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# Ornamental Grasses: easy, beautiful — and invasive?

By Cathy Caldwell | November 2017 - Vol 3 No.11

Ornamental grasses took the garden world by storm in the 1970's and 1980's when the "New American Garden" concepts of the now-famous landscape design team of Oehme and Van Sweden — featuring naturalistic gardens dominated by ornamental grasses — began to appear in public and private gardens and on magazine covers. That popularity continues, fueled in no small part by the easy nature of most ornamental grasses, which need little attention from the gardener to thrive. But for the newbie gardener — and even for the veteran — there are new grasses to consider and some unwelcome facts to learn about some old favorites.

*The "New American Garden" style of Ohme Van Sweden popularized ornamental grasses. Photo courtesy of UK Garden Photos.*

The favorites that began to appear in nurseries and gardens a few decades ago and which continue to be readily available are mostly natives of Asia. At that time, the native/non-native status of a plant received little if any attention. The most popular grasses employed in the "New American Garden" were cultivars of *Miscanthus sinensis*, *Calamagrostis brachytricha* and its relatives, and P*ennisetum alopecuroides*. These varieties, like most ornamental grasses, are extremely easy to grow, often thriving in dry, poor soil and requiring only a once-a-year haircut in later winter or early spring. But today, a gardener can find a wide variety of native grasses, so let's start there.

*Pink Muhly grass (Muhlenbergia capillaris)*
*Photo: Catherine Caldwell*

Two warm-season grasses you should definitely consider are native to the Southeast. The first is **pink muhly grass** (*Muhlenbergia capillaris*), which puts on a massive disply of pink panicles in autumn, and is drought-tolerant to boot. It wants a sunny, well-drained site and will grow to 3 feet tall.

There's a new variety of muhly grass named **'White Cloud'** — which has white panicles. Either variety of Muhly grass will make a striking statement in the garden. And if you're wondering about plants that would make good companions for muhly grass, you can take a cue from the gardens at Martha Jefferson Hospital, where pink muhly grass has been grouped near purple New England asters, *Symphyotrichum novae-angliae*. For more information about these tall New England asters, look at www.missouribotanicalgarden.org

*Muhlenbergia capillaris 'White Cloud'*
*Photo: Toby Gray*

Another native warm-season grass is known as **switchgrass** or panic grass (***Panicum virgatum***). It is tolerant of most soils, including sand and clay, even wet soils, but needs full sun to perform best.

*Panicum virgatum (switchgrass)*
*Photo: Matt Lavin*

Several varieties of switchgrass are available, including 'Cloud Nine' (tall, upright, to 8 feet tall), 'Prairie Fire' (burgundy coloration, 3 to 4 feet tall) and 'Northwind' (very upright, olive green, 5 feet tall). **Switchgrass** forms tall, slowly-spreading clumps that can be divided every 3 to 4 years. For more information on this easy grower, see www.clemson.eduplantprofiles/panicum-virgatum

A long-time favorite in the tall and upright category is ***Calamagrostis,*** a non-native which looks great in masses and can lend your garden a needed upright element. A famous cultivar is *Calamagrostis x acutiflora* 'Karl Foerster', which is a hybrid of European and Japanese species. For more information about this grass, take a look at the Plant Finder feature of the Missouri Botanical Garden website, www.missouribotanicalgarden.org/PlantFinder.

*Calamagrostis x acutiflora 'Karl Foerster'*

One genus of natives worthy of more garden use is ***Andropogon***, including *Andropogon virginicus* and *Andropogon gerardii*, both of which are native to our area and which you'll often see on roadsides and fields. Its common name is broomsedge, but this humble plant can add a striking element to your garden.

*Native broomsedge (Andropogon virginicus) in a garden bed.*
*Photo courtesy of Hoffman Nursery*

*Splitbeard Broomsedge*
*(Andropogon ternarius)*
*Photo:Tom Potterfield*

Another member of the *Andropogon* genus now being sold by native plant vendors is splitbeard bluestem, *Andropogon ternarius,* which grows up to 3′ tall with a 2′ spread. Its seed heads are sparkly little white puffs. ncsu.edu/goingnative

If you're looking for a shorter grass — 2 to 3 feet wide and tall — you might be directed to fountain grass, *Pennisetum alopecuroide*s, which is is one you'll at least want to be aware of as you wander the nursery aisles.

*Mt. Cuba Center.*

*Pennisetum alopecuroides showing off its autumn colors. Photo: SB Johnny, courtesy of Wikimedia Commons.*

But fountain grass has been so widely planted that the risk of invasivenss is increased, so ask for alternatives. Our nurseries and garden centers can offer us many alternatives, especially if plenty of us are asking for them.

One of those alternatives is a native — **prairie dropseed**, *Sporobolus heterolepis*, a showy easy-to-grow grass that tolerates deer,drought, erosion, dry soil, shallow-rocky soil, black walnut, and air pollution. I found this long list of positive traits at the Plant Finder feature of the Missouri Botanical Garden website. http://www.missouribotanicalgarden.org.

*Prairie dropseed in fall.*

**Little bluestem**, *Schizachyrium scoparium,* is an under-used native that is unfussy about soil or moisture and apparently needs only a sunny spot to perform well. It's quite small — averaging about 2 feet wide and 2 feet tall — and in summer, it is a blue-green color that changes to rusty rose in fall.

*Schizachyrium scoparium 'The Blues' at the Battery Conservancy, New York City*

Several cultivars have been developed, one of the most popular being 'The Blues' — which, judging from this photo taken at the Battery Conservancy, lives up to its name.

A very small grass popular in the nursery trade is *Festuca glauca,* which has striking blue-gray foliage and forms neat mounds.  Perhaps the most popular variety is 'Elijah Blue' —

but keep in mind its limitations:  short-lived, needs regular dividing and not tolerant of warm humid weather.  So there has to be something good about it, right?  It IS tolerant of dry conditions.  But if your garden needs a diminutive **grass**, you might try instead one of our **native sedges**, such as Pennsylvania sedge (*Carex pensylvanica*), which grows only a few inches tall, is a bright green, and which tolerates dry, poor soil. www.fandm.edu/center-for-the-sustainable-environment.

