



# THE INSIDE DIRT

*For Fingerlakes Gardeners*

## Inside this Issue

<i>Upcoming Workshops</i>	1
<i>Regulatory Restrictions on Pesticides in Turf</i>	2
<i>Susceptibility to Late Blight</i>	3
<i>Why Leaves Turn Color</i>	4
<i>It's For The Birds</i>	5
<i>October Shorts</i>	5
<i>Care of Holiday Plants</i>	6
<i>Forcing Indoor Bulbs Brings Color to Winter</i>	7
<i>Mulch Strawberries in Late November</i>	7
<i>Firewood: The Unknown</i>	8
<i>Indian Meal Moth</i>	9
<i>Mealybugs on Houseplants</i>	10
<i>Winter Squash</i>	11
<i>Growing Garlic</i>	12
<i>Storage of Equipment</i>	12
<i>Winter Tree ID</i>	13
<i>2013 Subscription Form</i>	15

### The Inside Dirt

is published monthly February to October by Cornell Cooperative Extension of Ontario County, 480 North Main Street, Canandaigua, NY 14424  
Phone: (585) 394-3977 x 427  
Editor: Russell Welser  
Production: Nancy Anderson  
Annual subscriptions are available at the cost of \$15.

## Upcoming Workshops

### \* Small Scale Woodlot and Sugarbush Evaluation Workshop Saturday, October 20, 2012

9:00 am - Noon  
Location: Woodlot off County Road 6 in the Town of Phelps, about 3 miles north of Geneva.

How many maple taps are possible? How much firewood can I cut? Do I have a lot of "good" trees? Maple producers and woodlot owners often need to know specific details about the volume or number of trees they have. This interactive workshop will guide owners or tree enthusiasts through the process of learning why and how to sample and measure the trees in a sugarbush or woodlot. Dr. Peter Smallidge, Department of Natural Resources, Cornell University is the instructor. Participants should bring a clipboard and pencils. The workshop will be outdoors with modest gentle walking. Dress for the weather.

**Cost:** \$15.00 per person  
**Pre-registration is required by October 12, 2012** by calling Cornell Cooperative Extension of Ontario County at 585-394-3977 x 427 or email Nancy with your full contact information (name, address, phone number).

### \* Holiday Decorating with Nature and History

**Tuesday, November 27, 2012**  
6:30 pm - 8:00 pm

Cornell Cooperative Extension 480 North Main Street, Canandaigua  
Learn about the fascinating origins of traditional holiday decorations and how to create these for your home. The

class will consist of an illustrated lecture followed by a hands-on demonstration.

**Cost:** \$5.00/person

**To register:** call Cornell Cooperative Extension of Ontario County at 585-394-3977 x 427 or email Nancy with your full contact information (name, address, phone number).

### \* Beginning Maple Workshop Thursday, January 17, 2013

6:30 pm - 8:30 pm

Cornell Cooperative Extension 480 North Main Street, Canandaigua  
Mr. Stephen Childs, NYS Extension Specialist, Department of Natural Resources at Cornell University will be the presenter. This workshop is aimed at the beginning maple producer and would be useful to the homeowner looking to tap a few trees in the backyard.

**Cost:** \$10.00/family

**To register:** call Cornell Cooperative Extension of Ontario County at 585-394-3977 x 427 or email Nancy with your full contact information (name, address, phone number).

### \* Spring Garden Symposium Saturday, February 16, 2013

8:30 am - 3:00 pm

Steamboat Landing, Canandaigua  
Speakers: Joann Gruttadaurio - *Weeds and Soils*; Kevin Schoonover - *Edible Landscapes*; and Jana Lamboy - *IPM: Forewarned is Forearmed*.

Flyers will be mailed to the past 2 year's participants. If you are interested in receiving a flyer, please call 585-394-3977 x 427 or email nea8@cornell.edu and request a flyer. The flyer will be ready after January 3, 2013.

## Regulatory Restrictions on Pesticides in Turf

New York State has been experiencing a change in the regulatory landscape in the past 12 years that places far more restrictions on turf management. The first wave of restrictions occurred in the late 1980s with the passage of Title 10, Article 33 Special Requirements for Commercial Lawn Applications. The state law required pesticide applicators to notify and provide a list of the pesticides to the owner of the commercial establishment. Amendments to the law followed soon after, culminating in the 2000 Neighbor Notification Law that expands written warnings of pesticide use beyond commercial turf for counties that opt into the law. More recently, the 2010 Child Safe Playing Fields Law limits pesticide use on school grounds to products containing active and inert ingredients that are deemed minimal risk.

The Cornell Turfgrass program has received many requests from superintendents, lawn care providers, and pesticide applicators to identify the pesticides allowed under the new state law. A mere fraction of pesticides are considered allowable, and many of these are listed as organic under the Organic Materials Review Institute (OMRI). For weed management, we have identified only nine post-emergent herbicides adhering to the strict requirements described in the New York State Department of Environmental Conservation (NYSDEC) guidance on allowable herbicides. The nine herbicides contain active ingredients listed as minimum risk under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) 25(b) and the inert ingredients are considered eligible as minimal risk under 4a. Examples of active ingredients include citric acid, clove oil, eugenol, lemongrass oil, and 2-phenethyl propionate. The popular glyphosate-containing herbicides are effectively banned on school and day care playgrounds, turf and athletic fields, unless the pesticide applicator is granted a one-time emergency application. The same process is required for herbicides containing 2, 4-D, dicamba, halosulfuron, and other common active ingredients. Emergency determinations are approved by the local school board in the case of public schools, or by the county or state health department (DOH) for private schools and day care centers.

The NYSDEC describes in their guidance that the intent of the law is to minimize the harmful effects of pesticides on children by limiting the use of pesticides in schools and day care centers. However, some pesticides were used in schools to control harmful pests that are deemed a public health concern. Typical harmful plants that are found on school grounds include poison ivy, poison oak, poison sumac, wild parsnip, and giant hogweed. Many children and adults develop a strong allergic reaction to these noxious plants resulting in phytodermatitis, lesions and infections. Other harmful pests found on playgrounds and playing fields include stinging bees, wasps and hornets. The emergency determinations were intended to address the control of

deleterious pests through non-routine applications of the conventional pesticides. The problem with this process is the lack of exceptions for routine pest control. Stinging bees are a common problem on playing fields covered with blossoming clover flowers. Children that are allergic to bee stings may experience anaphylactic shock, potentially resulting in liability for the school district or private institution managing the playing field. There is currently no "allowable" herbicide that provides selective control of clovers or any broadleaf, dicotyledonous plant. With emergency determinations granted only for non-routine applications, there is virtually no herbicide available for effective seasonal control of clovers. On a single playing field, there could be several populations and species of clovers that flower throughout the growing season, which makes a one-time emergency herbicide application challenging for clover control.

