EMV stands for Europay, Mastercard and Visa cards that have an integrated circuit or “chip” that can be used to authenticate purchases and cut down on fraudulent use of credit card accounts for consumer sales in the United States. This chip based credit card system is proven effective, as it has been in use in Europe for years.

How is security improved with these new chip based cards? Each time the EMV card is used for a transaction, the card's chip creates a unique transaction code that cannot be used again. It essentially “changes” the card data each time a transaction occurs. The old magnetic stripe system contains unchanging data which makes it an easy target for counterfeiting.

Why should local nurseries and garden centers be concerned? Isn’t added security a benefit to everyone? Well, yes, but along with this change comes the necessity for businesses to invest in new software and hardware to accept these cards at the point of sale (POS). Is this mandatory? No, adding the new software and hardware is not mandatory. Most cards will still have the old magnetic strip for purchases, but consumers may not want to use this old system anymore.

The magnetic strip will still work at the point of sale after October 1, so no business will be lost. The question then becomes, is it worth
The EMV Chip is Coming October 1st; Is Your Business Ready? continued from p.1-

it for the garden center or nursery to make the switch to this new technology? If the merchant has a low volume of card transactions, the cost of the new software and terminals may exceed any potential loss through fraud.

This deadline, October 1, 2015, was created by the major banks and credit card companies. The major issue is the “liability-shift” which accompanies the deadline. After October 1, 2015, the liability for fraudulent purchases on credit cards will shift to the least EMV compliant company. If the nursery or garden center is not EMV compliant and the card used for the transaction has the chip technology, the garden center/nursery is liable for fraudulent purchases made with the card.

However, if the nursery/garden center has the ENV technology in place and the card used is a chip card, then the card issuer is still the party who is liable for the loss.

It is estimated that approximately 40% of new debit cards and more than 70% of new credit cards issued before the end of 2015 will have the new chip technology. These cards will no longer be swiped at the register, they will be “dipped”. “Card dipping” allows data to flow between the chip in the card and the financial institution which issued it to verify its legitimacy and verify the transaction data - hence the need for new software and a new point of sale card reader or “dipper”. This process will be a little slower than the old swipe system, but well worth the added security that comes with it. Customers will still sign or enter a PIN to complete the transaction, depending on the verification method tied to the EMV card.

While EMV compliance is not mandatory for merchants and processors, this shift in liability for fraudulent purchases may encourage many nurseries and garden centers to adopt the new technology simply to avoid the risk. The relatively small price for new card readers may be worth the added peace of mind for you and your clientele.

Free Newsletters
◇ Greenhouse IPM Update
◇ Christmas Tree IPM Update

Subscription Newsletters
◇ Cornell Turf Program (email request)
◇ Subscribe to Turf ShortCutt, RSS Feed, Blog
◇ Branching Out Newsletter Subscription
◇ Eastern New York Commercial Horticulture Program (Fruits and Vegetables)
Websites of Interest

All links are active

Cornell Cooperative Extension Albany County
Cornell Cooperative Extension Schenectady County
Cornell Cooperative Extension Rensselaer County
Cornell University Department of Horticulture
Cornell Cooperative Extension Capital District Region
Capital Area Agriculture & Horticulture Program
Pesticide Management Education Program
Sports Turf Managers of New York
NY Tree Farm
NYS Department of Environmental Conservation

Introduction
Several species of rust fungi may be found infecting various species of fir, and some of the more important rust species are in the genera Uredinopsis and Milesina; these diseases are more commonly known as fir-fern rusts. These rusts are characterized by the production of white fungal spores, while other common rust genera that infect fir produce yellow or orange-yellow spores.

Many of the Uredinopsis and Milesina species causing fir-fern rusts have more than one fir host, although each may have a specific fern host. Several species are perennial in the host, growing for several years in the needles before killing them. Others infect and kill current year's needles within weeks or months of infection.

Symptoms and Signs
The fir-fern rusts characterized by cylindrical or tongue-shaped, white fruiting bodies called "aecia,” which may form on yellow or even green needles (Fig. 1). These blister-like aecia (Fig. 2) break through the epidermis of the needle as they mature, and shortly thereafter, they burst open and begin to release spores that will cause infection on the fern host(s).
Depending upon the species of the rust, the fungus may overwinter either on the fern or as mycelium in living fir needles. Where a rust species does not kill the infected fir needles the first season, it may become perennial in the needles and twigs. Each year thereafter, the pathogen forms aeciospores on the newest needles until the infected twig eventually dies.

Where the fungus does not overwinter in the fir needles, spores are produced in the spring and carried by the wind back to newly emerging fir needles.

Avoid planting fir trees in areas with poor air drainage such as low areas. Space trees well and manage weeds to promote better airflow and more rapid drying of foliage following rainfall.