*Carex pensylvanica*
*Photo: Susan Harris*

*Festuca glauca*
*Photo: Peggy A. Lopipero-Langm*

## The Ornamental Grass You Should NOT Plant:

### *Miscanthus sinensis* — newest plant invader of the Mid-Atlantic Region

*Miscanthus sinensis*
*Photo: Miya.m*

A number of years ago, I planted two cultivars of *Miscanthus sinensis* in my yard — 'Variegatus' and 'Gracillimus'. These are two of the popular cultivars of *Miscanthus* — which is known by many names, including Chinese silver grass, eulalia, and maiden grass. To my surprise, I soon had *Miscanthus* seedlings popping up all over my yard, and at first I thought this was terrific. These volunteers were filling in empty spots in my garden beds and, with their tall, waving leaves and plumes, creating lots of drama. But these mini *Miscanthus* plants eventually grew to gigantic proportions, and even worse, they were appearing in my neighbors' yards and on the edge of a nearby woods. I began to worry. So naturally, I started Googling.

My research led me to the conclusion that the two cultivars in my yard had been up to some cross breeding and had produced **the species form of *Miscanthus sinensis***. And that turns out to be a very bad result because the species form of *Miscanthus* spreads rapidly via seed and has been labeled an **invasive species here in Virginia and in the greater mid-Atlantic region**.
www.dcr.virginia.gov/natural-heritage/invasive-plant-list ; www.virginia.edu/blandy; www.invasiveplantatlas.org.

*Miscanthus sinensis covers a large portion of the Tonomine Highlands in Japan.*
*Photo:* □□□□

*Miscanthus sinensis* is native to eastern Asia, and in fact, it is something of a bully in Japan. The species was brought here for the ornamental garden trade and it has been the subject of much hybridization, with over 50 cultivars developed over the years. Some of these cultivars became tremendously popular in the 1980's thanks to their use in the gardens of Oehme and Van Sweden.

But then observers began to notice *miscanthus* spreading into areas where it had not been planted, mostly in the Mid-Atlantic region. Early on, scientists noted that it seemed to have "escaped" from cultivation. Still, some of the early scientific research indicated that *miscanthus* spread mostly through rhizomes, and the accepted wisdom for many years was that the cultivars of *miscanthus* were sterile and did not produce seed. But in 2010, research at the Chicago Botanic Garden proved that notion wrong. Scientists examined the seed set of many cultivars of *miscanthus,* and found that almost all set viable seed, some of them in very high numbers, a factor that can enhance invasiveness. As the researchers explained:

*"Most cultivars set filled seed, ranging from 14 to 349,327 seeds per plant; only four produced*

*no seed over the course of the trial.* ***Most cultivars of the species represent a high risk for self-seeding*** *in Zone 5. Because Miscanthus sinensis is self-incompatible (8),* ***risk of self-seeding increases when two or more cultivars are grown together."***

—"Differences in Seed Set and Fill of Cultivars of *Miscanthus* Grown in USDA Cold Hardiness Zone 5 and Their Potential for Invasiveness," Journal of Environmental Horticulture, www.hrijournal.org (March 2012).

As noted above, *Miscanthus* is "self-incompatible" — meaning it requires two or more cultivars or species to set seed. My research revealed that the "wild" miscanthus species that have naturalized in my yard are each a unique individual or genotype. This means that these "wild" plants can breed with each other, and thus, set a lot of seed. "Miscanthus: Ornamental and Invasive Grass," *HortScience* (Mary Hockenberry Meyer, 2004). Aha! I seemed to have solved the mystery of my expanding population of miscanthus seedlings. Now I knew what I had to do.

First of all, I knew that **one of my cultivars had to go**. Because I was so smitten with the 'Variegatus' foliage, I got rid of the 'Gracillimus'. Then I set about removing the giant species plants that were dropping their own seed. Not so easy! The species sets deep rhizomes that are extremely resistant to shovels! Plus, they had apparently shed a lot of seed because new seedlings continue to appear every year. At least the new ones are easier to dig out.

**Should you continue to plant Miscanthus?**

- First and foremost, **DO NOT PLANT the species form of *Miscanthus sinensis***. Few nurseries off the species form these days, but it's wise to ask. And don't take one from a neighbor!
- Avoid planting *miscanthus* cultivars, and most important, **do not plant more than one cultivar on your property**.
- And if you simply must plant a *miscanthus* cultivar, use **only a vegetatively propagated cultivar that has shown little or no evidence of self-seeding in our area.** Be sure to ask about the cultivar you're considering — how it was propagated and whether it has been self-seeding in our area. Asking these questions of staffers at garden centers and nurseries will not only spread a greater understanding of the problem, but may even turn up some helpful information.
- Remember, there are plenty of alternatives that provide the height and presence of a *miscanthus*.

One researcher in this field has created a **miscanthus website** to help gardeners and others dealing with *miscanthus* questions and problems; she plans to update it regularly. Check it out at miscanthus.cfans.umn.edu. There's something else we gardeners need to know about *miscanthus:* it is being developed and genetically manipulated for **bioenergy fuel** crops. Grounds for worry? Perhaps, and that seems like one more good reason to avoid using *miscanthus* in the garden.

Are you wondering about the invasion potential of *miscanthus* cultivars you'd like to plant or are already in your yard? You can **compare the seed set of various *miscanthus* cultivars** at the website of Fine Gardening magazine, which has a chart summarizing the research at the Chicago Botanic Garden, www.finegardening.com/which-grass-invasive-which-isnt. Keep in mind that the seed set in Chicago — where the research was conducted — will probably be different in our region because environmental factors such as climate have a major impact on the number of viable seeds set. Still, I found the chart very interesting. The 'Variegatus' cultivar, which was once thought to be sterile, in fact produced 211 viable

seeds in the Chicago trials. But compare that number to 'Silberfeder' — 3,975 viable seeds per plant. Or consider the whopping number of viable seeds produced by 'Malepartus' — 203,699.