Another intention of the new law was to encourage the development of alternative strategies for controlling pests. The Cornell Turfgrass program has a long history of researching alternative pest management strategies. Many of these approaches entail cultural management of turf. Optimizing nutritional requirements of turfgrass, in addition to soil pH levels, aeration, dethatching, repetitive grass seeding, and irrigation are ways to favor grass over other competing species. In the past 20 years, a large variety of turfgrass cultivars have appeared on the market, providing viable options for more sustainable turf management through improved turf cultivars. Although Kentucky bluegrass is still the preferred species of turfgrass for playing fields in cool-season climates, the regenerating tall fescues and perennial ryegrass cultivars are providing new options for wear tolerance. Another cultural management strategy that enhances turf cover is direct mulching of leaves into turf. It is a strategy that works similarly to compost additions, where soil health is encouraged. Some researchers have found greater weed and turf disease suppression with leaf mulching and compost additions.

For more information on alternatives to pesticides, we encourage readers to visit the Cornell Turfgrass homepage at <http://www.hort.cornell.edu/turf/>. The website provides information on allowable herbicides for schools and day care centers, and links to the NYSDEC web page for guidance on emergency determinations.

*Source: Jenny Kao-Kniffin, Ph.D., Assistant Professor, Department of Horticulture, Cornell University. New York State Turfgrass Association online Newsletter, August 2012.*

## Susceptibility to Late Blight

### Tomato Cultivars

Cultivar Name	Susceptibility
Defiant PHR F1	resistant
Matts Wild Cherry	resistant
Mountain magic F1	resistant
Plum regal F1	resistant
Aunt Ginnys Purple	moderately resistant
Aunt Rubys German Green	moderately resistant
Black Krim	moderately resistant
Black Plum	moderately resistant
Brandywine	moderately resistant
Prudens Purple	moderately resistant
Red Currant	moderately resistant
Yellow Currant	moderately resistant
Yellow Pear	moderately resistant
BHN 589	moderately susceptible
BHN 961	moderately susceptible
Big Beef	moderately susceptible
Celebrity	moderately susceptible
Mountain Fresh Plus F1	moderately susceptible
Mountain Supreme	moderately susceptible
West VA 63	moderately susceptible
Glamour	susceptible
Gold Nugget	susceptible
Jetstar F1	susceptible
Market Pride	susceptible
New girl F1	susceptible
New Yorker	susceptible
Pik Rite	susceptible
Pilgrim	susceptible
Primo red F1	susceptible
Scarlet red	susceptible
Sunbrite VFF	susceptible
Sunrise	susceptible
Supersonic F1	susceptible
Ultra Sweet	susceptible

### Potato Cultivars

Cultivar Name	Susceptibility
Adirondack Red	susceptible
All Blue	susceptible
All Red	susceptible
Allegany	moderately susceptible
Ambra	susceptible
Amey	susceptible
Andover	susceptible
Atlantic	susceptible
Austrian Crescent	susceptible
Bake King	susceptible
Banana	susceptible
Butte	susceptible
Caribe	susceptible
Carola	susceptible
Carrera	susceptible
Castile	moderately susceptible
Cherry Red	susceptible
Chieftain	susceptible
Chippewa	susceptible
Dorita	moderately susceptible
Elba	moderately resistant
Eramosa	susceptible
Eva	susceptible
Fabula	susceptible
French Fingerling	susceptible
Genesee	susceptible
German Butterball	susceptible
Green Mountain	moderately susceptible
Goldrush	susceptible
Hampton	susceptible
IdaRose	susceptible
Kanona	susceptible
Katahdin	moderately susceptible
Kennebec	moderately resistant

**Potato Cultivars** (continued)

Keuka Gold	susceptible
Keystone Russet	susceptible
LaChipper	susceptible
LaRatte	susceptible
LaRouge	susceptible
Marcy	susceptible
Manona	susceptible
Monticella	susceptible
NorDonna	susceptible
Norkota	susceptible
Norland	susceptible
Norland (Dark Red)	susceptible
Norwis	susceptible
Pike	susceptible
Ranger Russet	susceptible
Reba	susceptible
Red Lasoda #10	susceptible

Red Pontiac	susceptible
Reddale	susceptible
Redsen	susceptible
Rideau	susceptible
Rosa	moderately susceptible
Russet Burbank	moderately susceptible
Russet Norkotah	susceptible
Russet Gem	susceptible
Salem	susceptible
Satina	susceptible
Sebago	moderately resistant
Serran	moderately resistant
Shepody	susceptible
Snowden	moderately susceptible
Superior	susceptible
Winema	susceptible
Yukon Gold	susceptible

Source: <http://nwa.nrcc.cornell.edu/PotatoCultivarsPop.html>

## Why Leaves Turn Color

Most of us admire the array of brown, yellow, and red colors splashed on the country hillsides and along the many scenic roads. Every fall for years, trees have changed colors. It's a part of life and a unique way of Mother Nature to put a little joy to the sadness of another seasons end and the beginning of a new one.

Many people do not know why leaves change color, but we shouldn't feel too badly. Today's scientists don't even completely understand this complex process. The following explanation should give you a better understanding.

The leaves of trees are green because they contain chlorophyll, a green pigment necessary for photosynthesis, the food making and life support process. From the time leaves reach maturity to the time they fall from the tree, there is a progressive decrease in the rate of photosynthesis as well as a decline in respiration. Chlorophyll breakdown exceeds chlorophyll synthesis, resulting in the complete loss of chlorophyll, the leaves green color. The carotenoids, yellow pigments, also present in the leaves do not break down as fast and persists longer than the chlorophyll. Where before they were subdued by the dominant green pigments they are now revealed producing yellow leaves. Eventually, these

carotenoids are also broken down, turning the leaves brown. On the other hand, as the leaves break down anthocyanins are produced and accumulated giving leaves their red color. The production and accumulation of anthocyanins is brought about by warm, sunny fall days followed by cool nights. But not all trees possess a hidden yellow pigment or produce sufficient anthocyanins to reveal a yellow or red color, instead they just turn brown.

You may wonder what determines which color the leaves will be. This for the most part is determined by the trees genetic inheritance. However, because of physiological differences within a tree, the microclimatological differences around a tree, and the difference of weather conditions from one year to the next, explains why a tree may have leaves of different colors at the same time, or bear leaves predominately yellow one year and red the next.

