Winter is a good time to get ahead of many annual lawn weeds and to control existing weeds. Turfgrasses are dormant and are not as sensitive to herbicides as they are in the summer. This is especially true for St. Augustine grass which is particularly sensitive to post-emergent herbicides in the summer. This makes controlling weeds problematic, at best, when temperatures are above 85 degrees.

Before you run to the store and buy herbicides for your lawn, let me be clear: weeds do not cause thin or unhealthy turf. Thin or unhealthy turf allows weeds. Proper cultural practices such as watering only when necessary, proper mowing heights and fertilizer applications are critical to keep lawns healthy and help turfgrasses crowd out weeds.

Types of Weeds – Understanding the Life Cycles of Weeds
First, weeds are either annual or perennial. An annual weed is one that germinates, grows, flowers and produces seeds in one growing season. When seeds are produced, the weeds die and the seeds lie dormant in the turf until the next growing season when climatic conditions are again favorable. Annual lawn weeds are generally divided into two categories: summer annuals and winter annuals.

Winter Annual Weeds
This group of weed seeds generally begins to germinate when temperatures begin to cool and days become shorter in the fall. They grow through the fall and winter and begin to fade as weather begins to warm and days become longer. They deposit their seeds, which lie dormant, until the following autumn and the process starts over again. Examples of broadleaf (dicotyledons) winter annuals...
include weeds such as Carolina Wild Geranium (chickweed (*Stellaria media*), Lawn Burweed (Spurweed) (*Soliva pterosperma*) and several others. Grassy (monocots) winter annual weeds include: Annual Blue-eyed-grass (*Sisyrinchium rosalatum*), annual Bluegrass (*Poa annua*) and others.

Knowing that these germinate in the fall and grow through the winter, you can apply a pre-emergent herbicide prior to germination for effective control. Pre-emergent herbicides prevent weed seeds from germinating and work very well against a variety of both broadleaf and grassy weed species. If you miss the chance to apply a pre-emergent herbicide then you must choose an appropriate post-emergent herbicide. This is relatively easy for broadleaf weeds but not so easy for grassy weeds.

**Winter Perennial Weeds**

There are also some perennial weeds that grow predominately in the winter. They are dormant, underground, during the warmer months and wait for climatic conditions to favor their growth and development. This group includes: Florida Betony, white clover and a few others. These cannot be controlled with pre-emergent herbicides since they have underground storage structures and can re-sprout from the roots. Post-emergent herbicides and hand-pulling are the only ways to deal with these lawn weeds.

**Herbicides**

The good news is, since turfgrass is mostly dormant, there is a larger suite of products that can be used compared to the warmer months. Turfgrasses, for the most part, are more resistant to herbicides that cannot be applied in summer. Still, it is absolutely critical that label directions are followed closely to avoid damaging your turf.

Understanding herbicides and their modes of action are just as important as understanding weeds and their various biologies.

- **Selective** – A selective herbicide controls certain plant species (weeds) without seriously affecting the growth of other plant species (desired turfgrass). Most herbicides are selective herbicides. Herbicides are selected based on the turfgrass species. This simplifies the application because the herbicide can be applied over the turf without injuring it. Examples include: 2,4-D, Atrazine, Dicamba and others.

- **Non-selective** – Non-selective herbicides control green plants regardless of species. They are generally used to kill all plants, such as in the renovation or establishment of a new turf area, as a spot treatment, or to trim along sidewalks. Glyphosate (Roundup™), Glufosinate (Finale™), and Diquat (Reward™) are examples of non-selective herbicides. These herbicides injure turf. Therefore, in an established turf, their use is usually limited to spot applications for weedy patches, which must be followed by re-seeding or re-sodding the treated area.

- **Contact** – Contact herbicides affect only the portion of green plant tissue contacted by the herbicide spray. These herbicides are not translocated or moved in plants' vascular systems. Therefore, they do not kill underground plant parts, such as rhizomes or tubers. Repeat applications are often needed with contact herbicides to kill re-growth from these underground plant parts. Examples of contact herbicides include Bentazon (Basagran™), Glufosinate (Finale™), and Diquat (Reward™).