**What if you already have two miscanthus cultivars in your yard?** Well, I'm sorry to say you'll need to keep a watchful eye out for *miscanthus* seedlings — or get rid of one of those cultivars. Remember, when two or more of these cultivars are grown together, seedlings are possible, and **almost always revert back to the "wild type" or species**, which can become quite aggressive, especially here in our area.

Armed with my new knowledge, I did a little sleuthing at local nurseries and found the usual suspects, i.e., the well-known varieties. But there was more to intrigue me: a **new cultivar of miscanthus sinensis which was advertized to be non-seed-bearing.** Hallelujah! Could this be true? Well, almost.

Scientists have indeed developed a number of seedless plants through the creation of **triploids**. You've no doubt eaten some triploids — seedless watermelons, for example, and also seedless grapes and oranges. A triploid will look normal, but it has **three sets of chromosomes** — hence the name triploid — and reproductively-speaking, that makes all the difference. To get really scientific about it, those 3 sets of chromosomes "cannot be divided evenly during meiosis, yielding unequal segregation of the chromosomes (aneuploids) or complete meiotic failure." If this stuff intrigues you, read more at "Developing Non-Invasive Nursery Crops," mountainhort.ces.ncsu.edu (N.C.State Extension, Mountain Horticultural Crops Research and Extension Center).

Efforts to develop a non-invasive triploid *miscanthus* have apparently been successful. Research at North Carolina State University — a hotbed of *miscanthus* invasion — indicates that "some triploid *Miscanthus* display substantial reductions (greater than 95%) in fertility compared with diploid controls." A 95% reduction would be greatly appreciated in my yard, but it's still shy of complete infertility. Nevertheless, the North Carolina researchers concluded that several of the triploids they examined had such "**substantial reductions in fertility"** that they **"may provide desirable, noninvasive substitutes"** for the ever-popular cultivars now on the market. **"**Fertility and Reproductive Pathways in Diploid and Triploid Miscanthus sinensis," hortsci.ashspublications.org.

So apparently, these desirable, **noninvasive triploids have indeed been developed** and are now available at our local nurseries. One of these triploids is named 'My Fair Maiden' — and we should all hope it is as infertile as claimed. Read more about it at www.ces.ncsu.edu.

The fact that *miscanthus* has become invasive in our area should not deter you from creating the kind of movement and drama that ornamental grasses provide. Just look at the native alternatives identified above, and for more detailed information on native grasses, see our previous article, "Meadow Gardening," Meadow Gardening, The Garden Shed. The photographs above of the Muhly grasses ought to be inspiration enough! But don't stop there. You can learn from the masters — Oehme and Van Sweden. Their public and residential garden designs still demonstrate the many ways to employ ornamental grasses to exquisite effect — despite the fact that they often included *miscanthus* cultivars.

And we have a special opportunity to learn more about the "New American Garden" style of Oehme and Van Sweden because a traveling **photographic exhibit** of their many gardens is **now in Charlottesville!** The exhibition opened two years ago at the National Building Museum, and is now on view at **Campbell Hall at the University of Virginia** until November 21, 2017. For details about the exhibit, go to http://calendar.virginia.edu.


*The New American Garden Exhibition Poster*

SOURCES:

*The Encyclopedia of Grasses for Livable Landscapes* (Rick Darke, 2007)

"Selection and Use of Native Warm-Season Grass Varieties for the Mid-Atlantic Region,"www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications (Natural Resources Conservation Services, US Dept. of Agriculture, 2008)

"Delightful Ornamental Grasses: Coming to a Garden Near You," The United States National Arboretum, Gardening Page (2007);www.usna.usda.gov/Gardens/faqs/OrnamentalGrasses.html

"Miscanthus: Ornamental and Invasive Grass," *HortScience, hortsci.ashspublications.org* (Mary Hockenberry Meyer, July 2004) (abstract)

"Miscanthus: Ornamental and Invasive Grass," www.hrijournal.org/doi/abs/

"Fertility and reproductive pathways in diploid and triploid *Miscanthus sinensis*," Hort-Science 46:1353–1357 (Rounsaville, T.J., D.H. Touchell, and T.G. Ranney, 2011), hortsci.ashspublications.org

www.invasive.org

"The Relative Risk of Invasion: Evaluation of Miscanthus x giganteus Seed Establishment," *Invasive Plant Science and Management (*2014) (evaluating another species of miscanthus – *Miscanthus x giganeus* — used in bioenergy fuel production) weedeco.ppws.va.tech.edu

# Fothergilla — An Outstanding Choice for Fall Color

By Patsy Chadwick | November 2017 - Vol 3 No.11

When it comes to fall color, Fothergilla (pronounced fah-ther-GILL-ah) is one of the showiest shrubs in the landscape.  It provides a kaleidoscope of colors — shades of purple, maroon, burgundy, red, orange, yellow, and gold.  Better yet, this shrub extends the show well into November, long after most other woody plants have dropped their leaves.  Its colors do vary from year to year, depending on rainfall, temperatures, and amount of available sunlight.

While considered one of the great American native shrubs for fall color, ironically, Fothergilla is named in honor of an English botanist, Dr. John Fothergill (1712-1780), who cultivated one of the earliest and most extensive collections of American plants in Europe.

