

**In This Issue**

---

- 2 Association News**
- 3 From the President**
- 4 U of D News**
- 5 Landscape Bidding and Estimating**
- 8 The Nature of Gardens**
- 9 Federal Invasive Plan**
- 11 Federal Laws for Agricultural Employers**
- 13 About That Press Release**
- 14 The Multicolored Asian Lady**
- 16 IRS Simplifies Tax Deposit Rules**
- 16 Nutrient Management**
- 18 What's Attacking Cherry Laurel**
- 20 Maintenance Schedule**
- 21 Publications**
- 22 Pesticide News**
- 24 Research Briefs**
- 28 Calendar**

**ASSOCIATION NEWS**  
**Valann Budischak**  
**Executive Director, D.N.L.A.**

*Are you ready? It's almost here—another frantic spring selling, growing, planting, mowing and maintenance season is almost upon us! Seems like just yesterday I was cutting down my Christmas tree. Soon I'll be cutting back my grasses, butterfly bushes, etc.*

The Delaware Horticulture Industry Expo was held January 17<sup>th</sup> and 18<sup>th</sup> at the Modern Maturity Center. It was deemed a great success! Attendees had the opportunity to visit with exhibitors, hear interesting speakers, participate in a CNP prep course, and catch-up with old friends. Our 2000 Landscape Award winners were also honored at the DHIE. They are as follows:

**Naomi McCafferty** of Farm Meadows Nursery, Hockessin, DE - < \$10,000 category

**Rick Hollender** of Garden Design Group, Hockessin, DE - > \$10,000 category

Congratulations to our winners! We encourage any member to submit an entry for our 2001 Landscape Awards. Please keep this mind throughout the upcoming season. More information will follow later in the summer.

On February 22<sup>nd</sup> the DNLA co-sponsored a seminar entitled, "Using Natives in the Landscape". The event, held at the DE Department of Agriculture, was a sell-out! It was great to see the ever-increasing interest in native plants.

The date's been set! The annual Summer Expo and Golf Tournament will be held on Thursday, August 16<sup>th</sup> at Garrison's Lake Golf Club. Please plan on joining us for this event.

**Welcome New Members:**

**Amazoy Farm Nurseries**  
3617 Old Taneytown Road  
Taneytown, MD 21787  
(410) 848-0267

**Aquascape Designs, Inc.**  
1200 Nagel Boulevard  
Batavia, IL 60510  
(630) 326-1700

**Hooper, Inc.**  
P.O. Box 107  
Middletown, DE 19709  
(302) 378-9555

**Carol A. Krawczyk, ASLA**  
521 West State Street  
Kennett Square, PA 19348  
(610) 444-3215

**S. Joseph Lesley, Horticulturist**  
14 Glenway Avenue  
Smyrna, DE 19977  
(302) 653-8173

**FROM THE PRESIDENT**  
**Steve Sterling**  
**Delaware Nursery and Landscape**  
**Association**

*As I'm writing this I look out the window to see the result of the "GREAT BLIZZARD" of 2001. That was some Noreaster we had! (haha) Just goes to show you technology is no match for Mother Nature.*

On a more serious note, on November 14, 2000, OSHA published its final ergonomics standard, perhaps the broadest workplace regulation ever disseminated. Although the final standard exempts the agriculture industry and activities directly related to agriculture, the standard still applies to retail nurseries, the tree care industry and landscape, lawn and garden operations. Under the standard, employers could be required to set up an ergonomics compliance program if a single employee reports an ergonomically related disorder. It will be particularly difficult in nursery, Christmas tree, tree care and landscape businesses because the standard was developed with manufacturing industries in mind. The intent of the ergonomics standard is to remove five ergonomic risk factors (repetition, force, awkward posture, vibration and contact stress) from jobs that have invoked the standard, and have been identified as having inherent ergonomic hazards. OSHA has identified the landscape industry as one of the top ten industries for ergonomic problems. All businesses that fall into this category must be compliant by October 15, 2001.

It is not too late to get involved. ANLA has joined the U.S. Chamber of Commerce's lawsuit against OSHA. The chamber suit seeks to have the rule overturned entirely. The suit is scheduled sometime this spring. I urge you to write your Congressmen. A sample letter is available through ANLA's website and most likely your local Chamber of Commerce. I

would also be happy to fax you a copy.

The Nutrient Management Commission is gearing up to write guidelines for nursery growers. In July, the commission will begin holding discussion meetings to get input from growers. If you would like your voice to be heard, contact Dick Sterling at 302-653-7060.

Here's to a safe and profitable spring!

## **Help Wanted**

### **Richard Brusca Nursery, Inc.**

Sudlersville, MD

(410) 438-3180

Looking for seasonal help March – June, September – December. Hours are Mon. thru Fri. 7:30 – 5:00. Possible part-time hours in July & August. Individual would assist in pulling plants for wholesale orders, loading trucks, and stocking retail yard. Some customer service would also be required. Hourly rate is negotiable. Benefits.

**Wholesale field nursery** in Smyrna seeks part time employee. Job duties include propagation and fieldwork. Farm equipment experience preferred. Plant knowledge a plus. May lead to full time position. Flexible schedule. Fax resume to 302-653-1075.

### **Award Wining Landscape and Maintenance**

**Co.** looking for persons to fill openings in crews. Full time employment with benefits and good wages. Experience not required but will be advantageous. Must have valid drivers license and reliable means of transportation. Must have good work ethic. Call to set up an appointment for your interview (302-284-9677).

**U of D NEWS**  
**Susan Barton**  
**Extension Specialist**

This year the ornamentals short course series has a central theme--Integrated Landscape Management. We will have insect, disease and weed short courses throughout the state and season. We will also offer two pest walks and a landscape tour. The Ornamentals Research Expo in September will include the ever-popular plant give-away sponsored by John Frett and the UDBG, but we will also include a series of stations designed to show you components of integrated landscape management in action. This should be both an enjoyable and informative event. The series will culminate in a 2-day workshop in November focusing on implementing integrated landscape management principles into your work or your businesses.

The ANLA Management Clinic in February was fantastic as usual. The talks were interesting, exciting and inspiring. The opportunities to network with local and regional professionals as well as national leaders were plentiful. We invite more Delaware nursery and landscape professionals to attend this great event (airfare is usually very inexpensive from Baltimore).

For the next several years, I will be involved in a major DelDOT and DNREC renovation project on an area called the Blue Ball Property. The area includes approximately 15 acres on either side of 202 between 141 and I95. There will be major new road construction and renovation as well as the creation of both active and passive park spaces. The theme for the landscaping is the use of regional vegetation. This presents some fantastic opportunities for the nursery industry. This project will require many thousands of plants and plugs. Our challenge will be to find the plants we want to use in the quantities we need. Planting will occur over the

next 7-10 years so there is some opportunity to gear up for production of the plants we'll be requesting. If you are interested in learning more about this project and how your nursery can benefit, please give me a call (302-831-1375).

This season, the Ornamentals Task Force (extension and research professionals at the University) has hired a former student (John Ritterson) to do ornamentals scouting. John will be contributing to Ornamentals Hotline and working with several local nurseries to implement IPM programs in a production nursery setting. At the end of the season, John will write a fact sheet (and possibly trade journal article) on his experiences. We hope this project will make a real impact on the nursery industry's acceptance and willingness to implement IPM principles.

The following short courses are scheduled for spring and summer 2001:

**Diagnosis & Control of Insects on Woody Ornamental Plants** – May 22 and 24 from 4 to 6:30 pm in Fischer Greenhouse, Newark, DE.

**Pest Walk** – June 28 from 9 am to 12 pm at UDBG, Newark, DE.

**Weed Identification and Control** – July 17 from 4 to 6 pm at the Research and Education Center, Georgetown, DE.

**Diagnosis & Control of Insects on Woody Ornamental Plants** – July 18 from 4 to 6 pm at the Research and Education Center, Georgetown, DE.

**Landscape Tour** – August 15 from 9 am to 12 pm at sites in Kent County.

## LANDSCAPE BIDDING AND ESTIMATING

Susan Barton

*The following article is a summary of a 3-hour workshop conducted at the Delaware Horticulture Industry Expo on January 17, 2001. Jerry Gaeta, an associate of Vander Kooi & Associates, Inc, presented the workshop. He is a national speaker and partner in a full-service design/build and commercial maintenance firm in Mt. Pleasant, SC.*

At its most basic level, landscape estimating is about determining what it costs your company to do a landscape job, adding a reasonable profit and coming up with a selling price. As an estimator, you must also be a futurist. You are bidding on the future costs you will incur to complete a future project. Most companies focus on the costs and beat up supplies to get the best prices. But really landscapers are selling services not products. The focus should be on the price that your client is willing to pay. If that price is too low to accommodate costs, consider reducing plants sizes rather than profit.

Every estimating system should have the following characteristics:

- Every dime you spend on a job must come back in the costs.
- Compensate for all job site variables such as, site conditions and different ratios of materials, equipment, labor and subs.
- Recover overhead. The first step here is to know your overhead, sometimes referred to as “the bill in the night.” (What is costs you to run whether you work or not.)
- Act as a management tool. Good estimating systems help you run decisions through a budget process.

As a landscaper, you are in the people business. Remember, you are selling labor, not materials.

The first step is to calculate an “Overhead Recovery Budget.” This takes about a day and a half to do well. List all your pre-budgeted expenses and evaluate each item for its inflation potential and decide whether it appears anywhere else on the budget. This figure is then spread systematically over all the jobs your company completes over the course of a year. Overhead items include:

Advertising  
Depreciation (office equipment and furniture)  
Donations  
Insurance (office items, life and health)  
Interest and bank charges  
Downtime  
Labor burden (for downtime) (25%)  
Office supplies  
Professional fees  
Rent  
Salaries (office staff and officer)  
Labor burden (for office staff and officer) (10%)  
Small tools and supplies  
Taxes (business and property)  
Telephone  
Travel and entertainment  
Utilities  
Yard expenses  
Overhead vehicles  
Radio systems  
Miscellaneous  
Licenses (i.e. pesticide and dealers) and bonds  
Education  
Uniforms and hard hats  
Computers  
Bad debt

After estimating the overhead recovery budget, you are ready to follow a simple system.

