Laws of the Land

We've all heard of the law of the jungle, but there are also laws of the garden. Some of them were passed decades ago for reasons now incomprehensible and are virtually ignored. Others are important but almost impossible to enforce. How many gendarmes are available to make sure you really use that powerful pesticide according to label directions and don't pour it down the sink when it's past its prime? How many constables walk a woodland beat where they can handcuff collectors of endangered plants? But ignorance of the law can be costly. If you double dig a new bed and hit a utility line, for instance, you may be slapped with a stiff fine. In some cases, gardeners are working to change laws. They want to establish minimeadows, so they're working to overturn ordinances that call for crew-cut lawns. They're fed up with the deforestation of our suburbs, so they're lobbying for tree protection laws. They're concerned about the overuse of pesticides so they're asking that aerial sprays be banned. They're strong backers of landfill laws, because they know all that yard waste is worth its weight in gold for making compost. In this issue, we'll tell you about these efforts and more.
Taking the Lawn
In Their Own Hands

When John and Diane Goodhart let the side yard of their Rocky Mount, Virginia, home revert back to nature, they felt they were creating a beneficial natural area. Unfortunately their neighbors don't agree. Where the Goodharts see beauty in the paradise trees, saplings, and honeysuckle and blackberry vines, the neighbors see a weed-choked lot—and they're not happy about it. In an attempt at compromise, the town council asked the Goodharts to clear out some of the weeds. The couple refused, but offered to build a fence around the property; that option didn't interest the town council.

The confrontation, which began this summer, has persuaded local officials to consider creating an anti-weed ordinance.

Environmentally concerned gardeners across the country are running into similar situations when they create natural areas in their yards. Prairies and meadows can cut down on yard maintenance, eliminate chemicals, and conserve water. Local weed ordinances may prohibit homeowners from growing plants over 12 inches tall. Many prairie wildflowers and grasses are well over a foot tall.

Weed ordinances are usually enforced by local health departments. Their intent is to protect us from the adverse effects—primarily rodents—of unattended property. But most naturalistic yards are not uncared for. "It's not a matter of neglect," John Goodhart told the Associated Press. "It's a matter of design." He added, "There is no compelling reason for the town to be involved in the natural growth on my property because it doesn't threaten the health and safety of anyone."

Until the Rocky Mount council passes a weed ordinance, it can't legally stop the Goodharts from growing "weeds" on their property.

But for other gardeners wanting alternatives to turf laws, the only recourse has been to challenge weed ordinances in their cities or counties. In an article on weed ordinances in the Fall/Winter 1990 issue of <i>Wildflower</i>, the journal of the National Wildflower Research Center, Anne Paulson Gillespie, a resource botanist with the center, cited the cases of two couples who challenged local weed ordinances and won at least partial victories. Walter and Nancy Stewart, of Rockville, Maryland, had turned six acres of their seven-acre property into a natural meadow. Because Montgomery County prohibited lawns higher than 12 inches, officials ordered the Stewarts to cut the meadow. Along with Stewart McKenzie, an environmental advisor to the Montgomery County Council, they successfully fought the ordinance, saying that it was based on aesthetics that can't be regulated and maintained that because they didn't use pesticides, the lawn was environmentally safe.

Jim and Bobbe Baker of College Station, Texas, were found to be in violation of a city ordinance forbidding grasses or flowers over 12 inches tall outside a flower bed. Their two-acre property contained one acre of Saint Augustine grass, some wooded areas, and a half-acre wildflower meadow.

The College Station Appearance Committee—which oversees the city's general appearance—spent two years reviewing the Bakers' case before amending the ordinance. The amendments say that between March 1 and June 15, state highway rights-of-way and agricultural, wooded, and wildflower cultivation areas are exempt from the existing weed ordinance, but grasses and weeds cannot reach more than 18 inches. But as the Bakers pointed out to Gillespie: "By June 15 the brown-eyed Susans had not finished their bloom, much less produced mature seeds for next year. And blazing star had yet to bloom."

Gillespie noted that "height restrictions put too much stress on native grasses and give many weeds and undesirable grasses a competitive edge..." The Bakers case helps reinforce the contention that basing a weed ordinance on height limitations and mowing dates is inadequate and instead promotes undesirable vegetation.

Madison, Wisconsin, has taken another approach. Prior to 1979, lawns there had to be cut to eight inches or lower. That law was amended to allow plants taller than eight inches in certain areas of the lawn. Residents who want a meadow of taller grasses must apply for a city permit and submit landscape plans. Neighbors within a 200-foot radius of the property are notified of the landscape plan and given a chance to veto the proposal. If 51 percent or more of the responses are positive, the plan is approved; if the majority are negative it is denied, but there is an appeal process.

The city of Madison has published "An Introduction to Naturalized
Landscapes: A Guide to Madison's Natural Lawn Ordinance, which is packed with information on creating natural landscapes. The 29-page booklet contains information on the benefits and drawbacks of a natural lawn; compares planting and maintenance costs between traditional lawns and prairies; answers questions about rodents, mosquitoes, allergies, and other potential hazards that may concern neighbors; provides a step-by-step guide and examples of forms for a natural lawn permit; includes information on planning, choosing plants from nurseries that propagate their own plants, maintenance, prairie burning, and transitions between different types of landscapes. It also contains sample site plans, a bibliography, a list of courses, and descriptions of area parks with prairie restorations.

Careful planning should help keep naturalistic gardeners out of court and

Continued on page 4

Between a Rock and a Yard Place

When Donna and Glenn Crylen bought their Burbank, Illinois, home three years ago they decided not to put in a front lawn. At the time it seemed like a good idea. "I like flowers and my husband hates to cut grass," Donna Crylen says. So they planted a variety of ground covers, small evergreens, bushes, and flowering plants, along with four birch trees, one dogwood, one maple, and three flowering plums, and covered the area between them with landscaping rocks.

Then Donna Crylen decided to put another "rock garden" in the parkway area in front of her corner lot. She called city hall for permission and was given a verbal okay on the condition that she keep the plantings low. The Crylens were happy with the new gardens. They didn't use chemicals or need to water the yard—plastic was laid to catch rainwater and direct it toward specific plants—and without grass clippings they weren't sending yard waste to the landfill.

For a year the gardens grew. Irises, daylilies, hostas, mint, snapdragons, and petunias were filling in the spaces. Then out of the blue one neighbor began complaining about the yard, setting off a battle that lasted almost a year. City officials said the Crylens violated a city ordinance requiring "grass or herbage" in front yards and ordered the couple to move the stones in the front yard. Donna Crylen was outraged. "I told the alderman that I shouldn't have to get permission to plant on my private property," she says. "I had planted baby plants in the garden and asked the city to give them a chance to grow and fill in the spaces." Instead the city sued.

"They should have grass and that's what they don't have," Alderman Thomas Roach told the Southtown Economist. "If they want to live in Arizona, they better move there. We don't want everybody to pick up the ball ... and start loading up their lawns with stones."

The suit received much press coverage and neighbors began knocking on the Crylens' door wanting to help. "I lived here for two years and had only met my immediate neighbors. Suddenly I knew everyone in a four-block radius," Donna Crylen says.

Donna Crylen circulated a petition and received over 500 signatures of support. Suddenly officials switched to complaining about the parkway area instead of the front lawn. "I told them I had received permission to plant in the parkway area. Unfortunately, I didn't have anything in writing."
**Sample Natural Landscape Ordinance**

An ordinance to promote the use of native vegetation, including native grasses, in planned landscapes and to allow the use of such plants in the preservation or restoration of natural plant communities.

**Legislative Purpose**

The use of wildflowers and other native plants in managed landscape design can be economical, low-maintenance, effective in soil and water conservation, and may preclude the excessive use of pesticides, herbicides, and fertilizers. Furthermore, native vegetation and native plant communities, on a worldwide basis, are disappearing at an alarmingly rapid rate. The legislature recognizes the desirability of permitting and encouraging the managed preservation and restoration of natural plant communities in urban, suburban, and rural areas while maintaining public health and safety. It is not the intent of this legislation to allow vegetated areas to be unmanaged or overgrown when such growth provides demonstrated health hazards or prevents detection of accumulated trash and refuse that constitutes either a direct health hazard or provides a breeding ground for fauna known to create a safety or health hazard. The legislature recognizes that a limited number of species may be serious agricultural pests or may adversely affect human health or safety. In such instances, the legislature has provided a remedy by specifically defining plants recognized to be a threat to the agricultural economy or to human health and safety.

**Natural Landscaping Defined and Protected**

“Preservation” means to keep intact desirable components of the existing vegetation at a building or construction site.

“Restoration” means to replant a building or construction site with vegetation native to the region, including grasses, forbs, shrubs, and trees.

**Noxious Weeds Identified**

The following plant species are defined as noxious weeds:

(This list should be made appropriate for the area and should be minimally restrictive. The state list of noxious weeds may be helpful.)

A list for central Texas would include *Amaranthus palmeri* (Palmer amaranth), *A. retroflexus* (pigweed), *Ambrosia artemisiifolia* (ragweed), *A. psilostachya* (ragweed), *A. triloba* (ragweed), *Sonchus asper* (sowthistle), and *Sorghum halepense* (Johnson grass).

It shall be lawful to grow native plants, including ferns, grasses, forbs, shrubs, and trees, in a managed landscape design when said plants were not obtained in violation of local, state, or federal laws. No commissioner or other agent of the (town, city, village, county, etc.) may undertake to damage, remove, burn, or cut vegetation on a preservation or restoration project or in any other landscape incorporating native plants, except those specifically prohibited herein, and except on order of a court of record following a hearing at which it is established (1) that noxious weeds specifically named in the weed ordinance exist in such preservation or restoration projects and that a condition creating a clear and present hazard to public health or safety has arisen or (2) that the project is a threat to the agricultural economy. An action for a court order under this subsection shall be maintained as an action to enjoin a public nuisance. A court order under this subsection shall provide that the destruction, cutting, or removal of vegetation shall be selective unless general cutting, destruction, or removal is necessary to eliminate the offending condition.