A member of the *Hamamelidaceae* genus, Fothergilla is a deciduous flowering shrub that is native throughout the southeastern part of the United States. It is a cousin of witch hazel, another interesting and very useful native shrub. Besides its spectacular fall color, Fothergilla provides multi-season interest. It makes a dramatic statement in the spring with its attractive, fragrant white bottlebrush-style flowers that emerge on leafless stems. In summer, it is an attractive, well-mannered shrub bearing dark green to bluish-green leaves. After it eventually sheds its fall foliage, the shrub continues to be of interest in winter with its zigzag branching and light-brown bark.

Only two species of fothergilla exist and both are native to the southeastern United States – large Fothergilla and dwarf Fothergilla:

- Large Fothergilla (*Fothergilla major*) grows wild in the southern Appalachians in North Carolina, Georgia, and Alabama and as far west as Missouri. Found growing primarily in part shade in woods, ravines, and along stream banks, it has a rounded mound-shaped habit 6’ to 10’ tall and 5’ to 9’ wide. The leaves are nearly round and 3” to 5” inches long with coarsely toothed margins. The showy white flowers, which have no petals, appear in April as 1” to 2” long bottlebrush-like spikes and last for 2 to 3 weeks. The “bristles” on the spikes are stamens. The plant reproduces by suckering, but not to any great extent.

*Fothergilla Major in autumn*

- Dwarf Fothergilla (*Fothergilla gardenii*) naturally occurs in the sandy soils of North and South Carolina in sunny savannahs. This medium-size, slow-growing, multi-stemmed deciduous shrub looks very similar to large Fothergilla, though it is much smaller. Topping out at around 3’ to 4’, it is a suitable choice for smaller gardens. Like major Fothergilla, this dwarf species has attractive white flowers in spring and showy fall foliage. It requires moist, well-drained acid soil and is not drought tolerant. This species is “strongly suckering in habit,” according to Dr. Michael Dirr’s *Manual of Woody Landscape Plants*.

*Dwarf Fothergilla (F. gardenii) in Spring at Longwood Gardens*

While the two species are nearly identical except for overall plant size, their cultural requirements differ

slightly. Large Fothergilla prefers part shade and drier, heavier, more acidic soil than the dwarf variety, which prefers more sun and sandier acidic soil.

### *FOTHERGILLA HYBRIDS AND CULTIVARS*

Interest in Fothergilla as a landscape plant has grown since the 1990s, resulting in the development of a fair number of hybrids and cultivars. Of the many selections available, the following three tend to be some of the most popular:

***Fothergilla x intermedia* 'Mount Airy'** is a naturally occurring cross between the two species (*F. major* and *F. gardenii*). It was discovered at the Mount Airy Arboretum in Cincinnati, Ohio by University of Georgia plantsman, Dr. Michael Dirr. It grows about 5' to 6' tall and wide and shows consistently good fall colors. The 2" long and 1-3/4" wide flowers are larger than those of its parents. It has heavy textured, dark blue-green leaves with whitish undersides.

*Fothergilla major 'Mt. Airy'*
*Photo: kjeanette, courtesy of UBC Botanical Garden.*

Until this selection was introduced, Fothergilla was not all that well known or grown commercially. A vigorous plant, 'Mount Airy' is now widely available in garden centers. It is thought to be superior to the species in nearly every aspect, including flower size and abundance, cold hardiness, general robustness, and fall color. Its brilliant fall colors alone warrant its use in the landscape as a specimen plant.

***Fothergilla gardenii* 'Blue Mist'** was introduced by the University of Pennsylvania's Morris Arboretum in Philadelphia, Pennsylvania. It has a delicate, mounded growth habit topping out at 2' to 3' tall and 3' to 4' wide. The blue-green foliage is very attractive in the summer and lends a cooling effect to the summer landscape. According to Dr. Dirr, it may not be quite as cold hardy as the species and, in his opinion, the fall color is not as spectacular as other forms of the species.

***Fothergilla x intermedia* 'Blue Shadow'** is a sport of 'Mount Airy' described above and very similar to it except that the leaves of 'Blue Shadow' emerge green in spring and rapidly mature to an intense, powder blue color. The leaves retain this color all summer and then change to brilliant red, orange and yellow shades in fall. This shrub grows 4' to 6' tall and wide with a rounded habit. It is one of the more popular cultivars available commercially.

*Fothergilla 'Blue Shadow'*
*Photo:kjeanette*

***CULTURAL REQUIREMENTS***

Fothergilla thrives in filtered shade to full sun in USDA zones 5-8, but the best fall color is produced in full sun.

It prefers moist, acidic, well-drained soil with plenty of organic matter added. Acid soil is a must. Fothergilla species thrive in soil with a pH of 5.0 and below. Alkaline soils result in yellow (chlorotic) foliage.

This plant has shallow roots and benefits from a layer of mulch to moderate soil temperatures and conserve moisture.

The *F. gardenii* species tends to spread by suckering. To limit its spread, promptly remove the suckers as soon as they appear.

Prune Fothergilla only to maintain a healthy framework. This includes trimming off dead branches or branches that are rubbing against each other. However, if you wish to reduce its size, prune it after it finishes flowering in late April. Fothergilla blooms on last year's wood. If you wait until it goes dormant in the winter, you will lose the spring flowers.

Fothergillas are trouble-free plants that have no known pest or disease problems. They are generally deer resistant.

***PROPAGATION***

Fothergilla is easy to propagate from either root or softwood cuttings. In fact, its suckering habit can be used to your advantage for this purpose. Simply dig up a sucker with as much of the root as possible and transplant it elsewhere. New plants can also be started from softwood cuttings. Early summer is generally the best time to collect cuttings so that they have time to establish a good root system before going dormant in winter. Starting new plants from seed is the most difficult approach as it may take as many as 9 to 15 months for the seeds to germinate.

