



# “What’s Growing On...”

**Inside this issue:**

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Rutgers on the Radio	1
From the Desk of.....	1
For the Birds	2
Master Gardener Classes	3
Earth/Arbor Day	3
Critters & Creatures	4
Aster Yellows Disease	4
Marcescence	5
You’re a Master Gardener When.....	6
Hydrangeas	7
Companion Planting	7
Shamrocks	8
Leaf Spot	9
Snowdrops	10
Witch Hazel	10
Garden Space-saving tips	11-12
Pruning Rhododendrons	12-13
MGs at the Eco-Fair	13
Garden Tips for March	14
Gardening Tips for April	15
Gardening Tips for May	16
Available Fact Sheets	17

Attachments:  
Newsletter Renewal  
Monarch Teach Network  
Seed Starting 101  
2016 Tomato Order Form



## RUTGERS COOPERATIVE EXTENSION ON THE RADIO

For agriculture news and horticultural tips, listen to me, Pam Burton, on the RCE Agricultural Program on Monday, Tuesday, Wednesday & Thursday on SNJ Today AM 1240 announcing local workshops, seminars, and horticultural tips.



### From The Desk of Pam Burton

Rutgers Master Gardeners of Cumberland County have declared 2016 the year of the Pollinator. We are in the process of transforming our gardens at the Extension Education Center into educational gardens by identifying plants and adding informative labels for the public. There will be demonstration plots highlighting information found in Rutgers Fact Sheets such as The Stake and Weave Method of Training Tomatoes (Fact Sheet 1102). Education is our product and spring is full of opportunities to carry that mission to fruition. Please stop by next time you are in the area.

As Home Horticulturist, I am up-close and personal to all of the interesting things that homeowners bring to our office and it does ensure that no two days are ever alike. Entomologist, Joe Mahar, mentioned the possibility of some odd and unusual insect specimens that might occur this spring due to the roller-coaster of weather this past winter. Bring it on! The more unusual the better – a true learning experience!



*Rutgers Cooperative Extension 100 Years of Service in Cumberland County*

## For the Birds



Maybe you'd like to start a new hobby...or maybe you've been bird-watching for a long time. In either scenario, there are several free Rutgers Fact Sheets that provide recommendations for Birding in the Garden State. I have spent many happy hours with my Mom and Grandmom noting the harbingers of spring as the bluebirds, robins and finches visited our gardens.

Rutgers Fact Sheet 1010, "Birding in the Garden State: How to Get Started", provides a shopping list of what you might need to get started, including a good pair of binoculars and a bird identification book. I might also recommend packing a hat, bug spray, sunscreen and water just in case you are out longer than expected!

Rutgers Fact Sheet 1011, "Landscaping to Create Backyard Bird Habitat", offers a wide variety of native trees, shrubs and vines to choose from to attract birds. Birds enjoy some of the same summer-fruiting plants as we do, including raspberries, blackberries and blueberries, so make sure you plant enough to share or use bird netting. It's also important to add fall-fruiting and winter-fruiting plants for the birds, to provide food, cover and nesting sites, should they need to over-winter in New Jersey.

The sighting of a hummingbird holds special significance for me and my family. Hummingbirds enjoy a habitat near water where there are a variety of nectar bearing flowers that flower from May through September. They prefer an area that has rough-barked trees and shrubs nearby for shelter, perching and nesting. Hummingbirds seem to be most attracted to red tubular flowers, but a successful hummingbird garden includes a variety of annuals, perennials and biennial natives. If you are limited in space, consider a hummingbird window garden, so you can enjoy the view.

Rutgers Fact Sheet 1022 offers a comprehensive overview of the types of backyard birdfeeders as well as the types of food that attract certain species of birds.

Rutgers Fact Sheet 034 offers practice standards on building bird nest boxes as part of the New Jersey Forest Stewardship Series. Specific nest box requirements are provided for 15 species of birds including bluebirds and martins. On a cautionary note, house sparrows have been known to move into nesting boxes intended for more desirable songbirds, so be very diligent in your sparrow watch!

By requesting these 4 free Rutgers Fact Sheets, you will be able to get started on your lifelong journey of bird-watching by creating a landscape, complete with feeders and bird boxes that will attract birds to your yard.

### Resources:

<http://www3.ag.purdue.edu/entm/wildlifehotline/pages/sparrows.aspx>

Penn State University; <http://extension.psu.edu/natural-resources/wildlife/landscaping-for-wildlife/pa-wildlife-6>

North Carolina State University; <http://ncsu.edu/goingnative/howto/design/wildneed/humbird.html>

Clemson university; [http://www.clemson.edu/extension/natural\\_resources/wildlife/publications/haven\\_for\\_hummingbirds.html](http://www.clemson.edu/extension/natural_resources/wildlife/publications/haven_for_hummingbirds.html)

## Master Gardener Classes Open to Public

Do you have gardening questions? Here's your chance to ask the experts.

Join us for the following Master Gardener classes that will be held at the Extension Center, 291 Morton Avenue, Rosenhayn, from 9am-12pm in March, April and May. These classes are open to the public and the cost is \$20.00 per class:

- March 1: Turf Culture, Steve Rettke
- March 15: Credits: 6 cat. 13, 3B & PP2; Turf Pest Management, Steve Rettke
- March 17: THURS!; Organic Gardening, Doug Hall
- March 22: Credits: 6 cats. 13, 3A & PP2; Plant Diseases, Andy Wyenandt
- March 29: Stormwater/Rain Garden, Sal Mangiafico
- April 5: 2 CORE Credits; Pesticides, Steven Bross, DEP (1 hour only)
- April 12: Credits: 6 Category 7A; Structural & Household Pests, Heather Lomberk, Mosquito Control Commission
- May 3: Status of Beekeeping in NJ; Ned Morgan
- May 10: Animals, Friend or Foe, Brooke Maslo
- May 17: Plant Growing, Jim Johnson & Wes Kline
- May 24: Volunteerism/Team Building, Julie Karavan & Pam Burton



## Earth Day & Arbor Day



There are two designated days in April that call for recognition of the environment. April 22, 2016 marks Earth Day. In 1962, Gaylord Nelson flew to Washington and convinced President Kennedy that it was time to give visibility to the environmental issue by going on a national conservation tour. While the tour was not a success, the idea germinated into a spontaneous response at the grassroots level and has sustained its' momentum with annual earth day celebrations.

April 29, 2016 is Arbor Day and the Northern Red Oak, *Quercus rubra*, is the New Jersey state tree. The Red Oak is a relatively fast growing tree that can reach a height of 60-70 feet and a spread of 40-60 feet. It has been used in communities as a street tree, or in parks where the overhead height is not a problem, but shade is a welcome feature. The acorns of the Red Oak are small and easily broken which is also appealing in an urban setting. The Red Oak has a beautiful showy red fall foliage and is also valuable for the wood which is used for making furniture, flooring, paneling and veneer.

Take some time out of your busy schedule on one or both of these days to celebrate the natural resources that surround us.

