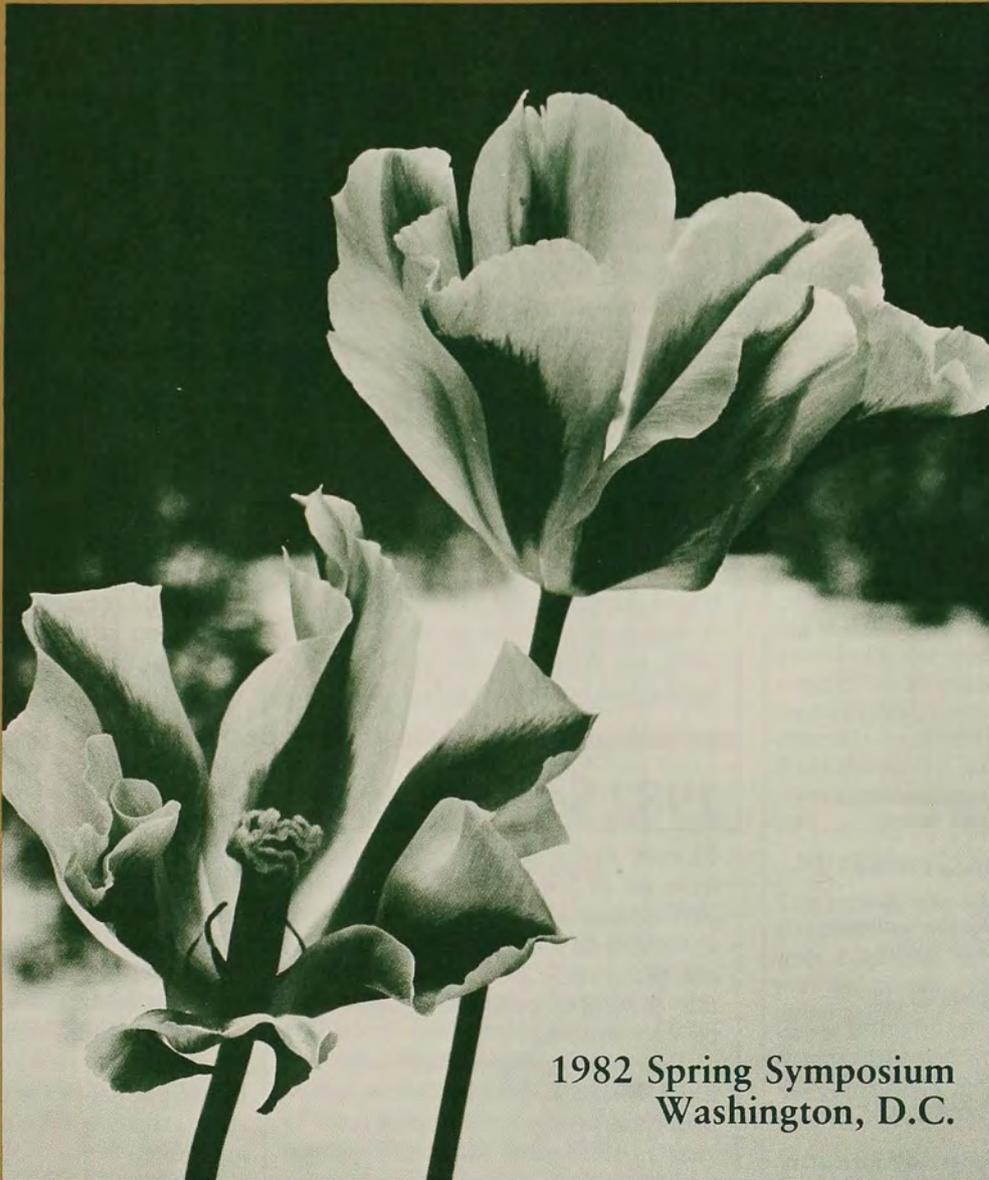


AMERICAN HORTICULTURIST

JANUARY 1982 NEWS EDITION



1982 Spring Symposium
Washington, D.C.

Malak

The Society's Fourth Spring Symposium is in Washington, D.C. this year. Be sure to mark your calendar and reserve Friday, April 23 through Sunday, April 25 for a visit to the nation's capital. We'll also be visiting outstanding public and private gardens in Virginia and Maryland and will hear many experts speak on a variety of subjects, including garden restoration. The complete itinerary and a registration form are in this issue. Turn to page 12 for details.

River Farm Notes

On Sunday, October 11, the Society held its first fall Open House at River Farm in several years. We wish all of you could have joined us, but for those of you who could not, I would like to devote this column to a brief retrospective look at this special event.

Our entire staff and a whole host of "plant people" were involved in making this event a success. Members from local chapters of national plant societies, individuals involved in professional growing and hybridizing, staff members from other horticultural institutions and organizations, garden writers, artisans and craftsmen all combined efforts to provide educational displays, plant sales, horticultural information and arts and crafts sales for our many visitors.

Happily, our grounds were in good autumn form. The traditionals, our dahlias, roses and chrysanthemums, came through with a fine display. Even though winter had left her chilly calling card several times during the previous two weeks, some of our summer plants also put forth their best. Of these the marigolds, spider flowers, hardy and waxed begonias, impatiens and the zinnias provided the brightest color.

In addition to the autumn display in our gardens, there were plant displays, plants for sale, knowledgeable people anxious to answer gardening questions, a rose competition in progress and arts and crafts for sale. For weeks before the event Society staff members dried rose petals from our gardens in their homes and in the attic here at River Farm. These were sold along with essential oils for making potpourri. There was also a spring bulb sale, hot food and drink and lots of good company.

We owe our thanks to the plant societies (and their energetic crews) who participated—the Azalea Society of America, the Herb Society of America, the American Begonia Society, the American Gloxinia and Gesneriad Society, the National

Capital Dahlia Society and the Northern Virginia Bonsai Society. Thanks also to Mr. J. Benjamin Williams who not only set up a rose display and sale (and donated the proceeds to the American Horticultural Society), but also arranged to have a rose competition for our visitors.

We also wish to thank White Flower Farm who made it possible for us to conduct a first-class bulb sale and donated to the Society all of the bulbs that were not sold during the Open House. Many of our visitors will have superb displays of perennial tulips and "The Works" daffodils come spring!