From green to autumn colors is a complicated process which only Mother Nature knows for sure. Its beauty and color arrangement is the perfect setting for a moment of relaxation, thought, or dream.

Source: Russell Welser, Extension Educator., Cornell Cooperative Extension Ontario County.

## It's For The Birds

Winter bird feeding is a serious business that cannot be handled in a lackadaisical manner. Never start a feeding tray unless you plan to keep it stocked with food.

Bird feeders come in all sizes, shapes, and costs. They need not be attractive, fancy, or anything elaborate. One you make yourself will do. Remember, it's the birds who you must please and not yourselves. Feeders should be put up in October or early November so that birds will become accustomed to it.

Deciding where to locate a feeder is very important. There are several basic considerations you should keep in mind.

- 1). Select a place that is convenient for you when servicing the feeder. When the weather turns cold and snowy, we have a tendency to neglect a feeder that is difficult to get to.
- 2). Locate the feeder in a place that does not have a lot of excitement and noise, such as areas where you are always coming and going.
- 3). Select a place that is near trees and shrubbery to provide protection as well as a place to perch.

You can expect to use 50 lbs. or more of seed in five active feeders per month during the months of October through March. The author advocates buying sunflower seeds and fine cracked corn. Buying such ingredient in 50 to 100 pound bags is more economical than buying them in smaller amounts or buying premixed bird seed.

About one household in five operates a winter feeding station for birds. The question, "Does feeding improve the chances of a bird population's survival?", has been debated for quite some time and the answer is not readily available. However, biologists are in general agreement that most birds would survive the winters without such aid from man. An ill-advised feeding program can cause more damage than good. If more birds are drawn into an area than the protective cover can support, predators will consume the extras. The second hazard occurs when someone stops feeding during the winter months, especially if the bird population exceeds that which could be naturally supported, resulting possibly in starvation.

Birds need certain minimum requirements before they can survive. They need sufficient shelter, food, water, and suitable living space. The population will increase until one factor becomes limited. If winter food is not the limiting factor, then the amount of water, shelter, or nesting space must be improved to increase a population. Consequently, little can be done to increase the number of birds that visit during the winter unless winter food is their limiting factor. In the long run, good habitat landscaping may be more important and economical than winter feeding.

*Source: Russell Welser, Cooperative Extension, Ontario County.*

## October Shorts

**Saving Garden Seeds:** If you are currently saving garden seed for next season, keep in mind that the viability or the ability to germinate and grow successfully varies among different vegetables. Seeds that have a short storage life of two years or less include corn, salsify, onion, and parsnip. Consider replacing these annually. Beans, carrot, leek, and pea seed remain viable for two to three years, while beet, swiss chard, pepper, broccoli, cabbage, lettuce, cucumber, eggplant, melons, radish, spinach, and squash can be stored up to five years. Successful storage of seeds can be achieved by placing them in an environment that is cool and dry.

**Rust:** This disease is caused by a fungus that needs water on leaf blades and prefers soft, succulent leaf tissue that is produced after heavy fertilization. That means that rust is more common where the infected leaf blades don't get mowed off such as compacted areas, low N turf, and droughty turf.

Rub a white tissue or piece of fabric across a rusty lawn, and you will see the powdery orange spores. Luckily, this disease rarely kills plants, and the fungus is not toxic. At this time of year, the easiest solution is to get the grass growing, so the rusty leaves will be mowed away. The disease is also common when leaf blades are green, but the top growth has stopped in the fall. There are resistant cultivars of perennial ryegrass and Kentucky bluegrass.

See the National Turfgrass Evaluation Program website for information: <http://www.ntep.org>

*Source: Turfgrass Short CUTT, September 10, 2012.*

## Care of Holiday Plants

**Azalea** - Single and semi-double flowering potted azaleas are available in winter and spring in shades and tints of red and orange or in white. Select well-shaped plants with a few open flowers. Room temperatures of 60° F. at night and full sunlight during the day are necessary for extended flowering. Regular watering and spraying the leaves with water, will help prevent defoliation.

**Christmas Begonias** - Christmas begonias are usually available through the winter months. Plants with a large number of buds will bloom for several weeks indoors. Keep the soil moist at all times. Night temperatures should be between 60° F. and 65° F.; during the day the temperature can be 10 degrees higher. The best location for Christmas begonias are in full sunlight. Discard the plant after flowering. It is one of the most difficult to maintain for growth and rebloom in the home.

**Christmas Cactus**—Christmas cactus is a popular flowering house plant. Some varieties and hybrids bloom during winter and spring. Shades and tints of red are the usual flower colors. Although a member of the cactus family, Christmas cactus should not be kept dry like its relatives. Keep the soil moist to promote flowering. Locate plants in full sunlight. Temperature should be 60° F. to 65° F.

**Christmas Pepper** - The Christmas pepper has cone-shaped red and yellow fruit. It prefers full sun and cool temperatures with moist soil. Unlike the Jerusalem cherry this one does not easily rejuvenate and is best discarded after fruiting.

**Cyclamen** - They have become very popular as holiday plants. Given the right conditions, they will continue to provide blooms of pink, red, orchid, and white long into the spring. They thrive on cool temperatures with high humidity and for best results should be moved to a cooler area at night. After it blooms, the plant should be allowed to rest and then be reported in July for new growth to begin.



**Gloxinia** - It is another permanent house plant. The large trumpet-shaped flowers come in shades of red, purple, blue, and white. General requirements call for high light and humidity, medium temperatures, and moist but not soggy growing medium. After it blooms, the plant needs a dormant period of 2 - 3 months before it will flower again.

**Jerusalem Cherry** - With its shiny green leaves and orange-red, cherry-like fruits, Jerusalem cherry can be admired during the winter and moved outdoors in spring. Keep the plant in cool temperatures, away from drafts, with high light. The soil should be kept moist. After the fruits develop, the plant should be cut back, repotted and moved outside to begin a new cycle.

**Kalanchoe** - This is a small, compact plant that bears red, orange, and yellow flowers in clusters above the foliage. For extended bloom they require cool temperatures, full sunlight and constantly moist soil.

**Norfolk Island Pine** - The Norfolk Pine naturally appears "Christmasy". It looks like a Christmas tree, and with a brightly ribboned pot and some miniature ornaments on its branches, it can serve very well as a miniature Christmas tree. High light, cool temperatures and evenly moist soil will keep your Norfolk Pine thriving year round in your home.

**Poinsettia** - Known for their beautiful red floral leaves, the Poinsettias have long been a symbol of Christmas. They should be kept in a bright location with temperatures around 68° F. during the day and 60° F. at night. The soil should be kept uniformly moist. Foil wrapped plants should be pierced at the bottom of the pot for drainage.