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Reprinted with permission of the National Wildflower Research Center. For a fact sheet on “Recreating a Prairie,” send $2 to National Wildflower Research Center, 2600 FM 973 North, Austin, TX 78704. The sheet is free to members of the wildflower center; just include your member number when ordering.

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**Lawns** Continued from page 3

save on costly legal fees from weed ordinance violations. Even if your county government doesn't have a weed ordinance you could have an experience like the Goodharts. The National Wildflower Research Center recommends telling your local health officer about your landscape or even submitting a plan. If you're allowed to proceed, document your work, providing enough information to prove the yard is tended and not neglected.

“Keep seed and plant receipts, and record the number of hours spent working in the yard, or keep a copy of the bill submitted by hired professional landscapers. Also, a checklist of plant species present in the landscape would be helpful, especially if you are cited with a violation when many species are not flowering,” Gillespie wrote.

Even before planting, gardeners should obtain a noxious weed list from their state's department of agriculture and cross-check it with a list of the natives they want to plant. Gillespie suggests that you may even want to contact a local botanist to verify that the species in your yard are neither noxious weeds nor health hazards.

If coping with weed ordinances and tracking height requirements seems like more hassle than it's worth, you might consider planting a meadow with shorter plants. Pat Rodgers, a landscape designer in Charlotte, North Carolina, designed a meadow with plants no higher than six inches for one of her clients. Rodgers planted creeping buttercups, marsh pennywort, wild blue phlox, forget-me-nots, atamasco lily, blue-eyed grass, snow-in-summer, pinks, and butter-and-eggs with small bulbs—snowdrops, crocus, winter aconite, grape hyacinths, and Greek windflowers. The owners mow the meadow once every three to six weeks from late May through the middle of August and only water during an extreme drought.
Hugging Trees Via City Hall

On an episode of the 1960s television series “Bewitched,” Samantha Stevens (Elizabeth Montgomery) is outraged by a local builder's plans to remove all the trees from a neighborhood park and put in a shopping center. When picketing proves ineffective, Samantha twitches her nose and halts the bulldozers long enough for husband Darren to step in and reason with the developer.

Magic may save television trees, but waiting until a man with a chain saw appears under your favorite oak is not the time to discover that your town doesn’t have a tree ordinance.

Most cities have simple tree ordinances in place—laws that require a permit to plant, maintain, or remove trees in public areas. Now ordinances are beginning to include private property, primarily land that is under development. Some bills protect trees only of a certain size or age. Others are aimed at maintaining an area's tree cover. “Tree ordinances are becoming more and more commonplace,” says Bill Kruidenier, executive director of the International Society of Arboriculture.

Opposition to laws that protect trees on private land has traditionally come from developers and builders, since it's more expensive to build under and around trees, or to replace trees that are removed. “Developers want to know if there's a payback,” Kruidenier says.

“Laying Down the Law,” an article in the December/January 1991 issue of the American Forestry Association’s Urban Forests, offers some suggestions for creating tree ordinances. “Many people are quick to point fingers at land developers. This is a mistake,” urban foresters Phillip Rodbell and Adam Kuby wrote. “You will need the development community on your side if you wish to pass and implement a strong tree-protection statute. Indeed, you will find that developers if approached correctly are your greatest allies.”

Developers and homeowners are both apt to resent what they view as government interference with private property. Kruidenier didn't know of any ordinances that would stop homeowners from removing a tree from their own yards, but noted that homeowners’ associations may have something to say about the issue if the home is in a development. It’s more likely, he said, that city arborists will meet with resistance when trying to remove trees that are diseased, block intersections, or present a hazard to pedestrians.

City councils may balk at passing tree ordinances because of liability concerns. If the trees aren’t cared for properly, who is responsible—the municipality that creates the ordinance or the property owner? In the case of private property, it’s usually the property owner, says Kruidenier.

In lobbying for a tree ordinance, it helps to involve as many different interest groups as possible. Citizens in Chapel Hill, North Carolina, alarmed at their disappearing urban forest, prodded city officials on the issue. The city hired a consultant who formed a task force of developers, utility engineers, environmentalists, neighborhood presidents, and representatives of the Chamber of Commerce and home builders associations. To keep everyone talking amicably, a professional negotiator was brought in. It took over a year, but the group finally compromised on an ordinance that was passed by the town council.

Real estate agents can often be called in to help champion tree ordinances, since they recognize that mature trees can add 10 or 15 percent to the value of a home. The human preference for landscapes with trees is well-documented, and the presentation of these studies can help bolster the case for preserving trees. Landscape architects can also serve as effective allies by presenting drawings of town landscapes with trees and without trees.

A copy of the Chapel Hill tree ordinance is available for $5 by writing Chapel Hill Tree Ordinance, Urban Forests, American Forestry Association, P.O. Box 3000, Washington, DC 20013.

The Tree City Program

Your state forester’s office can tell you if your city has a law protecting its trees. If it doesn’t, you may want to join the National Arbor Day Foundation’s Tree City program. The program involves four steps:

1. Establishing a tree board or department. Boards usually consist of citizen volunteers and professional foresters who develop and administer city tree programs.
2. Writing a tree ordinance to establish policies for planting, maintaining, and removing trees. The ordinance may address the issue of what trees should be planted and where. Sample tree ordinances are available from the Arbor Day foundation and the American Forestry Association.
3. Creating and maintaining a community forestry program with a minimum annual budget of $2 per capita. Programs may begin with a public tree inventory including the species, location, and condition of each tree. The tree board works with qualified city employees or commercial contractors to maintain existing trees, plant new trees, and remove diseased or dead trees.
4. Issuing a proclamation declaring the observance of Arbor Day.

Communities may observe Arbor Day with a small, simple ceremony or a community-wide celebration. The “Celebrate Arbor Day!” packet available from the foundation contains a sample proclamation and ideas for commemorating the day.

Over 1,000 cities in 47 states and the District of Columbia are designated as tree cities.

For more information about Tree City USA contact your state forestry office or write the National Arbor Day Foundation, 100 Arbor Avenue, Nebraska City, NE 68410, Attn: Tree City Information.
My Husband’s Obsession and Miss Utility: A True Confession

My husband and I bought our first house last April. Even though I grew up in a small town, I had lived for 10 years in urban apartments. My husband grew up in cities and had never mowed a lawn before we moved into our new neighborhood. Suburbia was going to be a big adjustment.

John planted our first tree—a sugar maple transplanted to the front from our forested back yard—at the end of May. I didn’t think it was such a good idea to plant the tree in the middle of a record hot spell, but he was determined and even my constant doomsday warnings couldn’t deflate his enthusiasm. “I don’t want anything to do with this tree,” I finally said. “Fine,” he answered, “You don’t have to do a thing.” Hah! I thought. Deep inside I knew this tree was going to be trouble.

John faithfully watered it every night. The spindly thing looked a little bedraggled and pitiful, but John had high hopes. “It doesn’t look like much,” I said. “Just wait until it grows up,” he answered, “You don’t have to do a thing.” Whatever happened to the days when he would yell “I love you!” as he drove off? Watering the tree became his obsession. A few weeks later he left on a business trip, yelling out the car window as he drove off, “Don’t forget to water my tree!” “Water the tree,” I muttered. Whatever happened to the days when he would yell “I love you!” as he drove off? Water the tree. I decided to go back to bed.

Two hours later the trouble began. I awoke to hear someone pounding on the front door. I stumbled down the steps, opened the door a crack, and heard a voice say “I’m from the phone company, ma’am. When did you plant that tree?” I don’t wake up very quickly, so I just stared stupidly out the door. He was very patient. Perhaps he was used to women in their bathrobes staring stupidly through screen doors. “What?” I asked. “The tree,” he repeated. “When did you plant the tree?” The tree. “A few weeks ago,” I answered. “When was the last time it was watered?” he asked. The tree did look a little thirsty—actually it looked dead to me—but since when does the phone company care whether you water your trees? In my sleepy state this conversation wasn’t making much sense.

“Well, I think my husband watered it last night,” I replied. “Ah hah!” said the phone man. “I’m going to have to dig it up.” I was very confused.

He continued firing questions at me while I continued to stare in a daze at the tree. “Who planted this tree? Did he call Miss Utility before he dug? Did he mention splicing any cables while he was digging?” Beginning to wake up, I was silently cursing John for ever wanting a house and a tree. “Miss Utility?” I asked. “Who’s she?”

Miss Utility, I discovered, is a toll-free number that residents of Virginia, Maryland, and the District of Columbia have to call before digging any holes in their yards. You’re responsible for calling whether you’re digging a small hole for a bedding plant or a large one for a tree or shrub. It’s a one-call system—you call Miss Utility, who in turn notifies the electric, gas, telephone, television, water, and sewer companies that you are planning to dig. The utility companies come out and mark where underground lines are so you don’t damage any cables or electrocute yourself. (The electric company marks its lines with red paint. If the other utility companies follow suit—the water company with aqua blue, gas with mustard yellow—your lawn will be crisscrossed with a rainbow of paint blotches—you won’t need to muck it up by planting flowers.)

The consequences of not calling can be pretty severe. For instance, if one of your neighbors is on home dialysis, accidentally cutting off the electricity may have serious results. “Now, in your situation,” the repairman said, “every time you water your tree, the water is seeping into the phone line and signaling 911. The police keep coming to your neighbor’s house.” I had been wondering why I kept hearing sirens in what the real estate agent swore was a safe neighborhood.