Many of our visitors also enjoyed talking to *Washington Post* columnist Henry Mitchell, and we wish to thank him for spending the day with us autographing his book *The Essential Earthman* and energetically responding to gardening question after question.

Finally, thanks to our many visitors. If you were unable to join us this time, we hope you will be able to join us for our Spring Open House on Sunday, May 16th, Rain Date Sunday, May 23rd.

—Steve Davis

AMERICAN HORTICULTURIST

VOLUME 61 NUMBER 1

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Member of Society of National Association Publications

1982 Seed Program

Thanks to the considerable input from all of last year's seed program participants and to the generosity of a number of seed companies, arbor-eta, plant societies and individuals, our 1982 seed program promises to be very exciting.

This year's program will offer a much larger and more diverse selection than last year. Many of last year's participants requested that we add more trees and shrubs to the list. This year we will be offering several, including *Vitex agnus-castus*, chaste tree, collected here at River Farm, and *Koelreuteria paniculata*, golden-rain tree. *Franklinia alatamaha*, one of last year's most popular selections, will be offered once again. We also will have seeds to interest the vegetable and wild-flower gardener. Pole bean 'Kentucky Wonder' and celeriac 'Giant

Prague' (*Apium graveolens* var. *rapaceum*) will be on the list. Wild-flower selections include Maximilian sunflower, *Helianthus maximiliani*, butterfly weed, *Asclepias tuberosa* and four botanical varieties of lupine. There will also be plants for the perennial border, house plants, herbs and annuals. In short, there will be something for everyone.

You should receive your seed program packet by early February. To participate, simply list your choices on the order card enclosed and return it to us. Return your list of selections promptly to ensure that you get your first choices. Look for this mailing soon, and remember, even if you will be unable to participate yourself, think of all those gardening friends and relatives who might enjoy participating.

Letter to the Editor

A number of articles I have read on mulching warn that additional applications of nitrogen are necessary to prevent nitrogen deficiency of plants mulched with straw, leaves, grass clippings and sawdust. Has it ever been established in a controlled, scientific experiment that the application of organic mulches without additional nitrogen will cause nitrogen deficiency?

I have been mulching trees, shrubs, perennials and annuals for years with shredded leaves, bark, woodchips, wheat straw, etc. Usually, I neither compost the material before application nor add nitrogen fertilizer, yet my plants do not show any symptoms of nitrogen deficiency.

Also, I am skeptical of the usual explanation of why this deficiency might occur. How can microorganisms acting on mulch, which is above the soil surface, compete for nitrogen with the roots of a plant that may be several inches below the surface? Application of organic mulches might be followed by symptoms of nitrogen deficiency if the feeder roots are very near the surface, if some of the mulch is mixed into the soil, or if the soil is waterlogged, but I doubt that nitrogen deficiency will occur if the mulch is left on the surface, the plants are deeply rooted and moisture conditions are normal.

—Lyle E. Pursell,
Rolla, Missouri

Mealy Bug Control on House Plants

Mealy bug infestations on house plants are difficult to control because the insect's white, waxy covering protects them from most pesticides. According to research compiled by Robert G. Anderson, Extension Specialist in Floriculture at the University of Kentucky, home gardeners can effectively fight these pests by spraying with a solution made from soap or a pesticide used in combination with an alcohol wetting agent.

Use a pesticide such as diazinon or malathion and add alcohol to the solution. The addition of alcohol allows the pesticide to penetrate the insect's waxy covering. Make a 50 percent solution of water and alcohol (rubbing alcohols, ethanol and isopropanol will work) and then mix the pesticide according to directions.

Soap solutions also have been proven effective in controlling mealy bugs indoors. Three to five applications at seven- to 10-day intervals are necessary for effective control.

Fels Naptha Soap: Shred and dissolve one-half of a bar of Fels Naptha soap in two gallons of water. It will be necessary to heat the mixture to dissolve the soap completely. This solution can then be sprayed on infested plants where it will leave little visible residue on the leaves.

Safer's Insecticidal Soap: Mix between eight and 16 tablespoons per gallon of water and spray. Safer's leaves little or no visible residue on the foliage when dry.

Fels Naptha soap is available in the laundry soap section of most grocery stores. Safer's Insecticidal Soap is available from International Intermediary Corporation, 165 O'Farrell Street, Suite 609 Cn, San Francisco, CA 94102.

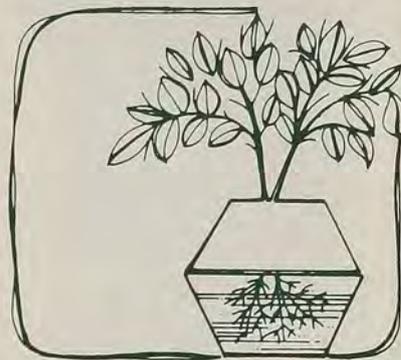
Back Issues Requested

Because of a mix-up in print orders and an unusual number of requests for back issues of *American Horticulturist*, the Society's supply of several issues has almost run out. Help us keep our inventory of copies complete by sending us unwanted or extra copies of the following magazines: February/March 1980 (Volume 59, #1), August/September 1980 (Volume 59, #4), February 1981 (Volume 60, #2), April 1981 (Volume 60, #4) and August 1981 (Volume 60, #8). We also are low on our supply of the July 1981 newsletter (Volume 60, #7).

We will be happy to reimburse you for postage. Please mail those issues to Assistants to the Editor, American Horticultural Society, P.O. Box 0105, Mt. Vernon, VA 22121.

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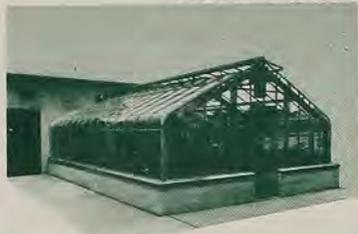
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CALENDAR

December 18-January 10
Pittsburgh Christmas Flower Show
Phipps Conservatory
Pittsburgh, Pennsylvania
Hours: Daily 9:00 a.m. to 5:00 p.m.