***USES IN THE LANDSCAPE***

Fothergilla is equally attractive used as:

- An interesting single specimen or accent plant. This shrub merits specimen status in the autumn garden due to its outstanding fall foliage.
- A mass planting. Keep in mind that large Fothergilla is a good choice for a spacious landscape, whereas dwarf Fothergilla will generally work better in a smaller garden where space is at a premium.
- A part of a shrub or mixed border containing other plants that like similar growing conditions and acidic soil such rhododendrons and azaleas. Other good plant combinations include oakleaf hydrangea (*Hydrangea quercifolia*), inkberry (*Ilex glabra*), serviceberry (*Amelanchier canadensis*), red chokeberry (*Aronia arbulifolia*), sweetbay magnolia (*Magnolia virginiana*), summersweet (*Clethra alnifolia*), and sweetbay magnolia (*Magnolia virginiana*).
- A foundation planting.
- An informal hedge.
- A planting in a naturalized setting bordering the margins of a wooded area.

Regardless of how you use it, easy-to-grow Fothergilla's showy spring flowers and attractive summer foliage are excellent reasons enough to grow this native species. But its astonishing fall colors make this shrub a truly outstanding multi-season choice for the landscape.

***SOURCES:***

*Dirr's Hardy Trees and Shrubs, An Illustrated Encyclopedia* (Dirr, Dr. Michael A., 1997)

*Manual of Woody Landscape Plants, Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*, Sixth Edition (Dirr, Dr. Michael A., 2009)

*Native Plants of the Southeast, A comprehensive Guide to the Best 460 species for the Garden* (Mellichamp, Larry, 2014)

"Dwarf Fothergilla," The Morton Arboretum website

"Fothergilla," Clemson Cooperative Extension Home and Garden Information Center Publication HGIC 1093

"Problem-Free Shrubs for Virginia Landscapes," Virginia Cooperative Extension (VCE) Publication 450-236

"Selecting Plants for Virginia Landscapes: Showy Flowering Shrubs," VCE' Publication HORT 84P

"The Witch Hazel Family (Hamamelidaceae)" by Richard E. Weaver, Jr., 1976, arnoldia.arboretum.harvard.edu

"Trees and Shrubs for Acid Soils," VCE Publication 430-027

# Shallots — A Gourmet Treat

By Cleve Campbell | November 2017 - Vol 3 No.11

It's November and the vegetable garden is fast becoming  a distant memory. It seems like fall clean-up and putting the garden to bed for the winter are our final chores. I've had my fair share of battles this gardening season: fighting ground hogs, squirrels, deer, rabbits, and insects. But I'm not quite ready to let the gardening season come to an end.  One of the easiest and most carefree crops, the shallot, can be planted in the fall**;** plus, it's what many gardeners and chefs consider a gourmet vegetable. This fascinating vegetable **can be planted even in November** and is ready for harvest in late spring to early summer. What's really cool about shallots is that they perform well with very little maintenance, and since they are planted in November, I have one less task to perform during the spring-rush planting season. One of their greatest attributes is that rabbits, squirrels, deer, and insects tend to avoid the shallot patch.

A dainty but hardy member of the *Allium* genus (which includes onions, garlic, and chives), shallots are biennials, and they are prized for their delicate onion-like flavor. In addition to being a carefree crop, shallots are a gourmet treat. They are a mainstay in **French and Thai cuisines**; they can be an elegant addition to salads, dressings, sauces, and sautés and may be substituted for onions in many dishes.

**True bulbs** like onions and shallots can grow in two different ways. Onions grow by increasing the size of the single bulb planted. Shallots, on the other hand, grow in the same manner as garlic. When you plant a clove, it grows by forming multiple cloves, each with a paper wrapper. However, unlike garlic, there is **no papery cover** that creates a "head." Instead, shallots produce a cluster of bulbs from a single planted bulb.

*Unlike garlic, shallots do not have a papery cover to hold the bulbs together to form a head.*

Shallots for planting should be purchased from an online seed source or from a garden center, if possible. Grocery store shallots have probably **been treated/sprayed** with a growth regulator to deter sprouting, and they may not grow in the garden once planted. If you need to use grocery store shallots, try to purchase organic shallots to increase the chance they will sprout, or better yet, if you have a gardening friend who grows and saves shallots from the previous harvest, ask your friend to share a few.

**Shallots Are Generally Classified Into 3 General Groups**

*French Red Shallots*

**French Varieties —** These are the commercial ones that are available in our local grocery stores. French Red is the most common variety sold commercially. French varieties all have brownish-red skin, pinkish-purplish flesh, and pear-shaped bulbs. Their flavor is a subtle combination of onion and garlic. Like all shallots, their flavor is at its best after being sautéed in butter, although they can also be eaten raw in salads.

**Gray Griselle Variety —** Many people, especially in France, consider the gray or Griselle variety of shallot to be the best in terms of flavor. The French consider the gray shallot to be the "true shallot" and no French chef would allow any other variety into the kitchen. The pear-shaped (1-1/2 in.) bulbs have gray skin and pinkish-white flesh.

*Gray Griselle Shallots*

*Dutch Shallots*

**Dutch Shallots** — The flavor of Dutch varieties is stronger and more like an onion than other shallot varieties. They tend to be round and feature orange-yellow skin and yellowish-cream colored flesh.

**Environmental and Cultural Practices**

Shallots prefer full sun (8 hours); however, they will grow in part sun but the size of the bulb will be reduced. They prefer a well-drained, loose soil that is rich in

organic matter; a raised bed is ideal. They are not too picky about the soil pH, as they will tolerate a wide pH range, from 5.0 to 6.8. The bed should be as weed-free as possible, because weeds compete with the shallots for moisture, light, and nutrients.

If the shallots purchased for planting are sold in clumps, divide them into individual sets (bulbs) before planting. Plant the bulb at a depth of 1 to 2 inches deep and about 6 to 8 inches apart. The pointed bulb tip should be pointed up; the tip of the bulb should be just below the soil line or barely sticking out of the soil. Mulch lightly with leaves or straw to retard weeds and to maintain a consistent moisture level. The bulbs will develop on the surface of the ground. Do not cover with soil. The roots will be very shallow; therefore, extreme care must be taken with any cultivation or weeding to avoid damaging the plant.