All of these plants are fairly available in nurseries and garden centers during the winter months. Each would enhance a holiday decorating scheme or be a welcomed gift plant. Distinctive flowers and striking foliage make them all beautiful additions.

*Source: Russell Welser, Extension Educator, Cornell Cooperative*



## Forcing Indoor Bulbs Brings Color To Winter

Rows of yellow daffodils, red tulips, and blue hyacinth may seem like a pipe dream during the dreary winter months. But a technique called “forcing” can bring spring color into the winter home.

Forced bulbs also make appreciated and inexpensive holiday gifts.

“This is a good time of year to force bulbs,” says Ernest Schaufler, floriculturist with Cornell Cooperative Extension. “You can go to the gardening stores, see what bulbs they still have, and make an offer to take them off their hands.” Bulb forcing can be begun as early as September and as late as mid-winter.

To “plant” your forced indoor garden, you will need bulbs, clay or plastic pans or pots, potting soil, and small stones for drainage. You will also need a cool spot where the bulbs must rest for a period, while they develop their root systems. The area should be dark, with a temperature between 40 and 50 degrees F. (Some bulb enthusiasts have been known to use their refrigerators.)

For tulips, use a 5-inch pot to hold 3 bulbs; for hyacinths, a 5-inch pot to hold 3-4 bulbs; for daffodils, a 7- to 8-inch pot to hold 3-4 bulbs; and for crocus, a 4-inch pot to hold 6-7 bulbs.

Put a small amount of drainage matter in the drainage holes of the pot.

Add enough potting medium to allow the bulbs to rest as follows:

Tulips—bulb tops just above the soil line; put the flat side of the bulb toward the pot side.

Daffodils—bulb tops even with top of pots

Hyacinths—bulb tops just above the medium

Crocus—bulbs about 1 inch below the medium

Add potting soil around (and over) the bulbs and lightly press until it is 1/2 inch below the pot rim. Water slowly until water begins to seep out the drainage hole.

Next, put the bulbs in cold storage. Most bulbs require two months of storage. Paperwhite narcissus, though, should be forced immediately after potting.

You can pot paperwhites at Thanksgiving and still have blooms in time for Christmas,” Schaufler says.

When you bring the bulbs out of storage, put them in a sunny but cool window. The cooler the better, in fact. Excessive heat will make the blooms come on too fast. A cool locale will keep your bulbs at their best longer.

*Source: Miracles of Gardening, November 1989. Ernest Schaufler, Department of Floriculture and Ornamental Horticulture, Cornell University.*

Position for forcing tulips



## Mulch Strawberries in Late November

Strawberries should be mulched to prevent winter injury to the plant crowns and to help keep the fruit relatively clean of dirt during harvest time.

The strawberry plant in early fall and late spring is likely to be injured by temperatures around 18°F. During the winter when the plant is fully dormant it will withstand temperatures of 12°F and not show any crown injury. Many different things are done in regards to mulching depending on location, soil texture, variety, market and snow cover.

To be absolutely safe, it is important to mulch strawberries in mid to late November when night temperatures approach 20°F.

Covering strawberry plants sooner than this should be avoided. Mulching over the strawberry plants too early will weaken the plants.

One of the best and most available mulches is wheat straw used at the rate of about one bale per 50 linear feet of row.

## Firewood: The Unknown

Homeowners continue to turn to alternate energy sources of home heating. The revitalization of wood stoves and furnaces have brought back a little of the lifestyle of yesteryears. However, many of these woodburning homeowners depend on others for their sources of firewood. Individuals purchasing or selling firewood need to be familiar with the regulations covering the sale of firewood and the terminology used, along with being able to identify wood species.

The laws regarding the sale and transportation of firewood are for the protection of our forests and the consumer, as well as to set some standards for the firewood industry. Whenever wood for fuel is advertised, offered for sale, or sold at retail, the dimensions of the stack of wood, when ranked and well stowed, must be stated in feet and inches. These dimensions may be accompanied by any descriptive word, such as face cord, cord or truckload. The phrase "ranked and well stowed" by law means the placing of pieces of wood in a row, with individual pieces touching and parallel to each other, and stacked in a compact manner. The NYS regulations covering the sale of firewood also state that no firewood identified as hardwood shall consist of the wood from any species of conifer, or from aspen, poplar, basswood, butternut, willow, grey or paper birch. The law further states that any wood represented as seasoned wood must specify the length of time and the manner of seasoning.

It is common to see ads in local papers as follows: "SEASONED FIREWOOD: Mixed hardwood \$60 a face cord, will deliver. Call \_\_\_\_\_." Although this appears to be an appropriate ad, it is illegal. It does not state the dimensions of the face cord nor how it was seasoned. The ad also uses the term hardwood and thus should not consist of the wood species mentioned earlier.

It is surprising the number of individuals who refer to a face cord as a cord of wood. There is a big difference between the two. A face cord is 4 feet in height, 8 feet in width, and the depth is defined by the length of the cut wood in inches. All face cords are not the same in that the length of the cut wood often varies from 12 to 24 inches with 16 and 18 inches being the more common. A cord of wood on the other hand is 4 feet in height, 8 feet in width and 4 feet in depth. It would take 3 face cords with the length of 16 inches to equal one cord.

When purchasing firewood you should realize that differing wood species have different heat potentials by volume. Apple, Hickory, Black Locust, and White Oak are best; Beech, Red Oak, Sugar Maple and White Ash second; Black Cherry, Red and Silver Maple third; Poplar, Basswood, and most Conifers last. However, a pound of dry Poplar delivers as much heat as a pound of dry Hickory, but the Poplar stick

would be twice as large as the Hickory stick. When pricing firewood keep this in mind.

Another important aspect is the manner of seasoning. A log left whole loses very little water over several months and it is not until the log is cut and split that it begins to season more rapidly. It usually takes 9 months or more for cut and split logs to be fully seasoned (dried) to obtain 100% of the maximum fuel value. However, cut and split logs seasoned for 3 months will allow you to obtain 85% to 90% of the maximum fuel value.

A delivery ticket, sales invoice, or receipt shall be presented by the seller to the buyer whenever any unpackaged wood for fuel is sold; and shall contain the name and address of the seller, the date of the sale, the quantity or dimensions of the wood sold, and the price of the quantity sold. The seller must also provide source documentation of the firewood to the buyer. Untreated firewood cannot be moved more than 50 miles from its source / origin and can not be moved outside an Emerald Ash Borer quarantined area and can not be imported from outside New York State. Persons moving untreated firewood for their own use (not for sale), must have a Self-issued Certificate of Origin when transporting the firewood. This certificate can be found on the NYS DEC website.

