experiments. Although both showed similar results, one source was better than the other.

EDITOR'S NOTE: Jack Alexander, Arnold Arboretum, showed a film: *Plant Propagation – A Tribute to Alfred Fordham*. The film is available from McMillan Films, MacQuesten Parkway, Mount Vernon, N.Y.

Friday Morning, December 1, 1978

Dr. Harrison Flint served as moderator of the morning session with Mr. Alfred Fordham serving as moderator for the New Plant Forum.

PROPAGATION OF MAGNOLIAS BY SOFTWOOD CUTTINGS

RICHARD A. FENICCHIA
Department of Parks
Rochester, New York 14620

Magnolias can be propagated from soft, succulent shoots and from semihardened cuttings providing rigid sanitation procedures are followed. We have used the method described below on a small scale at our park. The outdoor propagating frames are constructed in a shady area and covered with sash. We do not use mist in the outdoor beds; however, one could use mist in a greenhouse. Sand and sand-peat mixtures are satisfactory rooting media. Following bed preparation, I apply a Benlate drench at the rate of 1 teaspoon per gallon of water.

Cuttings should be 3 to 6 inches long with the soft terminal bud removed and the leaves cut in half. The cuttings should be wounded on one side. I have observed that when magnolias are wounded, many roots will be initiated along the side opposite the wound.

Before sticking, the cuttings are dipped in Hormodin 3, containing Benlate. The cuttings should then be stuck 2 inches deep. A groove is made in the medium before sticking, so as not to brush the hormone off. After sticking, the cuttings are well watered, and covered with sash and lath. The cutting bed should be kept well watered for the first 2 weeks. A weekly

spray with a mixture of Benlate (1 teaspoon/gal) and 20-20-20 soluble fertilizer (1 teaspoon/gal) is applied.

The rooted cuttings in the outdoor frames are not dug until they have received a natural cold period to break their dormancy. In February, we pot and set the rooted cuttings in a greenhouse to establish a good root system before lining out in the nursery.

I have had similar good success this year, on an experimental basis, rooting *Magnolia* 'R.A. Fenicchia' in a greenhouse with bottom heat at 70°F. Cuttings were stuck on July 21, August 16, and September 8. Most of the cuttings were well rooted in 3 to 4 weeks at all time periods.

In conclusion, I would like to say that the overall percentage of cuttings rooted with both techniques is very good. With some *Magnolia* cultivars the rooting percentage was 100%. I have found that *M.* × *soulangiana* and *M. quinquepeta* (Syn.: *M. liliflora*) cultivars root readily.

HOW THE COMMERCIAL PROPAGATOR MIGHT BEST USE THE RESOURCES OF AN ARBORETUM OR BOTANICAL GARDEN

JOHN H. ALEXANDER, III

Arnold Arboretum
Jamaica Plain, Massachusetts 02130

Prior to becoming an Arnold Arboretum staff member, I worked for a small family owned nursery. I occasionally visited the Arboretum and, once in a while, I requested and received propagating material from them. But not until I became an Arboretum staff member did I become fully aware of the many ways a commercial propagator might make use of an arboretum. Some of the resources available from an arboretum are plants, seeds, cuttings and a myriad of information relating to them. One can also obtain help in identifying, locating and propagating plants. One can even get help in selling plants.

The Brooklyn Botanic Garden (BBG) Handbook, *American Gardens – A Traveler's Guide*, lists the names and addresses of over 100 arboreta and botanic gardens in North America. It also includes many other gardens that are open to the public. Many botanic gardens regularly publish booklets that are helpful and educational. Another BBG handbook that I often find useful is the *Nursery Source Guide*. It lists wholesale and retail sources of plant materials. To take advantage of this and similar free