- I. Produce the Product – calculate the costs that are required to do the job.
  - Materials - actual costs
  - Labor – production hours (hours/ sq.

- ft.) x ave. wage
- Equipment – production hours (hourly rate for each piece of equipment) (clients should pay for your equipment; if you don't bid a piece of equipment out 50-60% of the time it may be better to rent)
- Subcontractors – actual cost

II. General Conditions – could add 10% or more to each category if conditions are difficult.

These are items like:

- Drive time
- Layout time
- Tolls
- Clean up
- Loading and unloading
- Foreman meeting w/ owner/architect

II. Mark-Ups – assign a % of your overhead recovery budget (ORB) to each category (materials (10%), labor (what's left of ORB), equipment (25%), subcontractors (5%))

Here is an example:

Direct costs for the year are as follows:

Materials = \$182,000

Labor = \$110,000 + \$27, 556 (labor burden) = \$137,781

Equipment = \$47,016

Subcontractors = \$17,500

Now apply the appropriate percentages for markups:

Materials = \$182,000 x 10% = \$18,200

Equipment = \$47,016 x 25% = \$11,754

Subcontractors = \$17,500 x 5% = \$875

So far you have accounted for \$30, 829 of overhead. If your overhead is actually \$131, 412, you still need to account for \$100,583. \$100,583 is 73% of your total labor figure. So

for all jobs, you should add 73% overhead recovery to the labor cost.

Finally, you are ready to add profit and determine the selling price. Give your customer a quote and be quiet. Sales wisdom says that the first person to talk after a bid is delivered loses. It may be necessary to walk away before you lower prices.

Let's look at some examples:

Equipment should be billed out for 40 hrs/week, at a 40-week season over a period of 5 years. So let's calculate the total cost per hour of a ¾ ton pickup truck.

Item = ¾ ton pickup

Use = 1600 hours (in 5 yrs)

Purchase price (plus interest and inflation) = \$24,500

Life expectancy = 8000 hours

Per hour cost = \$3.05 (24,500/8000)

Maintenance cost - \$12,150

Life expectancy = 8000 hours

Per hour maintenance = \$1.55 (12,500/8000)

Gas and oil = \$.90

Total per hour = \$5.50 (3.05 + 1.55 + .90)

Next, we'll calculate the cost of labor per man-hour in a truck (for a 3-man crew).

Ave. crew wage = \$10

Overtime and fudge factor (20% of \$10) = \$2

Labor burden (25% of \$12) = \$3

Overhead recovery factor for labor (73% of \$15) = \$10.75

Total cost of labor/manhr = \$25.75

¾ ton pickup = \$5.50/hour

Overhead recovery factor for equipment (25% of 5.50) = \$1.40

Total equip. expense/manhr = \$6.90 / # of people in vehicle (3) = \$2.30/manhr

Labor/manhr = \$25.75

Vehicle cost/manhr = \$2.30

Total cost manhr and vehicle = \$28.05

Add 10% profit = \$30.85/manhr is the cost of a 3-person crew in a ¾ ton pickup

Good estimating is not just a numbers game. You should decide whether or not to bid a project based on your answers to the following questions:

- Does the project fit my schedule?
- Does the project fit into my company strategy?
- Does my company have an advantage on this project?
- Does the project fit into the estimator's schedule?

If you decide to bid a project, start by reading the spec book and notes extremely carefully. Look for discrepancies between the spec sheet and the plan. Call the contact person if you find a discrepancy to ask which guideline to follow. Sometimes that attention to detail can get you a job. Next, do a complete and accurate "take-off." Start with a quantitative take-off, counting everything and measuring square footage. Then write all the notes that will cost you money on a pad of paper. Think through potential problems that may exist on the job. Fax out the take-offs to your suppliers to get materials prices. Then apply your average production rates for the labor required. Here are some examples of average production rates (but these may differ for your company):

- Plant 2-2 1/2 inch caliper tree – 3 hrs each + .25/hr loader with auger
- Plant 2 gal shrubs – 14/hr
- Spread mulch – 1 yd/hr
- Lay sod – 350 sq.ft./hr

Adjust these figures for season and soil type. List each item in a chart and include an extra 10% for loss if the work is warrantied. Calculate the total man-hours required and translate into total days for scheduling purposes. Bring all the information together on one sheet

and staple your calculations to it. Start with the actual job costs, and then add tax on materials and burden on labor. Apply your overhead recovery percentages to materials, labor, equipment and subs. Then add 10% profit and you have your quote. Check your ratio of percent labor to gross and see if it comes close to your firm's average. If it is lower than normal, it may be due to particularly large materials on this job.

Lay out your jobs on a schedule based on time estimates, weather and client requirements. Leave at least 2 open days per month. To check on your estimating accuracy and determine if you are really making a profit, you must track the costs of each job in the field. At least weekly, record:

- Bid hours
- Hrs to Date
- % Complete
- Over/Under

Concentrate on the big variables and make adjustments during the job if possible. Sound simple? Of course not. Good estimating is complicated and time consuming but it will make or break the profitability of a company.

**THE NATURE OF GARDENS, THE  
NATURE OF OBSERVATION**  
**Susan Barton, editor**

*Rick Darke presented a fascinating keynote address at the AABGA Northeast and Mid-Atlantic Regional Meeting in New Jersey on September 14, 2000. The following is a summarized version. This talk addresses the public horticulturist with a responsibility to educate visitors and consumers about plants and more specifically, gardening.*

As we seek to create attractive, sustainable landscapes that represent the unique opportunities of each locale, it is worth rethinking a common misconception regarding the relative adaptation of native and exotic plants. Native plants are often touted as best adapted to sites within their native range. This is often true, but only if growing conditions on the site have not been changed beyond recognition by human activity. What is certain is that native plants tend to work with the rest of the ecosystem since a long-evolved balance is present in a native landscape. A focus on natives also provides protection against human arrogance - we too often have introduced changes to regional landscapes only to watch them wreak havoc with ecological balance. Gardening with native plants also allows us to protect and preserve a maximum amount of local variety. By employing plants native to each region, you avoid the problem of creating a franchised landscape for any environment, somewhat like the botanical equivalent of McDonalds (both in cuisine and architecture). A chain like McDonalds threatens to wipe out unique, community-based local diners as a franchised landscape plan would wipe out regional plant variation. Neil Diboll, a midwestern conservationist, has wryly observed, "The price of a global economy is a global ecology."

The dictionary definition of exotic is 1) foreign, introduced from a foreign country, extraneous and 2) having the charm or fascination of the unfamiliar. Do we, as public horticulturists simply want to chase novelty? Too many collections in public gardens project an object without taking into account its meaning or context. A good conservatory display should peak the public's interest about the landscape from which the plants were collected rather than one individual, fascinating species. The Mediterranean garden at Longwood Gardens is a good example of a display that evokes a sense of place that is very different from local native landscapes. The visitor imagines a Mediterranean climate with unique characteristics rather than focusing on individual plants they might import into their own gardens.

The City Gardens Contest at the Delaware Center for Horticulture reflects a positive change in the way horticulturists portray gardens to the general gardening public. In the past, gardens were judged on criteria such as "Are the beds properly edged?" and "Are there spots on the leaves?" Now, the most important criterion is "How do the gardeners use and enjoy their gardens?"

Many gardening consumers seek that utterly evasive "evergreen plant with flowers that bloom from spring until frost." Massive annual displays requiring significant yearly input only reinforce that ideal. Instead, we should teach consumers that color is beautiful as an ebb and flow through space and time. Gardens change with each season and that change provides more interest than constant color ever could.

Public gardens have a responsibility to grow plants in niches that illustrate the plant's natural habitat. If the plant would be found growing naturally on a rock outcropping, plant it in a pocket of a stone wall. Horticulturists sometimes forget about a plant's natural setting.

One famous horticulturist was asked where one would usually see a plant he presented in a lecture on exciting, new plants. His response was “in the back of the border” rather than in a moist, full-sun habitat, where the plant would grow naturally. *Itea virginica* is a fantastic native plant, but it grows naturally in wet sites. It suffered in many gardens during the drought of 1999 when it wasn’t properly sited.

This is not to suggest that horticulturists should become dogmatic nativists. In fact, the conditions in many gardens are so far removed from the local natural conditions that many native plants won’t survive or conditions may be altered so that even desirable natives take over and exclude other species. Gardening, as in almost everything else, requires a sense of balance. A common quote, “familiarity breeds contempt” is just not true when it comes to the landscape. In fact, familiarity breeds comfort and pride. Show visitors and customers the beauty of subtle colors and natural diversity. Help them experience regional pride in the garden and learn to appreciate a diverse garden palette that reflects regional colors, forms, textures and seasonal changes.

## **COMMITTEE URGES GREEN INDUSTRY TO JOIN FEDERAL INVASIVES PLAN**

Members of a nonfederal advisory committee are encouraging green industry professionals to play active roles in the proposed National Invasive Species Management Plan, which was prepared by the National Invasive Species Council. The advisory committee assists the council, which was formed as a mandate by President Clinton in February 1999 in response to damage caused by invasives.

Issues the plan addresses include prevention; early detection and rapid response; control and management; restoring native plant communities; promoting international cooperation; awarding grants and long-term funding for research involving public and private universities, federal and state government agencies and the private sector; improving outlets for information by establishing a Web site and database; and improving education and public awareness. These programs will gradually go into effect over the next 10 years, beginning as early as April.

“In many ways (invasives are) a national problem without a simple national solution,” said Craig Regelbrugge, senior director of government relations for the American Nursery & Landscape Association (ANLA) and a member of the 32-seat advisory committee. “I think that the nursery industry ... is in general agreement that we need more effective measures to keep harmful foreign (invasives) out of the country.”

The National Invasive Species Council is chaired by the secretaries of Agriculture, Commerce and the Interior; and includes the EPA and the departments of State, Treasury, Defense and Transportation. The council will coordinate the efforts of more than 20 federal agencies, as well as various regional, state and

local agencies to implement the National Invasive Species Management Plan.