Before your next purchase of firewood, become familiar with the different wood species (identification and heat values), the regulations covering the sale of firewood, the terminology and the appropriate questions to ask.

*Source: Russell Welser, Extension Educator, Cornell Cooperative Extension Ontario County.*

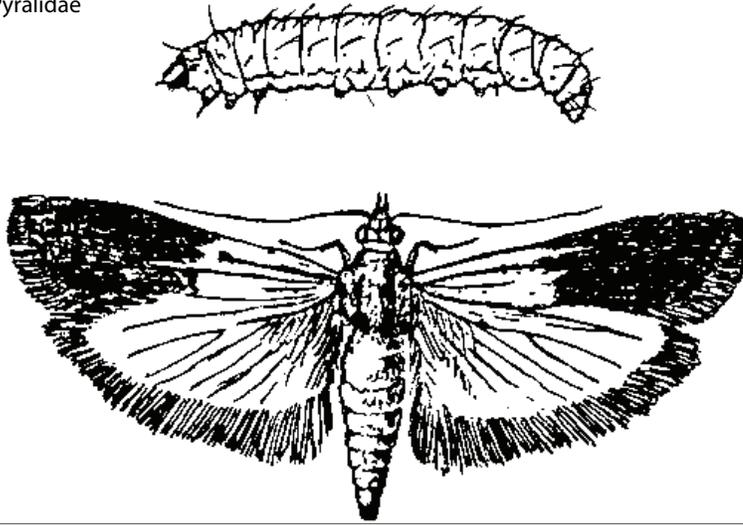


# Indian Meal Moth

*Plodia interpunctella* (Hübner); Family: Pyralidae



Adult in normal resting position



Top: Larva  
Bottom: Adult with wings spread



Pupa

## Injury

The Indian meal moth is one of the more common moths infesting stored grains and grain products. Others include the Mediterranean flour moth and the meal moth.

The larval stage causes the injury. Larvae feed on flour and meal products, dried fruits, nuts, bird food, and dried pet foods. As the larva feeds it spins a web, leaving behind a silken thread wherever it crawls. Small particles of food often adhere loosely to the thread, making it conspicuous.

Many times an infestation is noticed when moths are seen flying around the home in the evening. They are attracted to lights and often appear in front of the television screen.

## Description

The Indian meal moth has a wingspan of about 3/4 inch (18-20mm). The color of the outer two-thirds of the wings is bronze to reddish brown, while the part of the wings closer to the body is grayish white.

The larvae (caterpillars) are about 1/2 inch (12-13mm) long when mature. They are a dirty white color, sometimes exhibiting pink or green hues.

The pupa (resting stage) is in a loose silken cocoon spun by the larva, and is a light brown color.

## Life History

A female Indian meal moth can lay from 100 to 300 eggs during her lifetime. Eggs are laid singly or in groups on the food materials. Within a few days the tiny whitish caterpillars emerge. These larvae feed for a few weeks, and when they are

mature they often crawl up the walls to where wall and ceiling meet, or crawl to the top of the cupboard, to spin the silken cocoon in which they pupate and from which the adult moth emerges. Mating occurs and the life cycle repeats itself. In warm weather the cycle may take only 6 to 8 weeks.

## Management

The following suggestions may be useful in bringing an infestation quickly under control. Prompt action can be important in preventing losses of quantities of foods stored on kitchen or pantry shelves.

- Carefully examine all susceptible foods that may have been exposed to infested material.
  - Do not forget bird seed, dog, cat and fish foods. These are often the source of an infestation.
  - Insects may even be found in paper wrapped products that have not yet been opened in the home. All infested packages should be discarded. There is no satisfactory way of separating the insects from the food products, flour, or meal.
- The contents from opened packages that appear to be uninfested should be transferred to glass jars with tight fitting tops. It is possible that eggs were laid in these products and they may hatch later and lead to a new infestation if not contained.
- Remove all food containers and utensils from the infested area (shelf paper may also need to be removed) and clean thoroughly, first with a vacuum cleaner and then with soap and water. Special attention should be paid to cracks and corners where bits of flour, meal or other products may have accumulated. Remove and destroy cocoons that may be found on ceiling of cupboards, or where room walls and ceiling meet.

4. In many cases thorough clean-up will control these insects. In difficult cases, however, a pheromone sticky trap can help to catch flying male moths and reduce the numbers of adult moths. Pesticides are usually not necessary.
5. Continue to observe the area for several months after treatment. If moths reappear, clean-up may have been inadequate, or newly infested packages may have been brought into the kitchen.

Long term storage of flour and meal products often leads to infestation, therefore, such products should be purchased in quantities suitable for early use, unless adequate containers are employed.

Although we generally do not recommend treating food storage areas, in particularly difficult situations treating the corners of storage areas can be done with an insecticide, if 'Indian meal moth' and 'Indoor use' are stated on the label. Treatment should be limited to corners of storage areas, using a paintbrush or spray can. Do not place and food or dishes back in closet until material is entirely dry.

*Prepared 1973 by Carolyn Klass & Prof. Edgar M. Raffensperger,, Dept. of Entomology, Cornell University. Updated 2012*

*Source: <http://entomology.cornell.edu/cals/entomology/extension/idl/loader.cfm?csModule=security/getfile&PageID=858888>*

## Mealybugs on Houseplants

Family: Pseudococcidae

### Injury

Several species of mealybugs are common pests of houseplants. The mealybugs are soft-bodied insects, whitish in color, and when mature about 5 mm (3/16th inch) in length. They move slowly, but can spread readily from plant to plant, especially when plant foliage touches. They feed by inserting long tube-like mouthparts into plant tissue and sucking juices from the host. As a result, plants may be stunted, or even killed, and there may be a sweet sticky substance called honeydew on the foliage or below the plant.

### Description and Life History

Mealybugs are elongate-oval in shape, and often are whitish due to a waxy covering on the body. There may be two or more long waxy filaments extending from the posterior end of the body. Adults are usually found at rest or slowly crawling on the undersides of leaves or on stems. Mature females deposit eggs in a loose cottony wax, which may be conspicuous on the stems and undersides of leaves. As many as 600 eggs may be deposited in a mass, so the potential for population increase is great. The newly hatched young (called crawlers) crawl from the cottony masses and move around on the plant looking for a suitable site to feed. The crawlers are very small and may be easily blown from one plant to another by wind or breeze. Young nymphs are yellow to pink in color, but after feeding begins, they exude white waxy material which soon covers the body. This waxy material protects the mealybugs from insecticidal sprays and from moisture or drying.