Luckily for us, later evidence showed that John’s digging didn’t cause the problem in the phone line. But besides the danger to yourself and others from damaged lines, there is a hefty fine for not calling Miss Utility. The Virginia code says that you are liable for the total damages, including overhead, labor, materials, and overtime, says Mike Curtis of the public relations department of the Northern Virginia Electric Cooperative. In addition, counties can tack on additional fines. In Prince William County, where I live, residents found guilty of damaging cables may receive a jail sentence of up to 30 days and/or be fined $1,000. If you’re a professional landscaper or builder, licenses or permits that you hold may be suspended for up to 12 months.

Utility regulations are state laws. Not every state has a one-call system like Miss Utility and states that do have the system may call it by different names. For example, Kentucky residents call “Bud,” Massachusetts residents call the “Dig Safe Call Center,” and Oklahomans “Call Okie.”

A representative for Miss Utility in Virginia suggested checking the first five pages of your city’s telephone directory to determine if your state has a one-call system. If you don’t see it listed there, call one of the utility companies in your area and find out. If your state doesn’t have the one-call system you’ll need to call each utility company individually before you dig. This may sound like a lot of trouble, but it’s a lot better than being hauled off to jail in your bathrobe.

The next time my husband plants a tree I think I’ll take a business trip.

The story you have just read is true. The name of the author has been withheld to protect our assistant editor.
Beware the Law of the Land

by Robert W. Pelton

Judge Roy Bean, the cantankerous hanging judge of the Old West, was fond of telling the story of a "smart aleck" young attorney who found himself pleading a case in the small Texas town of Sweetwater. After the lawyer's long and learned peroration, Judge Bean swept aside the counsel's arguments with a peremptory wave of his hand. "What you say may be in all them there law books all right," said Bean, "but it sure ain't the law of Sweetwater."

Most American towns harbor in their statute books their own versions of the law of Sweetwater—oddball laws that seem to have no rational explanations and under which no one in living memory has ever been arrested. And a considerable number of these laws seem to have been aimed specifically at gardeners.

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A number of offbeat pieces of gardening legislation were clearly written in jest, such as this one from Santa Fe, New Mexico: "No female shall appear in a bathing suit while gardening within this community unless she be escorted by at least two police officers or unless she be armed with a club."

A lot of laws that seem a bit more serious in intent were aimed at protecting the modest sensibilities of more genteel generations.

Lingerie can't be hung on a clothesline in a garden within the city limits of Austin, Oregon, unless it's hidden from view by a "suitable screen."

Magnolia, Arkansas, has an old law that prohibits a man from soliciting a woman to assist him with garden chores; technically, a man can't even ask his wife to help him pull weeds. (There is nothing, of course, to prevent the reverse.)

Hefty gardeners beware! An old Rhinelander, Wisconsin, law forbids anyone weighing more than 300 pounds and wearing shorts to work in a garden that can be seen from the street.

Other laws seem to be based on the notion that the garden is a place for labor rather than pleasure. In Callicoon, New York, a local ordinance prohibits anyone from reading comic books while working in a garden. And it's a violation of the law in McCloud, California, for anyone to eat ice cream with a fork while sitting in a garden.

Local laws have had a thing or two to say about animals in the garden. Pigs can be confiscated in Philadelphia, Pennsylvania, if they're found running loose in any garden within the city. What is known as the "Guardian of the Poor" can pick up the pigs and give them to a starving family. In Guymon, Oklahoma, a statute prohibits plowing a garden with an elephant.

Town politicos don't stop at meddling in our gardens. They also want the last word on its produce.

Hastings, Nebraska, retains a most unusual law regarding sweet potato storage: It's illegal to keep them in a bakery. And lawyers could have a real problem in Clarendon, Texas, when it comes to making money. A statute there says an attorney can be barred from practicing law should he refuse to accept garden produce in lieu of his legal fees. In Franklin, Kentucky, it's forbidden to trade tomatoes after the sun goes down.

whoop, quarrel, or make any unusual noise or sound in a garden in such a manner as to disturb the peace and quiet of neighbors on the Sabbath."

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Lawmakers in Bowman, North Dakota, were concerned about the welfare of even their departed constituents. You'll be in deep trouble there if you try to grow vegetables in a cemetery inside city limits.

Some of these laws, collected over 22 years, may have since been expunged from the code books. But it's not likely. The Rev. Henry Ward Beecher, himself a horticulturist and writer on the subject, once offered a realistic comment on the art of lawmaking: "We bury men when they are dead, but we try to embalm the dead body of laws, keeping the corpse in sight long after the vitality has gone. It usually takes a hundred years to make a law; and then, after the law has done its work, it usually takes another hundred years to get rid of it."

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Robert W. Pelton is a freelance writer living in Knoxville, Tennessee.
States Activate Composting

More and more states are enacting legislation that bans or limits yard wastes in state-run landfills. The purpose has been to reduce the enormous amount of waste we produce in this country; the result has been to stimulate composting with municipal- and county-run facilities and in bins and piles in homeowners’ back yards.

Fourteen states plus the District of Columbia have passed laws banning at least leaves or grass clippings from landfills. Many others have voluntary yard waste composting programs or are considering legislation; only two states, Alaska and New Mexico, have no current composting programs.

The Environmental Protection Agency (EPA) estimates that yard waste comprises 18 percent of municipal solid waste and as much as 50 percent in the summer and fall. They project that half of the country’s 6,000 landfills will be forced to close by the mid-1990s.

“I’m impressed with what’s happening,” says Richard M. Kashmanian, senior economist with the EPA’s Office of Policy, Planning, and Evaluation. Kashmanian has observed a trend not only towards more states enacting landfill bans, but also in landfill bans becoming more inclusive. “First it was leaves and then leaves and grass and now we’re getting Christmas trees,” he says. According to BioCycle magazine, there were 1,407 composting facilities handling yard waste at the end of 1990, more than double the number in 1988.

New Jersey was the first state to enact a yard waste ban when it prohibited leaves from going into landfills in August 1989. The State currently composts 36 percent of all its yard waste, which amounts to 9 percent of its total waste. “At first there was some fighting and screaming, people saying we couldn’t do it,” says Ellen McShane Fox, recycling specialist with the New Jersey Office of Recycling. “Now it’s just an accepted part of life.” Fox would like the ban extended to include grass and to see more public education on back-yard composting.

Joe Keyser, coordinator of the American Horticultural Society’s National Backyard Compost Demonstration Park, agrees that states need to pay more attention to back-yard composting since this is the cheapest and easiest way to deal with lawn and garden debris. “People responsible for the composting programs in many states tend to be civil engineers who are looking for big solutions. I consider it more of an issue of individual responsibility.”

Keyser says that many states have done a good job in producing brochures on composting, but that this is only the first step. “People have to be able to actually see composting being done and to get hands-on experience. Simply reading a flyer isn’t going to do it.” He hopes to see more states establish back-yard composting demonstration areas like AHS’s compost park, where people can view compost bins and learn about different composting methods.

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<td>All yard waste</td>
<td>January 1993</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Leaves, tree trimmings, garden clippings</td>
<td>September 1990</td>
</tr>
<tr>
<td>South Carolina</td>
<td>All yard waste</td>
<td>September 1992</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>All yard waste</td>
<td>January 1993</td>
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High Court OKs Local Pesticide Laws

The U.S. Supreme Court has given local governments the green light on passing pesticide-use laws stronger than those of the federal government.

But it would probably be ill-advised for environmentalist-gardeners to begin lobbying city halls just yet. The recent ruling is expected to spur major battles in Congress and state houses, with pesticide users attempting to limit local control.

Members of the green industry foresee a patchwork of sometimes poorly conceived laws. Lawn chemicals allowed in one jurisdiction could be forbidden in another suburban municipality across the street. A grower might unknowingly sell produce in a town where a chemical used on it was forbidden.

A landowner in Casey, Wisconsin, had challenged the local government’s right to limit aerial spraying. He and others who joined him in the action believed the law was pre-empted by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). But the court said that as long as states didn’t allow the use of pesticides prohibited by FIFRA, they had the right to regulate pesticides, or allow local governments to do so.

However, the wording of the court’s decision left some doors open to those who disagree with it. In response to the argument that local control will throw agricultural and horticultural commerce into total disarray, Judge Byron White wrote: “Congress is free to find that local regulation does wreak such havoc and enact legislation with the purpose of preventing it.” Thus an amendment to FIFRA is one possibility. Another route for those distressed by the ruling will be to push for every state to take the regulating authority in its own hands. That’s less attractive to regulators, who note that it will still mean 50 different sets of rules.

Pesticide safety groups say that community leaders are the best judges of environmental conditions and concerns in their own areas. The high court seemed to agree, saying that FIFRA “does not preclude registration and labeling requirements with a general approval to apply pesticides throughout the nation without regard to regional and local factors like climate, population, geography, and water supply.”

But those opposed to local regulation maintain that small governments lack the scientific expertise to judge a pesticide’s toxicity and its potential impact on the environment.
Pumped Up Pumpkins and Other Champs

These days, the world records are broken regularly. Edward Gancarz did it in 1990 with 816 1/2 pounds, upping Gordon Thomson's record of 755, set the year before, which absolutely shattered Robert Gancarz's 671 pounder from 1986. Norm Gallagher's 1984 record of 612 seems, in retrospect, almost puny. We're not talking about weight lifting, big game hunting, or monster truck meets, but competitive pumpkin growing. If you're not convinced, travel to Collins, New York, on October 14 for the World Pumpkin Confederation's (WPC) World Pumpkin Weigh-Off. At 1 p.m., the WPC headquarters will link up via a simultaneous conference call to 23 sites around the world to determine not just the world's largest pumpkin, but also the largest squash, the longest gourd, the heaviest cabbage, and other vegetable champions.

