

Dates and Events of Note

- September 9 CCE Monroe & Ontario Landscape Field Day, Sonnenberg Gardens
- October 8&9 Canadian Greenhouse Conference
<http://canadiangreenhouseconference.com>
- November 5-7 New England Greenhouse Conference Wooster MA. www.negreenhouse.org
- November 7-9 Grower Talks Sustainability Conference, Frisco, Texas
- November 12&13 Sports Turf Managers of New York conference, Syracuse. www.stmony.org
- December 2 Landscape Roundtable CCE Monroe

Cornell Cooperative Extension in Monroe County provides equal program and employment opportunities.

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Cornell Cooperative Extension is supported by public and private funding. Primary cooperating partners are the County of Monroe, the State Of New York, SUNY's Land Grant Colleges at Cornell University and the U.S. Department of Agriculture.

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Horticulture Notes

Mid Summer 2008

Field Day for Arborists & Landscapers

Arborists and Landscapers will want to mark their calendars for Tuesday September 9 from 8:30-2:30 for a field day at Sonnenberg Gardens, 151 Charlotte Street, Canandaigua 14424.

The field day is sponsored by Cornell Cooperative Extension of Monroe & Ontario Counties and hosted by Sonnenberg Gardens.

Seminars and field demonstrations will include:

- Tools of the trade, ground imaging radar for locating and assessing the health of tree root systems with Gary Raffel, owner Genesee Tree Services.
- Protocol for disease diagnosis. Field diagnostic and collections practices leading to correct identification of tree maladies with Karen Snover-Clift, Cornell Plant Disease Diagnostic Lab.
- Woody pest updates Emerald Ash Borer, Hemlock Woolly Adelgid, Walt Nelson, Horticulture Program Leader, CCE Monroe & Ontario Counties.
- Review of interesting ornamental pests and diseases in our area, Liz Berkeley, Diagnostic Lab Technician, CCE Monroe.
- This field day has a recertification training application pending with NYS DEC in category Core, 1a, 2, 3a, 9, 10, 25 recertification credits for Certified Nursery Landscape Professionals and ISA CEU's.

Morning seminars are at the Carriage House, Sonnenberg Gardens, 151 Charlotte Street, Canandaigua 14424.

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Shrub Bugs on the Web

Susan Lang, Cornell Staff Writer

If a pest is attacking one of your ornamental trees or shrubs, you can now turn to the online Interactive Plant Manager for help in diagnosing and dealing with it.

Search by pest name or type (e.g., leaf feeder or trunk borer), plant name or sign or symptom to learn what's eating your plant and what to do about it. The Web site, at http://www.nysipm.cornell.edu/aes_ornamental.asp, provides easy-to-read fact sheets with such information as range maps, photos of pests, the damage they cause and life-cycle charts. It also recommends

the least-toxic way to control the pests and provides quick links to pesticide guidelines and other resources.



A project of the New York State Integrated Pest Management (IPM) Program, based

Japanese beetles are widespread and common and can cause serious damage to the foliage and fruits of several hundred species of ornamental trees, shrubs, vines as well as fruit trees, and field and vegetable crops

at Cornell, the new tool is intended not only for homeowners but also for landscapers, arborists, nursery growers, landscape architects and extension educators.

"The database has hundreds of high-quality pictures and allows users to type in the type of plant, damage or the pest to figure out what's going wrong and how best to approach it, using IPM," says Jody Gangloff-Kaufmann, IPM area specialist for Cornell Cooperative Extension on Long Island and the project manager for the new Web site. "We hope both land-care professionals and home gardeners in New York will visit the Web site and see how easy it can be to get the right plant health information quickly."

The Interactive Plant Manager focuses on the most common insects of New York and the Northeast, with more than 175 insects and 180 plants; however, more insects, trees, shrubs and diseases will continually be added.

Thrips Management Suggestions in Greenhouses

John Sanderson, Assoc. Prof. Entomology, Cornell Univ.
 Dan Gilrein, Extension Entomologist, CCE, Suffolk County

Western flower thrips (WFT) remains one of the most serious greenhouse pests for most growers of greenhouse flowers and bedding plants. Feeding by these tiny insects causes plant cells to collapse, resulting in scarred patches on mature growth and distortion of young leaves or flowers. The thrips' feeding can also transmit incurable tospoviruses, including Impatiens Necrotic Spot Virus (most common) and Tomato Spotted Wilt Virus, that can severely damage or kill greenhouse plants. Both the thrips and the viruses have a very wide host range including common flowers, vegetables, and many weeds. Following is a review of suggestions for managing western flower thrips:

- Thrips control should start at the end of the previous crop or season. Eliminate all sources of thrips at the end of each crop or growing season to avoid harboring a small population ready to infest an incoming or spring crop.
- Eliminate weeds inside and around the greenhouse perimeter, which may harbor thrips and/or the virus (plants don't always show symptoms of virus infection).
- Keep older plants segregated from newer crops and avoid moving clean new plants into thrips-infested areas.