- **Systemic** – Systemic herbicides are translocated in the plant’s vascular system. The vascular system transports the nutrients and water necessary for normal growth and development. Systemic herbicides generally are slower acting and kill plants over a period of days. Examples of systemic herbicides include Glyphosate (Roundup™), 2,4-D, Dicamba (Banvel™), Imazaquin (Image™), and Sethoxydim (Segment™).
Pre-emergence – Pre-emergence herbicides form the basis for a chemical weed control program in turfgrasses and are used primarily to control annual grasses (e.g., crabgrass, goosegrass, and annual bluegrass) and certain annual broadleaf weeds (e.g., common chickweed, henbit, and lawn burweed). Pre-emergence herbicides are applied prior to weed seed germination. Knowledge of weed life cycles is important, especially when herbicide application is timed to attempt pre-emergence control. If the chemical is applied after weed emergence, pre-emergence herbicides have little or no effect. This narrow window of application timing is a potential disadvantage for many lawn care companies and homeowners, who often wait too late in the spring to apply the pre-emergence herbicide. For pre-emergence control of winter annual weeds such as annual bluegrass (*Poa annua*) and others, apply a herbicide when nighttime temperatures drop to 55ºF–60ºF for several consecutive days (late October to early November for Central Florida).

Irrigation before and after application is necessary to activate most pre-emergence herbicides. Pre-emergence herbicides are generally effective in controlling weeds for 6–12 weeks following application. Most herbicides begin to degrade soon after application when exposed to the environment. Therefore, to obtain season-long control, an additional application should follow 6–9 weeks after the initial one. Note: On those areas where turf is to be established (including sod and winter over-seeded areas), most pre-emergence herbicides should not be used 2–4 months before planting. Otherwise, root damage and germination reduction of the turf seed may result.

Post-emergence – Post-emergence herbicides are active on emerged weeds. Weed size is very important for proper herbicide action. Generally, *the younger the weed seedling, the easier it is to control*. If the herbicides are sprayed when the weeds are mature, high rates are required for achieving control. This increases the risk of turf injury. Post-emergence herbicide effectiveness is reduced when the weed is under drought stress, cold stress, has begun to produce seeds, or is mowed before the chemical has time to work (several days after application). Avoid application when these detrimental growing conditions exist.

**Herbicides for Use by Homeowners**

Here are some (not all) common herbicides to look for to help you get control of winter lawn weeds. Remember, in all cases, READ THE LABEL! The label is the law!!!!!!! Look for the active ingredients. These products are sold under a number of brand names so take the time to read the label for the active ingredient and for directions about proper application. Also, remember that not all herbicides can always be used on all turfgrass species. How do you know, you say???? READ THE LABEL!!!!!!

- Atrazine – Broad spectrum post-emergent control of many broadleaf weeds and some pre-emergent as well. **Do not use** on Bahia grass or Bermuda grass.
- Benefin – Pre-emergent control of many annual weeds. Can be used on all common Florida turfgrass species.
- Dicamba – Post-emergent broadleaf weed control. Can be used on all common Florida turfgrass species in cooler months.
- Imazaquin – Post-emergent. Brand name “Image” and others. Useful on a wide variety of weeds. Don’t use on bahia grass.
- Oryzalin – Pre-emergent weed control. Can be used on all common Florida turfgrass species. Timing is important as with all pre-emergent products.
- Pendimethalin – The most common pre-emergent herbicide. Can be used on all common Florida turf species. Sold under many brand names.
- Prodiamine – Another common pre-emergent herbicide for all turfgrass species.

*Continued from Page 2*

*Continued on Page 4*
In Central Florida, it can be challenging to distinguish between weeds, native plants or desirable plants and *Urtica chamaedryoides* is a good example. Even though this is a Florida native, beware! This plant looks innocent enough but when touched, you will discover the fine stinging hairs that give *Utica* its nicknames: Stinging Nettle or Fireweed. There is a good link from UF for more information: [http://edis.ifas.ufl.edu/hb002](http://edis.ifas.ufl.edu/hb002).