There are questions as to how this plan affects the green industry, particularly in terms of quarantines and plant-shipment regulations, which can differ greatly from state to state. “I hope the plan will be a unifying force. It will definitely be more unifying on a national level, and hopefully it will trickle down to the states,” said Ann Gibbs, state horticulturist for the Maine Department of Agriculture and a member of the advisory committee. “I don’t think (the plan) will impact the industry (negatively) any more than any other industry. But the nursery industry needs to be heard.”

Although the plan aims to resolve the issue of invasives on a national level, Regelbrugge said the problems caused by these species will be solved on a regional basis. He added that by working on the local level with environmental officials, green industry professionals can determine the best solutions to the invasives issue for their area.

According to Gibbs, nursery professionals can do their part to support the plan locally by promoting public awareness and education on the hazards of invasive species. “Nursery folks can ... make their customers aware of what invasives are and what kinds of plants may be aggressive,” she explained. “(In Maine) there have been efforts to discuss the issue of invasives. What we have done is develop a brochure that explains what invasives are.”

Gibbs said many states are in the process of creating local and regional invasive species councils, and nursery professionals should get involved. “Generally these councils are made up of state agencies. Members of the green industry can contact their local extension services or their department of agriculture to find about local invasive species councils,” she

explained. Gibbs added that the National Invasive Species Council’s Web site contains dozens of examples of local efforts to eradicate invasive pests from woodlands, as well as residential and commercial landscapes.

The National Invasive Species Council considers its plan flexible. The published text states: “This plan reflects the widespread view that a well-coordinated Federal effort, working with the States, affected parties, and international partners, can improve the extensive but fragmented approach to addressing invasive species that exists currently. The Plan is meant to be a living document that will be revised and improved over time through public involvement, partnerships, and careful monitoring of progress.”

“I’ve been impressed, working on the plan, which brought a broad based group of people together,” said Gibbs. “Ultimately, this plan will help the industry because I think the general public is becoming more aware of invasives. I think it behooves the industry to be a part of this effort.”

For a copy of the National Invasive Species Management Plan, go to [www.invasivespecies.gov](http://www.invasivespecies.gov).

**SUMMARY OF FEDERAL LAWS AND  
REGULATIONS AFFECTING  
AGRICULTURAL EMPLOYERS**

**Jack L. Runyan  
USDA**

About 34 percent of U.S. farms in 1997 used hired labor, and 12 percent used contract labor. Hired labor costs average 12 percent of total farm production expenses in 1997, but amounted to as much as 44 percent of production expenses for horticultural specialty crop producers, 40 percent for fruit and tree nut producers, and 32 percent for vegetable and melon producers. Hired farm workers have accounted for about 31 percent of the farm workforce in the 1990's. Hired labor's importance to U.S. farm production requires agricultural employers to understand Federal laws and regulations governing employment, taxes, wages, and working conditions. This single-source publication summarizes these laws and regulations. This updated version of a 1992 report contains expanded sections on agricultural employers' Federal safety requirements, migrant and seasonal farm worker provisions, and tax requirements for agricultural employers, as well as new sections on employer responsibilities under the Family and Medical Leave Act of 1993 and the Personal Responsibility and Work Opportunity Reconciliation Act of 1996.

Hired labor costs average 12 percent of total U.S. farm production expenses in 1997, but they amounted to as much as 44 percent of production expenses for horticultural specialty producers, 40 percent for fruit and tree nut producers, and 32 percent for vegetable and melon producers. Hired labor is an important part of the U.S. farm production process, and it is increasingly necessary for agricultural employers to know the Federal laws and regulations governing employment, taxes, wages, and working conditions, and to be aware

of changes in those laws and regulations. This single source publication, an updated version of a 1992 report, summarizes these laws and regulations. Among the changes from the 1992 report are expanded sections on occupational and pesticide safety, migrant and seasonal farm workers, immigration, and tax requirements.

New sections include employer responsibilities under the Family and Medical Leave Act of 1993 and the Personal Responsibility and Work Opportunity Reconciliation Act of 1996.

The Fair Labor Standards Act of 1938, a Federal law with broad application, contains provisions and standards on minimum wages, maximum hours allowable without overtime pay, child labor, and recordkeeping. Coverage and exemptions for agricultural workers and recent changes in legislation are discussed.

The Occupational Safety and Health Act of 1970 focuses on assuring safe and healthful working conditions for working adults and contains standards affecting several aspects of the agricultural workplace. Major provisions of the act cover standards for temporary labor camps, field sanitation, hazardous substances. Cadmium usage, and logging operations. The cadmium usage and logging operations provisions are the major changes since publication of the 1992 summary.

The Federal Insecticide, Fungicide, and Rodenticide Act of 1947 sets an overall risk/benefit standard for pesticide registration, requiring that all pesticides perform their intended function when used according to labeling instructions, without posing unreasonable risks to human health or the environment. The Environmental Protection Agency (EPA) requires the certification of all pesticide applicators and their employees who will be applying pesticides. In 1992, EPA issued a new Worker Protection Standard that

covers all employers using pesticides or having them applied.

The Migrant and Seasonal Agricultural Worker Protection Act of 1983 (MPA) provides migrant and seasonal farm workers with protections concerning pay, working conditions, and work-related conditions. Since 1992, two rules changing and clarifying MSPA have been published: one changed MSPA regulations regarding disclosure of workers' compensation information and reconsideration of the MSPA required transportation liability insurance; and the other amended the definition of "employ" under MSPA to include a definition of "independent contractor" and to clarify the definition of "joint employment."

The Immigration Reform and Control Act of 1986 requires all employers, including farm employers, to verify the eligibility of each employee hired to work in the United States, and prohibits employers from discriminating against any individual because of citizenship status. Since 1992, the Immigration and Naturalization Service has changed the list of documents acceptable for verifying employee identity and eligibility to work in the United States.

Workers' compensation laws provide medical and cash benefits to employees or their dependents who incurred a work-related injury or illness through no fault of their own, and relieves employers of liability from lawsuits involving negligence. These laws are not Federal laws (except those covering Federal employees and certain maritime employees) and coverage for agricultural workers varies among States. These variations are discussed.

The Family and Medical Leave Act of 1993 (FMLA) was enacted to allow employees to balance their work and family life by taking reasonable unpaid leave for certain family and

medical reasons. While an employee is on FMLA leave, an employer is required to maintain group health insurance (arrangements will need to be made for the employee to pay his or her share of the premiums). Upon return from FMLA leave, an employee must be restored to his or her original job, or to an equivalent job. FMLA will have a minimal effect on agricultural employers because it is limited to employers with 50 or more employees in 20 or more work-weeks in the current or preceding calendar year.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, commonly known as the Welfare Reform Act, has many provisions. Agricultural employers, like all employers, are affected by the provision that each State must have a program that timely collects and processes information about the newly hired so that child support can be effectively enforced.

In addition to these acts, four Federal laws—Equal Pay Act of 1963, Civil Rights Act of 1964 (Title VII), Age Discrimination in Employment Act of 1967, and Americans with Disabilities Act of 1990—provide qualified workers equal access to employment opportunities. The responsibilities of agricultural employers under each of these laws are discussed.

This report also explains agricultural employers' responsibilities under the three major Federal employment tax laws: Federal Insurance Contributions Act of 1935, (commonly known as Social Security), Federal Unemployment Tax Act of 1935, and Federal income tax codes.

Reprinted from Food and Rural Economics Division, Economic Research Service, U.S. Dept of Agriculture. Agricultural Handbook #719. July 2000. [www.ers.usda.gov](http://www.ers.usda.gov)

## **ABOUT THAT PRESS RELEASE** **Al Rothstein Media Services, Inc**

Put yourself in the position of a television newsroom's assignment editor. You get to work at 7:30 in the morning. While getting ready for your meeting with the news director, producers and reporters, the police radios are blasting in your ear as you open the snail mail, check e-mail, collect overnight faxes and thumb through the schedule of the day's events. In that meeting, you will have to tell everybody what is going on that day, then match reporters with photojournalists to send out the door.

While thinking about the meeting and sifting through your mounds of material, you find dozens of press releases. Obviously, you are in a hurry, and that means the majority of the press releases will get tossed.

The ones that you keep have earned your attention. How?

### **The Headline**

The headline of a press release must grab the attention of the person reading it. It will not do this if it reads, "Acme Lumber Company Announces An Alternative Lumber Treatment." It will get attention if it says "Consumers Can Save Dollars With New Lumber Treatment." The first example does not tell the hurried assignment editor what the story means to the audience. The second one does.

### **The First Sentence**

If the first sentence should tell the assignment editor why the story should be covered.

"Acme Lumber Company is proud to introduce a form of treatment that could increase profitability by the third quarter" might be acceptable to stockholders, but not to a broader

audience. "Consumers will see significant savings as a result of purchasing and applying a new form of lumber treatment" will get more attention.

### **Using Quotes**

It is common to see tiresome quotes in a press release. An example is: "We are proud of our new product and believe it will benefit our industry in the long-term," stated ACME CEO R.J. Acme. A more personal and effective quote would be: "I have tried this product at home myself," said Acme CEO R.J. Acme. "I was never more proud of the ingenuity of my company's engineers."

### **Don't Forget**

Contact information, date of release and location are musts. It isn't necessary to say "For Immediate Release" because once it is released, news organizations believe they have a right to use it. That is, of course, if it gets their attention.

### **Length**

One page is the ideal length for your press release. There are exceptions, but not many. Remember:

- The headline should get attention.
- The first sentence should tell why the story is important.
- The quote should be personal.
- Don't forget the contact information.
- Keep the release one page in length.

Courtesy of Al Rothstein Media Services, Inc., Media Tips Newsletter, Nov.-Dec., 2000, Issue #20, Media Campaigns Media Training Speaker Training; web: [www.rothsteinmedia.com](http://www.rothsteinmedia.com), e-mail: [me-diabrain@rothsteinmedia.com](mailto:me-diabrain@rothsteinmedia.com), toll free: (800) 453-6352

**THE MULTICOLORED ASIAN LADY**  
**Ted. E. Cottrell**  
**ARS Southeastern Fruit and Tree Nut**  
**Research Laboratory**

Multicolored Asian lady beetle (*Harmonia axyridis*) – This insect has a wider range of colors and spot numbers than other lady beetle species. Wings range from black to mustard; spots number zero to many. The most common U.S. form is mustard to red with 16 or more black spots.