January 14
Cornell Floriculture Research Open House
Department of Floriculture and Ornamental Horticulture
Cornell University
Ithaca, New York
Information: Robert W. Langhans, Professor of Floriculture, Department of Floriculture and Ornamental Horticulture, Cornell University, Ithaca, NY 14853

January 15-16
American Rock Garden Society
Eastern Winter Study Weekend
Marriott Hotel
Newton, Massachusetts
Information: Donald M. Hughes, 157 Circuit Street, Hanover, MA 02339

January 15-16
Mailorder Association of Nurserymen
Annual Winter Meeting
Hyatt Regency Chicago
Chicago, Illinois
Information: Mailorder Association of Nurserymen, Inc., 210 Cartwright Boulevard, Massapequa Park, NY 11762, (516) 541-6902

January 20-24
Calgary Alberta Home and Garden Show
Round-Up Center/Stampede Park
Calgary, Alberta, Canada
Information: Calgary Alberta Home and Garden Show, Ms. Rosalie Schmidt, Show Manager, Suite 202-2695 Granville Street, Vancouver, British Columbia, V6H 3H4, Canada, (604) 736-3331

January 24-29
Associated Landscape Contractors of America
Annual Meeting and Trade Show
Riviera Hotel
Palm Springs, California
Information: Associated Landscape Contractors of America, 1750 Old Meadow Road, McLean, VA 22120, (703) 821-8611

February 5-14
23rd Annual Denver Garden and Home Show
Currigan Hall
Denver, Colorado
Hours: Friday, February 5th and Monday, Tuesday and Thursday 6:00 p.m. to 10:00 p.m.; Saturdays, Sundays and Friday, February 12th, noon until 10:00 p.m.
Information: Denver Garden and Home Show, Industrial Expositions, Inc., P.O. Box 12297, Denver, CO 80212, (303) 458-1325

February 9-14
Peoria Home and Garden Show
Peoria Civic Center
Peoria, Illinois
Hours: Tuesday through Thursday 5:00 p.m. to 10:00 p.m.; Friday and Sunday noon to 10:00 p.m.; Saturday 10:00 a.m. to 10:00 p.m.
Admission fee: \$3.00
Information: Peoria Home and Garden Show, Trade Shows, Inc., P.O. Box 596, Wayzata, MN 55391, (612) 475-2237

February 10-12
American Society of Consulting Arborists Meeting
Huntington Sheraton Hotel
Pasadena, California
Information: American Society of Consulting Arborists, 12 Lakeview Avenue, Milltown, NJ 08850, (201) 821-8948

February 13
Wine Growing and Making Conference
Mississippi Grape Growers and Vinifera Wine Growers Association, Sponsors
Enology Laboratory
Mississippi State University
Mississippi State, Mississippi
Information: Dr. Richard H. Mullenax, Extension Horticulturist, P. O. Box 5426, Mississippi State, MS 39762

February 14-18
National Arborist Association
1982 Annual Meeting
Maui Surf Hotel
Maui, Hawaii
Information: National Arborist Association, Inc., 3537 Stratford Road, Wantagh, NY 11793, (516) 221-3082

February 25, March 4, 11, 16 and 25
Winter Lecture Series
American Horticultural Society
Mt. Vernon, Virginia
Information: Phone or write Dorothy Sowerby at the Society

February 25-28
Ark-La-Tex Home and Garden Show
Shreveport Exposition Hall
Shreveport, Louisiana
Information: Ark-La-Tex Home and Garden Show, Mr. Charles G. Page, Box 14, Gravois Mills, MO 65037, (314) 372-2277

February 26-27
Fifth Annual Trees for Nebraska Conference
Nebraska Center for Continuing Education
33rd and Holdrege Streets
Lincoln, Nebraska
Information: Luann Leaming, Department of Horticulture, 377 Plant Sciences, University of Nebraska, Lincoln NE 68583-0724, (402) 472-1640

February 26-28

American Rock Garden Society
Western Winter Study Weekend
Miller Forestry Center Auditorium
Portland, Oregon
Information: Ann Lunn, 3040 NW Park View
Lane, Portland, OR 97229, (503) 645-7326

February 26-March 7

Vancouver Home and Garden Show
Exhibition Park
Vancouver, British Columbia, Canada
Information: Vancouver Home and Garden
Show, Ms. Rosalie Schmidt, Show Man-
ager, Suite 202-2695 Granville Street, Van-
couver, British Columbia, V6H 3H4,
Canada (604) 736-3331

February 27-March 7

New Jersey Flower and Garden Show
Morristown National Guard Armory
Morristown, New Jersey
Hours: Monday through Saturday 10:00 a.m.
to 10:00 p.m.; Sunday 10:00 a.m. to
6:00 p.m.

Admission fee: Adults \$4.00, Senior Citizens
\$2.50

Information: New Jersey Flower and Garden
Show, P. O. Box 8951, Robbinsville, NJ
08650, (609) 799-1677

February 27-March 7

Southern Living Show
Charlotte Merchandise Mart
Charlotte, North Carolina
Information: Southern Living Show, Southern
Shows, Inc. 1945 Randolph Road, Char-
lotte, NC 28207, (704) 376-6597

February 27-March 7

Central Ohio Home and Garden Show
Ohio State Fairgrounds
Columbus, Ohio
Hours: Monday through Friday 4:00 p.m. to
10:00 p.m.; Saturdays 1:00 p.m. to 10:00
p.m.; Sundays 1:00 p.m. to 7:00 p.m.
Admission fee: Adults \$3.50, children \$1.00
Information: Central Ohio Home and Garden

Show, Harriett S. Wyatt, Executive Pro-
ducer, Hart Productions, Inc., 1172 W.
Galbraith Road, Cincinnati, OH 45231,
(513) 522-7330

February 27-March 7

Cincinnati Home and Garden Show
Cincinnati Convention/Exposition Center
Cincinnati, Ohio
Hours: Monday through Friday 4:00 p.m. to
10:00 p.m.; Saturdays 1:00 p.m. to 10:00
p.m.; Sundays 1:00 p.m. to 7:00 p.m.
Admission fee: Adults \$3.50, children \$1.00
Information: Cincinnati Home and Garden
Show, Harriett S. Wyatt, Executive Pro-
ducer, Hart Productions, Inc., 1172 W.
Galbraith Road, Cincinnati, OH 45231,
(513) 522-7330

March 3-7

Greater Des Moines Home and Garden Show
Veterans Memorial Auditorium
Des Moines, Iowa
Hours: Wednesday 4:00 p.m. to 10:00 p.m.;
Thursday and Friday noon to 10:00 p.m.;
Saturday 10:00 a.m. to 10:00 p.m.; Sunday
noon to 8:00 p.m.