### Resources:

Towson University: <http://www.towson.edu/tutreeclub/NorthernRedOak.htm>

University of Florida: <https://edis.ifas.ufl.edu/st560>

Sierra College/Natural History Museum: <http://www.sierracollege.edu/ejournals/jscnhm/v1n2/earthday.html>

University of North Dakota: [http://www.und.edu/org/earthday/earth\\_day\\_origin.htm](http://www.und.edu/org/earthday/earth_day_origin.htm)



## Critters & Creatures

### Good News/Bad News: Spring has Sprung



#### *Good News:*

As a kid growing up, we knew it was spring when we'd hear the peepers peep and we'd all run outside to listen. But that begs the question...Why do peepers peep? Those of us lucky enough to live near water consider them a harbinger of spring. The elusive male peepers make up for their small size by their high-pitched, loud piercing call. They have vocal sacs that are larger than other frogs and emit a note that by itself can sound like the peep of a chick, but when repeated in succession has been described as jingling bells. The male peepers are calling for mates. Spring Peepers usually call during mating season, but they do have a separate call that they use when involved in a conflict or fight. You may also hear them after rain storms and before hibernation. Whatever the reason, they are a welcome spring sound.

#### *Bad news:*

Spring also makes its' presence known with slugs and snails. Ugh. Rutgers Fact Sheet 397 entitled "Slugs and Snails in the Vegetable Garden" give various recommendations for the control of slugs and snails. One recommended non-chemical control is to place a grapefruit skin upside down on the garden soil surface. Turn them over every day and remove the slugs. Another non-chemical control recommendation is to bury pie tins in the soil just below the soil surface and fill the tin with beer. You will find drowned slugs each morning for removal. Change out the beer every 3 or 4 days. Adding flour may help them become sticky. You are allowed to grin as you discard the nasty creatures.

#### Resources:

[http://www.fcps.edu/islandcreekes/ecology/spring\\_peeper.htm](http://www.fcps.edu/islandcreekes/ecology/spring_peeper.htm)

University of Rhode Island: [http://www.uri.edu/cels/nrs/paton/LH\\_spring\\_peeper.html](http://www.uri.edu/cels/nrs/paton/LH_spring_peeper.html)

University of Michigan: [http://www.biokids.umich.edu/critters/Pseudacris\\_crucifer/](http://www.biokids.umich.edu/critters/Pseudacris_crucifer/)

## Aster Yellows disease on Echinacea

Statistics suggest that 300 species of plants in at least 38 families are subject to the aster yellows disease. Instead of the customary purple, the flowers of an echinacea or coneflower are almost completely green and have several green growths emerging from the center of the blossom. The secondary flower heads actually emerge from the primary flower head, giving the plant a sci-fi look.

The disease is caused by leafhoppers during feeding when they transmit a bacterium-like organism called phytoplasma that lives in the plants. Once a plant has aster yellows there is no cure and the affected plants need to be destroyed.

There are no crops that offer complete disease resistance to aster yellows. One recommended control method is to avoid planting a susceptible crop next to a yellows-infected crop. Rutgers Fact Sheet 237 on Leafhoppers provides some information on the control and management of the leafhoppers. In addition to destroying all affected plants and the surrounding weeds, as previously mentioned, the Fact Sheet also notes that there are crops that offer some resistance to leafhopper feeding. If you are considering using an insecticide you need to begin treatments as soon as leafhoppers are noticed, and of course, as always, read and follow the insecticide labels very closely. The Label is the Law.

#### Resources:

University of Illinois Extension: <http://extension.cropsci.illinois.edu/fruitveg/pdfs/903.pdf>

University of Minnesota: <http://blog.lib.umn.edu/efans/ygnews/2012/07/aster-yellows-common-in-cone-f.html>

Iowa State University: <http://www.ipm.iastate.edu/ipm/info/plant-diseases/aster-yellows>

University of Wisconsin: <http://hort.uwex.edu/articles/aster-yellows>

## Marcescence

A combination of questions regarding the same topic came in to the Help Line recently. The questions were why do some trees such as oak and ash keep their leaves all winter? Is it an advantage to the species? What other kinds of trees retain leaves? We'll take these questions one at a time.

Why do some trees such as oak and ash keep their leaves all winter? The term used to describe the retention of leaves that would otherwise be shed during autumn is marcescence. It refers to an incomplete development of an abscission layer at the base of a leaf's petiole. Marcescence can occur when cold weather or frost interrupts the abscission process, or the process that "unglues" the leaf. It could be related to the origin of the seed. If the tree is from an area south of here, those trees do tend to hold onto their leaves a little longer in the fall. There could be management issues that could result in leaf retention as well, including fertilizing too late in the fall.

The second question: Is it an advantage to the species? This question is subject to some speculation. It has been suggested that retained leaves may deter browsing animals. Leaf retention could also benefit trees through nutrient cycling where smaller understory trees with smaller root systems hold onto their leaves and are able to retain and recycle their nutrients

Lastly the question of What other kinds of trees retain leaves? The homeowner actually was aware that some oak tree species retained their leaves which are the most common tree to do so. She also mentioned ash, but in addition to those two trees, I also found references to American beech, witch hazel, hornbeam and hophornbeam.

Regardless of the reason for marcescent leaves, those leaves will be pushed off when growth begins next spring. Until then, they do add a bit of texture to the woods and possibly some small amount of shelter for the birds while they have had to deal with this winter of wicked weather.

Resources:

Penn State Extension: <http://extension.psu.edu/natural-resources/forests/news/2012/winter-leaves-that-hang-on>

North Dakota State University: <http://www.ag.ndsu.edu/news/columns/hortiscope/plonearticle.2012-11-21.1615189336>

University of Illinois Extension: <http://web.extension.illinois.edu/askextension/thisQuestion.cfm?ThreadID=11455&catID=195&AskSiteID=87>



## You know you're an Extension Master Gardener when . . .

*Many thanks to North Carolina Cooperative Extension for these notable quotables...*

- At least once a day you get naked and do gymnastics in front of a mirror looking for ticks.
- You grab other people's banana peels, coffee grinds, apple cores, etc. for your compost pile.
- You have to wash your hair to get your fingernails clean.
- All your neighbors come and ask you questions.
- You know the temperature of your compost every day.
- You spend more time volunteering than at home.
- Your spouse never knows where you may be on any given day.
- You buy a bigger truck so that you can haul more mulch.
- You enjoy crushing Japanese beetles because you like the sound that it makes.
- Your boss makes "taking care of the office plants" an official part of your job description.
- Everything you touch turns to "fertilizer".
- Your non-gardening spouse becomes conversant in botanical names.
- You find yourself touching leaves, flowers and trunks wherever you go.
- When considering your budget, plants are more important than groceries.
- You dumpster-dive for discarded bulbs after commercial landscapers remove them to plant annuals.
- You plan vacation trips around the locations of botanical gardens, arboreta, historic gardens, etc.
- You sneak home a 7 foot Japanese Maple and wonder if your spouse will notice.
- Your neighbors recognize you in your pajamas, rubber clogs and a cup of coffee.
- You always carry a shovel and a plastic bag in your trunk as emergency tools.
- After purchasing \$300 worth of plants, you enter "groceries" in your check register.
- You appreciate your Master Gardener badge more than your jewelry.
- You spend more time chopping your kitchen greens for the compost pile than for cooking.
- You like the smell of horse manure better than Estee Lauder.