The multicolored Asian lady beetle (*Harmonia axyridis*) is native to Asia. This beneficial insect was imported and released in the United States as early as 1916 in an attempt to naturally control certain insect pests. This lady beetle is now established in the United States after releases over many years by federal, state and private researchers, in addition to accidental entries of beetles on imported nursery items at Louisiana, Delaware and South Carolina docks. It is uncertain whether its establishment resulted from planned or accidental releases.

### **Life Cycle**

The multicolored Asian lady beetle is similar to other familiar lady beetles commonly found throughout the United States. The multicolored Asian lady beetle feeds on insect pests in orchards and forests but may also occur on row crops and in gardens. Lady beetles have four distinct life stages; egg, larva, pupa and adult. The multi-colored Asian lady beetle adults begin laying eggs on host plants in early spring. Eggs hatch in about three to five days, and larvae begin searching on plants for aphids and other soft-bodied arthropods on which to feed. Adults and larvae typically feed upon the same prey. Larvae molt four times, becoming larger after each molt, and enter an immobile pupal stage after the last month. After several days, the adult beetle emerges from the pupal case.

Development time from egg to adult requires about 15-25 days depending on temperature and food availability. Later in the fall, near the time of killing frosts, the adult beetles seek shelter to spend the winter.

### **Mixed Blessing**

This variably colored and spotted lady beetle is an effective, natural control for harmful plant pests such as aphids, scale and other soft-bodied arthropods. Still, its tendency to over winter in homes and other buildings, sometimes in large numbers, may make them a nuisance to many persons.

If agitated or squashed, the beetles may exhibit a defensive reaction known as “reflex bleeding,” in which a yellow fluid with an unpleasant odor is released from leg joints. This reaction generally prevents predators, such as birds, from eating lady beetles. But in the home, the fluid may stain walls and fabrics.

Multicolored Asian lady beetles have become a problem in some regions of the United States. It is probable that their introduction into new habitats in the United States freed these lady beetles from some natural population checks and balances that occur within the native Asian range. It is likely that these natural controls will catch up to the lady beetles in time and curtail their booming population. Additionally, a period of time may be required for checks and balances of our native lady beetles to adapt to this newcomer.

Multicolored Asian lady beetles are beneficial insects. Their control of aphids in pecan orchards has decreased insecticide use. Additionally, they have controlled aphids on some ornamental plants. Still, these lady beetles are unwelcome guests for many homeowners.

## What These Insects Do – And Don't Do

Lady beetles are not structure-damaging pests, unlike insects such as termites and carpenter ants. Lady beetles do not chew or bore holes in walls or eat carpet or furniture. They do not lay their eggs in homes. Multicolored Asian lady beetles are attracted to lighter colors: whites, grays, yellows. So, light-colored houses, especially on hillsides in forested areas, might serve as “homing beacons.” Once the lady beetles enter the walls of a building through cracks and crevices, they may or may not proceed to the interior of the building.

Most stay in the wall spaces. During warm days of late winter and early spring, overwintering beetles in a wall space may become active. In their search for an exit, they may enter the homes living areas and become a nuisance. Warmer temperatures or lighting in the living area may attract these active beetles as they search for an exit.

### Prevention and Control

Preventing the lady beetles from entering is the best approach to keeping them from becoming a household nuisance in fall and winter. Caulking exterior cracks and crevices – before the lady beetles seek overwintering sites – is the best way to keep them out. This will also keep out other unwanted insects such as wasps, and will save homeowners money on energy costs.

Lady beetles that enter wall spaces in the fall may remain there, without entering living areas, until they depart in spring to search for food. But some may become active on warm days in late winter or early spring and move into living areas.

Sweeping and vacuuming are effective methods for removing these lady beetles from living areas. Using insecticides indoors for control of

the lady beetles is not typically recommended unless the infestation is very heavy, and professional pest control advice should be sought. Lady beetles that enter living areas are typically attracted to light. A trap for indoor use that uses light to attract lady beetles and other flying insects was developed by entomologist Louis Tedders (retired) and colleagues at the Southeastern Fruit and Tree Nut Research Laboratory, Agricultural Research Service, Byron, Ga. The insects become trapped in a removable bag. Use of insecticide is unnecessary. A patent application was filed, but a patent was not granted.

Detailed technical instructions and diagrams for constructing the trap are available on an ARS web site in PDF (portable document format) at: <http://www.ars.usda.gov/is/pr/2000/001030.trap.pdf>

An ARS scientific research contact is Ted. E. Cottrell of the ARS Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA., [tcottrell@saa.ars.usda.gov](mailto:tcottrell@saa.ars.usda.gov)

## **IRS SIMPLIFIES TAX DEPOSIT RULES** **Jim Sargent, Penn State Extension**

Beginning January 1, 2001, many small businesses will be allowed to make employment tax payments on a quarterly basis instead of making monthly deposits. Under the new rules, small businesses can make payments every three months if they have less than \$2,500 in quarterly employment taxes. Under the old standard, a business was allowed to make quarterly payments only if they collected less than \$1,000 in employment taxes per quarter.

Small businesses with less than \$2,500 in employment taxes per quarter may pay the tax when they file Form 941. Only employers with employment taxes of \$2,500 or more per quarter must deposit the tax with an authorized federal institution.

Reprinted from *Green Business Reporter*, January 2001, Vo. 10, No. 19.



## **NUTRIENT MANAGEMENT: SITE ENVIRONMENTAL RISK ASSESSMENT** **David S. Ross, Extension Agricultural Engineer, John D. Lea-Cox, Nursery Research and Extension Specialist** **K. Mare Teffeu, Reg. Extension Specialist** **University of Maryland**

Evaluating site risk is one component of nutrient management planning. Site environmental risk assessment involves looking at several factors, including the topography, surface conditions, irrigation practices, and any containment facilities or buffers that contribute to water movement. Runoff from irrigation or rainfall can concentrate sediments and nutrients into flows that lead to surface waters. Any action that reduces total water flow certainly can benefit the operator in lowering their operations' risk.

Topography is a factor in water runoff. A topographic map shows contour lines that are points of equal elevation. Where lines are close together, the terrain has a steeper slope because the lines represent different elevations. Where the lines are close together and tending to look like fingers pointing in one direction, there is a steep slope and a ravine or trench is present in the terrain. Generally, this is where water flows as a stream continuously or after a storm. A topographic map of undisturbed terrain tells one a lot about the area.

Many nursery and greenhouse production areas, however, have been leveled and shaped for ease of production activities. A topo map is not as useful on the engineered surface and one must walk the ground to see where water flows. Large sheet flows of water may tend to concentrate when flowing from these level areas.

Surface conditions must be examined. Water velocity is a critical factor in moving water. As

the velocity of water increases, particles of earth are picked up and carried to new locations. Erosion is the process by which the land surface is worn away by water. Sedimentation is the process of soil particles settling out of the water flow. Water should move on the nursery surface with very little erosion and sedimentation. The greatest danger of erosion is on bare ground that is empty of containers. Production areas are typically very compact, smooth surfaces over which water will flow very quickly. The intensity and duration of an irrigation event or rainfall is a factor contributing to flow problems.

Actions taken to slow down the water velocity are helpful. Using improved water carrying conveyances reduces the risk of contaminating surface water. Reducing the slope of the water's path will slow down the water velocity. A rock-lined channel reduces water velocity and erosion, if well designed. A well-established grass waterway also slows down the water while the grass stabilizes the surface of the channel. Vegetative cover is important. A buffer area of grass or trees along a waterway provides a filter for sediment, slows water flow, and removes nutrients. Causing the water to flow in a thin, uniform depth as sheet flow across a buffer improves the success. Obviously, management of water conveyance facilities is important.

Separation of crop and non-crop runoff is another way to reduce volumes of water carrying nutrients. Runoff from building roofs, roads, and parking lots should be directed separately from the property or into separate sedimentation basins before discharge to surface water.

Irrigation management and container spacing also contributes to the amount of runoff. The irrigation application should adequately wet the substrate but not create much leaching. Keep the applied water in the container! When

containers are spaced apart and watered by overhead sprinklers, water is going to fall onto the ground between the containers. Keep containers as close together as practical and place spaced containers in an area where the runoff can be best managed by directing it to a containment basin or buffer. Recycle water when possible.

Site environmental risk assessment is the process of looking at all these many factors to evaluate the risk of nutrient and sediment laden water reaching public surface water. Good design of the site can go a long way toward managing the flow of water. Water conservation practices include building sedimentation basins and containment facilities for keeping part of all of the irrigation water on site for recycling. Grass waterways and buffer strips help to control erosion and reduce sediment and nutrient loss. Careful management of the irrigation system minimizes the total volume of water to be moved about. Good management reduces the long-term cost of operation.

Reprinted from *Nursery News*, Volume 63, Number 1, Winter 2001; Maryland Cooperative Extension Newsletter.

## WHAT'S ATTACKING CHERRY LAUREL?

Stanton Gill, Regional Specialist  
University of Maryland

Cherry laurel, *Prunus laurocerasus*, is a fast growing, handsome plant used for hedges in residential and commercial landscapes. The flowers are spectacular when it blooms in spring and the foliage is very handsome. This plant is one of the most resistant plants to Japanese beetle feeding due to the high cyanide content in the foliage. The cyanide compound is referred to as prunasin. In fact, the foliage from most of the plants in this genus is considered poisonous when injected. Cherry laurel grows well in sun or shade, tolerates salts, and grows in a wide range of soil pH levels. It appears tolerate drought conditions fairly well.

Now, after praising this plant for its attributes, let us take a look at the darker side. If cherry laurel is planted in heavy, poorly drained, soil it easily becomes susceptible to root rots and plant decline. Obviously, avoid poor drained soil sites.

The plant is resistant to Japanese beetle feeding, but how about other insect pests? One insect problem observed repeatedly over the years is damage from the main peach tree borer, *Synanthedon exitiosa*. The borer attacks the plant near the soil line. Since Cherry Laurel is usually multi-branched you will not notice the resulting oozing from the branches unless you dig around the base of the plants. This means getting down on your hands and knees and looking for the injury. Usually, you will notice the dieback of the individual branches on the plant first. Browning foliage has a way of catching your eye.