### Management

Despite their delicate appearance, mealybugs may be difficult to control. One reason is the microhabitat they live in, e.g. the undersides of leaves, crotches of branches, or under protective sheaths found at the base of some plants. In addition, the waxy cottony masses protect eggs, and the waxy covering protects the young and adults. The newly emerged crawlers are the most susceptible stage to control

because they do not have the waxy coating. Unfortunately, in the home or greenhouse environment, crawlers may occur at many times during the year, and there may be repeated generations of these insects.

For a small number of plants, hand picking, washing, or using a cotton swab dipped in rubbing alcohol to remove individual mealybugs can give good control. Washing with soapy water solution (two teaspoons of a mild *dish detergent*, not soap, per gallon of water) using a soft brush or cloth, will help to dislodge the mealybugs.

Discarding heavily infested plants may be the best recommendation for those plants and for others around them. If you are not sure, isolate nearby plants for a few months until it can be determined whether they also have mealybugs or not. You may also want to isolate plants after treatment to avoid reinfestation. There are also houseplant insecticide products available to treat mealybugs on plants. Be sure that the plant you want to treat, and "mealybugs," are listed on the label. Check the label to see if the product is safe for use indoors, or move the plant outside for treatment. Some plants are very sensitive to chemical sprays, and on these plants a lower rate of application is usually given on the label. Sensitive plants include Boston Ivy, Maidenhair and Pteris ferns, some species of Crassula, African violets, Gloxinia, Orchids and Begonias. If you do choose to treat a plant, you need to apply it so thorough coverage of the plant is achieved. Applications may have to be repeated (see label directions) if mealybugs reappear. This may occur because some of the mealybugs may be well hidden and may not come in contact with the insecticide, or because the mealybugs may have been in a non-susceptible stage (e.g. eggs) when the application was made.

*Prepared 2005 by Carolyn Klass, Senior Extension Associate, Dept. of Entomology, Cornell University. Updated 2012*

*Source: <http://entomology.cornell.edu/cals/entomology/extension/idl/loader.cfm?csModule=security/getfile&PageID=859233>*

## Fresh Now...from NY Farms: Winter Squash

**Nutritional Value:** In general, winter squash are high in betacarotene which is converted to Vitamin A in the body. Vitamin A is needed mainly for proper eyesight (adjusting to night vision), proper immune functioning (fighting infections), and for maintaining healthy skin. Acorn squash is also a good source of calcium. Butternut and hubbard are very rich in beta carotene. One cup of either will give you all the vitamin A you need for a day and about one third of your vitamin C needs. The beta carotene content -- and therefore its vitamin A value -- actually increases during storage.

Winter Squashes are low in fat and high in complex carbohydrates which make them excellent energy sources. Squashes are also rich in potassium. Winter squash has more natural sugars, carbohydrates, and vitamin A than summer squash.

According to Chinese medicine, squash helps to reduce inflammation. The seeds are nutritious too; roasted and lightly salted, they are an excellent source of protein and B vitamins.

### Eating—Now That's Easy

To prepare winter squash, cut the squash in half lengthwise and scoop out the seeds. Place the squash cut side down in a pan. Add a little bit of water to the pan to help prevent scorching. Cook in the oven at 375°- 425° F till a fork can easily pierce the flesh. Serve as is or scoop out onto a plate. You can top the squash with butter, herbs, or applesauce. Or scoop out the flesh, mix it with raisins and apples (sauteed or sauced) and put it back in the shell and reheat for a fun treat. You even make soup by pureeing the flesh with stock and herbs (butternut squash soup with a dollop of applesauce is delicious). If you like a more savory rather than sweet squash, try adding cumin, curry, thyme, sage, oregano, or similar herbs and spices.

**Selection Tips:** Look for winter squash that is firm and without severe blemishes. The squash should not have wet-looking spots or wounds. Winter squash with some sort of stem attached will store longer.

### Varieties:

**Acorn:** They look like large dark green acorns (surprise!). Their dry, orange flesh even has a slightly nutty flavor! Perfect for stuffing and great baked.

**Buttercup** – Hard, thin-skinned, dark- bluish green squash with a round “cap” on top. Newer varieties may be more pumpkin- like in color and don't have the telltale cap. Their bright orange flesh is tender, sweet, and smooth when steamed and drier and denser when baked

### Butternut



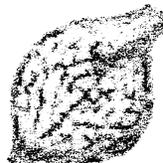
Peanut- shaped and colored with deep orange flesh that is reminiscent of butterscotch. Tasty baked and topped with butter or syrup, or pureed into soups. The highest in vitamin A.

### Delicata

These elongated green and yellow striped squash with tender yellow flesh are best when steamed or baked, and younger ones may even have tender enough skin to eat once cooked.



### Hubbard



Dark green to blue- gray squash that weigh anywhere from 5- 20 pounds, these bumpy, thick- skinned squash have sweet, dry, orange flesh. Better than pumpkins for pumpkin pie!

### Kabocho

Similar to a buttercup with a rough texture, this squash has yellow flesh that is sweet, rich tasting, tender, and dry, like a cross between a sweet potato and pumpkin. It has the highest sugar content and is great served baked with butter or stuffed.

*Source: Inside Dirt, October 2003.*

## Growing Garlic: Some Expert Advice

**Timing:** Garlic should be planted in early to mid-October in Upstate New York.

**Soil Preparation:** Before planting, work into the soil a complete fertilizer (5-10-10) at the rate of two pounds per 100 square feet of garden area. Just before planting, scatter an equal amount of fertilizer on the surface. Soils with high organic matter such as compost and manure are preferred.

**Planting:** Each garlic plant produces a bulb made up of about 10 cloves. Divide and plant these cloves individually at 3- to 4-inch intervals in rows 18 inches apart. Plant each clove in a 2-inch deep furrow, with the root portion down and cover with no more than an inch of soil above the tip of the clove.

**Mulching:** Mulching with straw over the rows will help garlic plants survive winter conditions. At the first sign of growth in early spring, remove the mulch. Garlic usually resumes growth in early April.

**Fertilizing:** When the plant has grown to about 6 inches tall, sidedress at the rate of two pounds of the 5-10-10 fertilizer per 50-foot row. Scatter the fertilizer evenly in a line about 3 inches away from the plant.

**Weed and Drought:** Weeds and drought are two major enemies of garlic. A weekly weed control program (mechanical cultivation) is a must. Yield will go down sharply if garlic experiences any drought during the season. Ideally, it should receive an inch of water (rain and irrigation) per week during leaf development and 1½ inches of water a week after bulbs begin to form in June. Stop irrigation a couple of weeks before the crop is harvested in late July or early August.