Resource:

NC Cooperative Extension: [http://www.ncstategardening.org/extension\\_master\\_gardener/statewide/is\\_the\\_program\\_right\\_for](http://www.ncstategardening.org/extension_master_gardener/statewide/is_the_program_right_for)





## Hydrangeas

The color of *Hydrangea macrophylla* or Bigleaf Hydrangeas is related to the cultivar and the availability of aluminum which is directly affected by the pH of the soil. There are non-bluing cultivars and white cultivars where the pH will not entirely change the color of the flower.

Simply put, the absence of aluminum produces pink flowers and the high availability of aluminum produces blue flowers. If you regulate the aluminum you regulate the color. Aluminum becomes more available at lower pH's and a higher pH can lock up the aluminum particles making them unavailable to the plant.

If you desire pink flowers, then aim for alkaline soils with a pH of 6.5 or higher. Avoid supplying aluminum to the plants and consider a fertilizer with no aluminum and a higher level of phosphorous. Phosphorous will help prevent aluminum uptake. It was also suggested that you could add lime, however, be certain not to raise the pH too significantly or it can result in iron deficiency.

On the other hand, blue flowers will be produced in acidic soil somewhere between a pH of 5.5 and lower. To lower your pH you can apply sulfur. Avoid the use of aluminum sulfur to reduce the chance of aluminum toxicity.

The changing of the pH can only alter the color and not the intensity of color which is dependent upon the cultivar. Also, this change may not happen as rapidly as you would like. It can, in fact take several years.

You may have purple color or find a mixture of blue and pink on the same plant at a pH between 5.5 and 6.5. This situation is a classic example of why you need to check the pH of your soil before planting. Rutgers Fact Sheet 1152 offers details on *Hydrangea macrophylla* as well as four other species of *Hydrangea* that are grown in New Jersey.

### Resources:

The United States National Arboretum: [www.usna.usda.gov/Gardens/faqs/hydrangeafaq2.html](http://www.usna.usda.gov/Gardens/faqs/hydrangeafaq2.html)

Illinois State: [www.web.extension.illinois.edu/state/newsdetail.cfm?NewsID=29303](http://www.web.extension.illinois.edu/state/newsdetail.cfm?NewsID=29303)

University of Georgia

## Companion Planting

There is a tale of 3 sisters where corn, beans and squash planted together in one hill act as companion plants. The beans are nitrogen fixing legumes that helps the nitrogen loving corn grow. The beans can then use the tall corn stalks for support. At the same time, the squash provides a dense cover that helps with weed control and just might deter raccoons from invading the corn. This example of companion planting is credited to the early Native American Indians. The myth of the 3 sisters was that they could not get along so they are convinced to use their difference to not only help each other, but actually to become dependent on one another.

### Resources:

Cornell University: <http://www.gardening.cornell.edu/factsheets/ecogardening/complant.html>

Penn State: <http://extension.psu.edu/plants/master-gardener/counties/susquehanna/penn-state-master-gardener-articles/good-neighbors-make-good-gardens-companion-planting>

## Shamrocks

The official Irish shamrock is the *Trifolium dubium* with a yellow flowered clover, but due to its difficulty to grow indoors, the nurseries and florists have selected the similar looking but easy to grow indoors plant known as *Oxalis*. *Oxalis acetosella* is the familiar shamrock that is found in grocery stores this time of the year. It grows to about 6 inches and has tiny dark green leaves of a triangular shape which fold up at night. *Oxalis* likes cool air, moist soil and bright light. They also enjoy being a bit crowded in the pot.

If you give or get an oxalis for St Patrick's Day, keep in mind that these plants go through a dormancy two to three times a year. During the dormancy, the plant will look sick and lose its' leaves, but don't give up on it. Keep it in a cool dark place, stop watering the oxalis and let the leaves die back then remove the dead brown ones. It's lucky enough to sleep for about three months, when new shoots will appear and then it can be moved back into the light. It's at the end of a dormancy period that you can divide your shamrocks by taking them out of the pot and removing and potting the small side bulbs. Shamrocks do not lend themselves well to a mixed basket of plants due to the dormancy considerations.

*Oxalis* are part of the Wood Sorrel family and there are many varieties of oxalis. Two are specifically mentioned in Rutgers Fact Sheet 939 which is entitled "Container Nursery Weed Control: Bittercress, Groundsel and Oxalis". Yellow woodsorrel, *Oxalis stricta*, creeping woodsorrel, and *Oxalis corniculata* are perennials and they cause serious problems in container nurseries. Information and control of both are addressed in the aforementioned Fact Sheet.

It can be noted that other *Oxalis* varieties may have yellow, white, pink, purple, or red flowers and grow as tall as 10 inches. The leaf color ranges from dark green to deep red. Although I am uncertain as to which variety it was, I have seen an oxalis with deep red leaves planted in a unique container and used as a centerpiece in an outdoor living space which was really very pretty.

Have a safe, happy and healthy St Patty's Day!

### Resources:

Rutgers NJAES Cooperative Extension: <https://njaes.rutgers.edu/weeds/weed.asp?oxalis>

University of Vermont: <http://www.uvm.edu/pss/ppp/articles/shamrock.htm>



## Leaf Spots

Rutgers Bulletin E160 entitled "Plant Disease Control" mentioned Leaf Spots as a specific spring time disease caused by fungus. Leaf spots are not restricted to just photinia, but can occur on many species of ornamental plants. Additionally, there are various types of leaf spot.

Leaf spots frequently have a light-colored center with a distinct dark-colored border. They are caused by a leaf-inhabiting fungi that discolors and kills small regions of tissue between or on the leaf veins.

Spring is a season that sees many disease problems in the landscape and the problems are worse when the plants are under stress. The bulletin emphasizes that ... "Improving plant vigor" is the most important aspect of disease control in the home landscape"...

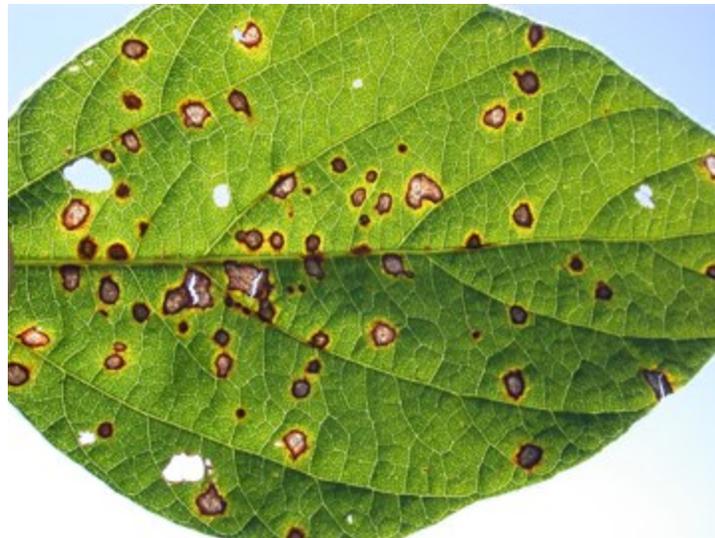
Given that, the following tips are recommended for proper management of leaf spots:

- Remove leaf litter and apply fresh mulch. The spores of most leaf spot fungi are produced in the dead leaf litter on the ground and get splashed onto developing leaf tissue at budbreak.
- Irrigate early in the morning hours.
- Avoid overhead watering that might lead to excessive moisture remaining on the foliage. Severe spotting can occur when moisture remains on leaf surfaces for long periods of time, and individual spots may grow together to form larger leaf blotches.
- Do not prune during growing season. New growth is highly susceptible to leaf spot.
- Provide air circulation even if it mean thinning out a few plants

Once leaf spots are visible, please note any fungicide applied is ineffective. However, fungicide can be applied according to the label for prevention and treatment of leaf spots on new growth. These are recommended in Rutgers Bulletin E160 and may require a certified pesticide applicator.