In Maryland, adult peach tree borer emergence occurs over a relatively long period, generally starting in June and extending through

September. Female peachtree borers mate and lay eggs on the stems of shrubs or tree trunks. The larva of the peach tree borer feeds in the cambium, usually at the root crown, where it girdles the plant. The larvae feed in the trunk until late fall, are dormant for the winter, start feeding again in the spring, and pupate in June and July.

A traditional control for insects boring in trees and shrubs is the application of broad spectrum chemical insecticides applied to the trunk and branches just before the borer eggs hatch. Insecticidal bark sprays are effective only if a lethal residue is present during the brief interval between the time when larvae hatch and before the larvae enter the tree. Dursban 4E, and the synthetic pyrethroid Astro, are two contact materials labeled for tree and shrub borers. The use of pheromone traps has made timing applications of synthetic insecticides more efficient. Using a pheromone trap, the adult males are captured and counted. A good time to apply a contact chemical to prevent newly hatching larvae from boring into the cambium is when male populations peak. Unfortunately, pheromone traps are underutilized by many landscape managers, and pesticide applications are often made on pre-determined schedules. This approach can result in borer larvae successfully penetrating the bark before a pesticide application is made or after the chemical has broken down to a sub-lethal level. Once the larvae are under the bark, pest control options are severely limited.

An alternative control method for dealing with clearwing borers is through the use of entomopathogenic nematodes. Entomopathogenic nematodes infect only insects or related arthropods. As a biological control agent, entomopathogenic nematodes offer two major advantages. The first is their ability to attack borer larvae after they have entered the plant. The second advantage is that

nematodes are safe for the pesticide applicator and have no adverse impact on non-target sites. Several commercial companies are marketing nematodes for use in controlling insects in the landscape and nursery. These products contain infective juvenile nematodes in the “dauer” stage or J3 stage and are formulated for application as sprays or drenches.

The efficacy of nematodes as a control tactic for clearwing borers compares well with published accounts of efficacy associated with the use of conventional pesticides. For example, Nielsen and Dunlop found that chlorpyrifos (Dursban and Lorsban) reduced peachtree borer abundance by 44 to 89%. Studies by other researchers with chlorpyrifos found reductions in peachtree borer ranging from 40 to 100%. Our studies indicate that hydraulic applications of the nematode, *Steinernema carpocapsae* provides borer reduction comparable to those achieved by the use of synthetic organic pesticides. Due to the ineffectiveness of nematodes on non-target organisms and their relative safety to applicators and clients, entomopathogenic nematodes appear to be a viable management option for landscape managers attempting to control dogwood borer, peach tree borer, and banded ash clearwing.

No endorsement of named products is intended nor criticism implied of similar products that are not mentioned.

The other pest that injures cherry laurel is the dusky tree cricket. This injury occurs in late summer to early fall. We have seen this injury on cherry laurel and rhododendrons. The damage is an upper leaf surface skeltonization. Just the upper leaf tissue is removed, but the exposed tissue of the foliage turns brown, making the plant extremely unattractive. The dusky tree cricket feeds at night, so you find the damage, but not the pest when you examine the plant during the day. Controls need to be applied in late August to early September before the feeding damage is done. Synthetic pyrethroids and the systemic Orthene have been good levels of control.

Reprinted from *Nursery News*, Volume 63, Number 1, Winter 2001; Maryland Cooperative Extension Newsletter.

#### Sources for Entomopathogenic Nematodes:

Product Name	Nematode	Target Pests	Producer
Ecomask	<i>Steinernema carpocapsae</i>	Caterpillars Weevil Larvae	BioLogic
Guardian	<i>Steinernema carpocapsae</i>	Caterpillars	Hydro Gardens
J-3Max	<i>Steinernema carpocapsae</i>	Caterpillars	The Green Spot

## MAINTENANCE SCHEDULE

Below is a recommended maintenance schedule to help get you through the mowing season. Manufacturers vary on maintenance recommendations, so always remember to consult your operator's manual for your particular unit. Remember, at the beginning of the season, thoroughly service your engine, electrical systems, air and fuel systems, power train and deck.

Before each use:

- Check engine oil level
- Check tire pressure
- Check mower level
- Adjust cutting height, if needed
- In severe conditions:
  - Lubricate all mower spindles
  - Lubricate drive wheels, caster wheels and caster wheel forks
  - Check and clean engine air cleaner

After each use:

- Clean debris from engine, especially air intake screen
- Remove belt shields, clean belt area and check belts
- Clean under deck and inspect blades
- Check for loose, missing or damaged parts

As needed:

- Adjust brakes
- Replace fuel filter
- Adjust shift lever neutral

After first 25 hours:

- Adjust tension on mower deck timing belt
- Check timing on mower blades
- Check engine oil and filter
- Check and adjust brakes
- Check and adjust drive wheel belt

tension

- Lubricate all mower spindles
- Lubricate drive wheels, caster wheels and caster wheel forks

Every 25 hours:

- Clean foam air cleaner element
- Lubricate all mower spindles
- Lubricate drive wheels, caster wheels and caster wheel forks

Every 50 hours:

- Check battery electrolyte level

Every 100 hours:

- Change engine oil and filter (or annually)
- Adjust tension on mower deck timing belt
- Check timing on mower blades
- Clean and gap spark plug
- Clean or replace paper air cleaner element
- Replace fuel filter
- Check mower blade stop time

Every 500 hours:

- Check valve clearance (Consult your dealership)

Reprinted from "Prevention Maintenance for Walk-Behinds" by Chase Tew in *Turf*, Feb. 2001.

# Publications

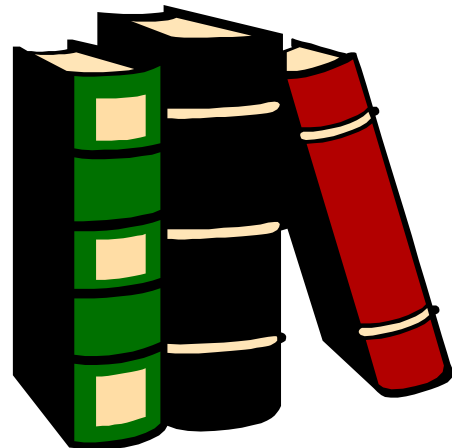
**2001 Quick Guide.** The 2001 edition is now available! This is a quick guide to the registrations of insecticides, herbicides and fungicides on the crops grown in the U.S., what each product will control and the trade names they are sold under. Price \$21.95 each plus tax, if applicable, and \$4.50 shipping. Order directly from Thomson Publications, P.O. Box 9335, Fresno, CA 93791. Phone (559)266-2964 or Fax: 559-266-0189.

**Research – SNA Research Conference Proceedings Online.** The 1997-1999 SNA Research Proceedings are available for viewing and downloading on the SNA Web Site at [www.sna.org](http://www.sna.org). Visitors can view and/or download any section(s) from these years. Visitors also have the option to download a complete copy of each Proceedings and print them from their computers. SNA is continually adding previous SNA Research Proceedings to the SNA Web Site.

**Human Resource Management for the Green Industry.** Useful in acquiring and keeping good employees. This publication will help you: evaluate your own company's policies and procedures, develop recruitment techniques, motivate your staff, measure performance and handle difficult situations, understand legal considerations, support your firm's long-term objectives with sound employee management practices. A-40030-2/Available April 2000/approx. 200 pages paperback plus IBM Microsoft Word disk. Green Industry (\$93.75 for ANLA members; \$125 for nonmembers) plus \$5.75 shipping. Fax your order to (202) 789-1893 or call (202) 789-5980, ext 3019/or mail to ANLA, 1250 I St., NW, Ste. 500, Washington, DC 20005.

**Pirone's Tree Maintenance, 7<sup>th</sup> ed.** John Hartman, Thomas P. Pirone and Mary Ann Sall. Oxford University Press 198 Madison Ave., New York, NY 10016-4314 (\$49.95, hardcover) ISBN 0-19-511991-6. Nina Bassuk from Cornell University reviewed this latest edition of a classic text and suggests that while the treatments of some subjects are too superficial, the section on diagnosing tree problems is excellent. She suggests that the diagnosis section would be most useful to a tree manager faced with an ailing plant.

**Turf Managers' Handbook for Golf Course Construction, Renovation and Grow-in.** C. Bud White. Ann Arbor Press, 310 North Main, Chelsea MI 48118 (\$65, hardcover) ISBN 1-57504-110-3. This publication is an excellent reference and guide, which addresses golf course superintendents and managers before, during and after construction. While there are several books on golf course management already published, this is the first to concentrate on grow-in period. (Reviewed by Yaling Qian, Colorado State University).



# Pesticide News

Freebies from the Consumer Labeling Initiative (pesticide labels, that is)!!

Each item carries the Read the Label First! logo/message, as well as the National Pesticide Telecommunications Network phone number, and in some cases the National Antimicrobial Information Network phone number. The items include:

- a rubber-type round jar opener (in various colors blue, red, orange, etc.);
- a bag clip (in various colors)(8 in.long);
- a 3x5 inch hard plastic mini minder clip [holds a pen, notes, and is magnetic] (in various colors);
- a flat, magnetic soft photo frame, about 3x4 inches, in which the middle with the logo on it pops out;
- a bumper sticker;
- a round Read the Label First! logo sticker (about 2 inches in diameter); and,
- a poster entitled "Use these Products Safely", EPA #735-H-00-001. Poster is 18 wide x 24 high, on heavy paper.

Items are provided free of charge to all requesters. Contact Amy Breedlove, at 703-308-9069, fax 703-305-5884, or email: [breedlove.amy@epa.gov](mailto:breedlove.amy@epa.gov) to place your order for all items EXCEPT the poster. The poster can be obtained by contacting the National Service Center for Environmental Publications (NSCEP) directly at 1-800-490-9198 or 513-489-8190, or by fax 513-489-8695, or via their web site at: [www.epa.gov/ncepihom](http://www.epa.gov/ncepihom) . If you would like additional information about the "Consumer Labeling Initiative," or the "Read the Label First!" campaign, or these items, please contact Amy Breedlove.

## Insecticides:

AKARI (fenpyroximate) – Nihon Nohyaku – Received EPA approval to use on greenhouse ornamentals to control mites. It will be marketed in the U.S. by Sepro Corp.