*Shallots should be planted with the pointed end up.*

**Fertilizer Requirements**

As with any crop, a soil test should be taken prior to planting to determine the soil pH and any nutrients that are needed. The general recommendation is 3 to 4 pounds of 10-10-10 per 100 square feet when preparing soil, followed by side dressing after bulb enlargement with 2 pounds of 10-10-10 or the equivalent organic fertilizer.

**Water Requirements**

Like most vegetable crops, shallots require about 1 inch of water per week. They like moisture but the bulbs will rot if waterlogged. Watering should be stopped about a week prior to harvesting.

**Harvesting**

Shallots may be harvested as green onions, when the tops are 6 to 8 inches high. Harvest mature bulbs when the tops have turned yellow and fall over. When harvesting, take care to lift clusters carefully so that the bulbs are not damaged during harvest. Each planted clove should yield about 10 or more shallots.

**Storing**

Once the shallots have been harvested, they **should be cured** before storing. To cure, place the shallots on a tray or a wire rack in a warm, dry spot for a week or two to cure. Once they have cured, you can store the shallots either by hanging them in a cool, dry place, **or** by removing the tops and storing them in mesh bags (recycled onion bags work great).

*Shallots being stored by hanging.*

Shallots are not only easy to grow, with few pests and disease problems, but also are a good use of the garden's footprint or real estate, because they are expensive to buy in the grocery store. A bountiful supply of shallots are a great joy in the kitchen, since shallots can be prepared in any number of ways. Onions and garlic are normally used to create foundation flavors, whereas shallots are often used to create "finish" — that extra zip that pushes a good recipe over the top. And don't forget to **save the largest shallot** bulbs for the next planting season.

**Enjoy!**

Thanks for visiting *The Garden Shed*. We look forward to you dropping by next month.

**Sources:**

"Onions, Garlic and Shallots," Virginia Coop. Ext., Publication No. 426-411, https://pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/426/426-411/426-411_pdf.pdf

"Shallots," University of Maryland Extension, https://extension.umd.edu/learn/shallots

"Shallots," University of Arkansas, Division of Agriculture, Publication FSA6095, https://www.uaex.edu/publications/PDF/FSA-6095.pdf

"Onion, Leek, Shallot & Garlic," Clemson Coop. Ext., Publication HGIC 1314 http://www.clemson.edu/extension/hgic/plants/vegetables/crops/hgic1314.html

# The Ornamental Garden in November

By Patsy Chadwick | November 2017 - Vol 3 No.11

*Autumn in the garden.*
*Photo: James Balcerzak*

Now that November has arrived, the autumn leaves are past their peak and the ornamental garden is entering a state of dormancy. Does this mean it's time to put away the gardening tools? Not really. The gardening season doesn't truly end in the central part of Virginia until the ground freezes, which may not happen until December. Meanwhile, there's a lot to be done to prepare the garden for winter.

***GENERAL FALL TASKS TO COMPLETE IN NOVEMBER***

Here's just a sampling of tasks to be completed this month:

***Drain and store water hoses***, sprayers, and wands. Leaving them outdoors all winter is never a good idea. Don't forget to drain irrigation systems as well as any outdoor spigots that are not frost-proof.

***Shut down and winterize water features***. Fountains that are full of either standing or running water risk being damaged in freezing weather. Vessels with pumps should be emptied and stored and the pumps drained, dried, and stored as well.

***Remove dead or dying plant matter from ponds***. Decomposing organic matter can deplete oxygen in the water, potentially killing pond fish over winter. For smaller ponds, place netting over the surface to catch falling leaves. For general information on water garden maintenance and advice on overwintering pond plants, see Virginia Cooperative Extension (VCE) Publication 426-042, Winterizing the Water Garden.

***Clean and store lawn ornaments*** such as portable trellises, figurines and other decorative ornaments. Also, don't leave empty flowerpots, particularly clay ones, outside. They can be damaged from freezing and thawing cycles.

***Dig up and store tender bulbs*** that you didn't get around to digging up in October. University of Maryland Publication HG105 on Overwintering Tropical Plants gives good advice on how to store caladium and elephant ear (*Colocasia spp.*) bulbs. It also provides guidance on how to overwinter tropical plants in general.

***Continue watering evergreens*** until the ground freezes. They will survive winter's freezing temperatures far better if well hydrated before cold weather sets in. In particular, they are better equipped to ward off winter browning of foliage from drying winds.

***Collect soil samples*** to test for pH and nutritional levels. Don't guess what your soil needs. If the soil test indicates your soil pH needs to be raised or lowered, now is a good time to apply either lime or sulfur as needed.

***Remove the spent flower heads of chrysanthemums*** to tidy up the plants. However, leave the stems standing. They should not be cut back to the ground until late winter or early spring. The dead tops help protect the crown of the plant in cold weather.

***Remove and dispose of diseased foliage*** from roses, peonies, irises, daylilies, and any other plants that are subject to fungal leaf diseases. Do not put the diseased foliage in your compost pile. Bag it and put it in the trash.

***Apply a layer of mulch over the root ball of roses*** after the first hard frost (below 24°F).

***Mulch flower beds*** after the ground freezes to prevent injury to plants from frost heaving.

*Fall is a great time to plant and transplant trees.*

***Plant deciduous trees and shrubs now***. Planting them during cool autumn weather allows them to become established before next summer's brutal hot weather arrives. Prepare the planting site by loosening the soil well beyond the drip line of each plant. Dig a hole that is two to three times wider than the diameter of the root ball but no deeper than the height of the root ball. Remove any wires, ropes, and non-biodegradable material from the root ball before back filling the hole. After you finish back filling, apply about 3 inches of mulch over the site but don't let the mulch touch the trunk of the plant. Leave a 2" to 3" gap between the trunk or plant stem and the mulch. Water the plant well but not to the point that the soil becomes soggy.