Admission fee: \$3.00

Information: Greater Des Moines Home and
Garden Show, Trade Shows, Inc., P.O. Box
596, Wayzata, MN 55391, (612) 475-2237

March 4-7

Metropolitan Louisville Home-Garden and
Flower Show
Kentucky Fair and Exposition Center—East
Wing
Louisville, Kentucky
Information: Metropolitan Louisville Home-
Garden and Flower Show, Mr. Tony Short,
1800 Arthur Street, Louisville, KY 40217,
(502) 637-9737

March 5-14

Cleveland Home and Flower Show
Cleveland Public Hall/Convention Center
Complex
Cleveland, Ohio

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Tour Dates to Remember

The following Society sponsored tours have been scheduled for 1982.
For information, brochures and reservation cards, write to Dorothy
Sowerby at River Farm.

January 28-February 12

Flora and Fauna of Scenic Kenya

February 20-March 5

Wonders of Tropical Hawaii

March 15-30

Horticulture, History, Art and Culture of
Arizona

April 3-22

Fabled Gardens and Cities of China

April 9-22

Spectacular Spring Gardens of Georgia and
South Carolina

April 24-May 5

Holland and Belgium

May 6-20

England and the Chelsea Flower Show

May 26-June 9

The Galapagos Cruise

June 8-18

Mediterranean Villas and Palaces Cruise

July 7-17

Mountain Flora and the Remarkable
Rockies

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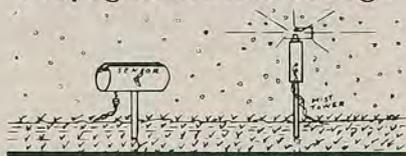
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Admission Fee: \$4.00

Information: Cleveland Home and Flower Show, 636 St. Clair Avenue, Cleveland, OH 44114, (216) 621-3145

March 6-14

Long Island Flower Show
George E. Nold Exhibition Hall
New York State University
Farmingdale, New York

Hours: March 6-13 11:00 a.m. to 10:00 p.m.; Sunday, March 14th 11:00 a.m. to 8:00 p.m.

Admission fee: Adults \$4.00, children 2.00, Senior Citizens weekday discount \$3.00

Information: Frank S. BonGiorno, Show Director, Long Island Flower Show, 211 Burrs Lane, Dix Hills, NY 11746, (516) 643-4780

March 6-14

1982 Indiana Flower and Patio Show
Indiana State Fairground
Exposition and Expo-Pavilion Buildings
Indianapolis, Indiana

Hours: Monday through Thursday 11:00 a.m. to 9:00 p.m.; Friday and Saturdays 11:00 a.m. to 10:00 p.m.; Sundays 10:00 a.m. to 8:00 p.m.

Information: P. O. Box 20189, Indianapolis, IN 46220

March 7-14

Philadelphia Flower Show
Pennsylvania Horticultural Society
Philadelphia Civic Center
Philadelphia, Pennsylvania

Hours: Monday through Saturday 10:00 a.m. to 9:30 p.m.; Sunday 10:00 a.m. to 6:00 p.m.

Admission fee: Adults \$5.00, children \$2.50

Information: Philadelphia Flower Show, The Pennsylvania Horticultural Society, 325 Walnut Street, Philadelphia, PA 19106, (215) 625-8250

March 13-21

111th New England Spring Garden and Flower Show

Commonwealth Pier Exhibition Hall
Boston, Massachusetts

Information: Massachusetts Horticultural Society, Horticultural Hall, 300 Massachusetts Avenue, Boston, MA 02115, (617) 536-9280

March 13-21

Buffalo Home and Garden Show
Buffalo Convention Center
Buffalo, New York

Information: Buffalo Home and Garden Show, Joseph W. McIvor, Jr., Manager, 1530 Statler Building, 107 Delaware Avenue, Buffalo, NY 14202, (716) 852-2006

March 18-21

Central Missouri Home Lawn and Garden Show

Hearnes Multi-Purpose Building
Columbia, Missouri

Information: Central Missouri Home Lawn and Garden Show, Mr. Charles G. Page, Box 14, Gravois Mills, MO 65037, (314) 372-2277

March 24-28

Baltimore Flower and Garden Show
Baltimore Convention Center
Baltimore, Maryland

Hours: Wednesday through Saturday 10:00 a.m. to 10:00 p.m.; Sunday 10:00 a.m. to 8:00 p.m.

Information: Mr. Thomas J. Stafford, Producer, Baltimore Flower and Garden Show, TJS Productions, 7668-B Fullerton Road, Springfield, VA 22153, (703) 569-7141

March 28-31

Williamsburg Garden Symposium
Williamsburg Conference Center
Williamsburg, Virginia

Information: See page 14 of this newsletter.

March 31-April 4

Edmonton Home and Garden Show
Sportex Building/Exhibition Grounds
Edmonton, Alberta, Canada

Information: Edmonton Alberta Home and Garden Show, Ms. Rosalie Schmidt, Show Manager, Suite 202-2695 Granville Street, Vancouver, British Columbia, Canada, V6H 3H4, Canada, (604) 736-3331

Attention Mail-order Nurserymen

The Society is starting a catalogue file of mail-order firms offering plants, seed, bulbs and greenhouse and gardening supplies. This file will be used to provide source lists for plants mentioned in *American Horticulturist* and to help members locate plants and supplies.

Please send us a copy of your

most current catalogue or plant list, and put the Society on your permanent mailing list so that we may keep the most current copy in our file. Send catalogues and plant lists to Barbara W. Ellis, Associate Editor, American Horticultural Society, PO Box 0105, Mt. Vernon, VA 22121.

Hot-Callus Method Speeds Up Grafting



TOP LEFT: Plastic hot callusing pipe consists of two cylinders. The outer cylinder is slotted to localize warm air to graft unions while holding them in place. The inner cylinder separates two heating cables and helps stabilize air temperatures when filled with water. TOP RIGHT: These whip and tongue grafts were callused following 28 days on the hot-callusing device at 80 degrees F. Graft unions are bound with rubber grafting bands.

A new device that localizes thermostatically controlled hot air around a graft union to accelerate the growth of callus tissue has been developed by Harry B. Lagerstedt, horticulturist for the USDA's Agricultural Research Service in Corvallis Oregon. Although the device was invented specifically for grafting filbert or hazelnut trees, several other species, including apple, peach, pear and prune, have been successfully hot-callused using the device.