Only a few fungicides may be available for managing Uredinopsis spp. of rust on fir grown in nurseries or Christmas tree plantations in New York. Some formulations containing neem or triadimefon may be registered but keep in mind that these products are best used preventatively, not curatively so multiple approaches may be best in managing these fungi.
Management Strategies

If infected ferns in the area are not protected species, then removal of ferns may be another option to try to break the fir-fern rust cycle. Remove ferns in areas near trees by mowing them or using a registered herbicide on them. Alternatively, or in conjunction with fern eradication, use a registered fungicide to protect the trees when possible.

Only a few fungicides may be available for managing Uredinopsis spp. of rust on fir grown in nurseries or Christmas tree plantations in New York. Some formulations containing neem or triadimefon may be registered but keep in mind that these products are best used preventatively, not curatively so multiple approaches may be best in managing these fungi.

Avoid planting fir trees in areas with poor air drainage such as low areas. Space trees well and manage weeds to promote better airflow and more rapid drying of foliage following rainfall.

References:

Derived from:
http://www.plantpath.cornell.edu/Trees/PloiodNcst.html
My idea of a perfect mental health day is to slip off to Minnewaska State Park Preserve for some biking and botanizing. White stone cliffs with magnificent views, miniature pitch pines, sky lakes and rattlesnakes which all can be visited via carriage roads make for an exciting day on a bicycle seat. During last week’s sojourn I also witnessed one of Minnewaska’s many treats: the blooming of the mountain-laurel. Down many trails, the normally dark green shrubs were covered from root to crown in white to pink flowers, and remote Lake Awosting was ringed in color. The magnificent show was courtesy of one of North America’s most flamboyant native plants.

To those who care about nomenclature, mountain-laurel is known as *Kalmia latifolia*, named for Peter Kalm, a Swedish plant explorer who visited the Hudson Valley in 1749 in search of useful plants for his homeland. He fell in love with mountain-laurel and sent samples to Carl Linnaeus, chief botanist of the era and bestower of plant names. Working from his laboratory at the University of Uppsala, Linnaeus thought so highly of both shrub and man he joined them for eternity with the moniker. Mountain-laurel soon became a plant of desire for European gardeners.

Yet, like any person, plant or animal, mountain-laurel was found to have its own quirks. A broadleaf evergreen which a gardener might plant in a sheltered spot, it will gladly grow on an open mountaintop or windy hillside in the wild. It looks like an evergreen which requires a shady spot, but it performs most profusely in sun. Outdoors people of all stripes have described such dense growth as a “laurel hell,” requiring the traveler to miserably crawl or scrape through. Gardeners, a more optimistic bunch, would think it an excellent groundcover while perusing the same spot. But most importantly, mountain-laurel is very pH specific. Although it can be found from Canada to Florida, it is only happy in places where the soil is very acidic. Hailing from central New Jersey, we had to hack back the mountain-laurel to see out our picture window, and I thought it an easy-to-grow plant, but I wasn’t appreciating the high iron, low pH nature of our brick red, clay soil. That same mountain-laurel, which will thrive in a small New Jersey town as well as the wilds of Minnewaska, will sulk and die when planted in Schodack. I know, I tried. Perhaps the plant just died, and I was the one left sulking. My piece of Schodack is just too mild, at pH 6.2.

For those with the proper conditions, or the inclination to create them, there are many cultivars of mountain-laurel available. Dr. Richard Jaynes of Connecticut has bred over 30 types with variations in size, color, habit and leaf shape. He is acknowledged as the leading mountain-laurel expert and his Broken Arrow nursery claims to hold the largest collection of mountain-laurel in the world. I’m more than a little envious, but I’ve always got Minnewaska when I need a laurel fix.
My garden had a lot of wind damage this past winter. Can you suggest plants for a windbreak?

Due to the drying winds of winter we've observed plenty of evergreen foliage damage this year. When the ground is frozen and the sun is bright, evergreen plants can't take up water and desiccation of the leaves occurs.

Many people will plant a single row of small, fast-growing evergreens to stand guard against the wind. Like soldiers on the front lines, these small trees have little hope of making an adequate windbreak. To adequately block the wind, it is best to plant a triple row of plants of various sizes and shapes. These rows should also be staggered. The outside (windward) row should consist of shrubs that will ultimately mature at a shorter height than the middle row. Choose large, dense, fast-growing shrubs like forsythia, weigela or deutzia.

Many people will plant a single row of small, fast-growing evergreens to stand guard against the wind. Like soldiers on the front lines, these small trees have little hope of making an adequate windbreak...

- Ask Chuck
Ask Chuck, continued -

The center row should contain wind tolerant small trees or taller shrubs like Rose-of-Sharon, Holly, Hawthorne, or Privet. Finally the leeward row can again consist of large, dense, fast growing shrubs. More space will be required to plant a triple row but even the harshest winds stand little chance of penetrating these lines.