The World Pumpkin Confederation has been promoting the sport of "leviathan vegetable gardening" for eight years and the results have been, in a word, stupendous. Last year they had over 2,000 members from Australia to Zimbabwe (30 countries total) giving it their all to grow 800-pound squashes and 200-pound watermelons. Most every WPC site competes in the pumpkin, squash, and watermelon classes. Many sites also have their own particular classes. In Collins, New York, they grow long gourds. In Smoky Lake, Alberta, they fancy big garlic. The Alton Towers, England, site is particularly interested in the heaviest leek, the heaviest swede (not a Wagnerian contralto named Olga; this is the British name for rutabaga), and the longest parsnip.

What kind of people devote their summer to monster vegetable growing? "Kids from 5 to 95, doctors, lawyers, stockbrokers, priests, and everyone in between," says Ray Waterman, WPC president and world record holder for the longest gourd (99 inches). According to the WPC, giant pumpkins first attained international acclaim when William Warnock of Goderich, Ontario, sent a 400 pounder to the Paris World's Fair in 1900.

Veterans seem to agree that the single most important step to pumpkin stardom is selecting seed from humongous specimens. But there are many pitfalls along the way—disqualifying cracks, too-close plant spacing, squash bugs. To help, WPC publishes a quarterly newsletter full of news and information. Recent articles include "Growing A Long Gourd," "When Do They Grow—Day Or Night?", "Structural Strength Of Pumpkins," and a review of a cookbook, In Praise Of Pumpkins ("for those of you who've agonized over what to do with your pumpkin harvest").

Waterman says the giant pumpkins are quite edible, but the prizewinners usually go on display in a children's hospital or a similarly worthy site. "What kid doesn't want to see the biggest pumpkin?"

How big can these heavyweights get? Waterman is predicting a 1,000-pound pumpkin by the turn of the century. Judging from the recent string of records, it seems entirely possible.

To join the World Pumpkin Confederation, send $15 to them at 14050 Gowanda State Road, Collins, NY 14034. Members receive the quarterly newsletter Esprit de Corps and are entitled to compete in the weigh-off.
Regional Notes

Sunday in the Park with Topiary

Visitors to the AmeriFlora '92 floral exhibit in Columbus, Ohio, next year may want to take a side trip to the city's main library.

There in Deaf School Park—named for an academy that burned down 10 years ago—local sculptor James Mason and his wife Elaine, an arts administrator for the Columbus Recreation and Parks Department, have taken on an ambitious topiary project. They are recreating Georges Seurat's post-impressionist painting "Sunday Afternoon on the Ile de la Grande Jatte," containing 52 people, eight dogs, three cats and a monkey, and a pond to represent the Seine.

James Mason's usual medium is wood or bronze. Prior to beginning the project in 1988, their topiary experience had consisted of "two little ones in our back yard," says Elaine Mason, and a weekend class at Longwood Gardens. "Looking back I think, 'We were really cheeky, weren't we?'" But so far, she says, the only unpleasant surprises have not been horticultural ones. "One of the contractors installing irrigation broke two of the armatures and the welder who came out to fix the armatures set a tree on fire."

Two parks department horticulturists have served as ongoing technical advisors.

The yews that were to be shaped into the figures on land were planted in October 1988. The next June the Masons blocked in rough forms with hand pruners and loppers, cutting hard into the centers of the yews to form narrow necks and waists. "A lot of spectators were afraid we would kill them," Elaine Mason recalls. That summer her husband installed most of the five-eighths-inch bronze rod armatures along which new growth was to be guided; she followed, tying branches to the armature with heavy jute twine.

Then they installed the pond, where eight large concrete planters hold the boating figures, and built two hills. One hill suggests the "jatte" in the painting's background; the other is the viewing point from which Seurat would have sketched the painting.

This season, they planted the "trim": low-growing ornamentals, hedges, and lawn. And now for the most part, all the figures are recognizable, no longer from the shape of the supporting armatures, but from the living branches. "Although sometimes we look at a figure and think, 'Rats! That umbrella isn't going to be finished in time,'" says Elaine Mason.

Writing in the Ivy Journal, published by the American Ivy Society, the couple explained that James Mason chose the Seurat painting because it was a work of art about the relationship between people and the natural world. The topiary is a work of art and a work of nature, they observe. But while most art is art mimicking nature, here nature is mimicking art.

The Case of the Reappearing Bonsai

At this writing, the staff of the U.S. National Arboretum and its parent agency, the Agricultural Research Service, (ARS) were still scratching their heads over the theft and return four days later of an elm bonsai from the arboretum's National Bonsai and Penjing Museum.

This was no ordinary thief. He managed to thwart an elaborate alarm system, and he knew how to take care of the bonsai while it was in his possession.

The six-inch tall tree was taken on a Tuesday afternoon while most of the staff was taking a break. On Saturday, gardener Carol Bordelon was pulling weeds when a tall young man told her that a tree in the collection appeared to be out of place. "There's a bonsai near the Cryptomeria and it looks like an elm," he told her. Daniel Chiplis, assistant curator of the collection, said no other visitors had noted the little tree under the Japanese cedars, and few would have known it was an elm.

The man, who escaped through the nearby herb garden, not only had kept the bonsai alive, but had successfully repotted it. It's possible that the container was the reason for the theft, but the thief took quite a risk for an unglazed clay pot worth less than $100. The plant was worth several times that.

Bob Norton, ARS information director, said the agency was "very concerned" that their security precautions were breached and that next time, the thief could target a much more valuable plant.

For History Buffs

A New England Garden History Society has been established under the wing of the Massachusetts Horticultural Society to encourage the preservation of historic gardens. Members can attend tours of private gardens, lectures, and courses, and will receive two publications—a semiannual newsletter and an annual journal containing features on garden history and book reviews.

Write NEGHS, Massachusetts Horticultural Society, 300 Massachusetts Avenue, Boston, MA 02115.
Minneapolis Bog Almost Complete

The Minneapolis Parks and Recreation department is nearing the final phase of restoring an acid bog that was once rich in unusual natives.

At the turn of the century, the spring-fed tamarack bog in Theodore Wirth Park was a rich repository of such plants as pitcher plant and bog rosemary. It was a favorite collecting spot for a well-known local botany teacher, Eloise Butler, who described it as a quaking bog on an isle that was surrounded by a moat. But since then, the understory of the isle has been taken over by an invasive foreign shrub, the glossy buckthorn. "Acid bogs, which are most commonly seen in northern Minnesota, are few and far between in the metropolitan area," says Mary Maguire Lerman, coordinator of horticulture for the parks department. "Restoration of this bog will provide metropolitan residents a unique opportunity to view and study this rare resource and acquaint themselves with the plant communities that thrive in this type of ecosystem."

In 1986 the parks department, funded by a grant from the Metropolitan Council, a regional planning and funding body, began restoration by dredging the north end of the site, removing the buckthorn and a three-foot layer of peat. The next spring, the underlayer of peat rose to the surface, and such plants as grasses and sedges began to thrive again. In the winter of 1988, the restoration crew discovered that the 80 tamarack trees they expected to find on the site numbered closer to 200. The next spring, because removal of the buckthorn allowed sunlight to again reach the bog floor, ferns and starflowers began to appear.

A few boardwalk sections have been installed in the past two years. Now the parks department is ready to add additional "bog walks" and to begin replanting native acid bog plants such as orchids, sensitive fern, bunchberry, marsh marigold and blueberry, winterberry, and labrador tea shrubs.

The project is being backed by People for Parks, a nonprofit organization created to stimulate financial support from the private sector for park projects, which have also included concerts, playgrounds, and daffodil plantings.

For more information, or to make a donation to the Tamarack Bog Project, write to People for Parks, 310 4th Avenue South, Minneapolis, MN 55415, or call (612) 348-6778.

Pecans Move North

Researchers at the University of Nebraska at Lincoln have pushed the pecan north. Associate Professor of Horticulture Bill Gustafson has tested more than 50 cultivars of pecan trees developed from wild-collected germplasm and has selected the seven most cold-hardy cultivars for further development ("Bolton's S-24, 'C. L. McElroy', 'Canton', 'Gibson', 'Lucas', 'Mullahy', and 'Norton"). According to Gustafson, all require a growing season of only 140 to 180 days to produce a mature crop of nuts, making them suitable for commercial cultivation up to Zone 4 and hardy into Canada. This is a great improvement over Southern pecans, which require 270 to 290 days to produce mature nuts; previous Northern cultivars require 170 to 190 days.

Gustafson and members of the Northern Nut Growers Association spent years scouring the marshy banks of the Missouri and Mississippi Rivers searching for the germplasm of wild native pecans. "Many people didn't realize that the pecan grew this far north because the settlers had cleared them to develop farmland," says Gustafson. His team found the trees in areas that couldn't be farmed: along rivers—some in standing water—and in a military base in Leavenworth, Kansas. A few isolated trees had been preserved by farmers on their land. From graft wood from these and other trees, Gustafson has built the world's largest collection of cold-hardy pecan germplasm with over 100 clonally propagated pecans.

According to Gustafson, his seven trees seem just as productive as other pecans. The nuts are somewhat smaller (one-and-a-half inches) but contain a higher oil content than Southern pecans, which enhances flavor. "They seem to have more of a hickory flavor," says Gustafson. "They taste better. I've even had Southern people tell us that, so it's not our imagination." Although some of the cultivars are currently available in small quantities, it will be at least three years before they are widely available from nurseries.

In the United States, 75 percent of commercial pecan production comes from the Southeast. "I think the whole Northern part of the United States doesn't even know what a good pecan tastes like," says Gustafson.
Making a Difference

Help End Horticultural Quackery

Readers: Here's your chance to “make a difference” by helping garden writers stop deceptive advertising.

Most horticultural advertising today is honest. But occasionally a deceptive ad slips into the news media, quickly makes millions for the entrepreneurs, and is never seen again after the heat is turned on. In the 1970s, many state and federal agencies clamped down on deceptive horticultural ads and the companies responsible were forced out of the business. Some of their copywriters received jail sentences for mail fraud.