AVID (abamectin) – Novartis – As a result of the IR-4 Project they can now add to their label the usage on arbovitae, fir, white pine and spruce.

CINNACURE ( cinnamaldehyde) – Proguard Inc. Added to their label the control of aphids and mites.

CRYOLITE BAIT – Gowan – A new bait formulation to be used on ornamentals and non-bearing tree and vine crops to control black vine weevil and strawberry root weevil.

DELTAGARD GC ( deltamethrin) – Aventis – Added to their label the control of azalea caterpillars, California oakworm, casebearers and firebrats.

DIAZINON – EPA and the manufacturers of this product have agreed to a 4-year phase out on many uses. Included are to cancel indoor household usage on 3-1-2001 and all retail sales will stop on 12-31-002. For lawn, garden and turf usages manufacturing stops on 6-1-2003 and all sales end on 8-1-2003.

MATRIC (chromafenozide) – Nippon Kayaku/Sankyo – A new insect growth regulator being developed for use on rice, tea, vegetables, ornamentals and other crops.

MIMIC 2LV (tebufenozide) – Rohm & Haas – A new formulation being introduced for usage on forests and ornamental trees to control various insects.

NOVALURON – Makhteshim – Agan – This

new product will be marketed in the U.S. by Uniroyal for use on ornamentals. It is an insect growth regulator effective against caterpillars, whiteflies, thrips and fungus gnats. Registration is expected in 2001.

ORTHENE (acephate) – Valent As a result of the IR-4 Project they can now add to their label the usage on ash, aster, birch, chrysanthemum, cineraria, dahlia, gloxinia, marigold, Persian violet, snapdragon and verbena.

SANMITE (pyridaben) – BASF – As a result of the IR-4 Project they can now add to their label the usage on day lilies, winged euonymus, dogwood, lilac, rose of Sharon, spruce and trumpet creeper.

TAENURE (Metarhizium anisopilae) – Taensa – A soil applied bio insecticide used to control black vine weevils and other soil insects on ornamentals. U.S. registration on greenhouse ornamentals is expected in 2001.

TAERAIN (Metarhizium anisopilae) – Taensa – A bio insecticide used to control whiteflies, thrips and mites on vegetables, fruit and nut crops, and ornamentals. U.S. registration is expected in 2001.

TETRASAN (etoxazole) – Valent – A new insect growth regulator that is expected to be registered in 2001 on ornamentals.

VENDEX 50WP TWO (fenbutatin-oxide) – Griffin – A newly labeled product to control mites in greenhouse and outdoor ornamentals, and established landscape ornamentals.

### **Herbicides:**

AQUANEAT (glyphosate) – Nu Farm – A new formulation being sold as an aquatic herbicide.

BENSULIDE – Gowan – some restrictions made by EPA for re-registration include prohibiting all hand held applications except for spot treatment, prohibits large turf area treatments such as parks and recreation areas (except golf courses), restricts golf course fairway use to bentgrass only in certain states and to limit the applications to one application in the fall.

DIMENSION ULTRA WSP - (dithiopyr) – Rohm & Haas – A new formulation introduced for the turf and ornamental market.

ECLIPSE (MCPA/clopyralid/2,4-DP) – Riverdale – A new combination herbicide being developed to control broadleaf weeds in turf.

### **Fungicides:**

DEVINOL (napropamide) – United Phosphorus – As a result of the IR-4 Project they can now add to their label the usage on non bearing apples, black walnut, dogwood, pin oak, white pine, ash, birch, fir and non bearing peach.

ELEXA-4 (chitosan) – Safe Science – Received EPA registration to use on tomatoes, tree fruits, cucurbits, ornamentals, strawberries, grapes and other crops to control gray mold, powdery mildew and botrytis.

FLINT (trifloxystrobin) – Novartis/Bayer – As a result of the IR-4 Project they can now add to their label the usage on non bearing apples, day lilies, nandina, lark spur, pansy, phlox, privet, rose and verbena.

GOAL (oxyfluorfen) – Rohm & Haas – As a result of the IR-4 Project they can now add to their label the usage on dogwood.

GUARDIAN (ethaboxam) – LG Chemical – Introduction for this new fungicide is expected

in Europe in 2001 for use on fruit trees and ornamentals.

KALIGREEN (potassium bicarbonate) – Nichimen – As a result of the IR-4 Project they can now add to their label the usage on dogwood.

MANHANDLE (myclobutanil/mancozeb) – Rhom & Haas – A new fungicide formulation being developed for use on turf and ornamentals.

SPORODEX (*Pseudozyma flocculosa*) – Plant Products Inc. – As a result of the IR-4 Project they can now add to their label the usage on roses.

TAEGRO (*Bacillus subtilis*) – Taensa – A new bio fungicide being developed to suppress diseases in vegetables, potatoes, turf and ornamentals.

#### **Miscellaneous:**

AVG – Valent – Being developed for use on ornamentals as a growth regulator to extend flower longevity and reduce flower senescence, flower bud abscission and leaf yellowing.

BONZI – (paclobutrazol) – Uniroyal – Added to their label for this growth regulator the usage on a number of new bedding plants and woody plant species.

FASCINATION (GA 4+7/BA) – Valent – A new plant growth regulator being developed for usage on Easter lilies and Oriental lilies to prevent leaf yellowing and to prolong the length of flowering. Registration is expected in 2001.

PRO GIBB (GA) – Valent – Being developed on ornamentals to break flower bud dormancy, increase flower number and size, promote earlier flowering and increase stem elongation.

## **Research Briefs**

### ***Propagation:***

**Root pruning affects seedling development of pin oaks.** Pruning developing radicles of pin oak seedlings increasing the number of main lateral roots but not overall root length. Growers can maximize growth in #2 containers by initially growing in 10-cm-deep bottomless containers before transplanting to #2 containers. (J.R. Harris, J. Fanelli, A. Niemiera and R. Wright)

*Excerpted from HortTechnology 11(1), January-March 2001.*

**Using humic acid to promote seedling root development.** Humic acid as a seed treatment of substrate drench is effective in increasing root fresh weight in cucumber, squash, geranium and marigold. Therefore, the potential exists for using humic acid to increase root growth of seedlings and improve stand establishment in commercial applications such as plug production. (J.A. Hartwigsen and M.R. Evans)

*Excerpted from HortScience 35(7):1231-1233. 2000.*

**Year-round propagation of *Spigelia marilandica*.** Results show that environments that reduce stock plants' physiological stress—such as the greenhouse environment—can enable cuttings to be rooted and harvested every eight weeks. In the study, keeping stock plants in a greenhouse appeared to increase cuttings' rooting capabilities. This method can help growers produce cuttings with greater numbers of roots, as well as plants with higher root weights. Rooting cuttings of *Spigelia marilandica* and other challenging plants in a greenhouse can help ensure the availability of salable stock. (S.M. Foster and S. Kitto)

*Excerpted from American Nurseryman, February 15, 2001.*

### **Greenhouse Production:**

**Growing petunia and begonia in an ebb and flow system.** Closed irrigation systems, such as ebb and flow, can minimize nitrate pollution problems. Good quality, subirrigated petunias and begonias can be grown with a range of fertilizer concentrations and in different growing media. Final dry weight was maximized when begonias and petunias were grown with a fertilizer solution with an EC of 1.7 and 2.2 dS/m, respectively. (E.C James and M.W. van Iersel)

*Excerpted from HortScience 36(1):40-44, 2001.*

**Controlling bacterial blight of geranium with H-mutant bacteriophages.** Results from test utilizing an h-mutant phage mixture (viruses that specifically kill bacteria but are nontoxic to nontargeted beneficial bacteria and to humans) in a greenhouse production environment indicate that phages may be most effective as a biological control of bacterial blight on geranium when applied daily. In preliminary studies, phage longevity on the leaf surface decreases after 24 hours, thus reducing the efficacy of less frequent applications. Recognizing that daily applications may not be economically feasible, the researchers are currently evaluating compounds that extend the longevity of phage in the cropping environment. (J.E. Flaherty, B.K. Harbaugh, J.B. Jones, G.C. Somodi and L.E. Jackson)

*Excerpted from HortScience 36(1):98-100, 2001.*

### **Container Production:**

**Paper mulch reduces available N.** One inch of

recycled paper pellets (Enviroguard) can provide effective container weed control. But in experiments, the paper mulch reduced N in the leachate and plant growth, especially when N is applied as a topdress. When N is incorporated there was more N found in the leachate (therefore less tied up in the paper mulch). Growers should realize that use of paper mulch will affect container nutrition. (J.S. Glenn, C.H. Gilliam, J.H. Edwards, G.J. Keever and P.R. Knight)

*Excerpted from J. of Environ. Hort. 18(4):188-191, December 2000.*

**Phosphorus source affects growth and leaching.** When containerized spirea are fertilized with controlled release fertilizer (CRF) only, root and stem dry weights were lower (than other treatments). When all the phosphorus was supplied by triple super phosphate (TSP) and the N and K were supplied by CRF, the greatest P leaching occurred. The best results in growth and leaching reduction were achieved with 50% of the required P supplied by TSP and 50% supplied by CRF. In all treatments, P leaching was less than when soluble fertilizer is used. (A. Godoy and J.C. Cole)

*Excerpted from HortScience 35(7):1249-1252, 2000.*

**Recycled paper as a component of container plant medium.** Although N leaching decreased as recycled paper (RP) content increased in the medium, reasonable plant growth occurred in substrates containing less than or equal to 50% RP. Therefore, RP can be recommended at rates of up to 50% (by volume) or the growing substrate. (P.B. Craig and J.C. Cole)

*Excerpted from HortScience 35(7):1253-1257, 2000.*

## **Landscape:**

**Transplanting large (>2" caliper) maples leads to long-term water stress.** After transplanting with a 45-inch tree spade, dwarf red maples (Amur maple and Trident maple) showed measurable stress for more than one year. Stress had an effect on leaf size and overall canopy development. Supplemental watering, top pruning or a combination of those treatments resulted in trees that showed less stress and appeared to be more similar to the non-transplanted controls. (A.J. Barton and C.S. Walsh)