Resources:

Clemson University: <http://www.clemson.edu/extension/hgic/plants/landscape/shrubs/hgic1081.html>





## Snowdrops

Masses of snowdrops are an early spring delight. This spring-flowering ephemeral bulb is known as *Galanthus nivalis*. The word *Galanthus* comes from the Greek words *gala* which means milk and *anthis* which means flowers referring to its color and shape. This is an heirloom plant with its origins circa 1875 and is native to Europe.

Snowdrops have fresh green foliage with delicate pure white flowers that hang down and can be used as cut flowers, despite their short stems. They are hardy in zones 3 to 9, they generally grow 6 inches or less and they prefer cool, moist partially shaded, but well drained areas.

Snow drops are an easy perennial to grow and while they form clumps they do not spread aggressively. Plant them as bulbs about 2-3 inches deep and about 2 to 4 inches apart and do not let the bulbs dry out. Don't disturb them for several years which will encourage better blooms. You can divide the plants in spring when the clumps become overcrowded, which may be every 3 to 4 years. It's best to divide or separate the clumps while "in the green" which means before the leaves start to wither and include quite a bit of soil attached to the roots as you divide the snowdrops. Snow drops make a wonderful naturalizing plant to use in a cool moist and shady area. Share them with your neighbors, relatives and friends!

### Resources:

Cornell University: <http://www.gardening.cornell.edu/homegardening/scene4bcd.html>

University of Washington Botanic Gardens: <http://depts.washington.edu/uwbg/news/tag/winter-garden/>

Cobb County Extension Service: <http://www.caes.uga.edu/extension/cobb/anr/Documents/snowdrops.pdf>

## Hamamelis vernalis, Vernal Witch Hazel

Although perhaps not as well-known as other spring indicators, Vernal Witch Hazel blooms are among my favorites as one the first group of woody plants to flower in the spring.

The flowers are small and in tight clusters along the short lateral stems and have a wonderful fragrance that is welcome especially in late winter and early spring. I've heard the flowers unscientifically described as looking somewhat like spiders in form and I happen to agree. The flowers are variable in colors from bright yellow to dull orange to red-orange depending on the cultivar. The overall effect is spectacular and this is a definite must for taking stem cuttings inside to force for both the flowers and the fragrance. It has been noted that the four narrow flower petals have a slight waviness along their length and a curvature at their tips, which elongates on warm and sunny days and withdraws on cold days to avoid damage by freezing temperatures which helps extend the flowering time.

The shrub itself is native to the United States and is hardy in zones 3–8. It has a slow growth rate and generally matures at about 8' by 8'. Vernal Witch Hazel prefers full sun to partial shade and likes moist soils. The stem color is grayish brown in older stems and quite attractive. The one area of problem with this plant is that it does not readily drop its leaves so while you are enjoying the wonderful treat of very early flowers, they can be somewhat obscured by the persistent leaves.

Use this plant as a specimen, in a group planting, naturalized along streambanks or as an informal barrier hedge. There is a tendency for this plant to sucker and if left unpruned will make an excellent choice for a natural screen. Vernal Witch Hazels are relatively problem free which is another reason to add this to your landscape plan. Remember to plant it in an area that best suits the conditions in which it thrives.

### Resources:

Ohio State University: <http://hvp.osu.edu/pocketgardener/source/description/hamalis.html>

Clemson State University: <http://www.clemson.edu/extension/hgic/plants/landscape/shrubs/hgic1091.html>

University of Illinois: [http://urbanext.illinois.edu/ShrubSelector/detail\\_plant.cfm?PlantID=398](http://urbanext.illinois.edu/ShrubSelector/detail_plant.cfm?PlantID=398)

"Manual of Woody Landscape Plants, Their Identification, Ornamental Characteristics, Culture, Propagation and Uses", Michael A. Dirr; Fifth Edition; Stipes Publishing; Copyright 1975

## Space-Saving Tips

If your garden space is limited, try a few of these space-saving tips:

### Stake and Weave Tomatoes

Are your tomatoes unwieldy and all over the ground by harvest time? Avoid that now by planning ahead as detailed in Rutgers Fact Sheet 1102, The Stake and Weave Training System for Tomatoes in the Home Garden. The fact sheet covers tomato selection, staking, spacing, the recommended twine to use, and pruning so that you can realize improved fruit quality and yield. This system enhances ease of harvest, less disease, improved spray coverage, larger fruit, and fewer damaged fruit or fruit with imperfections. You can easily incorporate this system into a raised bed with plastic mulch and drip irrigation.

### Raised beds

One of the most simplistic designs I like to see in a landscape is a raised bed garden of edibles and herbs. There are many benefits to constructing raised beds including better drainage, higher yields, an expanded growing season, easy maintenance, reduced soil erosion and less soil compaction. Raised beds are recommended at a width of 4 feet across for easy access with enough room between beds to push a lawn cart through. Another benefit to the senses when harvesting a raised bed garden is that they are quite beautiful given the variety of colors and textures in the assorted selected plants. You can expand the use of your garden space in raised beds by incorporating vertical gardening.

### Vertical Gardens

When you are planning your garden this year strongly consider vertical gardening for the many benefits it brings to your garden. Not only will you make the most of your garden space, vertical gardening can reduce disease problems by getting the fruit off the ground and allowing for air movement. It's easier to harvest fruit at eye level and can make it easier to spot any insect issues. The vertical structures will add interest to the garden and you can be creative in your choice of structure by recycling what materials you have on hand. Make certain the structure is very well secured, because as your garden flourishes the weight of the plants can become quite heavy.

### Container Gardening

If you don't have any garden space, it is still quite possible to plant some of your favorite vegetables, flowers and herbs in containers. There are a few tips to help you with the success of your vegetable container garden. The first is to try and pick dwarf or low-growing varieties of the vegetables. Taller varieties will tend to spread out and are unsuitable for container growing. There are some vegetables that do not adapt to growing in containers such as sweet corn and watermelons. Rutgers Fact Sheet 055, Container Gardening with Vegetables, specifically lists vegetables and herbs which grow well in a container. My choices would include Lettuce, Dwarf Tomatoes, Cucumbers, Sweet Basil, Chives, Parsley and Oregano.