Recently the Garden Writers Association of America (GWAA) was alerted to a potential resurgence of deceptive horticultural advertisements. A recent catalog contained 11 possible violations of the Federal Seed Act, for example, by misnaming vegetable seed varieties; an advertisement for a flowering vine was fulfilled with stock that may have been dead before it was mailed.

The Horticultural Advertising Ethics Committee (HAEC) of GWAA, chaired by Susie Plimpton, asks gardeners to alert us to any advertising offers that seem deceptive or fail to deliver what has been promised.

The committee will give every submission a careful review to determine if the ads are in fact deceptive. Any ads deemed such—and not stopped voluntarily by the advertiser—may be brought to the attention of the U.S. Postal Service regulatory office, the USDA regulatory office, state district attorneys, and other consumer protection groups. The names of those who bring complaints will not be revealed without their permission.

Some of the ads to watch for include:
+ Any offer of vegetable or lawn grass seeds where a brand name or a fictitious variety name takes precedence over the registered name, e.g., “Miracle Giant” tomato seeds in large type and the real variety name in tiny type.
+ Any advertisement that offers plants, but actually supplies dormant roots, dormant cuttings with no root or leafy growth, or dormant bulbs. Caladium bulbs have been sold this way under the name of rainbow plants.
+ Any offer of a hybrid variety that is not a hybrid, especially with respect to lawn seed and vegetable seeds.
+ Any offer with outrageous claims. For example, the Venus’s-flytrap has been sold under the headline: Rid Your Home of Insects—Including Cockroaches.
+ Any offer where artwork seems exaggerated, for example, where heavy

Boys Town: Nurturing Youths and Plants

Gardening and farming have been an important part of Boys Town since its founding in 1917 by Father Edward Flanagan. He once said: “The youth who makes a mistake may be compared to a plant growing in depleted soil and deprived of health-giving sunshine. He hasn’t got a chance.” Vegetables and food crops have been grown to help feed resident’s bodies. The newest garden is intended to feed the mind and spirit.

The Boys Town Garden of the Bible is a project of Boys Town’s Horticultural Training Center. “The garden is a special way of bringing the Bible and spiritual references into the lives of young people,” said Robert Prucha, director of the horticulture center. The garden occupies three acres and reflects the gardens of 2,000 years ago. For three years over 100 students have been involved in the construction of the garden—preparing the soil for planting, laying brick paths, raising the plants, and planting the garden. It was dedicated in August.

Students do most of the work, guided by adult and youth supervisors.

Planting the garden has offered teachers a unique way to introduce scriptures to the students. Prucha noted that in the Bible Christ used plants to introduce his parables. “We are using these same plants to bring his lessons into the youths’ lives,” Prucha told the Boys Town Quarterly.

Prucha designed the garden and he and greenhouse manager Ann Wickenhauser researched books to determine what to plant. Plants and seeds were donated or purchased from all around the world. “It’s been a great project to work on,” Wickenhauser said.

The garden includes a main entrance where 10 weeping mulberries are planted to symbolize the Ten Commandments, and three areas displaying fruit, trees, and aquatic plants listed in the

The landscape plan for Boys Town’s Garden of the Bible.
retouching to increase fruit set is obvious, or artwork showing a Venus’s-flytrap placed inappropriately in front of a fireplace away from any natural light or humidity.

Any offer where testimonials appear to be questionable, for example, when a mystery expert is quoted as having authenticated the ad’s claims. Fraudulent ads often appear first in regional editions of major magazines then graduate to supermarket tabloids and Sunday supplements.

Some ads that have been successfully removed from the marketplace in recent years as a result of actions by members of the GWAA include:

* Giant Climbing Strawberries. These did not climb or bear large fruit without the runners being rooted in soil.

* Climbing Vine Peaches. The product sold was an inedible gourd.

* The 1,000-fruit Tomato Plant. The ad claimed the variety was large fruited; in fact, it was a cherry-sized tomato.

* Also report any instances where live plants are offered but the plants arrive dead. Good packaging today allows most plants to be shipped safely with near 100 percent success.

* Be alert to ads that do not contain qualifiers such as, “Claims are based on optimum conditions and results may vary from one climate to another,” or give no indication of a hardiness range.

Naturally, good old American salesmanship is a legitimate right even among horticultural advertisers, and there really is a grapefruit-sized tomato (Supersteak VFN); a tomato-potato plant (a tomato grafted onto a potato tuber); fast-growing shade trees that can grow eight feet a year (a new hybrid willow from Australia can grow eight feet a year); and strawberries that fruit all summer (called “day-neutrals.”) But there are no climbing vine peaches, no Venus’s-flytraps that will rid your home of cockroaches, and no miracle tomato plants that will produce 1,000 giant-sized tomatoes.

—Derek Fell

**TRAVEL/STUDY TRIPS FOR THE AHS GARDENER**

**SEPTEMBER 30-OCTOBER 20, 1991**

**GARDENS OF ASIA**

Join AHS Executive Director Frank Robinson on a program that encompasses Thailand, China, and Japan. Highlighted are excursions to the ruined city of Ayutthaya, hillside villages near Chiang Mai; a jungle safari on elephantback to the Karen Village near Mae Hong Son; Beijing and the forbidden city; Xi’an and the tomb of Emperor Quin Shi Huangdi with its army of terra cotta figures, Shanghai’s Yu Garden and Museum of Art and History; the beautiful gardens of Suzhou; Kyoto’s holy Shojy Mosis Temple, Nijo Castle, and Ryoanji Rock Garden; and Nikko’s botanical gardens. And by special invitation, we will visit the Imperial Palace Gardens as well as the Jindaiji Botanical Gardens in Tokyo.

**OCTOBER 17-24, 1991**

**GARDENS OF CALIFORNIA**

This will be a most unique voyage in San Francisco Bay from which we will navigate up the Sacramento and Napa Rivers. With the help of AHS members and friends we will visit a wonderful collage of private gardens in Woodside, Piedmont, Berkeley, Lafayette, Orinda, Walnut Creek, Sacramento, Davis, and Napa. Program highlights include four private gardens belonging to board members of the historic Filoli estate including James and Lurline Coonan, Mr. and Mrs. Eugene C. Trefethen Jr. of Napa, and Ruth Bancroft, whose garden in Walnut Creek was featured in the October 1989 issue of American Horticulturist. This program is being led by Mrs. Harry Van de Kamp of Paso Robles, California, a former AHS Board Member whose collaboration with this program makes it a once-in-a-lifetime opportunity.

**JANUARY 25-FEBRUARY 1, 1992**

**GARDENS OF THE VIRGIN ISLANDS**

An exceptional exploration voyage to the British and U.S. Virgin Islands on board the Nanucket Clipper. Ports of call include St. Thomas, St. John, Tortola, Virgin Gorda, and Peter Island. This unique program is being led by former AHS President Carolyn Marsh Lindsay and Bob Lindsay and AHS Board Member Andre Viette and Claire Viette. Participants will see the gardens of the Lindsays and the Viettes’ parents and private homes and gardens of their personal friends, including the spectacular gardens of AHS member Paulina du Pont Bean, whose gardens were featured in the December 1986 American Horticulturist. The small size of the yachtlke Nantucket Clipper makes it possible to sail into isolated bays, quiet anchorages, and deserted beaches known only by experienced yachtsmen who are intimate with these waters.

**FEBRUARY 19-MARCH 3, 1992**

**EGYPT AND NILE CRUISE**

Explore the earliest of the Western civilizations and the life-giving influence of the Nile River. The itinerary includes Cairo, Luxor, and Abu Simbel as well as a five-day cruise on the Upper Nile from Luxor to Aswan on board the Nile Goddess. Visit numerous historic gardens, including the Manial Palace Gardens in Cairo and the botanical garden on Lord Horatio Herbert Kitchener Island at Aswan.

Derek Fell is a free-lance garden writer and photographer and a member of HAEC. A version of this article appeared in Quill & Trowel, the GWAA newsletter. It is reprinted with permission.

Send copies of ads you want investigated to Susie Plimpton, 186 Beach Street, Ormond Beach, FL 32174.
Q: I find it hard to throw away flower and vegetable seed that I did not use this year. How can I save seeds so they will be viable for several more growing seasons?  
A: The key to saving seed is keeping temperature and humidity levels low, which will not only keep seed metabolism "on hold," but also will control damage from bacteria, fungi, and insects. The temperature and humidity, when added together, should be less than 100. For example, seed stored at 40 degrees should have relative humidity levels of 50 percent or less. Optimal storage temperature is between 32 degrees and 41 degrees.
To prepare freshly harvested, cleaned seed or unused purchased seed for long-term storage, spread the seeds out on newspapers and allow to dry for about one week in a dry and well-ventilated place. Next, put equal weights of silica gel or fresh powdered milk, in the desiccant should not be in direct contact with the seed.  
Dr. James Harrington of the University of California at Davis, recommends drying seeds with powdered milk. His method calls for placing two tablespoons of powdered milk in a stack of four facial tissues. Roll the milk up in the tissues and tape the ends so the milk will not spill out. Put this tissue pouch into a storage jar with the seeds. Immediately seal the jar tightly and place it in the refrigerator—not the freezer. Seeds that are stored in this fashion should remain viable for several years. However, if you store the seeds for more than one year, you should replace the desiccant once or twice a year.
When the seeds are planted, remember that dried seeds will require more water and imbibe water more slowly than "fresh" seeds.