Older stock plants and long-term flowering pot plant crops such as cyclamen or holiday cactus can carry the thrips (and the virus) over from the fall to the following bedding plant season.

- Inspect incoming plant material for signs of thrips damage. Look for scarred patches with irregular outlines on upper leaf surfaces - tiny black fecal specks from the thrips is diagnostic. Insist on good thrips control from your plant suppliers.
- Don't neglect hanging plants which can be an overlooked source of trouble. Hanging baskets of infested cutting crops over seedlings can spread a thrips infestation (and possibly virus) to other plants below.
- Discard heavily infested plants, which may be easier and more effective than treating.

Pinch off and bag unneeded flowers, which removes a large part of the thrips

population. Thrips lay up to four times as many eggs when pollen is present, compared to when only leaf tissue is available. While impractical in large ranges, this has worked on a small scale for some growers.

- Consider screening vents if outdoor sources are important. The National Greenhouse Manufacturers Association (NGMA) has compiled useful research data into its publication, "Helpful Hints: Insect Screening" (<http://www.ngma.com/downloads.htm>).
- Use yellow or blue sticky traps to monitor for WFT. Count and change cards weekly, noting upward population trends that signal the need for treatment. One 3 x 5-inch yellow or blue sticky card is spaced every 1,000 sq. ft. and positioned vertically just above the top of the plant canopy. The sticky cards may also be useful to detect when and where the thrips are originating by placing some traps near doors or vents. Flowers can also be checked for thrips by tapping a blossom over a white tray or sheet of paper and looking for the adults and tiny nymphs.
- When insecticides are needed, spray applications of Conserve, Avid (or generic version), Mesurool, Dura-Guard, Orthene TT&O, Marathon (or generic), or TriStar have been among the more effective options. Some growers are incorporating insect growth regulators (Azatin, Ornazin, Aza-Direct, Pedestal) or *Beauveria bassiana* (BotaniGard, Naturalis L) in tank mixes or rotations. Several pyrethroids (Talstar or generic, Decathlon, Scimitar, Mavrik) or aerosols/smoke generators (PT 1300 Orthene, Preclude, DuraPlex, Attain, Fulex Nicotine) are also labeled for control of thrips in greenhouses. Thrips can become tolerant or resistant to most insecticides and are difficult to control at best, therefore emphasis must be placed on sanitation and other non-chemical preventive measures. Resistance to spinosad, the active ingredient in Conserve, has been reported and may explain why some growers are not seeing the same results observed when the product was new although the complaints of poor control are still relatively few.

Follow label directions for each insecticide used, but often a five-day treatment interval for two to three applications is needed to control thrips that later hatch from eggs or emerge from pupae. *Beauveria* materials be used while the thrips infestation is still low; four to five applications at five-day intervals may be needed to keep low infestations in check. They have not performed well against serious infestations.

Use an application technique and equipment delivering small droplets that will give good pesticide coverage. As much as possible, insecticide should penetrate into thrips' hiding places such as buds and termi-

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Additionally, simulated traffic studies revealed that different levels of traffic did not affect turf species proportions. The most consistently desirable results were obtained with a mixture containing 70%-80% Kentucky bluegrass and 30%-20% perennial ryegrass. The best results for mixtures dominated by Kentucky bluegrass came from fields seeded in late summer.

Stier added that perennial ryegrass could be planted in spring and provided ideal ground cover with few weeds, but mixtures in which Kentucky bluegrass seed comprised 50% or more of the turf needed to be planted the preceding summer. Dormant seedings did not perform well, leading to relatively poor ground cover and significantly higher weed populations.

Summarizing the impact of his team's research, Stier said: "The research outcomes can allow school systems to prepare better bids for construction and renovation of sports fields, making the fields more likely to meet expected performance standards and ultimately reduce costs to the school districts."

The complete study and abstract are available on the ASHS HortScience electronic journal web site: hortsci.ashspublications.org

American Society



Horticultural

Science.

www.ashs.org

Pre-registration for Arborist & Landscape Field Day
 September 9 program

Payment with **registration by August 29** assures registration and.