To maximize space and production, you can sprinkle a few seeds of a fast-maturing crop like lettuce around the edge of a slower growing variety. I like to plant a small herb of basil at the base of a rangier plant like a tomato. The container you select should be large enough for root considerations and needs to provide adequate drainage. Drainage can also be helped by placing stones or crushed rock in the bottom of the container. It's recommended that a synthetic mix be used for this type of gardening for several reasons. The medium is better aerated and doesn't pack as tightly as

soil from the garden. It is disease and pest free and weighs considerably less than garden soil. The location of the planted container is dependent on the lighting requirements of the vegetables grown. However, the other consideration is the placement of the container which should be at least 12 inches away from stone and masonry due to the reflection of the heat from those walls. By far the most difficult aspect of growing vegetables in containers is the upkeep in watering. The restricted volume of the container makes it necessary to water frequently. It is not uncommon to have to water 2-3 times a day. Be careful with fertilizing container grown vegetables. It is easy to overfertilize plants in a container because of the small amount of growing medium. Rutgers offers a separate Extension Bulletin E079 entitled "New Jersey Vegetable Pesticide Control Recommendations for Home Gardens" for details on insect and disease control.

#### Resources:

North Carolina State University: <http://rutherford.ces.ncsu.edu/2011/07/vertical-gardening/>

University of Nebraska-Lincoln: <http://lancaster.unl.edu/hort/articles/2002/vertical.shtml>



## Pruning Rhododendrons

Rutgers Fact Sheet 1221, "Pruning Flowering Shrubs" provides specifics on how and when to prune. The first step is referred to as the 4 "D's" which are removal of dead, diseased, damaged or double-crossed limbs. After that remove any suckers that are found at the base of the plant and water sprouts which are those branches that are thick and are growing straight up through the plant. Remove any older wood that is no longer flowering. These good pruning practices will add to the benefit of the whole plant.

We were asked the other day if this is a good time of year to prune rhododendrons. In short, the answer is no.

Why? You will be cutting off the buds that will bloom this year. The time to prune rhododendrons is immediately after flowering. The Rutgers Fact Sheet 1221, "Pruning Flowering Shrubs" has a list of spring flowering shrubs that should be pruned immediately after flowering. In general, spring flowering shrubs are those that flower before June and it is on the one-year old wood that grew the previous year.

There are two types of pruning cuts and they are heading and thinning. When you prune back to a bud, that is called a heading cut. It's good to know that the direction that the top bud is pointing determines the direction of new growth. The proper way to prune for a heading cut, is  $\frac{1}{4}$  inch above the bud, sloping down and away from it at a 45 degree angle. Don't cut too close, or the bud may die. By pruning selectively with heading cuts, you can reduce the height of the shrub and retain its natural form.

If you take a limb back to the point where it originates, you have performed a thinning cut. Why would anyone want to do that? It will open up the canopy of the bush which will help with light penetration and air circulation. Thinning cuts should be made just above the side branches and roughly parallel to them. With thinning cuts, you will be able to reduce the overall size of the plant, without changing the natural form.

It is not recommended to use wound dressings or paint on pruning cuts. Make certain you make cuts into healthy wood and disinfect tools between each cut by spritzing with rubbing alcohol. Rutgers Fact Sheet 1221 has illustrated pictures of both a heading cut and a thinning cut.

## Pruning Flowering Shrubs (Crape Myrtles): Rutgers Fact Sheet 1221

One of the reasons we use crape myrtles in the landscape is because of their multiple functions for four season appeal. We get a long blooming time followed by an interesting seed head, but also have the value of peeling bark, fall color and their natural graceful form in winter months. One method of pruning crape myrtles that has become commonplace is also referred to as crape murder in the agricultural industry.

Some people have adopted the practice of chopping the tops off of the crape myrtle otherwise known as "topping". Although topping requires less skill, there are various reasons that people have chosen this method, but there are as many reasons to consider an alternative way of pruning rather than chopping off their tops.

Topping is detrimental to the plant because of the removal of large diameter stems which means the removal of large amounts of starches and food reserves. By removing the large diameter stems it also decrease the ability for the plant to produce food since the plant canopy is decreased. The exposed wood that is the result of topping is subject to disease and insect infestations. As well as negatively affecting the overall health of the plant, topping results in a shorter bloom time, and delayed flowering.

Numerous vigorous shoots originate from the top of the cut stems which ruins the natural form of the plant. The shoots are poorly attached and can break off in heavy winds or snow. If you do not have the joy of having a crape myrtle as part of your landscaping then consider your site location before buying the plant. There are many cultivars available in dwarf and compact sizes along with ground covers and shrubs as well as crape myrtles that can be grown in containers or hanging baskets.

Resources:

Clemson Cooperative Extension: <http://www.clemson.edu/extension/hgic/plants/landscape/trees/hgic1009.html>

NC State University: <http://pender.ces.ncsu.edu/2013/02/how-do-i-prune-crape-myrtle/>

University of Florida: <http://edis.ifas.ufl.edu/ep399>

Virginia Tech, Virginia Cooperative Extension: <http://pubs.ext.vt.edu/430/430-451/430-451.html>



\*\*\*\*\*  
**NEWS FLASH! Rutgers Master Gardeners at the 2016 Eco Fair at Wheaton Arts!**

Mark your calendars for May 7th to attend the Eco Fair at Wheaton Arts from 10 am until 5 pm, free admission, where Rutgers Master Gardeners will be there with Ramapo tomato plants, herbs, native pollinators and so much more!

The butterfly tent will be there for a hands-on, one-on-one educational experience with butterflies.

Rutgers Master Gardeners will once again sponsor a Children's Table and a Speakers Forum with timely topics.

For more information, call 856-451-2800, and ask for Pam, Ext 4 or Tammy, Ext 1.

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## Garden Tips for March

- Till or turn the vegetable garden soil when it's at the proper moisture level. FS129
- Add lime to lawns and gardens only when a soil test recommends it. FS797
- Sow seeds of dahlia, snapdragon, verbena, leaf lettuce, cabbage and broccoli indoors.
- Use dormant oils to combat scale insects and mites when the temperature is above 40° and when freezing temperatures are not predicted for a few days before the buds begin to open. FS866
- For a full-sun border, try mixing colors of perennial coneflower and Shasta daisy with annual globe amaranth. Place the taller coneflower toward the rear of the bed and Shasta daisy toward the front, with the globe amaranth mixed in between.
- Rake and remove debris from the lawn when it's dry.
- Have the lawn mower serviced and the blade sharpened.
- Fertilize your lawn. FS633
- Remove dead asparagus shoots from last year's growth. NE221
- If you want to raise fruit in your garden, try grapes, raspberries, or strawberries. It is much less difficult to succeed with them than with tree fruits, and you'll get much faster results. FS354, 214, 97 & 98.
- Submit a soil sample for testing to determine how much lime and fertilizer your lawn and garden areas need. Soil sampling packets with instructions are available at Extension. Cost is \$20.00
- Prune grapes, raspberries, blueberries, fruit trees and summer-flowering shrubs early in the month when the temperature is above freezing.
- Remove black knot fungus 18" below the growth on cherry, peach and plum trees.
- Grapevine prunings can be made into attractive wreaths.
- If the soil dries out against a house under the eaves where rain rarely reaches, water well during a thaw to prevent loss of plants.
- Sow grass seed as soon as possible. FS584
- Pinch off early buds from developing pansies to encourage plants to branch and form more buds.
- Watch for sale prices on fertilizers and pre-emergent crabgrass killer.
- Cut back the dried foliage of ornamental grasses.
- Particularly good choices for your cutting garden are phlox, daisy, dahlia, cosmos, aster, gladiolus and lily.
- Check stored bulbs, tubers and corms. Discard any that are soft or diseased.
- Check any vegetables you have in storage. Use or dispose of any that show signs of shriveling or rotting.
- Many herbs including chives, parsley and thyme are also well suited to baskets.
- Plant pea and spinach seeds and onion, shallot and garlic sets on St. Patrick's day, weather permitting.
- Branches of forsythia, pussy willow, spirea and dogwood can be forced for indoor bloom. Make long slanted cuts when collecting the branches and place the stems in a vase of water. Change the water every four days. They should bloom in about three weeks.
- Mulch heaved perennials; replant them when the weather is more settled.
- Late winter is the time to prune many deciduous trees. Look over your plants now and remove dead, dying, unsightly parts of the tree, sprouts growing at or near the base of the tree trunk, crossed branches, and v-shaped crotches.
- Repot and begin fertilizing houseplants.
- Avoid walking on grass or ground covers while they are frozen.
- Fertilize woody plants and fruit trees.
- Purchase new 40 watt, cool-white fluorescent bulbs for starting your seedlings.
- Keep the bird feeder filled.