Now is a great time to get planting. Be sure to keep your new trees and shrubs well-watered this summer. Continue watering them until the ground freezes so hydration is not a problem heading into this winter.

Privet, wind tolerant and hardy.

Beautiful Rose-of-Sharon, tougher than it looks!

Do you have a question for Chuck? Send it to tff24@cornell.edu.

---

2015 Pest Management Guidelines

Available upon request

Guidelines for Commercial Turfgrass
Guidelines for the Integrated Management of Greenhouse Floral Crops
Guidelines for Commercial Production and Maintenance of Trees and Shrubs
Guidelines for Production and Maintenance of Herbaceous Perennials
Guides for:
Berry Crops
Grapes
Vegetables
Tree Fruit
Field Crops

Contact Cornell University Bookstore at https://store.cornell.edu/c-875-pmep-guidelines.aspx
EDUCATIONAL OPPORTUNITIES:

July 16-18, 2015
23rd Annual ReLeaf Conference
When: July 16-18, 2015
Where: SUNY College of Environmental Science and Forestry, Syracuse, New York
Program: Urban Forestry in a Changing Climate, American Chestnut Research, Tours Workshops and much more!
Read Complete Program Here
Register Online Here

July 17-18, 2015
Christmas Tree Farmers’ Association of NY, summer meeting
When: July 17-18, 2015
Where: Bob’s Trees in Galway NY
Summer Meeting Programs
Register Online Here

July 22, 2015
IPM In-depth: Hands-on Greenhouse Workshop
When: Wednesday July 22 Registration at 10:45 and program to 4:30
Where: Plant Science Building, Cornell University Campus, Ithaca NY
Program: DEC credits have been applied for.

The Doctor is IN: Bring plant samples with pest, disease or nutrient issues. We’ll try to determine the problems and discuss effective management plans.

Pint-Sized Predators – Mites for Biocontrol:
In this session, we will learn about the identification, biology, behavior, and use of predaceous mites that are used for biocontrol of greenhouse pests, with an emphasis on Amblyseius cucumeris for biocontrol of thrips.

Control freaks – using Plant Growth Regulators successfully: Plant growth regulators (PGRs) are extremely useful tools for some greenhouse crops, but if used incorrectly, you might not get what you hoped for. Bill Miller will cover all the aspects of using PGRs safely and accurately to get the perfect plant – choice of PGR and what they do, proper mixing and application, and how to do those calculations correctly!

Get Smart! – using your smartphone to manage insect pests: Learn how to use the Greenhouse Scout app to identify pests and figure out which beneficials to use to manage them. Then put your scouting results right in your smartphone or pad and check the graphs to see what the populations are doing! You will receive a copy of the app when you register for the IPM In-depth.

Registration: Preregistration, required by July 13 via check or credit card (online form coming soon). Cost is $65 (includes lunch and parking fee). There is no onsite registration for IPM In-Depth. Please contact Elizabeth Lamb for more information at (607) 254-8800 or email her at: eml38@cornell.edu
Or register online: http://www.greenhouse.cornell.edu/calendar/ipm_workshop.htm

August 11, 2015
Floriculture Field Day
When: Tuesday, August 11. Registration 8:00 to 8:30 a.m. Program 8:30AM-3PM
Where: Morning program at Cornell Veterinary College Education Center, afternoon at Bluegrass Lane Turf and Landscape Research Facility, Ithaca, NY
What: Grow your business by capitalizing on market trends and using your greenhouse space year-round.
Program: This year’s morning educational program features:
· Allan Armitage on new must-have plants
· Chris Wien on high tunnel cut flowers
· Peter Konjoian on greenhouse vegetables
· Margery Daughtrey on diseases every edibles grower must know.
Lunch at Bluegrass Lane will be followed with guided tours of annual flower plants landscape performance trials and pest and disease identification*. New for this year are: patio vegetable varieties and displays, combination flower/edible containers, and a comparison of retail potting mixes. Be sure to enter the Pufahl Container Design Competition. The day ends with our annual ice cream social with Cornell Dairy ice cream.

*DEC Pesticide Recertification Credits have been applied for

Don't miss this opportunity to network with top industry professionals.

Be sure to attend our Cornell Alumni and Friends (and we are all friends, right?) event the evening prior to Field Day, August 10 at 5:30 p.m. More details to be posted shortly.

**Registration:** For more information see [http://www.greenhouse.cornell.edu/calendar/floriculture_field_day.htm](http://www.greenhouse.cornell.edu/calendar/floriculture_field_day.htm)

**Questions?** contact Tara Reed at 607-255-2131 or tln2@cornell.edu.

**November 17, 2015**

**Leadership Forum on Strategic Planning**

**When:** November 17, 2015  
**Where:** Saratoga Springs, NY  
Mark your calendars now for the 2015 Leadership Forum, which has a new home and a new focus this year. It will be in Saratoga Springs. The topic will be "Strategic Planning."