*Excerpted from J. of Environ. Hort. 18(4):202-206, December 2000.*

**Longer containers increase survival of prairie perennials.** Seedlings of pale purple coneflower (*Echinacea pallida*) and gray-headed coneflower (*Ratibida pinnata*) had higher survival rates when planted on a highway embankment if planted in 18 cm long containers as compared to 13 cm long containers. Rough blazingstar (*Liatris aspera*) and little bluestem (*Schizachyrium scoparium*) were not affected by container size (possibly due to less drought susceptibility of these two species). Hydrogels incorporated in the production container had no effect on survival. (R.D. Kemery and M.N. Dana)

*Excerpted from HortTechnology 11(1), January-March 2001.*

## **Insects:**

**Green lacewings to control lace bug damage on azalea.** Green lacewing populations decline rapidly when lace bug densities decline. Lacewings may disperse or then may consume each other. Green lacewing released at rates of 5/plant, 10/plant and use of Orthene resulted in the following reduction in lace bug densities

(79%, 88%, 100%, respectively). Green lacewings were effective in this study at controlling 'hot spots' or lace bugs. But they may be less effective when lace bug populations are more spread out. It may be difficult to justify augmentative biological control when the threshold for damage is very low and there is an extremely effective pesticide alternative. (P.M. Shrewsbury and D.C. Smith-Fiola)

*Excerpted from J. of Environ. Hort. 18(4):207-211, December 2000.*

**Use of banker plants to promote predatory mites in a landscape nursery.** Banker plants can be used to rear and disperse predatory mite within landscape nursery systems. In order to control spider mites on plants being produced for sale, predatory mites are released onto banker plants located upwind from the crop. Banker plants should also be inoculated with alternate prey to maintain populations of predators. The alternate prey should not be harmful to the crop. Arborvitae and rhododendron were tested banker plants for controlling spider mites with predatory mites. *Neoseiulus fallacis* was the predatory mite and *Oligonychus illicis* was used as the prey mite or alternate prey. *N. fallacis* dispersed from arborvitae and rhododendron for 28 and 13 days, respectively. Banker plants can be produced in containers and have the advantage of mobility to be redistributed upwind of infested crops. Or existing hedgerows can be used as banker plants if the spatial configuration is appropriate. (Pratt, P.D. and B.A. Croft)

*Excerpted from J. Environ. Hort. 18(4):211-217, December 2000.*

**Screening of predatory mites.** *N. fallacis* is the predatory mite that appears best suited for suppression of various pest mites in nurseries in the Pacific Northwest. In 3 out of 4 field tests, *N. fallacis* controlled spider mites below

economic levels. (Pratt, P.D. and B.A. Croft)

Editor's Note: The article did not discuss the adaptability of this predator to other parts of the country.

*Excerpted from J. Environ. Hort. 18(4):218-223, December 2000.*

### **Marketing:**

#### **Consumer preferences in landscape design.**

Using computer-generated models, landscapes with varying plant selection (evergreen only; evergreen and deciduous; evergreen, deciduous and 20% color; and evergreen, deciduous, color and enhanced hardscape), design sophistication (foundation, island, sophisticated) and plant size (small, medium and large) were created.

Consumers were asked to place a value on the home depicted. The home with the most varied plant material, most sophisticated design and largest plant size was perceived as 12.7% more valuable than the least valued home (evergreen only, foundation and smallest plant size). By analyzing the components of the landscape, we see that consumers place more value in plant size than in plant type. For some clients, paying for increased plant size will take precedence over paying for a diversity of plant types. If a designer or landscape wishes to increase the perceived value of a landscape job, adding annual color is a cost-effective, quick method. (Hardy J. et al.)

*Excerpted from J. Environ. Hort. 18(4):224-230, December 20.*

### **New Plant Introductions:**

***Ipomoea batatas*** 'Margarita' is a chartreuse-leafed sweet potato that maintains the chartreuse color throughout the growing season and was released from the Dept. of Horticulture New Crops Program at the Univ. of Georgia in 1996.

The leaves are three-lobed to cordate and alternate, with a cordate base and a broadly acuminate apex. The plants exhibit a trailing, prostrate habit, reaching 18 to 40 cm in height. Depending on temperature, stems grow up to 20 m long. The plant has failed to produce flowers outdoors, regardless of the environmental conditions. In tests at Univ. of Georgia indicated that the bright chartreuse foliage was highly visible from a distance. Plants should be considered as horticultural annuals, and vegetative cuttings may be rooted for overwintering. (A.M. Armitage and J.M. Garner)

*Excerpted from HortScience 36(1):178, 2001.*

'Buzzer Beater', 'Hoopla', 'Huskymania' and 'Slam Dunk' Rhododendrons were released as part of the 'Raise the Roof' series of rhododendron from the University of Connecticut. These cultivars were given basketball related names in celebration of recent women's and men's NCAA basketball championships in 1995 and 1999. Growers favored the names because they believed plants with basketball related names could be marketed more easily. 'Buzzer Beater' is an upright, medium to large rhododendron with light lemon yellow flower trusses. The dorsal lobe has a blotch or flare that varies from yellow-green to gray-orange to grey-red. 'Hoopla' is an upright, medium-sized rhododendron with light red-purple flowers that have lobes with undulate wavy margins and a corolla throat that is orange-white and orange, creating a pink and yellow bicolor effect. 'Huskymania' is an upright, medium-sized rhododendron with purple flowers that have an undulate, fringed margin and dorsal lobes with grayed orange blotches or flares. Violet flower buds open to display purplish, bluish flowers with greenish speckling. White stamens also provide a starry effect. This late-blooming rhododendron extends the bloom season for this group of

plants. ‘Slam Dunk’ is an upright, medium-sized rhododendron with a more compact habit. Red-purple flowers have lobes with undulate, fringed margins and a grayed purple blotch or flare on the dorsal lobes. The result is a wine-red flower color with a large dark flare. All four cultivars can be micropropagated readily using procedures effective for other large-leaf rhododendrons. These cultivars are not patented, but a \$0.10 per plant voluntary royalty is requested to help support woody plant improvement efforts at the University of Connecticut. For a list of nurseries and micropropagators offering these plants contact Mark Brand at ([Mark.Brand@uconn.edu](mailto:Mark.Brand@uconn.edu)) (M.H. Brand and G.A.L. Mehlquist)

*Excerpted from HortScience 36(1):180-182, 2001.*

**‘Royal Edward’ Explorer™ Rose** is a shrub rose of hybrid origin belonging to Explorer™ cultivar group. It is a semidwarf that produces medium pink flowers from June to September and is resistant to severe winter temperatures and common rose diseases (powdery mildew and black spot). It is propagated easily from softwood cuttings taken at the bud stage, treated with rooting hormone and placed under intermittent mist for 3 to 4 weeks. ‘Royal Edward’ should be grown on its own roots. ‘Royal Edward’ has been registered with the Canadian Ornamental Plant Foundation (COPF). Requests from U.S. Nurseries should be addressed to Bailey Nurseries, 1325 Bailey Rd., St. Paul, MN 55109.

*Excerpted from HortScience 36(1):183-184, 2001.*

## Calendar

**March 19 – 20** - Pesticide Applicator Training and Exam, New Castle County Extension Office. For more information, consult <http://www.udel.edu/pesticide/Cal.htm>.

**March 21** – ER IPPS Plant Micropropagation Area Meeting. University of Connecticut, Storrs, CT. Contact: Dr. Mark Bridgen, (860)486-1945, e-mail [bridgen@uconn.edu](mailto:bridgen@uconn.edu)

**March 22** – Unique and Innovative Techniques in Pruning Ornamental Trees and Shrubs. New Brunswick, NJ. Contact Office of Continuing Professional Education, Cook College at 732-932-9271.

**March 23** – 2001 Symposium, Longwood Graduate Program, “The Tropical Touch: Planting paradise in Cooler Climates.” Longwood Gardens, Kennett Square. For more information contact 302-831-2517.

**March 27** – Roadside and right-of-Way Vegetation Management. New Brunswick, NJ. Contact Office of Continuing Professional Education, Cook College at 732-932-9271.

**March 28 – 29** - Pesticide Applicator Training and Exam, Kent County Extension Office. For more information, consult <http://www.udel.edu/pesticide/Cal.htm>.

**March 30** – Naturalizing Early Spring Bulbs. Longwood Gardens Continuing Education, Spring 2001 Courses. #GS1701M, morning 9:30-12noon. Location: Auditorium/Outdoors (use main entrance) Fee: \$59. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**March 31** – Symposium, “Native Plants: A Growing Partnership with Nature.” U.S. National Arboretum, Washington, DC. For information or to register, call 202-245-4523.

**April 5, 12, 19, 26; May 3, 10** – Deciduous Flowering Shrubs I. Longwood Gardens Continuing Education, Spring 2001 Courses. (optional exam – May 17). #OPS1101A, afternoon session 1-3pm. Guided plant walks: Thursday, April 19; May 10; 9am-12 noon. #OPS1101E, evening 7-9pm. Guided plant walks: April 14; May 5; 9am – 12 noon. Fee: \$129. Location: Visitor Center Auditorium (use main entrance). Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**April 6** – Planting Trees and Shrubs. Longwood Gardens Continuing Education, Spring 2001 Courses. #GB1301M, morning 9-11:30am. Location: Longwood Nursery (meet at the rear of the Visitor Center parking lot. We will convoy to the Nursery). Fee:\$39. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**April 18, 25; May 2, 9, 16, 23** – Garden Design Studio I. Longwood Gardens Continuing Education, Spring 2001 Courses. #GD1101E, evening 6:30 9:30pm. Location: Betula Room (use business entrance). Fee: \$109. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**April 19-20** – Native Seed Conference, “Seed for the Future.” Orlando, FL. For registration information, call Nancy at 850-922-7206.