This undesirable plant (weed) can be a good indicator that winter has arrived. You definitely do not want to tangle with this plant or allow your pets or livestock to eat it. Good control in pastures can be achieved using commercial products like GrazonNextHL or RemedyUltra (a triclopyr ester), but what is a homeowner to do? Mowing provides no benefits. The seed is transported to other areas and the shortened plants just produce more leaves and more fine hairs. Glyphosate - the generic name for RoundUp - has limited control- anywhere from 80% to 30% effectiveness.

If you avoid the plants as much as possible, Fireweed will go away as the warmer days arrive for good. You can try spraying with Glyphosate but be warned - the spray will kill everything including desirable lawn grasses.

If you do have a brush with Stinging Nettles, a baking soda paste will help tame the burn and rash. Using a mild Hydrocortisone cream will provide longer lasting relief. If you or a friend get a nasty dose of the sting and feel severe consequences coming on, do not hesitate to get to a doctor or ER. It is rare, but some people and animals can have highly allergic reactions to Urticaria plants.

Avoid Stinging Nettles, spray if you feel it is needed, and wait for the Florida heat to return!
Master Gardener Program Mission Statement  
To assist Extension Agents in providing research-based horticultural education to Florida residents

Welcome  
2015  
MASTER GARDENER CLASS

Master Gardener Vision Statement  
To be the most trusted resource for horticultural education in Florida

Suellen Biferie  Dale Breedlove  Karen Burgess  John Castell  Susan Clark  
Karen Diedo  Kelesy Dunn  Judy Hays  Trish Johnson  Mallory Kennedy  
Susan Leah  Gerry Littlefield  Lynn Mann-Crook  Jill Osterhout  Kathi Penkacik  
Fran Poggiali  Russ Royce  Lillian Shelton  Steve Smith  Sidney Solis  
Judy Swiatosz  Jenna Workman  Patty Young  

5
Q: Is now a good time to prune my hibiscus?

A: Pruning a healthy Hibiscus bush will encourage new growth and tell the plant to grow more branches, thus producing more flowers. However, new growth produced at this time of year can be susceptible to freezing. Pruning a tropical hibiscus can be done any time of the year but the ideal time for full major pruning is early spring with minor pruning done up until the beginning of fall, around September. When you do prune, prune only two thirds of any branch at one time.

Q: I can't get my Vinca that I purchased at the big box store to grow. The wild ones come up and thrive. I put planting soil in the ground and mixed it in, and watered it well.

A: Vinca comes from the Mediterranean area and likes dry, sandy soil conditions. It is drought tolerant and wants full sun. In general it will thrive on abuse. The ones you buy are hybrids. Some are bred for flower color, not vigor, and are weak rooted and many of the hybrids are specialized to other regional growing conditions. The series 'Tropicana”, 'Pacifica' and 'Mediterranean' perform well in excessive heat and humidity and do well in Florida.

Q: I have a Crape Myrtle that has white stuff growing on its branches. I have removed some vines that had intertwined through the branches of the crape myrtle.

A: What you have growing on your Crape Myrtle branches is a lichen. It does not harm the tree but is an indicator that the tree is stressed. Lichen attaches itself to a branch but does not get its nutrients from the tree. A tree that is under stress has a thinner canopy and this allows more of the sun to shine through, creating the atmosphere the lichen needs. Removing the vines from the crape myrtle has opened the canopy allowing more sun to permeate through. Work on supplying nutrients to the tree to create a stronger tree with a thicker canopy.

Q: My Mexican Petunia has scale on its branches.

A: Mexican Petunia is an invasive plant in Florida and University of Florida does not encourage its growth in Florida. However, to correct the scale problem, prune the plant to the soil and, in the spring, it will re-grow. Be sure to bag up the cut off portions and send them out with the trash.

Q: I have trimmed my East Palatka Holly and, where I have pruned the branches, there is a twiggy growth coming out.

A: The growth on the pruned branches is called Witches Broom. Witches Broom growth can be caused my mites, aphids, fungi, viruses and bacterial organisms. There is no cure or treatment for Witches Broom. You can, however, prune it out. To remove it, cut 6” below the injury on a dry day. Sterilize pruning shears between cuts to avoid contamination on other branches. Remove the plant, bag it, and destroy with the trash.
My very first bromeliad was a NEOREGELIA that I received in a garden club plant exchange. I didn't know what it was. I planted it and was surprised when it grew and grew and produced many new plants (pups or keikis). In 20 or more years, it has produced 75 to 100 plants.

