## OVERALL NURSERY OPERATIONS AND ALLEVIATING ACUTE SHORTAGES IN CRITICAL MATERIALS\*

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During the meetings we have heard and will hear more about new techniques, new chemicals and other new things that are supposed to make the nurserymen's job easier or more difficult. I would like for you to consider an old quotation--"There is nothing new under the sun." Some things may be new for you or for me; but at sometime in the past other persons have been familiar with the idea or the substance.

A few thousand years ago, the Iranians had developed a canal system that provided water for irrigation and transportation for a vast population. The artisans had the knowledge and skill to maintain the system for centuries. After invaders conquered the country, the artisans were scattered; and the canals gradually disappeared to be replaced by deserts.

In the past we have placed a lot of faith and much of the responsibility of growing seedlings on the good Lord above. And fortunately, he has generally come through for us. But in recent years we have been placing a lot of obstacles in His way. Among these are:

- 1. Introduction of new weed and disease pests.
- A loss of soil fertility due to continuous cropping and soil erosion.

Although all nurserymen may not be professional agronomists, horticulturists, or foresters, all of you are professional nursery managers - because of your training and experience.

Today we talk of shortages; but many of the items we now consider essential were not in use thirty years ago. As professionals we should be able to meet the challenge.

Members of the panel will discuss some of the critical shortages and what can be done about them.

During the conference, there were several discussions of containerized seedlings. Some of you are already involved in some aspects of this program. Containerized seedlings will have a strong impact on the reforestation program in many regions of the U.S.; but it will probably move more slowly in the south. Here we can produce 1-0 seedlings at \$10 per thousand; and expect a high survival.

<sup>\*</sup> Same talk given at Eastern Nurserymen's Conference at Gainesville, Florida on August 5-8, 1974.

Weed pests are a major problem in many nurseries. Prior to 1946, chemicals were not used in weed control. Hand weeding, cultivation and excellent sanitation methods provided acceptable control. Shortage and high cost of labor were a major problem in 1946. Mineral spirits, methyl bromide, eptam and other chemicals were introduced to the nurseries. Many others are now available as fumigants, pre-emergence and post-emergence herbicides. We may have more problems with the E.P.A. and the environment than with weeds. We may have to develop a rotation system wherein weeds are controlled during the cover crop rather than in the seedbeds.

Disease and nutrient deficiency problems have been discussed. They begin to develop in older nurseries--especially under frequent seedling crops. Information regarding control measures is available for almost any problem.

Seedling handling is going through more change today than at any time during the past. Quality seedlings do not need to be graded or counted. The entire operation from lifting to cold storage in the field is being rapidly mechanized.

My last comment is this: When the proceedings are printed, take a day off and study them.