**April 21** – 10<sup>th</sup> Annual Celebrate Spring Garden Fair and Plant Sale, U.S. National Arboretum, Washington, DC. For information call 202-245-2726 or visit [www.usna.usda.gov](http://www.usna.usda.gov)

**April 28** – UDBG Plant Sale, held at Ag Day in Fischer Greenhouse, Newark, DE.

**April 30** – Water Gardening Propagation Workshop. Longwood Gardens Continuing Education, Spring 2001 Courses. #PS1101E, afternoon 1-4pm. Location: Potting Shed (use business entrance). Fee: \$59. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**May 10** – Spring Weed Identification Walk - Longwood Gardens Continuing Education, Spring 2001 Courses. #GS12101A, afternoon 1-4pm. Location: Acer Room/Outdoors (use business entrance/park in lower lot). Fee: \$59. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**May 11** – Managing Perennials in the Garden. Longwood Gardens Continuing Education, Spring 2001 Courses. #PS1701M, morning 7-10am. Location: Meet in the Idea Garden (use the Business Entrance/park in lower lot). Fee: \$69. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**May 12** – Invasive Plant Workshop. Longwood Gardens Continuing Education, Spring 2001 Courses. #GS1501M, morning 8:30-12:30pm. Location: Acer Room/outdoors (use business entrance). Fee: \$59. Address: PO Box 501,

Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**May 17** - Pesticide Container Recycling, Sussex Conservation District Maintenance Yard, Shortly Road, Georgetown DE, Collections from 9:30 am - 1:30 pm All containers must be properly rinsed plastic crop protection product containers. For more info, contact Grier Stayton or Bill Milliken, DDA, 302-739-4811; [www.usagrecycling.com](http://www.usagrecycling.com)

**May 22 and 24** - Diagnosis & Control of Insects on Woody Ornamental Plants from 4 to 6:30 pm in Fischer Greenhouse, Newark, DE. Cost is \$25. Contact Susan Barton (302-831-2531).

**May 24, 31; June 7, 14, 21, 28** – Annuals and Biennials II. Longwood Gardens Continuing Education, Spring 2001 Courses. (optional exam – July 5). #EPA1101A, afternoon 1-3pm. (Guided plant walks: June 2, 23; morning 9am – 12 noon.) #EPA1101E, evening 7-9pm. (Guided plant walks: June 7, 28; morning 9am – 12noon). Fee: \$129. Location: Visitor Center Auditorium (use main entrance). Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**June 1** – Spring Garden Pests – Solutions for Homeowners. Longwood Gardens Continuing Education, Spring 2001 Courses. #GS1201A, afternoon 1-4pm. Location: Acer Room/Outdoor, (use Business Entrance/park in lower lot). Fee: \$59. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**June 2** – Spring Garden Weeds – Solutions for Homeowner’s. Longwood Gardens Continuing Education, Spring 2001 Courses. #GS1401A, morning 9am – 12 noon. . Location: Acer Room/Outdoor, (use Business Entrance/park in lower lot). Fee: \$59. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**June 7** – Spring Plant Diseases – Solutions for Homeowners. Longwood Gardens Continuing Education, Spring 2001 Courses. #GS1301A, afternoon 1-4pm. Location: Acer Room/Outdoor, (use Business Entrance/park in lower lot). Fee \$59. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**June 7-9** – Native Plants in the Landscape Conference 11<sup>th</sup> Annual. Millersville University, Lancaster County, PA Contact: Office of Extended Programs, Millersville

University, (717)872-3030, fax: 717-871-2022, e-mail [roma.sayre@millersville.edu](mailto:roma.sayre@millersville.edu), <http://muweb.millersville.edu/~npil/index.html>

**June 14-16** – American Horticultural Society. 2001 Great American Gardeners Annual Conference. Cleveland, Ohio. Contact: Mary Ann Patterson, (703)768-5700 x 121, e-mail [mpatterson@ahs.org](mailto:mpatterson@ahs.org). Org homepage <http://www.ahs.org>

**June 14** – Spring Plant Disease Identification Walk. ). Longwood Gardens Continuing Education, Spring 2001 Courses. #GS12001A, afternoon 1-4pm. Location: Acer Room/Outdoors (use business entrance) Fee: \$59. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**June 18-22** – Small Flowering Trees (week long certificate course). Longwood Gardens Continuing Education, Spring 2001 Courses. #OPF-101W, 9am – 5pm, plus special evening events, field trips, and some meals (optional exam June22) Fee: \$259. Location: Visitor Center Auditorium (use main entrance). Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**June 21** - Pesticide Container Recycling, Sussex Conservation District Maintenance Yard, Shortly Road, Georgetown DE, Collections from 9:30 am - 1:30 pm All containers must be properly rinsed plastic crop protection product containers. For more info, contact Grier Stayton or Bill Milliken, DDA, 302-739-4811; [www.usagrecycling.com](http://www.usagrecycling.com)

**June 26 – 27** - Pesticide Applicator Training and Exam, Delaware Department of Agriculture. For more information, consult <http://www.udel.edu/pesticide/Cal.htm>.

**June 27** – Container Water Gardening. Longwood Gardens Continuing Education, Spring 2001 Courses. #GB1701E, evening 7-8:30pm. Location: Acer Room/Waterlily Display (use business entrance) Fee:\$39. Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**June 28** - Pest Walk from 9 am to 12 pm at UDBG, Newark, DE. Cost is \$10. Contact Susan Barton (302-831-2531).

**June 29** – Spring Garden Pest Identification Walk. Longwood Gardens Continuing Education, Spring 2001 Courses. #GS1001A afternoon 1-4pm. Location: Acer Room/Outdoors (use business entrance/park in lower lot).

(Optional field trip, date to be announced in class). Fee: \$59. . Address: PO Box 501, Kennett Square PA 19348-0501, fax: 610-388-9806. (No telephone registrations.)

**July 11-14** – American Association of Botanical Gardens and Arboreta Annual Conference: Pioneering the Connection Between People and Plants. Denver Botanic Garden, Denver, CO. Contact: AABGA, 351 Longwood Rd., Kennett Square, PA 19348; ph. (610)925-2500; Fax, (610)925-2700; url, <http://aabga.org>

**July 12-15** – American Horticultural Society, 2001 Youth Garden Symposium, “Children’s Gardens: Beyond the Boundaries.” Michigan 4-H Children’s Garden, Michigan State University, East Lansing, Michigan. Contact: Mary Ann Patterson, (703)768-5700 x 121, e-mail [mpatterson@ahs.org](mailto:mpatterson@ahs.org) homepage <http://www.ahs.org>

**July 14-18** – Ohio Florists’ Association Short Course. Greater Columbus Convention Center, Columbus OH. Contact: Ohio Florists’ Assn., 2130 Stella Ct., Ste. 200, Columbus OH 43215-1033; tel: (614)487-1117; fax 614-487-1216; [ofa@ofa.org](mailto:ofa@ofa.org); [www.ofa.org](http://www.ofa.org)

**July 17** - Weed Identification and Control from 4 to 6 pm at the Research and Education Center, Georgetown, DE. . Cost is \$10. Contact Susan Barton (302-831-2531).

**July 18** - Diagnosis & Control of Insects on Woody Ornamental Plants from 4 to 6 pm at the Research and Education Center, Georgetown, DE. Cost is \$10. Contact Susan Barton (302-831-2531).

**July 19** - Pesticide Container Recycling, Sussex Conservation District Maintenance Yard, Shortly Road, Georgetown DE, Collections from 9:30 am - 1:30 pm All containers must be properly rinsed plastic crop protection product containers. For more info, contact Grier Stayton or Bill Milliken, DDA, 302-739-4811; [www.usagrecycling.com](http://www.usagrecycling.com)

**July 20** – Fifth Annual Conference on Woody Plants. Scott Arboretum of Swarthmore College, Swarthmore, PA. To receive a brochure, call Longwood Gardens at 610-388-1000 ext. 507.

**July 22-25** – American Society for Horticulture Science. Sacramento, CA. contact: ASHJS, (703)836-4606, Fax: 703-836-2024, e-mail: [ashs@ashs.org](mailto:ashs@ashs.org) homepage <http://www.ashs.org>

**August 2-5** – SNA 2001 – Southern Nursery Association Researcher’s Conference and Trade Show. Georgia World Congress Center, Atlanta, GA. Contact: SNA (770)953-

3311; Fax (770)953-4411; SNA Infoline, (770)953-4636;  
<http://www.sna.org>

**August 15** - Landscape Tour from 9 am to 12 pm at sites in Kent County. Cost is \$10. Contact Susan Barton (302-831-2531).

**August 16** – Summer Turf and Nursery Expo, Garrison Lake Golf Course, Smyrna, DE. Contact Val Budischak (888-448-1203).

**August 16** - Pesticide Container Recycling, Sussex Conservation District Maintenance Yard, Shortly Road, Georgetown DE, Collections from 9:30 am - 1:30 pm All containers must be properly rinsed plastic crop protection product containers. For more info, contact Grier Stayton or Bill Milliken, DDA, 302-739-4811; [www.usagrecycling.com](http://www.usagrecycling.com)

**September 17** – Ornamentals Research Expo from 4-8 pm at UDBG, Newark, DE. Cost is \$25 (includes dinner). Contact Susan Barton (302-831-2531).

**September 20** - Pest Walk from 9 am to 12 pm sites in Kent County (departing from Kent County Extension Office). Cost is \$10. Contact Susan Barton (302-831-2531).

**September 20** - Pesticide Container Recycling, Sussex Conservation District Maintenance Yard, Shortly Road, Georgetown DE, Collections from 9:30 am - 1:30 pm All containers must be properly rinsed plastic crop protection product containers. For more info, contact Grier Stayton or Bill Milliken, DDA, 302-739-4811; [www.usagrecycling.com](http://www.usagrecycling.com)

**September 25, October 2** - Identification & Control of Diseases on Woody Landscape Plants from 4 to 6:30 pm in Fischer Greenhouse, Newark, DE. Cost is \$25. Contact Susan Barton (302-831-2531).

**September 30-October 3** – Eastern Region International Plant Propagators' Society Annual Meeting. Lexington, KY. Contact: Margot Bridgen, 26 Woodland Road, Storrs, CT 06268, phone (860)429-6818, e-mail: [mbippser@neca.com](mailto:mbippser@neca.com)

**October 18** - Pesticide Container Recycling, Sussex Conservation District Maintenance Yard, Shortly Road, Georgetown DE, Collections from 9:30 am - 1:30 pm All containers must be properly rinsed plastic crop protection product containers. For more info, contact Grier Stayton or Bill Milliken, DDA, 302-739-4811; [www.usagrecycling.com](http://www.usagrecycling.com)