\$45 payment as cash or check, (no credit cards) should accompany the registration. Make check payable to CCE Monroe County.

Bring your pesticide certification card to register for recertification.

Sessions will be canceled only for severe weather.

Registration fee: \$45 per person

Name _____

Firm _____

Address _____

Phone _____

E-mail _____



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Cornell Extension, Monroe & Ontario Counties

Turf Nutrition Update

Walt Nelson, wnn1@cornell.edu

Research at the University Connecticut and Oregon State shows little reason to modify the pH of an alkaline soil with sulfur when establishing or growing turfgrass. The sulfur is short lived in its efficacy and when top dressed only changes the top inch or so of the soil profile.

Iron deficiency in alkaline (generally over 7.5) soils may result in unacceptable turf color. Using a turf fertilizer with supplemental iron is sufficient to bring the color around.

2008 Cornell Guidelines

Tree & Shrub Guidelines

The tree and shrub management guidelines are available (\$25). This guideline is for professionals involved in production and maintenance of ornamental trees and shrubs.

In addition to the annually revised information, highlighted changes for 2008 include:

- Relocating all general pesticide information into one chapter.
- Revisions to the insect management chapter that include adding the active ingredients cypermethrin, indoxacarb, iron phosphate, milbemectin, and tebufenozide to the insecticide listings, identification of federally-restricted pesticides to aid in determining supervision requirements, and the addition of insecticide mode of action group numbers.

Pest Management Guidelines are available online at no charge

- Additions to the weed management chapter including a new herbicide resistance discussion and a new table to identify herbicides registered for use in landscapes.

Turf Guidelines

The turf management publication (\$18) is

written for professional turf managers.

In addition to the annually revised information, highlighted changes for 2008 include:

- Updated Internet resources for insect pest management.
- Addition of mode of action and risk of resistance table for turfgrass fungicides.
- Revisions to the disease management options, including organizing listed fungicides and nematocides by restricted-use, general use, and no use in Nassau and Suffolk counties.
- Addition of a new plant growth regulator chapter and an expanded listing of currently registered plant growth regulators.
- A brand new weed management chapter.

To order, go to <http://store.cce.cornell.edu/pmep>, call 607-255-7282, or email patorder@cornell.edu. They are available from CCE in Monroe County. Online versions of the guidelines are available at: <http://ipmguidelines.org/>

Establishing Faster-growing, Sports Fields

A study originally published in the February 2008 issue of HortScience offers information helping schools and contractors get outdoor sports fields ready for fall sports more quickly. Results of the research study will help schools and communities pare down the usual 9- to 12-month waiting period between planting new fields and opening the fields to autumn football traffic.

Dr. John Stier, Associate Professor of Horticulture at University of Wisconsin-Madison, led the 2-year study of seed mixtures and planting times. He noted that football fields are usually planted using slow-establishing Kentucky bluegrass seed mixed with a lower proportion of perennial ryegrass seed. The objective of this study, explained Stier, was to evaluate the effects of planting time and seed mix on three different blends of the two seeds.

The researchers also studied each seed blend's ability to stand up to "football-type traffic". "We were interested in determining the amount of time needed for athletic fields to establish before they could successfully support autumn sports. We also wanted to see if the amount of time (to establish the fields) was affected by grass types and mixtures, and how planting time affected the relative proportions of different grass species that became established.", stated Stier.

During each year of the project, field plots were seeded three times: in late summer, as a dormant planting in late fall, and in the following spring. Each plot was subjected to simulated football traffic (simulating either one or four weekly games) from mid-August through mid-November of the year in which spring seeding occurred. According to Stier, all planting dates provided acceptable turf quality by September, regardless of seed type. However, Kentucky bluegrass-based mixtures planted during the summer provided better turf quality than mixtures planted in the spring.

Dormant-seeded mixtures provided the poorest turf quality. The team found that turf seeded with 100% perennial ryegrass was less sensitive to planting dates than Kentucky bluegrass turf. Summer and spring plantings provided similar quality and dormant seedings resulting in superior quality to Kentucky bluegrass-based dormant seedings.

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Thrips cont. from page 2

nals, so tiny spray droplets are important. Pump-up sprayers may not be adequate.

• Consider other biological controls. Other options include weekly preventative releases of tiny predatory mites, *Neoseiulus cucumeris* or *Amblyseius swirskii*, to the foliage and flowers, as well as soil applications of *Hypoaspis* mites and sprays of insect-killing nematodes, *Steinernema feltiae*, to attack thrips pupae in the soil. (*A. swirskii* has the added benefit of attacking whitefly eggs). These natural enemies should be used preventatively before thrips are noticed, rather than in an attempt to reduce a serious infestation, and chances of success improve when releases of natural enemies are made to both the foliage and the soil.