Until now layerage, the technique of bending a growing stem over into the ground and rooting it while still attached to the parent plant, has been the only means of propagating filbert trees. Although layered plants can be placed directly into an orchard from the nursery in their first season while hot-callused filberts must be grown on for a year before they are large enough to cope with orchard conditions, with layerage only one new plant can be produced from each stem of the parent plant per year. This effectively limits propagation and distribution of new cultivars. Another disadvantage of filberts propagated by layering is that trees grown on their root systems develop suckers that pose lifelong orchard management problems. Lagerstedt's invention should significantly increase the number of trees produced each year and substantially reduce the time required for a new cultivar to be introduced.

Scientists experimenting with grafting filbert trees by ordinary methods were only able to obtain a 10 percent success rate until they discovered that filberts require temperatures of at least 70° F for the graft unions to callus. Unfortunately, maintaining that temperature

would require using expensive greenhouse space, and an added problem is that high temperatures cause the scion buds to begin growing too soon. Lagerstedt's hot-callusing device avoids these problems. Used outside during early winter and spring, the device surrounds graft unions with heated air but keeps scion buds exposed to cooler air temperatures. This accelerates callusing at the union while allowing the buds to remain dormant. At temperatures of 75° or 80° F a graft union will be formed in about three weeks. After that the new trees can be planted in the nursery, and when the scion buds break dormancy the graft unions are already well formed. Filbert grafting success averaged over 90 percent when Lagerstedt's hot-callusing device was used.

The device Lagerstedt designed consists of a two-inch plastic pipe into which one-half-inch slots have been cut perpendicular to the length of the pipe. A smaller one-half-inch plastic pipe filled with water and separating a pair of heating cables that have been fastened along its sides is placed inside the larger pipe. Graft unions (Lagerstedt uses a whip and tongue graft) are placed across the two-inch pipe in the slots and covered with a four-inch wide foam rubber strip that retards the escape of air warmed by the heating cables. The root systems are covered with sawdust to keep them moist.

Lagerstedt's device is relatively trouble free, requires no protective structure and is very inexpensive to use when compared to greenhouse propagation. It can be laid out on bare ground or gravel and requires only a source of electricity to operate the heating cable.

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How to Grow Hops and Use as Vegetable and Seasoning

The merits of hop vines in kitchen gardens, herb borders and landscape plantings have long been overshadowed by a highly advertised emphasis on their importance in flavoring beer and other malt beverages. Surprisingly, according to historical writings, the tender, leafless shoots of hop vines were used as a spring vegetable long before the flavoring derived from the female cones was used in brewing. In ancient Rome and later throughout Europe, hops, *Humulus lupulus*, was planted in gardens for its asparagus-like shoot tips that sprout from the crown of the plant. Old English herbals mentioned "hops-tops" as a seasonal vegetable sold in rural markets and also recommended using the plant in tonics to cleanse the blood and in lotions to treat the skin. Folk remedies advised steeping fresh or dried blossoms in warm potions as well as stuffing bed pillows with dried flowers for a mild sedative to relieve nervous tension and insomnia.

A dioecious plant (male and female flowers borne on separate plants), hops is commercially grown for its cone-like flower clusters harvested in late summer. At the base of each petal-like bract on the female flowers is a bright-yellow powder called lupulin that contains the resins and oils used to add flavor and aroma to beer. The flavor of hops was not always so popular. Before modern refrigeration and rapid transportation to market, large breweries were forced to use preservatives such as hops to protect against bacterial spoilage. At first many people disliked the taste and "unhopped" beer and ale were preferred for a long time. Once accepted only from necessity, the flavor of hops is now acclaimed as an essential quality in malt beverages.

Hop plants are propagated from cuttings taken from underground stems or rhizomes. Take cuttings in the spring when new shoots have begun growing from the crown of the plant. Each cutting should be about six inches long and have at least two pairs of buds. Plant two or three cuttings together in a hill in the garden where the plants are to grow at a depth of about one inch.



Jane Sansregret

The cone-like flower of female hop plants makes an attractive garnish. Hops also can be used to add flavor to bread.

Hops are long lived plants that thrive under a wide range of climatic conditions. They are hardy to Arnold Arboretum Zone 3. The major hop producing areas of the United States are located in Washington, Oregon, Idaho and California where temperatures may exceed 100° F in summer and drop below 0° F in winter. Hops can be grown successfully in areas with an average annual rainfall of eight inches, such as in Washington's Yakima Valley, to 40 inches per year as in Oregon's Willamette Valley. On arid land, irrigation is essential, and during dry spells in any area plants should be watered as necessary.

Hop plants are vigorous growers. Each spring as new shoots replace the old vines cut off at last fall's harvest, remove all but six shoots per hill or the plants will overcrowd themselves. (The thinned shoots make a tasty vegetable.) The stems remaining on the plants will lengthen rapidly as the summer progresses, often growing as much as 12 inches per day. They soon will be long enough to climb trelliswork. Very tiny hooked hairs help the vines cling as they wind clockwise around a support. Each main vine will grow 20 to 25 feet in height while side branches, which bear most of the cones, soon intertwine crosswise to form a thick screen. These side branches will be several feet long at maturity.

In July small, one-fourth-inch flowers bloom in pale-green clusters. The male flowers grow in long, loose clusters, and wind disperses their pollen. The female flower is a

tiny, short-stemmed cup backed by a single leafy petal. They are borne in spikes. Inside the cup of each flower two stigmas, which catch the wind-borne pollen, stand out like antennae and give the clusters a burr-like appearance. As the central stem of the spike lengthens, the bracts enlarge to cover the stigmas and fit together like the scales of a pine cone. The cones grow from one to several inches in length and are yellowish-green when ripe. Bunches of hanging cones add a festive look to the vines and also scent the air with a complex, cheesy aroma hinting of spices such as bay, cloves and ginger.

The female flowers need not be pollinated to produce their characteristic flavor and aroma. In fact, since seedless hops are easier to handle because the cones shatter less, most growers prevent pollination by planting only female plants. Some brewers prefer seeded hops, however, and one male plant for two or three hills of female plants would be more than sufficient. Growers plant only six or eight male plants per acre.