***Finish planting spring bulbs***. VCE Publication 426-201, Flowering Bulbs: Culture and Maintenance, recommends a planting depth of 2-1/2 to 3 times the diameter of the bulb. In other words, if your bulb is 2" in diameter, plant it 5" to 6" deep (that's from the top of the soil to the bottom of the bulb). While some bulbs can tolerate some shade, most of them do best in a sunny site that drains well.

***Dig a hole now*** if you intend to buy a live Christmas tree for planting out after the holidays. It's much easier to prepare the planting site now before the ground freezes. Otherwise, you may find the task very difficult in the dead of winter.

***Install tree guards or chicken wire*** around the trunks of vulnerable young trees and woody shrubs to

discourage rabbits, deer, squirrels and voles from nibbling on the bark.

***Rake up leaves*** that are falling into flowerbeds. Unless they are chopped into smaller pieces, they can mat down, which can harm overwintering plants.

***Clean and oil gardening tools*** and store them in a dry place over winter.

### *MOVE ESTABLISHED SHRUBS AND TREES WHILE THEY ARE DORMANT*

It's no fun digging up established trees or shrubs, but it is sometimes necessary to do so. Late fall is the perfect time for this task. This undertaking is not for the faint of heart, particularly if the plant is on the large size. Moving such plants normally require root pruning when the plant is dormant and needs to be done before bud break in spring if you are planning to relocate the plant in fall. The Clemson Cooperative Extension's Home and Garden Information Center Publication HGIC 1055 offers sound advice on how to transplant established trees and shrubs. It's important to make sure the root ball is large enough to accompany ample fibrous and feeding roots to help the plant make a full recovery from the move. The HGIC publication includes a useful chart recommending the diameter and depth of the root ball needed for this purpose.

### *GARDENING FOR THE BIRDS*

***Don't get overly aggressive about cleaning up your spent ornamentals***, particularly the ones with seed heads. Leave them in place as a source of food for foraging birds over winter. Seeds from cone flower, aster species, black-eyed Susan, sedum, Joe Pye weed, coreopsis, globe thistle, and even zinnias and marigolds will be welcomed by a variety of bird species.

***Clean out bird nesting boxes*** to prevent mites and avian diseases from overwintering in them. This job should be done with the use of garden gloves and a face mask (to avoid inhaling any of the debris). After removing the old nesting material, scrub the inside of the box with a solution of one part bleach to nine parts water. After the box dries, dust it with a wildlife-safe fungicide, and reassemble it promptly so that overwintering birds can use it for shelter.

If you decide to feed wild birds, now is the time to **set up bird feeders**. For advice on the food preferences of common bird species as well as the type of feeders to use, see VCE Publication 420-006, Feeding Wild Birds.

### *HOW TO OVERWINTER CONTAINER GARDENS*

Container gardens are very popular these days. But, when temperatures fall, you are faced with the dilemma of what to do with the plants, particularly perennials. If you planted perennials in a container garden, you may be tempted to leave them outdoors all winter. But before you do that, make sure both the plant and the container can withstand freezing temperatures. First, check the hardiness zone for your containerized plant. The central part of Virginia is in USDA zone 7. If your plant is rated as hardy in one or two colder zones (in our case, zones 5 or 6), it will probably overwinter just fine outdoors with protection.

Make sure the pot is frost-free. The more porous the container, the more likely it will crack during freezing weather. For example, untreated terra cotta absorbs water, which will expand when frozen causing the pot to crack.

The more soil you have in the container, the better insulated the plant roots will be. If you're not sure there's enough soil in the pot, try placing the entire container into a larger one and filling in the space between the two pots with soil or mulch.

Place the potted plant in a sheltered place out of drying winter winds.

If this approach doesn't appeal to you, other options include the following:

- Remove the plant from the container and plant it in your garden. This will solve the immediate problem while you consider a permanent home for the plant next spring. Mulch the plant with a 2" to 4" layer of mulch after the ground freezes. It's important to mulch after the ground freezes to prevent the plant from heaving out of the frozen soil.
- Plant the perennial, container and all, in the ground before the ground freezes. Cover it with a layer of mulch after the ground freezes. The mass of soil surrounding the pot will help protect it and the plant roots from freezing.
- Move the potted plant into a cold frame and monitor the temperatures to prevent the plant from overheating on warm days.
- Move the container into an unheated garage or basement where it can get some light. Keep the plant barely watered, just enough to keep the root ball from drying out.

***HOUSEPLANTS***

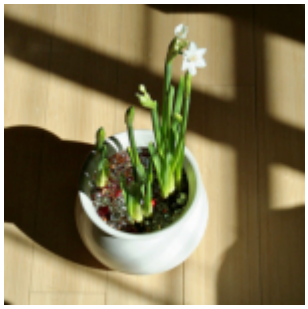
***Continue to inspect indoor plants closely for insect pests*** such as aphids, mealy bugs, mites, scale, spider mites, thrips, and whitefly. Treat for them as soon as possible. Otherwise, they may spread to other plants causing you a lot more work to bring them under control.

**Reduce or hold off on fertilizing houseplants** until spring. Winter is their time to rest.

*Paperwhites emerging in an indoor pot.*
*Photo: Brianna Privett*

***Start forcing paperwhite Narcissus bulbs now***

in order to have them in bloom over the winter holidays. Paperwhites don't require any period of chilling and are very easy to force. Once planted, they will bloom in about 5 to 6 weeks, according to VCE Publication HORT-76 on forcing flower bulbs for indoor bloom. This publication provides excellent graphics and clear instructions on forcing bulbs. It also provides a useful listing of bulbs commonly forced into bloom and projections on the number of weeks they should be planted in advance of flowering.



