and the area is aired out. We have tried similar techniques and had not been successful. To emphasize the example I have given, the customers specifically ask for stored stock.

MR. TOM PINNEY, JR.: Jack, do you feel that differences in relative humidity could explain the differences in results?

JACK HILL: I am certain that relative humidity is important, but I feel our humidity was as high as in the successful example I described.

The session adjourned at approximately 10:15 p.m.