## Gardening Tips for April

- Seed bare spots in the lawn early in the month. FS584 & 108
- Prune ornamental grasses.
- Prune your roses, except the climbing varieties. FS944
- Remove the winter mulch from roses after the middle of the month.
- Follow Extension's fruit spray schedules. FS112, 101, 115, 113, 114 and 116
- Divide summer and fall blooming perennials.
- Rake winter debris from your lawn before mowing.
- Apply dormant oil sprays for insect control when the temperature will be above freezing for at least 24 hours. FS866
- Start celosia, cosmos, marigold, annual phlox and zinnia seeds indoors at mid month.
- Prune, repot and clean your houseplants; begin fertilizing them.
- Are those swarming insects termites or ants? Can you tell the difference? FS338
- Apply pre-emergent crabgrass killer when forsythia is in full bloom.
- Fertilize established trees and shrubs. FS31
- Harden-off or condition transplants prior to moving them to the garden. Plant bedding plants of cabbage, broccoli and collards the third week.
- Direct seed beets, carrots, leaf lettuce, mustard greens, bok choy and radishes around the middle of the month.
- Plant strawberries, rhubarb, asparagus, and small fruit plants as early in the month as possible.
- Plant gladiolus corms.
- Plant daylilies, delphiniums, painted daisies and phlox.
- Remove spent flowers from spring flowering bulbs. Fertilize with 5-10-10 at 2 pounds per 100 square feet.
- Sharpen the lawn mower blade. Mow the lawn no shorter than 2½ ". FS119
- Sow hardy annual flowers like calendula, clarkia, larkspur and sweet pea.
- Turn the compost pile and keep it moist. FS74 & 117
- Protect well-developed strawberry buds from frost injury by applying straw mulch when freezing temperatures are forecast.
- Start eggplant, pepper and tomato seeds indoors at the middle of the month. FS787
- Do not fertilizer newly planted trees or shrubs.
- Prune early flowering shrubs immediately after flowering and before new growth begins.
- For earlier bloom of dahlias start tubers in 8" to 10" pots in April using commercial potting soil. FS1153
- For control of crabgrass, application of preemergence herbicides are generally more effective and easier to apply than postemergence herbicides. Preemergence herbicides must be applied prior to crabgrass germination (April 10 in Southern New Jersey and April 20 in Central and Northern New Jersey) to be effective. E233
- Plant a tree for Arbor Day!
- Plant sections of certified, disease-free potato seed tubers

## Gardening Tips for May

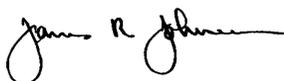
- Mow the lawn at a height of 2½-3" while never removing more than 1/3 of the leaf blade. Leave the clippings on the ground.
- Water the lawn deeply, applying a half to one inch of water at a time. Your lawn needs one inch per week during dry periods. FS829
- Apply broad-leaf herbicides to control weeds in the lawn. FS119
- Check your lawn for turfgrass insect pests and apply the correct control according to label directions. FS814
- Remove flowers from newly established strawberry plantings. Let them become established this year and form fruit next year.
- Remove seed stalks from rhubarb as soon as you see them. Harvest rhubarb through early June.
- Harvest mature asparagus beds for 6 to 8 weeks only.
- Lift and divide old chrysanthemum plants or set out new plants purchased or grown from cuttings. Pinch back mums when they are about 6" tall for bushier plants; Continue to pinch back the mums until mid-July.
- Plant gladiolus corms every two weeks for continuous bloom.
- Remove daffodil and tulip flowers as they fade. Leave the foliage in place until it turns brown and dies.
- Dig bulbs for storage after the leaves die.
- Plant dahlia and canna tubers mid to late May.
- Control euonymus scale now before their hard shells forms.
- Prune spring-flowering shrubs after the flowers fade.
- It is not too late to sow directly into the soil seeds of sunflower, zinnia, morning glory, portulaca, marigold, cosmos, periwinkles and gourds. Achimenes and other summer-flowering bulbs can also be planted in May.
- Pinch back the terminal growth on newly planted annual and perennial plants. This will result in shorter, more compact, well branched plants with more flowers.
- Time to plant caladium tubers, impatiens, coleus, begonias and pentas in shady areas.
- Replace and replenish mulch materials in flower beds and shrub borders to conserve moisture and reduce weed growth.
- Prune climbing roses as they complete their spring bloom season. Remove dead or weak wood as needed.
- Take a critical look at your landscape while at the height of summer development. Make notes of how you think it can be better arranged, plants that need replacement, overgrown plants that need to be removed and possible activity areas that can be enjoyed by family members.
- Check for insects and diseases. Destroy badly infested plants. Spider mites can be especially troublesome at this time. Select a chemical or organic control, or use insecticidal soap.
- Start with your tools. Use the right tool for the job and make sure each is in top working condition. A sharp edger makes short work of edging walkways and borders, whereas a dull one can double your time and make it look like a boy with a bad haircut.
- Stake your flowers now. They will be much easier to train.
- Transplant on cloudy days and make sure you keep the delicate exposed roots of your seedlings and plants protected from drying out.
- Harvest some of your well rotted compost to make high grade soil for your transplants. Make compost teas and give a good bit to your young plants after transplanting. Use it immediately. It doesn't keep.
- If you see pests on shrubs or plants, eliminate them now. If you aren't familiar with the insect you see, take it to the local Extension Center for identification.
- Geraniums that weathered the winter indoors need to be cut back and repotted with new soil or have some good compost worked in.
- Put markers out for your plants. Often, late maturing plants are forgotten and dug up inadvertently which can sometimes destroy them. After you've planted a few dozen varieties, it's helpful to have the names right there, and gratifying when your visitors ask.
- Scope out a spot in the yard to start a compost pile.
- Keep compost bins covered to prevent over saturation and leaching of nutrients from the compost.
- Work rotted manure or compost into vegetable and flower beds. Never add fresh manure to vegetable beds in the spring.