Q: I would like to dig up and transplant several established anglo-jap and English yews. Can these yews be successfully transplanted?  
A: Yes, since they have a compact root system, almost all species of Taxus will transplant well despite their size and age. The best time to transplant yews is fall or early spring. The new planting site must contain fertile and moist, but excellently drained, soil. Heavy clay or waterlogged soil will greatly inhibit or even kill yews. Yews flourish best in full sun, but will tolerate shade. Windy sites should be avoided to limit winter desiccation.
Smaller yews can be pruned back and immediately transplanted with bare roots. Larger plants can also be cut back to the desired size, but should be dug with a root ball. Yews withstand heavy cutting back because they can produce new growth from old wood. However, those that are severely cut back may benefit from being fertilized with well-rotted manure or bonemeal after transplanting.

Plant the yew at the depth at which it was previously growing. The hole should be wide enough for roots to grow easily into the surrounding soil—at least five times the diameter of the root ball. Compost or other organic matter should be incorporated into the loosened planting area to improve soil structure. While yews do not tolerate excess moisture, make sure adequate moisture is available immediately after transplanting. Mulching new transplants will help maintain beneficial moisture levels.

Q: I see a lot of references to Bordeaux mixture. What is it and how is it used?  
A: Bordeaux mixture was discovered in 1882 in France and takes its name from the wine growing region where it was first used as a preventative fungicide on grapes and tree fruits. It was widely replaced after 1940 with the fungicides ferbam and zineb, but is still used today because it is effective, relatively inexpensive, and is one chemical spray allowed to be used on most certified organically grown produce crops.
Bordeaux is effective against anthracnose, certain fungus leaf spots, melanos, downy mildew, apple scab, brown rot, and shot hole disease in tree fruit. It can also be used as a general disinfectant for produce-storage areas and horticultural work areas that need to be kept free from disease.
To be effective as a preventative, it should be applied on a regular and consistent schedule. The standard formula is known as Bordeaux 4-4-50: four pounds of copper sulfate and four pounds of hydrated lime in 50 gallons of water. The mixture can be made stronger, or weaker, if it appears to be scorching plants. It should not be used on plants that are susceptible to burning by lime. When the mixture dries on foliage, it coats it with a copper precipitate that prevents fungi spores from entering and infecting the plant. The mix should be used immediately after preparation or the adhesive quality is diminished.
Bordeaux mix is sold commercially in prepared powders to which water is added. However, experts agree that it is most effective if made from scratch immediately before use. To prepare a small amount of 4-4-50 mixture, dissolve two heaping tablespoons of fresh hydrated spray lime in two gallons of water. Then dissolve two level teaspoons of copper sulfate crystals into one gallon of water. Add the copper sulfate solution to the lime solution. This will make a three-gallon slurrylike solution that can be strained through a cheesecloth into a sprayer for immediate use. The two solutions of lime and copper sulfate should always be prepared separately and then mixed together with the amount of water determining the concentration. If spotting or scorching of foliage results, reduce the amount of lime in the solution. Bordeaux mixture should not be confused with Burgundy mixture. While the two fungicides are used for the same purposes, Burgundy mixture consists of copper sulfate, sodium carbonate, and water.
—Maureen Heffernan  
Gardeners’ Information Service
Members’ Forum

‘Environmental Vandalism’

I hope that your printing of the article “Pushing Poppies in California” (July) does not constitute AHS’s endorsement of California Poppies, instead of Litter!’s campaign to carpet the countryside with California poppies. To me the intentional introduction of any species, native or alien, into the natural landscape is an inexcusable act of environmental vandalism. In addition, on the basis of what you report, this organization’s “wildflower” seed mix contains not only natives, but at least one exotic species (scarlet flax). Our environment is fragile enough as it is; why disturb it by introducing plant species whose impact on the ecosystem is unknown?

Robert Ornduff, Curator
University of California Botanical Garden
Berkeley, California

The California Poppies, Instead of Litter! project came to our attention through Wildflower, the newsletter of the National Wildflower Research Center. At the time of their article the California group was not distributing a wildflower seed mix. Elizabeth Carmack, public relations director for the wildflower center, said their organization has received no expressions of concern about the poppies. She said gardeners should be careful to buy wildflower mixes containing only seeds of plants native to the area where they will be planted. To obtain a list of plants native to your area write National Wildflower Research Center, 2600 FM 973 North, Austin, TX 78704.

Whereas AHS would not endorse the introduction of plants to natural preserves or other areas where the flora is fragile or protected, the planting of native plants along roadways as a form of beautification and a way to eliminate litter seems entirely laudable and a marked improvement on the trash, weeds, and grass that highway departments spend many hours and dollars trying to control.

Where Are the Wasps?

On page three of your May News Edition you describe several different kinds of parasitic wasps that can be used as a control for caterpillar-type insects. I would like to know if a variety of Encarsia formosa to control whitefly nymphs is available commercially. You also mention another genus of wasps—Eretomoceres—for whitefly control and wasps which attack mealybugs, but do not mention their availability.

Helen Davidoff-Hirsch, M.D.
Englewood, New Jersey

Encarsia formosa is available from a number of suppliers of beneficial insects, including Nature’s Control, P.O. Box 35, Medford, OR 97501 and Bozeman Biotech, P.O. Box 3146, Bozeman, MT 59772. To the best of our knowledge, currently there is no retail source for Eretomoceres species, but E. californicus should be available next year from Biofac, Inc., P.O. Box 87, Mathis, TX 78368. The parasitic wasp that was used in the Midway Mall in Sherman, Texas, to control citrus mealybugs was Leptomastix dactylopii. It is available from South Texas Insectary, P.O. Box 882, Weslaco, TX 78596.

Lilypons Water Gardens

Begin your water garden today with a Lilypons catalogue featuring page after page of beautiful water lilies, lotus, bog plants, fish, statuary, and the essentials for keeping it all working together.

No pool? Choose a fibreglass or PVC pool from the many sizes shown in the Lilypons catalogue.

☐ Please send the new Lilypons catalogue plus informative newsletters with seasonal sales. Enclosed is $8.00.
California (30¢), Maryland (25¢) and Texas (35¢) residents please add tax.

☐ Please rush my catalogue by first class mail. Enclosed is $6.75.

Name
Address
City State Zip

1500 Dept. P.O. Box 1189
Buckeystown, MD 21717
(301) 874-5133
1500 Dept. P.O. Box 186
Brooksville, TX 77423-0186
(713) 954-5569
1500 Dept. P.O. Box 1130
Thermal, CA 92274
(713) 954-8569

American Horticulturist • September 1991 • 15
The American Horticultural Society's fall lecture series will begin Saturday, September 21 with two lectures.

Charles Thomas, president of Lilypons Water Gardens in Lilypons, Maryland, opens the series at 10:30 a.m. with a lecture on water gardening. At 2 p.m. Dr. Richard Lighty, director of the Mount Cuba Center for the Study of Piedmont Flora in Greenville, Delaware, will present "Gardening Nature's Way," a discussion of the rules of thumb for naturalistic gardening.

Thomas is the third generation of the Thomas family dedicated to growing water lilies, lotus, and other aquatic plants. He holds several water lily patents and has collected water lilies from domestic and foreign sources in an effort to improve offerings for water gardening enthusiasts. Thomas is a founding member of the International Water Lily Society. He wrote Water Gardens for Plants and Fish and the water gardening section of Taylor’s Guide to Garden Design. Lilypons is a commercial source of water gardening supplies and information.

Charles Thomas

Dr. Richard Lighty

Lighty was in charge of research at Longwood Gardens for six years beginning in 1969. He directed cultural studies, plant introduction, evaluation, and breeding at the gardens. He then joined the University of Delaware as a faculty member in the plant science department. There he developed and administered the Longwood Graduate Program which trains horticulturists for managerial roles in public gardens. In 1985 Mrs. Lammot du Pont Copeland asked Lighty to direct the development of her estate into a public garden. Now called the Mount Cuba Center, the garden emphasizes plants native to the Piedmont region of Eastern North America.

On Saturday, October 5 Holly Har­mar Shimizu, a horticulturist with the U.S. Botanic Garden in Washington, D.C., will lecture on “Edible Ornamental Landscaping” at 2 p.m.

Shimizu is responsible for outdoor horticulture and public programs at the U.S. Botanic Garden. Her horticultural interests include edible landscaping, herbs, fragrance, roses, and heritage plants. She was the first curator of the National Herb Garden at the U.S. National Arboretum. Shimizu held that position for eight years and was instrumental in the design and creation of the garden. In 1976 she received the Nancy Putnam Howard Award for outstanding achievement in horticulture from the Herb Society of America and is currently the national chairman of botany and horticulture for the society.

The cost of the individual lectures is $5; for $7.50 gardeners may hear both lectures on September 21. Reservations are required. Lectures will be held in the ballroom. Participants are encouraged to bring a picnic lunch and explore the gardens before or after the talks. AHS staff will be on hand to answer questions. For more information or to register contact Ann Clogan or Stephanie McLellan at the American Horticultural Society, 7931 East Boulevard Drive, Alexandria, VA 22308, (800) 777-7931 or (703) 768-5700.

**Autumn Days at River Farm**

There's still plenty to see at River Farm; the gardens will be blooming with sedums, cardinal flowers, asters, and anemones in September and October. Spend the day or join us for one of the events listed below. Our fall lectures and demonstrations are filled with information about dahlias, composting, and flower arranging. To learn more write or call AHS.

+ **October 5.** Back-yard Composting Lecture, 10 a.m. Admission: $5. Call for reservations.
+ **October 7.** Dahlia Day. Members of the National Capital Dahlia Society and American Horticultural Society staff members will be on the grounds to answer questions about the care and cultivation of dahlias. 11 a.m. to 4 p.m. Free.
+ **September 7.** Back-yard Composting Lecture, 10 a.m. Admission: $5. Call for reservations.
+ **September 7 and 11.** "Tropical Surprise,” a class sponsored by International Design Symposium (IDS) and AHS. Elizabeth Wingate of the Garden Club of Bermuda will present “Modern Design with Exotic Flowers and Foliages” on September 10 and “Banana Leaves and Victorian Fashion” on September 11. Each 10 a.m. to 4 p.m. session is $75 and includes supplies and lunch. Call for reservations.