Commercial growers pick hops by machine and dry the cones in kilns, but the most practical way for the home gardener to harvest them is to cut down the vines and lay them on the ground to pick by hand. The cones will dry to a papery rustle within a few days if spread in a thin layer on a screen. Store the dry cones by placing them loosely in a covered canister to prevent crushing and loss of the volatile oils.

For cooks who like to add an unusual taste to usual recipes, the brisk

flavor of hops can be a change from ordinary seasonings. Snips of tender shoots put springtime relish in soups and salads, and tiny, just-opened burrs add a trace of hop flavor when blanched for salads or steeped in tea. "A handful of hops" was the first ingredient listed in directions for preparing most yeast starters in the days before the convenience of dry yeast and yeast cakes. Today's cooks can bake with old-fashioned hop flavor and aroma by simmering a few dried cones in the water used to mix dough. After heating the liquid for 15 to 20 minutes, strain and cool to lukewarm before adding it to the recipe. The same method can be used to extract hop flavor for brewing homemade beer or ale. Dried cones steeped in boiling water for several minutes make a refreshing and relaxing cup of tea.

Along with taste treats hop vines provide the added benefit of a heavy summer cover to block out sun or seclude a view. Strung up to the eaves on heavy twine or spread across a trellis, the fast growing runners will shade windows, screen porches and patios. Draped over an arbor, the thick vines will make a quiet summer retreat. Luckily, once established, these hardy perennials need little special care —just support for climbing and removal of old vines at the end of summer. The welcome shade and fresh garnishes last only the summer months, but the aromatic flavor lingers through the year in fragrant flower cones for baking, brewing or in a bracing cup of tea.

Where to buy hop vines:

Until recently retail suppliers of hop plants have been hard to come by, and often the only source for home gardeners has been a generous hop farmer. With increased interest in all sorts of herbs, more and more garden stores have begun to stock hop cuttings. They are available by mail from the following sources:

Mellingers, 2310 West South Range Road, North Lima, OH 44452, catalogue free on request. Mellingers recently introduced 'Cascade', a new cultivar with a mild aroma.

Flintridge Herb Farm, Route 1, Box 187, Sister Bay, WI 54234, catalogue \$.50. —Jane Sansregret

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1982 SPRING SYMPOSIUM



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Woodlawn Plantation will be one of the stops on the Symposium tour of historic homes and gardens of Virginia. A property of the National Trust for Historic Preservation, the gardens at Woodlawn feature two parterres, a collection of old-fashioned roses and a nature trail designed by the National Audubon Society.

The Program

FRIDAY, APRIL 23

8:30 a.m. to 5:30 p.m.—*Registration, Assembly Foyer, The Sheraton National Hotel, Columbia Pike and Washington Boulevard, Arlington, Virginia.*

2:00 to 5:00 p.m.—*Educational/Lecture Session.* The speakers will be Donald H. Parker, Mrs. Wyatt A. Williams and James R. Buckler.

6:00 to 7:30 p.m.—*No Host Cocktail Reception* at the Sheraton National Hotel.

7:30 to 9:30 p.m.—*Spring Symposium Banquet.* Guest Speaker, Mrs. St. Clair Wright.

SATURDAY, APRIL 24

7:00 to 8:30 a.m.—*Continental breakfast* at the hotel.

8:30 a.m. to 9:30 p.m.—*Walking Tour of Annapolis Gardens.* Annapolis presents a rare opportunity for landscape aficionados to see William Paca's garden, a magnificently restored pre-Revolutionary garden that was featured in the October, 1981 issue of *American Horticulturist*, as well as four lovely private gardens. Also to be seen are the grounds of the United States Naval Academy and the campus of historic St. John's College, where a box lunch will be served. The day will be topped off by a cocktail reception and dinner at the William Paca House.

● **William Paca's Garden:** These beautiful pleasure gardens were buried for over 100 years beneath landfill and finally a 200-room hotel and bus station. Between 1968 and 1976 the grounds were carefully researched and

restored. Archaeologists discovered the falling terraces, the contours of the pond, foundations of the surrounding walls and other garden buildings as well as samples of woody plants. The authentically restored garden includes a wilderness garden, pond and formal parterres. The extensive plant inventory and wide use of flora native to the mid-Atlantic region will be of particular interest to gardeners and horticulturists.

● **Ridout Garden:** A privately owned, unrestored garden, Ridout has remained unaltered in form since its construction in 1763 by John Ridout, Secretary to Horatio Sharpe, Provincial Governor of Maryland. Of interest here are the five terraces, graced by original boxwood and roses, that give evidence of an elaborate, landscaped garden in a period when luxuries were few in the American colonies.

● **Carrollton Townhouse Garden:** Another elaborately terraced, private garden. Here terraces retain their original form, and boxwood plantings descend to Spa Creek, originally called Carroll Creek. The townhouse was the home of Charles Carroll, a signer of the Declaration of Independence.

● **114 Duke of Gloucester Street:** This unrestored garden is adjacent to a home built by John Ridout for his children. The garden contains an extraordinary English yew, *Taxus baccata*, probably planted before the Revolution.

● **20th-century garden:** Farther up Duke of Gloucester Street is a small garden with unusually diverse plant material landscaped in the 20th century to suit a distinguished 18th-century house.

- **St. John's College:** The buildings are excellent examples of 19th-century architecture. The grounds contain many tree and shrub specimens as well as what is believed to be one of the two remaining Liberty trees. Under this *Liriodendron tulipifera*, the Sons of Liberty met to plot the Revolution.

- **United States Naval Academy:** The grounds of the United States Naval Academy contain many fine specimens of trees; many of the buildings are outstanding examples of Beaux Arts architecture. The Superintendent's garden, built in the early 20th century, will be opened especially for the American Horticultural Society.

SUNDAY, APRIL 25

6:30 to 7:45 a.m.— *Continental breakfast* at the hotel.
 7:45 to 5:00 p.m.— *Northern Virginia Garden Tour* to Mount Vernon, Woodlawn Plantation, Gunston Hall and River Farm. A box lunch will be served on the bus, and there will be a wine and cheese reception at River Farm following the tour.

- **Mount Vernon:** George Washington's plantation is familiar to us all. The gardens have been restored to their original design, and there are extensive flower borders, kitchen gardens, an orchard and native and exotic trees. George Washington was a noted horticulturist; some tree and shrub specimens are original plantings.