The plant I have appears to be one of the early “neos” - Neoregelia Carolinae, a common garden type. It gets its name “oldie” from me because I think mine is one of these earlier, common species. (Anyway the lady I got it from was “oldie” and I am “oldie” so there you go.)

This bromeliad is probably the best known and has been in cultivation and hybridized for a long time. The plant has flat rosette type leaves, a bright red center. Small flowers appear in the center and do not last a long time, but the leaf color stays a long time. They produce gorgeous plants of pink, red and purple leaves with beautiful variations and these are beginning to show up in the garden centers.

If you succumb to buying the plant you can grow it in the house. However, I have grown mine (a pink one and a lavender one) in the garden under the Magnolia tree. Plant them in the ground: loose mulch, light soil type or keep them in their pots and move them around until you find the right place (the right light). They will start growing pups in the pots after they finish blooming. The mother plant will never bloom again but will produce pups and eventually die. Just separate the pups from the mother plant. Cut apart when they have a good start.

When they begin to bloom, the leaves will begin to change color - green, red, pink and purple. These particular “neos” are hybrids from the basic Carolinae. These are the typical ones you will see in the garden centers now. There are many other gorgeous leaved “neos” that you can find in bromeliad nurseries, but are not out in the market place.

High temps won’t harm the plants, but the foliage colors fade when it is hot. When nights begin to cool, the leaf color will return. “Neos” will tolerate temperatures to 20 degrees F. However, they can be moved very easily when planted in the ground. Just lift them out.

Fertilize your “neos” carefully - very lightly if at all, after they are divided, and never with any copper in the fertilizer.

They are easy to grow and make a beautiful bedding plant with their gorgeous leaf colors that last a long time. Impatiens combined with them are a lovely combination.

And – they are easy, easy. I told you they were a “Goodies”.

“Oldies but Goodies”
by Marty Borkosky
We may as well get into the thick of things in the New Year—by understanding thickets. We can understand them but no one wants to get in the thick of one except Brer Rabbit, who made his get-away from Brer Fox and Brer Bear when they decided to fling him into the briar patch. Turns out, that briar patch was where Brer Rabbit was born and raised so he didn’t mind being flung there at all!

“Well suh, dat briar patch was a thorny thicket”. A thicket being a literal tangle of plants, trees or shrubs with the dominant plants in this tangle either producing loads of seeds most of which germinate under the protection of the mother plants or that dominate by means of rhizomes (underground stems) to form dense stands. Being so dense, it’s hard to imagine anyone ever getting through one before the advent of heavy machinery. Florida is rife with thicket forming plants, both native and otherwise. The Uncle Remus stories were told in Georgia but they are an inheritance of the South in general and Florida is a part of the South. Brer Rabbit may have been thrown into a thicket of blackberry, a native upright Florida bush, or Dewberry, the viney, hairy version, both of which form painful over and undergrowths. We also have stands of Saw Palmetto, *Serenoa repens*, which are thicket formers by means of underground stems. They may not be considered a briar patch, but they are called “saw” palmettos for good reason. The dwarf Yaupon Holly and Wax Myrtle are also prolific at sending out rhizomes and the Cabbage Palm, or Sabal Palm or Palmetto, drop what seem like millions of seeds, most of which germinate (slowly they say, but I don’t believe it).

As well, the proclivity of invasive non-natives such as Privet, *Ligustrum sinense*, which spreads by seeds and rhizomes both, plus the Mimosa, Chinese Tallow and Coral Ardisia, not to mention the vines—barely touches the top of a vast list of thicket forming plants.

Do thickets have any value in the environmental scheme? Yes. They offer protection for smaller wildlife—nesting protection, protection from the adverse weather, and also cover for escape. They provide food in the form of seeds and a good supply of insects—not a bad place for a rabbit to be raised.