*Paperwhite narcissus starting to bloom in time for the holidays.*
*Photo: Brianna Privett*

***Start Amaryllis bulbs*** for bloom over the winter months. One of the easiest and most satisfying of bulbs to force, an Amaryllis will begin blooming within 6 to 8 weeks on average after it is planted. Like paper whites, these popular bulbs don't need to be chilled in advance of forcing. The bulbs generally come with instructions for forcing them. However, if you don't have instructions, refer to VCE Publication HORT-76 for information on how to force them.

# The Vegetable Garden in November

By Cleve Campbell | November 2017 - Vol 3 No.11

With the arrival of November, the 2017 vegetable growing season is finally coming to an end, and those early tomato seedlings are rapidly becoming a distant memory. November in the vegetable garden is a clean-up month, and also a time to reflect back on the growing season. Don't forget to make year-end notes in your garden journal — which varieties did well and which varieties performed below expectations: this information can be very valuable when planning for the 2018 growing season. And we will soon be reminded of the upcoming growing season because in December, we will start to receive the 2018 seed catalogs — chock full of pristine and unblemished photos and exciting new vegetable offerings.

Here's my Vegetable Garden To-Do List for November:

- **Root crops** such as carrots, radishes, turnips and parsnips can be **stored outdoors** in the ground. Just before the ground freezes, bury these crops under a deep layer of leaves or straw. Harvest as needed during the winter months.
- **Keep mulches pulled back** several inches from the base of **fruit trees**, to prevent bark injury from hungry mice and rodents.
- **Fallen, spoiled or mummified fruit should be cleaned up** and destroyed by burying or placing them in the trash. Good sanitation practices reduce re-infestion of insects and diseases in the following seasons.
- **Mulch strawberries** with straw or leaves. This should be done after several nights near 20ºF but **before the temperature drops into the teens**. Apply the straw or leaves loosely but thick enough to hide plants from view.
- **Now is a good time to collect soil samples** to test for pH and nutrient levels. A free soil testing kit is available at your local Extension Office. The Charlottesville-Albemarle Extension Office is located in the County Office Building on 5th Street Extension, 460 Stagecoach Road, (434) 872-4580.
- Don't forget the **garden hoses: drain and roll up and store on a warm sunny day**. It's hard to get a cold-water hose to coil into a tight coil. Also, be sure to shut off and drain any outdoor water pipes and irrigation systems that could freeze during the cold weather.
- **Rhubarb** plants that are four years old or more can be **divided and transplanted**. A site prepared by deep digging and incorporating compost will pay off with a good yield in upcoming years.
- **Prepare a spot in the garden NOW for early planting of peas.** This way you'll be all ready for planting peas in the spring, before the soil dries out.
- **Tidy up the asparagus bed.** Cut off the tops of the plants to about 3-4 inches above the soil level. Weed and add a winter dressing of compost or aged manure to the bed.
- **Early November is a good time to plant most fruit trees**, especially if a little mulch is added. Local gardening and landscape centers often offer discounts on fruit trees at this time of the year.
- If you have been thinking about installing a deer fence around your vegetable garden, the **fall and winter months are a good time to design and build a deer fence.**

**Sources:**

Virginia Cooperative Extension, Albemarle/Charlottesville, November Monthly Horticulture Tip Sheets,Va. Coop. Ext. Tip Sheets.

“Deer,” Internet Center For Wildlife Damage Management, Cornell University, Clemson University, University of Nebraska-Lincoln and Utah State University, Internet Center for Wildlife Damage Management –Deer

# Blue Ribbon Apple Pie

By Cate Whittington | November 2017 - Vol 3 No.11


Vintage Virginia Apples and the Cove Garden Ruritan Club celebrates its 17th annual Apple Harvest Festival this November. It's a fun event for the whole family.
https://www.albemarleciderworks.com/news/harvest-festival

The festival's much-anticipated Apple Pie Contest, sponsored by Charlottesville Cooking School and judged by local food luminaries, provides stiff competition for area bakers. One of our own PMG members walked away with First Prize in 2016. Congratulations to Sharon Wormser!

Sharon has graciously consented to share her Blue Ribbon recipe with the rest of us. Just in time for Thanksgiving, the pie features a variety of local Virginia apples.

**Blue Ribbon Apple Pie**

8-10 heirloom apples (if available) or Granny Smith**

2 Tablespoons Apple Jack, optional

1 ¼ cups white sugar

¼ cup brown sugar

¼ cup King Arthur pie enhancer

1 Tablespoon cinnamon

½ tsp. nutmeg

½ stick butter

1. Peel and slice apples and mix with sugars, enhancer, cinnamon and nutmeg.
2. Melt butter in large pan and sauté apple mixture approximately 20 minutes (here's where you add 2 Tablespoon s Apple Jack if you like).
3. Allow the apples to cool several hours or overnight (This really blends the flavors).
4. Spoon into piecrust with a slotted spoon, allowing some of the "filling" to drip off into a separate bowl. (Save this and use it as topping for the scoop of ice cream on your slice of pie, or as syrup for pancakes or waffles).
5. Bake at 375 degrees for 45-60 minutes.
6. Serve warm "as is" or with a scoop of vanilla ice cream and extra "apple syrup."

**Pie Crust**

4 cups unsifted flour

1 Tablespoon sugar

2 t. salt

1 cup shortening

¾ cup butter

1 Tablespoon vinegar

1 large egg

½ cup cold water

In a large bowl, mix first 3 ingredients well. Cut in shortening and butter (using a pastry cutter), until crumbly. Combine water, egg and vinegar, and beat with a fork.

Combine all ingredients until well moistened. Do not over mix. Divide dough into 3 portions. Wrap each in wax paper or plastic wrap and chill ½ hour (or freeze for next time). Roll out on a floured board. Handle this crust as little as possible; it's very crumbly and breaks apart easily.

** *Last year's winner was made with Virginia Gold, Albemarle Pippin, Suncrisp, Gold Rush and Pink Lady apples from Vintage Virginia Apples.*