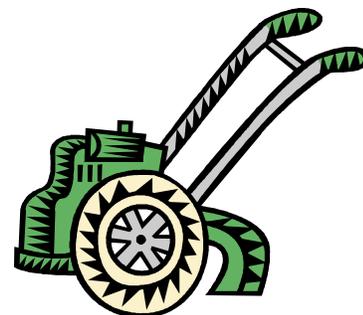
## Storage of Equipment

Putting away the lawnmower and/or garden tiller is often a haphazard process by owners. We simply push it into the shed thinking we'll use it again before the season's end. Before we know it, the cold weather is here and we fail to take the time to venture out to the shed to properly store our equipment. When spring rolls around and we have difficulty starting the engine or find that we need to order a part that won't arrive for another month, we only have ourselves to blame.

### Steps to do:

- Drain tank by running engine until tank is dry.
- With engine warm, drain crankcase and refill with fresh oil.
- Remove spark plug, pour one ounce of (S.A.E.) number 20 oil into cylinder and spin flywheel slowly to spread oil. Replace spark plug.
- Oil or grease any bearings or fittings as specified in the owner's manual.
- Remove all dirt and chaff.
- Replace worn parts or order new parts, if needed.

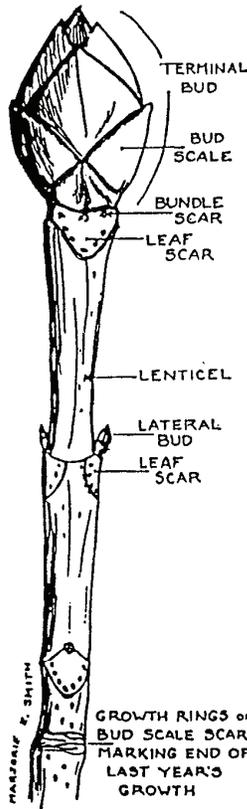
**By all means, read your owner's manual and follow instructions for proper storage.**



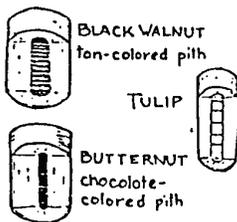
# Winter Tree ID

## Winter Tree ID How To Be A Twig Detective

HORSE CHESTNUT TWIG



SOME TWIGS WITH "CHAMBERED" PITH



Everyone shares in the excitement of spring when the foliage of deciduous trees and shrubs begin to unfold. At this time, we once again begin to notice and appreciate the trees which have been last on our winter list of attention-getters. It is also the time when many of us are again able to distinguish between the different kinds of trees present in our landscapes. While summer foliage characteristics are an excellent means of plant identification, they are of no use to us in fall and winter after the foliage is gone. There are, however, a number of winter bud and twig characteristics which can be used to identify trees and shrubs. Learning to use these characteristics can be an enjoyable and rewarding winter activity which will help you appreciate trees all year 'round.

Twig characteristics vary from species to species. They may be smooth and glabrous, with short hairs, scales, resinous dots or a waxy bloom.

Buds contain a number of miniature leaves and/or flowers. Between species, they vary in size, shape, color, and how they are arranged on the twig.

Bud scales protect the content of the buds. Depending on the species, buds may be covered by one to many scales. Some buds are covered by no scale at all and are termed "naked".

Leaf scars occur directly beneath the buds. They vary in shape and mark the area where the previous year's leaf was attached.

Bundle scars are the remains of the veins which carried water and nutrients to and from the leaf. The number of bundle scars vary between species. There may be only 1 or as many as 5 or 7 bundle scars or many tiny scars in a circular arrangement.

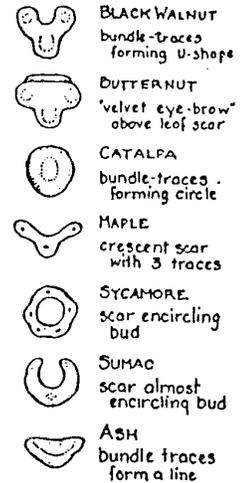
Lateral buds are those buds which occur along the sides of the twig. They may be arranged opposite, alternate or whorled in 3's.

In the center of each twig is a soft, pulpy area known as the pith which may be white or brown. The character of the pith varies between species. It may be:

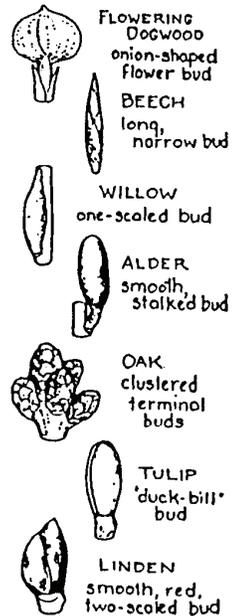


solid, chambered, diaphragmed or hollow.

### SOME DISTINCTIVE LEAF SCARS



### SOME DISTINCTIVE BUDS

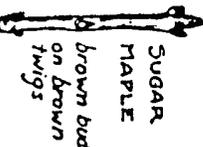
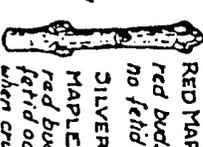
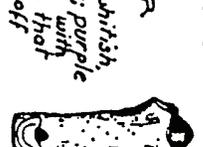
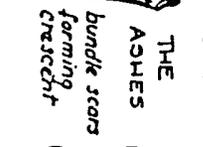
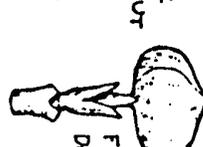


# Some Clues for Twig Detectives

## SOME CLUES FOR TWIG DETECTIVES

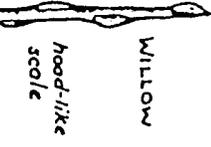
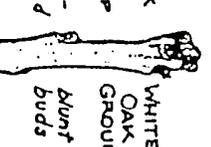
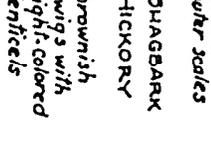
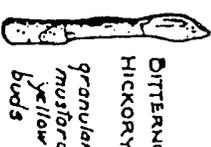
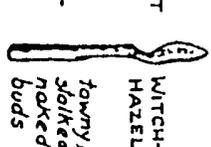
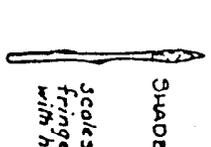
### TREES WITH OPPOSITE BRANCHING