## Rutgers Cooperative Extensions Fact Sheets

FS #	Fact Sheet Name
Fact Sheet 2	Brown Marmorated stink bug– a non native insect in New Jersey
Fact Sheet 20	Weed control around the home grounds
Fact Sheet 31	How to fertilize shade trees
Fact Sheet 58	Mulches for vegetable gardens
Fact Sheet 74	Backyard Leaf Composting
Fact Sheet 97	Strawberries in the Home Garden
Fact Sheet 98	Strawberries in the Home Garden II
Fact Sheet 101	Bramble Pest Control Schedule for Home Gardens
Fact Sheet 102	Your lawn and its care
Fact Sheet 112	Apple Pest Control Schedule for NJ Home Orchards
Fact Sheet 113	Peach and Nectarine Pest Control Schedule for NJ Home Orchards
Fact Sheet 114	Pear Pest Control Schedule for NJ Home Orchards
Fact Sheet 115	Cherry Pest Control Schedule for NJ Home Orchards
Fact Sheet 116	Plum Pest Control Schedule for NJ Home Orchards
Fact Sheet 117	Using leaf compost
Fact Sheet 119	Weed control in home lawns
Fact Sheet 129	Planning a vegetable garden
Fact Sheet 137	House ants and their control
Fact Sheet 214	Raspberries in the Home Garden
Fact Sheet 523	Grow your own vegetable and flower seedlings
Fact Sheet 562	Growing beets and carrots in the home garden
Fact Sheet 626	Fertilizing the home vegetable garden
Fact Sheet 633	Fertilizing the home lawn
Fact Sheet 681	Varieties for NJ home vegetable gardens
Fact Sheet 684	Turfgrass seed selection for NJ homes
Fact Sheet 786	Six ways to keep your newly planted tree alive and healthy
Fact Sheet 787	Starting vegetable seeds indoors
Fact Sheet 797	Soil Testing for Home Lawns and Gardens
Fact Sheet 814	Managing diseases of landscape turf
Fact Sheet 829	How to protect water quality and have a beautiful lawn
Fact Sheet 849	Cover Crops and Green Manure
Fact Sheet 866	Using horticultural oils
Fact Sheet 921	Conserving water on home landscapes in NJ
Fact Sheet 944	Roses and their Care
Fact Sheet 988	Picking vegetables in the home garden
Fact Sheet 1123	Vegetable insect control for home gardens
Fact Sheet 1124	Vegetable disease recommendations for home gardens
Fact Sheet 1140	Incorporating native plants in your residential landscape
Fact Sheet 1163	Mail order vegetable seed sources for the NJ gardener

**Call 856/451-2800 x4 ask for Pam Burton. When calling to request a fact sheet refer to the Fact Sheet by FS# or by name. All fact sheets are free unless otherwise noted.**

*What's Growing On* is prepared by Pam Burton, Horticultural Assistant, Rutgers Cooperative Extension of Cumberland County.



James R. Johnson  
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Sincerely,



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For important announcements concerning the Cumberland County Extension Center visit:  
<http://Cumberland.njaes.rutgers.edu>

If you have any questions concerning the website, please call our office at  
856-451-2800 x1 for agriculture and  
856-451-2800 x4 for Home Horticulture and Master Gardeners

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Rutgers Cooperative Extension is an equal opportunity program provider and employer. Contact your local Extension Office for information regarding special needs or accommodations. Contact the State Extension Director's Office if you have concerns related to discrimination, 848-932-3584.

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291 Morton Avenue  
Millville, NJ 08332-9791

**RUTGERS**  
New Jersey Agricultural  
Experiment Station



# Join Us for an Incredible Journey

Each fall, monarch butterflies from the U.S. and Canada begin a 2,000 mile migration to Mexico. The following spring, their great grandchildren return. This summer, an exciting opportunity for teachers is coming to a town near you.

The powerful story of the monarch butterfly inspired the emergence of the *Monarch Teacher Network* (MTN) in 2001 and its Canadian partners in 2003.

**'Teaching and Learning With Monarch Butterflies'** is a two-day teacher workshop combining classroom and field experiences. It enables pre-K through 12<sup>th</sup> grade educators to teach essential skills in literacy, math, science, geography, technology, Spanish, the arts and social studies... through the captivating story of monarchs. Teachers complete the workshop with all the materials they need to bring this exciting and dynamic subject into their classrooms.



Workshops are taught by a team of experienced classroom teachers and educators. Participants are provided with the knowledge, skills, materials and confidence to raise monarchs in the classroom and create an outstanding learning experience for their students. Workshop graduates can apply for \$200-\$800 MTN fellowship awards to participate in one week tours of Mexico or California where we visit the over-wintering colonies of Monarchs and explore local Mexican culture in the state of Michoacán or other animal migrations and old growth forests of California.



Each participant receives: Hands-on instruction by experienced teachers; Rearing cages, books, posters, DVDs and other essential materials; Strategies for butterfly gardens and "Monarch Parades"; Inquiry-based science activities for all abilities; Activities for Mexican/pre-Hispanic culture, history and Spanish language; Activities for language arts, math, social studies, drama, and fine arts; Distance learning projects with schools in Canada/Mexico/California; Proven models for engaging community support; Post-workshop on-going support.

**This workshop is** Co-sponsored by EIRC and the Rutgers Master Gardeners of Cumberland County.

Photo credit: Mike Aporius  
Winnipeg Free Press



## Here is what people are saying:

- *“This was the most awesome learning experience in my 30 years of teaching.”*
- *“Thank you for all the insights - reflecting on our way of life and how to make a difference.”*
- *“Everyone’s commitment, dedication, energy and obvious passion for this project are outstanding and contagious ... wonderful ambassadors for the planet Earth!”*
- *“What a magical place the classroom will be! I can’t wait to try to connect kids even more to the environment.”*
- *“I have never had monarchs in my classroom and now I am excited to start this new amazing classroom activity! I feel fully equipped to start this new hands-on adventure!”*



## Workshop Details

Dates: August 18 and 19, 2016  
Location: Extension Education Center  
291 Morton Avenue  
Millville, New Jersey 08332  
Time: 8:30 a.m. to 4:00 p.m.  
Cost: \$99.00



Name \_\_\_\_\_ Summer E-mail (**important**) \_\_\_\_\_

Home Address (street, city) \_\_\_\_\_

\_\_\_\_\_ State \_\_\_\_\_ zip \_\_\_\_\_

Home phone: (\_\_\_\_) \_\_\_\_\_ Grade \_\_\_\_\_ T-shirt size \_\_\_\_\_

School Name & Address: \_\_\_\_\_

\_\_\_\_\_

**No space will be held until the completed form is received.**

**Mail this completed registration and payment to: *Monarch Teacher Network*™ at: EIRC–MTN, South Jersey Technology Park, 107 Gilbreth Parkway, Suite 200, Mullica Hill, NJ 08062, or fax: 856-582-4206. Checks should be made payable to EIRC-MTN. For credit card payments, call Brian Hayes. 856-582-7000 X110.**

Inquiries: [bhayes@eirc.org](mailto:bhayes@eirc.org) 856-582-7000 X110 or Visit [www.MonarchTeacherNetwork.org](http://www.MonarchTeacherNetwork.org)