AHS Bulletin Board

Fall Lectures on Specialized Gardens

Charles Thomas

Holly Harmar Shimizu

Dr. Richard Lighty

Autumn Days at River Farm
New Post for Former AHS President Marc Cathey

Dr. Henry Marc Cathey, director of the U.S. National Arboretum for 10 years, will step down from that position this month to become national chairman for florist and nursery crops review with the Agricultural Research Service. Cathey is a member of the American Horticultural Society’s Board of Directors, and served as President from 1974 to 1978.

In his new position, which is a newly created one, he will help to shape ARS research priorities relating to horticulture for the mid-90s and beyond.

“Compost Happens” at River Farm

The future landscape of the AHS National Backyard Composting Demonstration Park is beginning to take form.

The permanent park site has been graded, mulched, and is ready for the construction of demonstration beds and information kiosks.

Current plans call for 70 to 80 demonstration beds and special research areas. On the blueprint are a chipping/shredding site featuring a dozen shredder and chipper units; a mulch garden, demonstrating roughly 25 different mulching materials and their proper applications; the actual compost park section, with holding and turning bins and tumbler units; a vermicomposting area that will let visitors study different methods for harnessing “worm power”; a conservation lawn area for demonstrating mulching mowers and related equipment; a cover crop/green manure area; and a special section on innovative technologies, where compost will be used for heat generation and other imaginative applications. The compost park and mulch sections should be completed this fall.

Helping to make this progress possible are the donations of tools and equipment we have received from businesses throughout the country. During the past three months, the Compost Demonstration Park has received compost bins, tumbling units, chipper/shredders, tools, and accessories from the following sponsors: Ames Lawn & Garden Tools, Barclay Recycling, Bio Industries, Inc., Bonar Inc., Dirt Cheap Organics, Evergreen Bins, Kemp Company, MacKissic, Inc., Obex, Inc., the Philadelphia Earthworm Company, Reotemp Instrument Corporation, Ringer Corporation, RPM, Smith & Hawken, Sun cast Corporation, and We Recycle Corporation.

Dr. H. Marc Cathey

The goal is to develop a research program that will help the United States florist and nursery industries, including arboriculture and landscape architecture, compete successfully in both American and overseas markets. Cathey will hold hearings throughout this country and abroad to assess future research, production, and marketing needs and develop priorities that will complement current programs of the ARS, universities, and private industry. More than 20 national garden and trade organizations will also have input into his reports, which will be prepared for the federal 1994 and 1995 budgets.

In announcing Cathey’s new position, R. D. Plowman, ARS administrator, said: “The florist and nursery industries are the two fastest growing segments of U.S. agriculture, producing a combined annual farm value estimated at about $7 billion. With the recent surge in imports of greenhouse and nursery crops, and the potential for American growers to not only expand domestic sales but also develop export markets, it is becoming increasingly clear that ARS research programs must be ready to meet anticipated demands.”

ARS is the research arm of the U.S. Department of Agriculture. Cathey will be part of its national program staff in Beltsville, Maryland.

The agriculture department has begun a search for Cathey’s successor, who will be the fifth director of the national arboretum.

A Report From the Development Office

+ Challenge Issued
A major challenge grant has been issued to the Society by AHS Board Member Mary Katherine Blount of Montgomery, Alabama. Blount has pledged $25,000 to the Society if an equal amount is raised by members and friends.

The gift’s purpose is the hiring of a horticulturist to oversee, develop, and beautify the gardens and grounds at our River Farm headquarters. The money raised by the challenge would purchase much needed gardening tools and equipment in addition to salary.

This challenge is the revitalization of a dream. When River Farm was donated to the Society in 1973 by the Enid A. Haupt Charitable Trust, it was hoped that the grounds would become a living laboratory of horticulture that would exemplify horticulture’s importance to our nation.

We applaud Mary Katherine Blount’s vision of George Washington’s River Farm—located outside the nation’s capital—as the appropriate site for an expression of the nation’s best in horticulture. Please help the dream come true! Contributions should be made out to the M. K. Blount Challenge.

+ Unrestricted Gifts
We gratefully acknowledge the following recent unrestricted gifts to the Society: Clark Winchole Foundation; District II, National Federation of Garden Clubs; Yacht Haven Garden Club; Chevy Chase Garden Club of Maryland; Hunting Creek Garden Club; and Rock Spring Garden Club. Red Hill Garden Club donated funds for new signs at River Farm.

+ New Plantings
Special thanks to the Alexandria Council of Garden Clubs for its project to restore the foundation plantings by the main house at River Farm. A selection of native shrubs and herbaceous perennials were planted in three locations around the house in early April.

+ Library Needs
A small group of dedicated Friends of the AHS Horticultural Library met recently to evaluate current needs of the library. These include better climate control, adequate lighting, shelving, and computer equipment.

The Friends of the AHS Horticultural Library includes volunteers who have donated a combined total of more than 2,000 hours in the past two years to classify, catalog, and shelf some 4,000 volumes.

Members and friends of AHS who are interested in book conservation and preservation are encouraged to contact our librarian, Alice Bagwill, by writing to the River Farm address, or by calling (703) 768-5700 between 10 a.m. and 3 p.m. on Thursdays.

—Judith A. Borden
Development Director
Gardeners' Bookshelf

Gardening Letters to My Daughter

Other people's diaries and letters have always fascinated me. Perhaps it's that glimpse into another person's private life, or the chance of finding some scandal buried deep among the pages. So it was with great anticipation that I began reading Gardening Letters to My Daughter. And although no dark secrets were revealed, I wasn't disappointed. Anne Scott-James, a British garden writer whose previous books have included The Language of the Garden and The Best Plants For Your Garden, originally wrote the letters to her daughter and weekend next-door neighbor, Clare Hastings, because . . . I felt that I might not be able to manage my own garden much longer, for it is too large for me now that I have reached the eery years, and I thought it would be fun to record some of my experiences in a series of letters to Clare, hoping she would find them useful or entertaining.

Useful and entertaining they are. Gardening advice—what, when, and where to plant; composting, deadheading, and pruning; formal gardens, cottage gardens, and gardens in other countries; gardening books; and more—is peppered with brief forays into the private lives of mother and daughter. For example, in a letter about plants for a dry bank, Scott-James suggests Phlomis fruticosa, and common rosemary: "These are mostly wild plants . . . of which Osbert and I would crush and sniff the leaves on our aromatic walks in Corsica—you were too young at that time to appreciate the plants, being more interested in the young waiter with the curly hair: that was a saga." Scott-James continues with other suggestions for Hastings' dry bank; I'm still longing to know what happened with that curly-haired waiter!

Hastings usually followed her mother's suggestions, but occasionally she set off on her own, either completely ignoring the tips or begging for patience. In a letter regarding "the battle about Latin names" Scott-James writes: "I know you like my hellebores and talk of growing some yourself. Are you going to write to a nursery and order 'six hellebores please?' I don't know what you would get." Hastings replied: "For now, I may have to stick to, 'That's a nice hellebore' and 'Do you do it in red?' and I shall avoid any parties where all these serious gardeners are boozing."

One of my favorites, about scented flowers, begins with Scott-James quoting Proust: "Often I have wished to see a person again without realising that it was simply because that person recalled to me a hedge of hawthorns in blossom."

Although references to plants by their English common names and allusions to events like the "Gardener's-Question-Time-for-Charity" may perplex American readers, the book is easy and fun to read. You may wish that your own mother had written such letters to you, but she probably wishes the same thing about her mother. Luckily, Scott-James and Hastings have been generous enough to share theirs with us.

—Mary Beth Wiesner

The Wild Gardener

This is Peter Loewer's third book this year, and definitely the most fun: a compendium of Loewer lore, if you will. Bits and pieces of these short chapters have appeared in American Horticulturist, a weekly column in the Sullivan County (New York) Democrat, or Kaatskill Life magazine. The title refers both to the book's emphasis on wildflowers and the delightful sense of abandon with which Loewer has chosen topics and references. Besides writing knowledgeably of many native plants, he shares his enjoyment of or abhorrence for the insect inhabitants of the garden and lets us indulge in hops and hemp; he draws metaphors from Greek myth and contemporary horror tales, quotes Byron and Longfellow, and introduces the reader to a virtual plethora of classic gardening books.

—Kathleen Fisher
Oriental Vegetables

"It has always seemed curious to me that, while Western gardens have been enriched beyond measure by the trees, shrubs and flowers that plant hunters brought back from China, there has never been a parallel introduction of oriental vegetables," writes Joy Larkcom in the introduction to Oriental Vegetables. As she makes clear in this masterful book, it certainly is not because of a paucity of interesting, delicious, and adaptable plants. But while a few tolerant American gardeners allow snow peas, pak choi, and daikon radishes into their gardens, the mass of Chinese vegetables worthy of cultivation—the choy sums, the mizuna greens, the bitter gourds, the yam beans, the basellas—are still barred from entry.

The bulk of this book is an invaluable encyclopedia of Chinese vegetables, with information on the background, habit, culture, harvesting, storage, use, and occasionally the decorative value of over 75 plants. Also included are chapters on seed sprouting, recipes, and gardening techniques.

Larkcom writes with style and authority; her prose is enriched with anecdotes from personal experience with these plants, both in China and in her garden in England. Her plant descriptions are botanically accurate, but also engaging, like this about the bitter gourd: "Their waxy, warty skins look as if they rubbed shoulders with alligators in the primordial slime. Ten slightly smoothed ridges run the length of the fruit, with dozens of little blistered warty bumps packed between them." She likens the segmented tubers of the Chinese artichoke to "exceptionally chubby maggots, miniature Michelin men, Sumo wrestlers, and spiral sea shells."