**BUDS** 1. *Smooth buds; crescent-shaped leaf scars with 3 bundle scars* 2. *Rough, dry buds* 3. *Large terminal bud* 4. *Onion-shaped flower bud* 5. *Often 3 buds of a node*

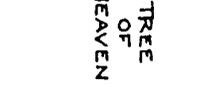
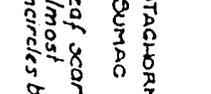
 SUGAR MAPLE brown buds on brown twigs	 NORWAY MAPLE green and red buds; keeled scales	 RED MAPLE red buds; no fetid odor	 BOX ELDER buds whitish, downy; purple buds with bloom that rubs off	 THE ASHES bundle scars forming crests	 HORSE CHESTNUT buds sticky	 FLOWERING DOGWOOD onion-shaped flower bud	 CATALPA Often 3 buds of a node
---	--	---	---	--	--	---	--

### TREES WITH ALTERNATE BRANCHING

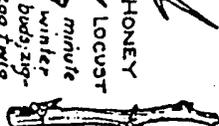
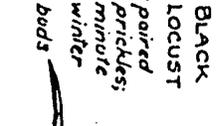
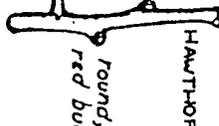
**BUDS** 1. *Single scale* 2. *Clustered terminal buds* 3. *Large end bud with loose scales* 4. *Flattened, yellowish buds* 5. *Long, narrow buds*

 WILLOW hood-like scole	 BLACK OAK GROUP sharp-pointed buds	 WHITE OAK GROUP blunt buds	 SHAGBARK HICKORY brownish twigs with light-colored leaflets	 DITTERNUT HICKORY granular, mustard-yellow buds	 WITCH HAZEL tawny, stalked, naked buds	 SHADBUSH scales fringed with hairs	 BEECH lateral buds divergent
--	--	--	---	--	--	--	--

**TWIGS** 1. *Thick twig, thick pith* 2. *Line encircling twig at each node* 3. *Knob-like twigs* 4. *Green twigs*

 TREE OF HEAVEN	 STAGHORN SUMAC leaf scar almost encircles bud	 TULIP 'duck-bill' terminal bud	 SYCAMORE leaf scar encircles bud	 GINKGO twigs peeling in silky fibres	 SASSAFRAS only one bundle scar
---	---	--	--	--	--

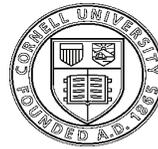
**CATKINS in winter** **THORNS** **BUNDLE-SCAR** U-shaped, chambered pith

 GRAY BIRCH single catkin at end of twig	 WHITE BIRCH white, peeling bark	 YELLOW BIRCH dark, peeling bark	 SPECKLED ALDER mahogany-colored catkins	 HONEY LOCUST minute winter buds; zig-zag twig	 BLACK LOCUST paired prickles; minute winter buds	 HAWTHORN round, red buds	 BLACK WALNUT dull gray terminal bud	 BUTTERNUT yellow-brown twigs with elongated terminal buds
---	---	---	---	---	---	--	---	---

Small drawings by May T. Watts. Accompanying text adopted from her "Winter Twigs", a Morton Arboretum Bulletin. Used by permission of the Morton Arboretum. Irene Lekstutis, Horticulture Program Assistant.

Source: Tompkins County Home and Garden.

**This is your last issue for 2012  
2013 Subscription Form below!**



Cornell University  
Cooperative Extension  
Ontario County

Hello Garden Friend,

This years gardening season came early, but a cold snap in April did in much of the crops on plums, peaches, apricots, pears, cherries, apples, and in some areas strawberries. Once the vegetables and flowers got planted it was hot and soon dry that lasted much of the growing season. Having the ability to water your garden and landscape plants was key in having a successful year.

If the dry conditions were not enough, along came the worst army worm infestation in many years. This pest wiped out a number of home lawns with greater damage to hay and wheat fields. Blossom end rot on tomatoes and peppers was prevalent as a result of the dry conditions.

Folks were concerned that their tomatoes weren't ripening which most likely was a result of high temperatures. The Emerald Ash Borer has not yet been identified as being in Ontario County. The Lily Leaf Beetle and the Brown Marmorated Stink Bug continue to spread across Ontario County. A new threat to fruit growers is the Spotted Wing Drosophila, a fruit fly that lays its eggs within the developing soft fruit. The odd pest situation was the number of calls concerning Blue Spruce being eaten by the Gypsy Moth raising concern in my mind that we may be dealing with a different strain of Gypsy Moth.

To keep informed and up-to-date on horticultural topics, don't miss out on next years *Inside Dirt* newsletter for 2013. Sign up today!

Have a garden friend, let them know as well, or better yet, give a subscription to them as a holiday gift. We will send a certificate to inform your friend of your gift.

I look forward to receiving your subscription. The fee is \$15.00 for 9 issues (February through October).

Russell Welsler  
Sr. Extension Resource Educator



**To subscribe:** fill out this form and return this tear off section to: Cornell Cooperative Extension, Inside Dirt, 480 North Main Street, Canandaigua, NY 14424. Each subscription is \$15.00.



**Please make check payable to: Cornell Cooperative Extension**

My subscription



Name: \_\_\_\_\_



Address: \_\_\_\_\_



City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_



Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Gift subscription for a friend



Name: \_\_\_\_\_



Address: \_\_\_\_\_



City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_



Phone: \_\_\_\_\_ Email: \_\_\_\_\_



Cornell Cooperative Extension  
of Ontario County  
480 North Main Street  
Canandaigua, NY 14424

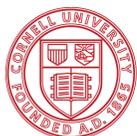
Non-Profit  
U.S. Postage Paid  
Permit # 22  
Canandaigua, NY 14424



Citrus Mealybug.  
Photo from [www.forestryimages.org](http://www.forestryimages.org)  
*United States National Collection of Scale Insects.*  
*Photographs Archive, USDA ARS.*  
*Mealybugs on Houseplants article on page 10*



Indian Meal Moth Adult (length less than 1/2 inch).  
Photo by Gary Alpert,  
*Harvard University; Bugwood.org*  
*Indian Meal Moth article on page 9.*



**Cornell University**  
Cooperative Extension  
Ontario County

This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide usage in New York State should be directed to the appropriate Cornell Cooperative Extension specialist or your regional DEC office.

### **READ THE LABEL BEFORE APPLYING ANY PESTICIDE!**

Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products is made or implied.

The information given herein is supplied with the understanding that no discrimination is intended.

*Building Strong and Vibrant New York Communities*

Cornell Cooperative Extension provides equal program and employment opportunities.