## ***Seed Starting 101***

**Monday, March 7th**

**5:30 - 8p.m.**

**Rutgers Cooperative Extension**  
**355 Courthouse-South Dennis Road**  
**Cape May Court House, NJ 08210**

**Presenters:**

**Jennifer Sawyer, Rutgers Master Gardener Coordinator  
for Cape May County**

**Jerry McManus and Brenda Church, Rutgers Master Gardeners**

**Participants will learn...**

**The basics of seed starting \* When to start seeds indoors**  
**How to select equipment \* Seedling Care**  
**How to build a moveable grow light**

5:30p.m. - Pasta Supper

6p.m. - Presentation

6:40p.m. - Portable light stand demonstration

7p.m. - Break

7:10p.m. - Hands on seed planting



**Beginners Class, no prior experience required \* Cost: \$20**  
**Registration due by March 2, 2016**

**Call (609) 465-5115, ext. 607 or email [DANA.TYNDALL@co.cape-may.nj.us](mailto:DANA.TYNDALL@co.cape-may.nj.us)**

1766-2016  
**RUTGERS**  
**250**

*Revolutionary for  
250 Years*

**Jenny S. Carleo, Agricultural and Resource Management Agent**

*Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and County Boards of Chosen Freeholders. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.*

## 2016 Order Form

### Rutgers 250, Ramapo, Moreton and KC-146 Tomato Seeds

The *Rediscover the Jersey Tomato* project is bringing back tomatoes with the delicious tangy old time Jersey tomato flavor that New Jersey farmers grew from the 1930s – 70s. For 2016 we are introducing the 'Rutgers 250' tomato and now offer four varieties, each with distinctive qualities, for home gardeners to reproduce that memorable taste.

*These tomato varieties were developed through non-transgenic (non-GMO) breeding.*

**Please allow 2 1/2 - 3 weeks turnaround time to receive your order.**

● **Rutgers 250 tomato** is the new result from crossing the same parent varieties as the original 'Rutgers' tomato that was released by Rutgers New Jersey Agricultural Experiment Station (NJAES) in 1934. 'Rutgers 250' was selected for high fruit quality and flavor and has been named in honor of the University's 250th anniversary.

*Mid-season maturity. Firm, crack-resistant fruit; high flavor; uniform color. Semi-determinate plants; best if staked. 'Rutgers 250' was not bred specifically for disease resistance, but in trials has shown good resistance to bacterial spot and bacterial speck. Open-pollinated. Available in conventional and organic.*

● **Ramapo F1 Hybrid tomato** was developed at Rutgers NJAES and released in 1968. It was prized by gardeners for its great flavor, fruit quality, reliability, and productivity. While Ramapo seed was unavailable for many years, Rutgers NJAES continued receiving requests for this popular tomato and eventually reintroduced Ramapo F-1 seeds in 2008.

*Mid to late season; resistant to cracking and Verticillium and Fusarium wilt. Semi-determinate plants approximately 80 days to maturity. Medium - large sized fruit. Feedback from a gardener survey indicates that Ramapo tomato grows well in a variety of US regions.*

● **Moreton F1 Hybrid tomato** was Harris Seeds' first F-1 hybrid, released in 1953 and one of the first hybrids grown by Jersey tomato growers. This early maturing, tasty variety was off the market and re-introduced in a cooperative effort by Harris and Rutgers. Moreton makes a good earlier maturing garden companion to Ramapo and KC-146.

*Early season, resistant to Verticillium. Indeterminate plants mature in 70 days. Medium - large sized fruit. A heavy feeder on less fertile soil. Treated seed. Favorite in extreme climates with short growing seasons.*

● **KC-146 tomato** (also known as Campbell's 146) was developed by Campbell's Soup Company as a processing tomato and released in 1956. This variety was wilt and crack-resistant and better flavored than other processing types. It was eventually replaced with newer varieties with a more disease resistance. Campbell's maintained the KC-146 stock as a flavor standard. We agree, this is one tasty tomato!

*Mid to late season; resistant to Fusarium wilt, semi-determinate plants; 78 days to maturity; medium-large sized fruit. Even though it is a processing variety, it has incredible flavor as a fresh tomato. Open-pollinated.*

**Fill out and return page 2 of order form**

#### For more information:

Rediscover the Jersey Tomato: <http://www.njfarmfresh.rutgers.edu/JerseyTomato.html>

Starting Vegetable Seeds Indoors <http://njaes.rutgers.edu/pubs/publication.asp?pid=FS787>

Growing Tomatoes in the Home Garden <http://njaes.rutgers.edu/pubs/publication.asp?pid=FS678>

Visit Rutgers New Jersey Agricultural Experiment Station on the web at: <http://njaes.rutgers.edu>

Questions? Contact: [ramapotomato@njaes.rutgers.edu](mailto:ramapotomato@njaes.rutgers.edu)





New Jersey Agricultural Experiment Station

Please allow 2 1/2 - 3 weeks turnaround time to receive your order.

NOTE: Because the demand for 'Rutgers 250' seeds exceeds supply in 2016, we are making available an additional 'Rutgers 250' tomato breeding line with the same attributes. This sister variety, 'Rutgers 250 Schermerhorn' is named in honor of the breeder of the original 'Rutgers' tomato, Lyman Schermerhorn. It is virtually identical to 'Rutgers 250' and there will be more seeds per packet (35) for this variety. We are currently sold out of conventionally grown 'Rutgers 250' seed. We expect to have adequate seed quantities to meet demands in 2017 and beyond.

### 2016 Jersey Tomato Seed Order Form

● Rutgers 250' seed packet - limit 1 packet per order (check one box):

<input type="checkbox"/> Organically grown seeds (not certified organic; 20 seeds)	\$4.00 each	} Total \$ _____
or	or	
<input type="checkbox"/> 'Rutgers 250 Schermerhorn' (approx. 35 seeds)	\$3.00 each	

● Ramapo seed packet (approx. 30 seeds)..... Quantity \_\_\_\_\_ X \$4.00 each = Total \$ \_\_\_\_\_

● Moreton seed packet (approx. 30 seeds, treated).. Quantity \_\_\_\_\_ X \$4.00 each = Total \$ \_\_\_\_\_

● KC-146 seed packet (approx. 30 seeds)..... Quantity \_\_\_\_\_ X \$3.00 each = Total \$ \_\_\_\_\_

**Subtotal \$ \_\_\_\_\_**

● Plus Shipping & Handling (see below) \$ \_\_\_\_\_

For 1 - 3 seed packets, add \$1.50

For 4- 10 seed packets, add \$2.50

For 11 or more packets add \$4.00

**Total enclosed (Subtotal + S&H) \$ \_\_\_\_\_**

Please print neatly and be sure to provide an email address and/or phone number in case we need to contact you about problems with your order.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP code \_\_\_\_\_

E-mail address \_\_\_\_\_ Phone \_\_\_\_\_

**Make check payable to: Rutgers, the State University of New Jersey**

Mail check and completed order form to:  
Rutgers NJAES Tomato Seeds  
Rutgers Plant Diagnostic Laboratory  
P.O. Box 550  
Milltown, NJ 08850-0550

Note: Please do not staple check to order form.