The meat of this book—-the encyclopedia—is so good that I wish she would have added another course or two and skipped dessert. Gardeners can find basic information on weed control, soil fertility, seed sowing, etc., in a legion of other books. There is no need for it here. It would have been useful, though, to have learned about even more Chinese edibles like daylily buds or especially ginkgo nuts; I have heard that inside those fetid fruits are scrumptious seeds used in Chinese soups and stews.

Also, the title is a bit misleading. While Larkcom covers Chinese and a few Japanese vegetables, the bounty of the rest of Asia will have to wait for future authors.

—Thomas M. Barrett

Women in the Field

Too few American gardeners know of or appreciate the plant hunters who risked life and limb to bring them their most beloved species. But this is all the more true of those botanical heroes who happened to be heroines. Unlike their male counterparts, few were encouraged to seek higher education and many achieved their major accomplishments as amateurs. Those who did obtain paying positions often remained on the lower rungs of the professional ladder. Many were too modest to write biographies or allow plants to be named for them. Some have been in the shadow of a husband or father. This book is a laudable step toward rectifying that neglect.

Marcia Bonta, who has contributed many articles to American Horticulturist, describes herself as a self-taught naturalist, and not all of the 25 women featured in this book are known for plant exploration. She classifies some as entomologists, others as ornithologists, ecologists, or naturalists. But aphids, birds, and butterflies are also inhabitants of the garden, and those women who studied them with a passion are as fascinating as those who pursued Trillium and Lunaria.

Biographies are not normally my first choice of reading matter. But Bonta has made it easy to get to know these women on a personal level and vividly evokes their adventures, disasters, and triumphs. Like the best of plant-hunting volumes, her book gives us precipitous cliffs, unfriendly natives, and stinging insects—all the more amazing since most of these explorers did their mountain climbing and bog wading in skirts.

Those in her section on botanists are Kate Furbish, whose lifework was to paint, collect, and classify the flora of Maine; Kate Brandegee, whose honeymoon consisted of walking 500 miles from San Diego to San Francisco "botanizing all the way"; Alice Eastwood, sent by the Arnold Arboretum to the Yukon at the age of 55 to collect willows; Ynes Mexia, a cantankerous collector of flowering plants in Central and South America; Mary Sophie Young, who collected seed plants and ferns in Texas via burro and a rootless buggy; Elizabeth Gertrude Knight Britton, who with her husband founded the New York Botanical Garden; and Agnes Chase, an expert on grasses who worked for the U.S. Department of Agriculture.

Many of these women began their botanical pursuits late in life, being delayed by illnesses or bad marriages. But their work seemed to give them longevity. Chase died at 95 on her first day in a nursing home; she had quit work five days earlier. At 67, Mexia collected 15,000 plant specimens in Ecuador, Peru, Chile, and Argentina.

Women in the Field will be enjoyed by anyone who prefers exploring the outdoors to being at a desk. It would be especially inspiring to students—women or men—who are entering, or considering, "the field." —K. F.
Gardeners’ Dateline

Mid-Atlantic


+ Oct. 11-14. Northeast Master Gardener Conference. Lincoln, Nebraska. Sponsored by the National Arbor Day Foundation. Information: The Arbor Day Institute, P.O. Box 81415, Lincoln, NE 68501-1415, or call Kathy Austin, (402) 474-5655.

Northeast


North Central


Exposition
for Professional Plant Growers


Orchid Association, 2607 South Blvd, Greensboro, NC 27405, (336) 627-0220.

San Francisco, CA 94030, (415) 451-6000.

Forres, Scotland. Information: (01343) 545-0895.

Propagators Society Meeting and Tour. Royal Plaza Trade Center, Marlborough, Massachusetts. Sponsored by the University of Massachusetts Cooperative Extension and the International Plant Propagators Society. Information: Kathleen Carroll, University of Massachusetts Cooperative Extension, French Hall, University of Massachusetts, Amherst, MA 01003, (413) 545-0895.

South Central

September 27-29. Seventh Annual Natural Landscaping Symposium and Plant Sale. Armand Bayou Nature Center, Houston, Texas. Information: Armand Bayou Nature Center, 8800 Bay Area Boulevard, P.O. Box 58828, Houston, TX 77258, (713) 474-2551.

Further information on this and other symposia is also available from the American Horticultural Society, 511 15th Street NW, Washington, DC 20004, (202) 686-3700.

The Southeast


September 26-29. The 24th International Conference and Trade Show for Professional Plant Growers Association. Opryland Hotel, Nashville, Tennessee. Information: PPGA, P.O. Box 27517, Lansing, MI 48909, (517) 694-7700, Fax (517) 694-8560.


September 12. Fall Gardening Festival. Atlanta Botanical Garden, Atlanta, Georgia. Information: (404) 876-5859.


September 29-31. Florida State Horticultural Society Annual Meeting. Doral Ocean Beach Resort, Miami Beach, Florida. Information: Mohamed A. Ismail, CREC, 700 Experiment Station Road, Lake Alfred, FL 33850, (813) 956-1151.

November 2-3. Chrysanthemum Show. Atlanta Botanical Garden, Atlanta, Georgia. Information: (404) 876-5859.

Southwest


West Coast


October 25-27. Fifth Annual East West Orchid Show: Orchids in the City. Los Angeles, California. Sponsored by southern California orchid societies. Information: (213) 957-1007.

October 31-Nov. 2. Fall Plant Festival. The Huntington, San Marino, California. Information: (818) 405-2282.

International

October 28-Nov. 15. International Horticultural Tour to New Zealand. Sponsored by the Professional Plant Growers Association. Information: PPGS, P.O. Box 27517, Lansing, MI 48909, (517) 694-7700.

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University of Delaware's Longwood Graduate Program is accepting applications through 31 December 1991 for the 1992-94 class. Graduate Record Exam must be taken no later than October for December application. The two-year program yields the M.S. degree in Public Horticulture Administration with emphasis in leadership, and in management of public gardens. The Program offers students academic study at the University of Delaware and management internships working with business, education, horticulture and maintenance staff of Longwood Gardens in Kennett Square, Pennsylvania. The Longwood Graduate Program is appropriate for individuals interested in leadership and professional careers in arboreta, botanical gardens, horticultural societies, park systems, civic garden centers and related institutions. Further information and applications may be requested by contacting Dr. James E. Swasey, Coordinator, Longwood Graduate Program, Box H, 153 Townsend Hall, University of Delaware, Newark, DE 19717-1303. (302) 451-2517.

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HELP WANTED
We at the American Horticultural Society are often asked to refer individuals for significant horticultural positions around the country. We are not in a position to offer full placement services to candidates or employers. However, as a service to our members, both jobseekers and employers, we would be very glad to receive resumes and cover letters of individuals seeking job changes and employers seeking candidates. All responsibility for checking references and determining the appropriateness of both position and candidate rests with the individuals. AHS's participation in this activity is only to serve as a connecting point for members of the Society. Inquiries and informational materials should be sent to: Horticultural Employment, American Horticultural Society, 7931 East Boulevard Dr., Alexandria, VA 22308.

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Hairy Potato a Drag for Insects

An international team of scientists has developed the world’s first insect-resistant potato. The “hairy potato,” as it is being called, is resistant to all major potato pests including the potato tuber moth, the Colorado potato beetle, thrips, mites, and aphids. Researchers from Cornell University and the International Potato Center in Lima, Peru, joined forces in the project, now in its 10th year.

The potato is a cross between Solanum tuberosum, the common potato, and a nonedible wild species from the Bolivian Andes, S. berthaultii. Hairs (technically glandular trichomes) on the leaves and stem form a physical and biochemical barrier. Small-bodied insects, such as aphids and leafhoppers, become ensnared in the sticky hairs. Colorado potato beetles and other large-bodied insects are not trapped, but still find the hairs disturbing and prefer to conduct their feeding and breeding business elsewhere.

Ward Tingey, professor of entomology at Cornell University and one of the scientists who helped develop the potato, notes that the hairy potato is somewhat less productive than the potatoes cultivated in the United States. “But you have to remember,” he says, “the male parent 10 generations ago was a wild Bolivian species which doesn’t produce potatoes in temperate environments.” He predicts that it will be five to eight years before the yields are improved and the potato is commercially available.

Some 1,362,350 acres of potatoes in the United States are treated with 4,420,000 pounds of insecticide annually. Tingey believes that there will be great demand for the hairy potato since insect populations have developed a resistance to insecticides in many areas of the country. The potato should also play an important role in international agriculture since, according to the International Potato Center, more insecticide is applied to the potato than any other food crop in the world.

Healthy Damage

Here’s yet another reason to think twice before you reach for that garden insecticide: Duke University researchers have found that being nibbled by insects may make plants healthier.

David Eitzman, a botany student working with Professor Mark Rausher, found that morning glories damaged moderately by tortoise beetles and a leaf miner showed what he calls an “overcompensation phenomenon.” They grew larger, flowered longer, and produced more seeds than their undamaged counterparts.

Rauscher didn’t have an explanation for the phenomenon, and he emphasized that his findings aren’t likely to generalize to all pests and all plants.

Useful By-product

A Penn State researcher says a steel by-product is an ideal growing medium for many bedding plants.

Dr. Jay Holcomb, professor of floriculture in Penn State’s College of Agriculture, has been using mineral wool to grow wax begonias, impatiens, chrysanthemums, and poinsettias. He notes that the pH is high, but says it holds water well and releases nutrients efficiently. And because the uncleaned wool is heavier than some other alternative media, its use in outdoor pots would make them less likely to blow over in a high wind.

Two or three greenhouse growers will be trying the material, currently used primarily for ceiling tile, this fall.

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