Leadership Forum is where company owners and managers further their knowledge of subjects related to running a business, but all NYSNLA members are welcome, especially if you're interested in becoming an owner or manager someday.

For the first time in many years, Leadership Forum will be a self-contained, one-day program not held in conjunction with any other NYSNLA event. We chose Saratoga Springs as the new location because it is easily accessible from anywhere in the state. (It's also gorgeous!)

These changes were implemented as a result of your responses to the Education Committee's survey -- we thank everyone who participated.


---

**Want to see your picture in print in the next issue of Growing Trends?**

Send your horticulture picture to tff24@cornell.edu

Follow Us On Pinterest

Follow Us On Facebook

Visit Our Blog
UNWANTED PESTICIDES AND SCHOOL CHEMICALS DISPOSAL PROGRAM SCHEDULED

CLEANSWEEPNY IS AN ENVIRONMENTAL BENEFIT PROJECT that provides for the environmentally safe and economic collection and disposal of unwanted or unusable pesticides, school chemicals, golf course chemicals, and elemental mercury and mercury-containing devices (e.g. manometers and thermometers). CleanSweepNY also collects and recycles triple-rinsed HDPE plastic containers from agricultural and certain non-agricultural entities. The NYS Department of Environmental Conservation administers the CleanSweepNY project through its Albany, NY Central Office Pesticides Program. Funding for this environmental benefit project is administered by the Natural Heritage Trust.

To date, CleanSweepNY has collected and disposed of over 1,424,037 pounds of chemical wastes, more than 853 pounds of elemental mercury, and over 4,200 plastic containers that could have wound up in landfills across New York State. CleanSweepNY results in enhanced stewardship of the environment through improved management of those materials which can pose human health risks upon exposure and a significant hazard to the environment such as water resources.

A FALL 2015 CLEANSWEEPNY Collection targeting Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie Counties. Counties will build on the success to date. Holders of pesticides and chemical materials who are located in other counties may also participate but onsite services cannot be provided.

The collection will occur during the week of October 21, 2013. Collection dates and locations are as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 29</td>
<td>Oneonta, NY</td>
</tr>
<tr>
<td>September 30</td>
<td>Fultonville, NY</td>
</tr>
<tr>
<td>October 01</td>
<td>Hudson, NY</td>
</tr>
</tbody>
</table>

Specific collection locations will be available upon registration or contact CleanSweepNY staff by phone: 877-793-3769 or by e-mail at info@cleansweepny.org

ACCEPTED FREE OF CHARGE CleanSweepNY funding was originally earmarked for the benefit of New York agricultural pesticides from farms, farms no longer in production, NYS certified pesticide applicators, greenhouses, nurseries, some small businesses, NYS schools, commercial or home & garden pesticide holders, golf courses, schools, marinas, cemeteries and others. Participants can bring unwanted pesticides to CleanSweepNY collection events at no charge and with no quantity limit. Some exceptions must be made for municipalities and government agencies so please call to discuss.

CleanSweepNY services are not available to homeowners

PRE-REGISTRATION & INFORMATION Pre-registration is required to participate in CleanSweepNY.

Requesting a registration packet is easy and can be done by calling 1-877-793-3769 or by e-mail to info@cleansweepny.org NOTE: Information received by CleanSweepNY is kept confidential and the registration deadline is September 18, 2015.

There is NO enforcement potential for any product turned in as part of this collection project. NO enforcement has been taken on any of the 2,452 registered participants in 18 CleanSweepNY events.

Please participate and help us to properly manage unwanted pesticides and chemicals in NY State!
Chuck Schmitt,
Senior Resource Educator, Albany County, 518-765-3513
cds34@cornell.edu

David Chinery,
Senior Resource Educator, Rensselaer County, 518-272-4210
dhc3@cornell.edu

Tove Ford,
Sr. Administrative Assistant
Newsletter Layout/Design
Albany County, 518-765-3518
tff24@cornell.edu

Sincerely,

Chuck Schmitt
Senior Resource Educator,
Capital Area Ag. & Hort. Program

This publication contains pesticide recommendations. Changes in pesticide regulations or human errors are still possible. Some materials may no longer be available, and some may no longer be legal. These recommendations are provided only as a guide. All pesticides distributed, sold, or applied in New York State must be registered with the Department of Environmental Conservation (DEC). Questions concerning the legality and/or pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension office or regional DEC office. Read the label before applying any pesticide. If any information in these recommendations disagrees with the label, the recommendation must be disregarded. Recommendations for the use of chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by Cornell Cooperative Extension Service nor discrimination against similar products or services not mentioned. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage and examine a current product label before applying any chemical.