The seemingly uncontrollable growth of thickets can be alleviated by means of fire. Natural fires reduce the over-abundance of dominant plants and create openings for understory plants and tree seedlings. Sometimes man creates fires to help things along and aid in promoting “succession” — a normal change in an ecosystem that occurs gradually over time. Fires change the composition of species and the structure and function of an ecosystem. They help maintain diversity so that not one thing takes over. Other species of plants and animals will get their chance to grow and thrive. Of course we hope there will always be a Brer Rabbit around.

**January Helpful Hint**

*From Month by Month Gardening in Florida by Tom MacCubbin*

Keep a bale of hay handy to protect your annual plantings on cold nights. Much cold protection depends upon holding in heat and excluding frost or freezing temperatures. When frost or freezing temperatures are expected distribute the hay over the tops of the plantings. Form loose layers that hide the foliage and flowers. Leave the hay in place until the cold days and nights are over. When cold danger has passed, pull the hay back and remove or use as mulch.
Calendar of Public Events

<table>
<thead>
<tr>
<th>Topic</th>
<th>Date/Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Bromeliads &amp; Orchids (1.5 CEU)</td>
<td>1/10/15—10-11:30 a.m.</td>
<td>DeBary Hall</td>
</tr>
<tr>
<td>Gardening Tips (1.5 CEU)</td>
<td>1/10/15—1 to 3:00 p.m.</td>
<td>Deltona Regional Library</td>
</tr>
<tr>
<td>Port Orange MG Q&amp;A Clinic</td>
<td>1/12/15—10 to 12 noon</td>
<td>Port Orange Library</td>
</tr>
<tr>
<td>Port Orange Library Clinic</td>
<td>1/13/15—2 to 4 p.m.</td>
<td>Port Orange Library</td>
</tr>
<tr>
<td>Azaleas and Camellias (1/5 CEU)</td>
<td>1/15/15—1 to 2:30 p.m.</td>
<td>DeBary Hall</td>
</tr>
<tr>
<td>Growing Potatoes in the Home Garden</td>
<td>1/17/15—10 to 12 noon</td>
<td>UF/IFAS Extension, Volusia Co.</td>
</tr>
<tr>
<td>Sugar Mill Gardens Q&amp;A Work Day</td>
<td>1/21/15—9 to 11 a.m.</td>
<td>Sugar Mill Gardens Port Orange</td>
</tr>
<tr>
<td>Vegetable Gardening Sq. Ft./ Hydroponics 1.5 CEU</td>
<td>1/29/15—1 to 2:30 p.m.</td>
<td>DeBary Hall</td>
</tr>
<tr>
<td>Ormond Beach Plant Clinic</td>
<td>2/2/15—10 to 12 noon</td>
<td>Ormond Beach Library</td>
</tr>
<tr>
<td>Port Orange Library Clinic</td>
<td>2/10/15—2 to 4 p.m.</td>
<td>Port Orange Library</td>
</tr>
<tr>
<td>Tree Care (1.5 CEU)</td>
<td>2/12/15—1 to 2:30 p.m.</td>
<td>DeBary Hall</td>
</tr>
</tbody>
</table>

For more details Master Gardeners should check the VMS calendar.
The general public may contact the Volusia County Agricultural Center.

Volusia County Agricultural Center
3100 E. New York Ave. (S.R. 44),
Deland, FL 32724
At the Volusia County Fair Grounds
West Volusia... 386-822-5778  Daytona Beach... 386-257-6012  New Smyrna Beach... 386-423-3368

Why Mulch Matters
From The Book of Great Garden Tips and Tonics

The short answer is...because. Besides keeping the weeds under control, a good mulch conserves moisture, cools the soil, and helps keep low-growing vegetables like squash, beans, and melons from getting dirty and water-spotted.

Mulching works wonders around America’s favorite fruit. It prevents blossom-end rot on tomato plants by regulating the supply of moisture, and often results in a longer bearing season with greater yields.

Okra, eggplant, peppers, and all other long-season vegetables grow best when they’re surrounded by a mulch that keeps their roots cool and moist during the long, hot, dry, mid-summer months.

Timing is Everything—The best time to mulch is after a heavy rain before the weather gets too hot. Never apply a mulch when the ground is dry. If you do, the mulch will absorb any rainwater that happens to come along and allow it to evaporate before it can soak into the soil, where it will do the most good.