- **Woodlawn Plantation:** Home of George Washington's foster daughter, Nelly Custis Lewis, and now a property of the National Trust for Historic Preservation, Woodlawn features two parterres, a collection of old-fashioned roses and a nature trail designed by the National Audubon Society.

- **Gunston Hall Plantation:** Home of George Mason, Gunston Hall features an extensive formal boxwood garden, an herb garden, a cutting garden, two acres of formal gardens and a large variety of trees and shrubs.

- **River Farm:** Formerly part of George Washington's Mount Vernon estate, River Farm is now the home of the American Horticultural Society.

Evening Free to explore Washington.

MONDAY, APRIL 26

Departures for home or Post Symposium Tour of gardens in Washington, D. C., Delaware and Pennsylvania. Included in this itinerary will be visits to the National Arboretum, the U.S. Botanic Garden, Winterthur and Longwood Gardens.

Symposium Speakers

- **James R. Buckler** is the horticulturist at the Smithsonian Institution, Washington, D. C.

- **Donald H. Parker, FASLA,** is Director of Landscape Architecture for Colonial Williamsburg.

- **Mrs. Wyatt A. Williams** is a noted lecturer, past president of the Garden Club of Virginia and author of *Historic Virginia Gardens*.

- **Mrs. A. St. Clair Wright** is the Chairman of the Board of Directors of the William Paca House and the Chairman of the Board of Directors of Historic Annapolis, Inc.

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WILLIAMSBURG GARDEN SYMPOSIUM

Additional information on transportation, tours and other activities will be found in the booklet, *Symposium Jottings*, contained in the conference packet you will receive on your arrival.

The Program

Unless indicated otherwise, all events will take place in the Williamsburg Conference Center adjoining the Williamsburg Lodge.

SUNDAY, MARCH 28

2:00-5:00 p.m.—Registration and free time to visit Colonial Williamsburg's gardens, exhibition buildings, craft shops, Bassett Hall, Carter's Grove plantation and the Abby Aldrich Rockefeller Folk Art Center.

5:30 p.m.—*Virginia Room*. The President's Reception.

8:30 p.m.—*Auditorium*. Welcome. Special program.

MONDAY, MARCH 29

9:30 a.m.—*Auditorium*. *What's Happening in Horticulture* with Dr. Henry M. Cathey. Question period.

10:45 a.m.—*North Gallery*. Coffee.

11:15 a.m.—*Visions and Revisions in Williamsburg Gardens* with Peter Martin. Question period. Free time for luncheon.

2:00 p.m.—Special tour of selected Colonial Williamsburg gardens.

4:30 p.m.—*Foyer*. Informal tea. Free time for dinner.

8:30 p.m.—*Bruton Parish Church*. The Symposium Flower Arrangements Presentation. Mary Pope presents a seminar on church floral arts: *Beauty With Reverence*.

TUESDAY, MARCH 30

5:45 a.m.—The Early Risers Bird Walk. Free time for breakfast.

9:00 a.m.—*Auditorium*. Symposium Film Special.

9:30 a.m.—*The Delightful Dimensions of Landscape Design* with Carolyn Stirland Marsh. Question period.

10:45 a.m.—*Foyer*. Coffee.

11:15 a.m.—Briefing talk on Daffodil Land tour. Free time for luncheon.

1:00-5:00 p.m.—Tour of Gloucester daffodil farms and area gardens and historic attractions. Free time for dinner.

8:30 p.m.—A Symposium Extra: *A Capitol Evening*.

WEDNESDAY, MARCH 31

9:00 a.m.—*Auditorium*. Symposium Film Special.

9:30 a.m.—*Modern Trends in Vegetables and Flowers* with Jeannette Lowe. Question period.

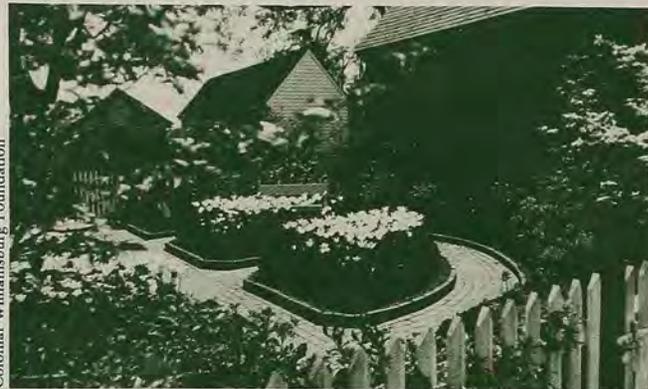
10:45 a.m.—*Foyer*. Coffee.

11:15 a.m.—*American Gardens Through English Eyes* with Pamela J. Harper. Free time for luncheon.

1:00 p.m.—Carter's Grove plantation tour.

3:30 p.m.—*Foyer*. Tea.

4:00 p.m.—*Symposium Clinics*. Three question-and-answer clinics to be conducted by visiting and local authorities on: Landscape Design; Flowers and Vegetables; and Indoor Gardening.



Colonial Williamsburg Foundation

The garden of the 18th-century Powell-Waller House in Williamsburg, Va., is tightly designed in geometric forms. Boxwood and holly are used extensively and color is added by tulip beds, flowering dogwood and Cherokee roses which cover the fence in the foreground.

7:30 p.m.—*Virginia Room*. The Symposium Gardeners Banquet focuses on *Great Gardens of America: The Horticultural Feast that is Longwood Gardens* with Everitt L. Miller.

How to Register

Garden Symposium registration should be made in advance and must be accompanied by a check for \$110 per person. This fee covers lectures, tours of Colonial Williamsburg gardens and exhibition buildings, craft shops, Bassett Hall, Carter's Grove, teas, clinics, but not the Gardener's Banquet and other meals or lodging.

Hotel rates include lodging only. Please give two choices for accommodations, since it is not always possible to reserve your first choice. All accommodations are attractive, and every effort is made to give registrants their first choice. A deposit is not necessary to reserve a room.