Emerald Ash Borer Update

Michigan State University Press Office

Valuable landscape ash trees may now be protected from Emerald Ash Borer (EAB) with a new insecticide called emamectin benzoate. (ed. Note: the material is labeled in NYS for codling moth only, we can hope it soon gets an expanded label in NYS.)

Research at MSU showed that the new product, which will be sold as Tree-äge™, was "remarkably effective" in controlling EAB, reports forest entomologist Deborah McCullough. She reports dramatic results in 2007 tests.

The researchers looked at the mortality rate of adult EAB beetles that were caged with leaves from emamectin benzoate-treated trees, trees treated with other insecticides and non-treated trees. They repeated the trial three times during the summer. In all three trials, leaves from the emamectin benzoate-treated trees killed all the beetles.

In contrast, at least 70 to 80 percent of the beetles survived on the untreated leaves, and no more than 80 percent of the beetles died when they fed on leaves from trees treated with other prod-

ucts.

Last fall, some of the emamectin benzoate-treated ash trees were felled and debarked to see how many EAB larvae were feeding on each tree. The emamectin benzoate-treated trees showed more than 99 percent fewer larvae than untreated ash trees. McCullough cautions that more study is needed, as this is only one year's data. Part of this year's work will investigate whether emamectin has to be applied every year or every other year.

Cooperating researchers included USDA entomologist Therese Poland and Phillip Lewis, from the USDA Animal and Plant Health Inspection Service.

Emamectin benzoate must be transported by the tree up the trunk and into the branches and leaves. This means that the product will probably be most effective if the tree is still relatively healthy when it is treated. EAB feeds on the tissues that transport nutrients up into a tree, so if the pest has already killed those tissues, it is too late to save that part of the tree.

This product affects insects that eat ash tree tissue, McCullough said, but it won't hurt anything that lands or climbs on the tree, such as butterflies, birds and squirrels.

Though this is not a 'silver bullet' for eradicating EAB across the country, it could be a quantum leap forward in our ability to slow the spread of this deadly insect," according to Ken Rauscher, director of the Michigan Pesticide and Plant Pest Management Division. This product affords municipalities, homeowners and others the opportunity to save landscape trees, municipal park trees or other trees of value that would have otherwise received a death sentence because of EAB.

McCullough and others are excited about this product's possibilities. This could be a tool that we can integrate with our other options to slow the advance of EAB in newly discovered infestations. For more information on emerald ash borer, go to www.emeraldashborer.info or www.michigan.gov/eab.

Emamectin benzoate is a promising material for management of Emerald Ash Borer

Garden Retail Customers

Walt Nelson wnn1@cornell.edu

Garden retailers know that direct marketing efforts attract their best customers. Nationally the baby boomers are the ones with disposable money (children on the way out and the mortgage is manageable). Demographers report sub segments of that generation.

The Boomers have two groupings, those born between 1946 and 1954 are very different from those born between 1955 and 1964. Older boomers spend leisure time traveling and gardening. Younger boomers are still kid-focused. When it comes to shopping, labels are more important to younger boomers (44%) than the older segment (36%)—yet both cite Wal-Mart as their retailer of choice.

One-third of baby boomers (about 25 million people) head single-income households. Single boomers have nearly the same per-person income

Know your customers first, then put a marketing effort in place reaching those customers

as married boomers. The big difference between the groups is that single boomers are more likely to *not* have brand preferences. They don't already have allegiances, and one niche is promoting your store to single-head-of-household boomers.

All the baby boomers are zealous about all forms of media. They've picked up on iPods and texting and PDAs, AND are also reading the daily paper. 93% surf the

Internet to research products prior to purchasing. Don't discount any form of media if you want to appeal to this group.

Thirty-eight percent of boomers are grandparents, with an average age of 53 years. And they dote on their grandchildren. Consider hosting Grandparents Nights, or grandparent/children events at retail. Put in a kids planting area with pots, soil and annual flowers.

U-Boomers are the estimated 24 million baby boomers that are "financially unprepared" yet still uncompromising when it comes to products and services. They'll account for nearly 25% of US consumption by 2015. Retailers can tap into this mar-

ket by figuring out how to deliver service and quality while keeping costs down.