Symposium Authorities Include

- **Henry M. Cathey**, Director of the U. S. National Arboretum, Washington, D. C., Past President, American Horticultural Society.
- **Pamela J. Harper**, Garden Writer and photographer, Seaford, Virginia.
- **Jeannette Lowe**, Horticulturist, W. Atlee Burpee Co., Warminster, Pennsylvania.
- **Richard D. Mahone**, Director of Landscape Construction and Maintenance, Colonial Williamsburg.
- **Carolyn Stirland Marsh**, President of Carolyn Marsh & Associates, Inc., Landscape architects, Columbus, Ohio.
- **Peter Martin**, Colonial Williamsburg Garden Historian.
- **Everitt L. Miller**, Director, Longwood Gardens, Kennett Square, Pennsylvania.
- **Donald H. Parker**, FASLA, Director of Landscape Architecture, Colonial Williamsburg.
- **Mary Pope**, OBE, VMH, Founder-President of the National Association of Flower Arrangement Societies of Great Britain, Little Wrackleford, Dorchester, Dorset, England.

Registration Form

IMPORTANT: All events described in the American Horticultural Society's Spring Symposium program are included in the registration fee. This fee covers all motor coach transportation, all entrance and guide fees, the cocktail reception, two luncheons, two breakfasts and the banquet at the hotel and dinner at The Paca House.

\$230 for AHS member \$ _____
 \$225 for spouse \$ _____
 I enclose a check for \$ _____

MAIL CHECK AND REGISTRATION FORM TO:
 Dorothy Sowerby, AHS, Box 0105, Mt. Vernon, VA 22121.

It would be helpful if you would send the full amount due with this registration form. However, if you wish, you may pay only \$115 per person now, with the balance due upon your arrival at the Meeting.

CANCELLATIONS: Full refund if written cancellation is received before April 13 less \$35 per person for booking expense. No refunds will be made after April 13.

Upon receipt for your deposit, we will send you a hotel accommodations card that you may complete and mail directly to the Sheraton National Hotel. Hotel rates have been established at \$46 for a single or double accommodations.

(Below, list you name as you wish it to appear on your name badge.)

Full Name(s) Mr., Mrs., Ms. _____

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Eastern Airlines will be our official airline for the Spring Symposium. Eastern will guarantee you the best available rates when you call, possibly as much as 30 percent below normal coach rates. Call 800-327-1295 to make your plane reservations. If Eastern does not service your area, they will make reservations for you at the best available rates with another airline that does fly from your home to Washington.

36TH ANNUAL WILLIAMSBURG GARDEN SYMPOSIUM

Registration Form

PLEASE REGISTER ME FOR THE 1982 SESSION, to be held Sunday, March 28 through Wednesday, March 31.

My check covering the \$110 registration fee for each person is enclosed

(Please make registration checks payable to Colonial Williamsburg Foundation.)

- Williamsburg Inn.....\$ 90
 - Bed-Sitting Room.....\$125
 - Colonial Houses\$ 72
- Williamsburg Lodge\$72
 - East Wing\$72
 - South Wing.....\$72
 - West Wing.....\$80
- The Motor House\$53

My second choice is _____

Date of arrival _____

Date of departure _____

Signed _____

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CITY _____ ZIP CODE _____

AREA CODE _____ PHONE NUMBER _____

I will share a room with:

NAME _____

STREET _____

CITY _____ ZIP CODE _____

AREA CODE _____ PHONE NUMBER _____

Please tell us how you would like your name badge(s) prepared:
 (Example: Mrs. John J. Adams or Mrs. Mary Adams)

RESERVATIONS ARE NOT TRANSFERABLE: Hotel rates are European Plan and are subject to Virginia sales tax. Deposit check is not necessary for accommodations. Colonial Williamsburg cannot guarantee a requested room location within its hotels, but will make every effort to comply with the hotel choice.

MAIL CHECK AND REGISTRATION FORM TO: The Williamsburg Garden Symposium/Mrs. Trudy S. Moyles, Registrar/ Goodwin Building/Williamsburg, Virginia 23185.

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Beltsville "Bee Doctors" Run Diagnostic Clinic

There's a diagnostic service in Beltsville that's not for your car or your body. It's for sick honey bees.

Nearly 2,000 times a year, scientists at the ARS Bioenvironmental Bee Laboratory diagnose samples of sick bees or disease-infected honeycombs mailed in by beekeepers and apiary inspectors.

This service helps maintain the health of the nation's honey bees, which are vital to agriculture. Without honey bees for pollination, considerably fewer fruits and vegetables would reach market, and nearly all food, including meat, would be more expensive.

Any industry with an annual investment in goods and services of \$12 to \$15 billion—the total value of crops pollinated by honey bees—would want to keep a healthy labor force. And so it is with beekeeping.

The "bee doctors" of Beltsville's diagnostic service verify the opinions of bee inspectors at state departments of agriculture or of beekeepers themselves. These entomologists first examine a mailed-in specimen under a microscope. They look for spores of the microorganisms that cause American foulbrood disease, chalkboard disease, sacbrood, paral-

ysis disease, and other bee maladies. The scientists also check for symptoms of parasites such as bee "lice," mites and the larvae of the greater wax moth, which can transform the neat geometry of a honey comb into an unrecognizable mess.

When a disease is found, word is sent to the beekeeper and to the chief apiary inspector of his or her state, who check to make sure that the beekeeper treats the tainted colonies immediately.

At the lab, leftover disease samples are studied to determine if the disease germs in certain geographical areas have developed resistance to the antibiotics that beekeepers depend on to keep their operations healthy.

Samples of diseases or dead bees come to the Beltsville lab from many parts of the country. Thus, the diagnostic service helps entomologists know the distribution of bee diseases. Laboratory chief Hachiro Shimanuki says the service could provide early warning if a serious disease appears to be spreading or if a potentially disastrous foreign disease has entered the country.

Diseases and parasites cost the beekeeping industry millions of dol-

lars each year with the loss of bees and bee equipment. The public also pays a price with the loss of pollination services and the need for inspection services. The cost would undoubtedly be higher without the ARS diagnostic service of Beltsville.

Dr. Hachiro Shimanuki is located at Bioenvironmental Bee Laboratory, Rm. 208, Bldg. 476, Beltsville, MD 20705.

—Steve Berberich,
Agricultural Research, July 1981

Hose Hangers Will Prevent Fungus in Greenhouse

It only takes one drop of water from the end of a hose that has been lying on the floor of your greenhouse to transmit a pathogenic fungus from below the bench to the plants growing on the bench. To prevent this problem, install hose hangers at convenient locations in your greenhouse and use them to keep hose nozzles off the ground at all times. Les Nichols at Penn State Cooperative Extension Service suggests that, of the many types of hangers that are available, metal broom clips are probably the most inexpensive and easiest to install. They should be available at local hardware stores.