Knowing the demographics of your customers permits focused marketing to build on the clients. As there is always attrition it can not be an exclusive effort. Casting a broader net brings in other segments. How one presents the business portrays volumes to the customer and conveys comfort that your business is REALLY the place for them to shop.



Marketing Lawn Care tips

Walt Nelson wnn1@cornell.edu

(with background from Travis Harper University of Missouri)

Part of having an informed lawn care consumer is instructing them on how to watch for turf diseases. Not knowing what to look for may allow a disease to fester in the turf. A lawn may or may not require a fungicide. Most home lawns, even those with diseases generally do not require a fungicide. With knowledge about the situation, an informed decision about pesticides can occur.

Ample soil moisture and warm temperatures hastening the growth of turfgrass, maybe faster than we would like.

Just because lawns are doing well now does not mean the grass will continue to be healthy.

Red thread is a summer disease appearing nearly every years in lawns, particularly those with perennial rye grass.

As a growing season progresses, turfgrass diseases begin appearing. Because of the delay in diagnosis, residential lawns do not generally have fungicides applied. Those lawns generally recover and regrow with little adverse impact.

Because it may be too late to apply a fungicide, maintaining a healthy, disease-free lawn is an ongoing effort, one that does not require constant attention.

As a professional you well know the first step in maintaining a healthy lawn is proper soil fertility. Soils low in nitrogen increase susceptibility of turfgrass

to dollar spot and red thread.

On the other hand, high levels of nitrogen fosters the development of leaf spot, Rhizoctonia brown patch and Pythium blight. Low pH is often associated with diseases such as brown patch as well. Test the soil pH of new clients and at 3-5 year intervals for repeat clients.

Low potassium levels in the soil reduce turfgrass tolerance to high temperatures and drought stress. This can led to diseases such as summer patch.

Mowing height and frequency also affect the likelihood of turfgrass diseases. Optimal cutting heights for cool-season grasses range from 2.5 to 4 inches, depending on the grass species. Cutting grass lower than recommended increases the likelihood of disease.

Determine the frequency of cut with "one-third rule" of mowing: Remove no more than one-third of the leaf growth during a single mowing. Mowing creates wounds on the grass blades through which fungi can enter. Keep

mower blades sharp. Leaf cuts made by a sharp mower blade are cleaner and heal faster than the tearing and shredding caused by a dull mower blade.

Over watered lawns are more likely to develop turfgrass diseases. Suggest clients irrigate only when they show signs of needing water. Allow cool-season grasses to have periods of drying (near wilting) to disrupt the growth cycle of fungi favored by excess water. Schedule irrigation for the early-morning hours. Lawns watered in the evening remain wet throughout the night, which encourages the development of diseases.

Even if all of these techniques are followed, development of turfgrass diseases may be unavoidable. This does not necessarily mean that a fungicide needs to be applied. Grasses can naturally recover from some diseases when environmental conditions favor growth of the turfgrass. In some situations, however, it may be necessary to use a fungicide to suppress diseases until favorable environmental conditions return.

The regular use of these cultural practices, along with the occasional use of fungicides, helps lawns stay healthy all year long.

Growing an informed client grows the lawn, client loyalty and your business

2008 Cornell Guidelines

Floriculture Guidelines

The annual floriculture crops guideline is now available (\$25). it provides up-to-date pest management information for those producing greenhouse floral crops in New York State. It has been designed as a practical guide for producers, pesticide dealers, and others who advise those producing greenhouse floral crops or operating a greenhouse.

In addition to the annually revised pesticide and pest management information, highlighted changes in the 2008 Greenhouse Floral Crops Guide include:

- A reorganization of the insecticide chapter to eliminate repeating product details while providing a simpler method to select appropriate insecticides.
- The addition of mode of action classification numbers to insecticide listings for use in insecticide resistance management programs.
- An updated growth regulator discussion, including expanded growth regulator listings.
- Revised disease and fungicide chapters that include the addition of: cladosporium to diseases of concern, nemesia to the listing of specific floral crops, new fungicides, and new fungicide resistance information for more recent chemistries.

Perennial Guidelines

- A revised biological organism chapter.

The herbaceous perennial management guideline is now available (\$25). This practical guide for producers, landscapers, pesticide dealers, and others who advise those producing or maintaining herbaceous perennials provides up-to-date pest management information.

In addition to the annually revised pesticide and pest management information, highlighted changes in the 2008 Herbaceous Perennials Guide include: The addition of two new reference tables. One relates to the mode of action classification for various insecticides/miticides and another on herbicides registered for landscape use. The second is a new section on herbicide resistance.