

Helping Carolinians Increase Their Knowledge of Gardening, Manage Their Landscape Investment & Protect the Environment

NC STATE UNIVERSITY NORTH CAROLINA COOPERATIVE EXTENSION

JC Raulston Arboretum Plant Focus

Wild Ginger – the Shade Garden Secret

Wild gingers are handsome, low-growing plants that many shade gardeners revere for the deep green or mottled leaves and the “little brown jugs” found hiding under the cluster of leaves. The gingers found tucked away down woodland trails largely come from either North America or Asia.

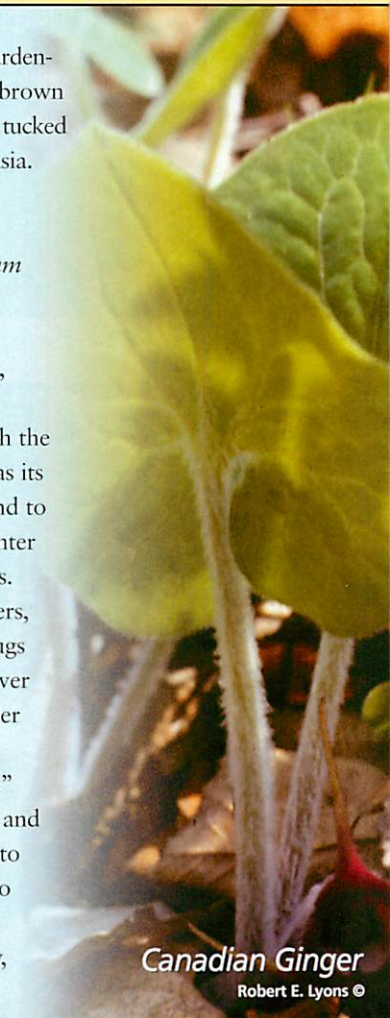
Most of the wild gingers require a moist, rich soil and partial shade. They can tolerate periods of drought that are common in the Southeast. The Canadian ginger, *Asarum canadense*, and the ‘Callaway’ ginger, *Asarum shuttleworthii* (sometimes known as *Hexastylis shuttleworthii* var. *harperi* ‘Callaway’) are becoming more available to gardeners.

Our native ginger, *Asarum arifolium*, better known as arrowleaf ginger, displays a great variability in leaf shape, color and leaf sustainability. The sometimes dark green leaves are often found in the shape of an arrow with the leaves showing a mottled or solid green color. This plant is not as showy as its Canadian or European cousins during the winter months, as the leaves tend to become dull and ragged. As spring approaches, they make up for their winter dullness with a display of fresh new leaves and tan to purplish flower buds.

Two recently introduced gingers come from Asia. These Japanese gingers, *Asarum splendens* and *A. yakushimanum*, display unusually large flower jugs and are slow to establish, but will form a colony. If you are looking for silver speckled foliage, look for *A. splendens*. For a dark shiny green leaf, consider *A. yakushimanum*.

As the flower buds give way to becoming flowers or “little brown jugs,” many gardeners become kids at heart again and find themselves on hands and knees searching under those newly formed leaves for the unusual flowers to pick and show to friends and family. Resist this urge and invite friends into your garden to see them as they should be seen.

The JC Raulston Arboretum has a collection of wild gingers on display, and is a great place to visit for ideas. **Stephen Greer**



Canadian Ginger
Robert E. Lyons ©

inside

2 Control Grubs and Other Pests

3 Enviro-Tip

4 Garden Spot



European Ginger
Robert E. Lyons ©



Canadian Ginger
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'Callaway' Ginger
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Armyworm



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Fall Armyworm Damage



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Spittlebug



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Japanese Beetle Grubs

Control Grubs and Other Pests in Your Lawn

Of the one million different insect species in the world, 38 are commonly associated with turf in North Carolina. Fortunately, the average homeowner will only see a few of these insect species in a lifetime.

White grubs and green June beetle grubs are the most common turf insect problem. There are two ways to handle grubs. One is to wait until September and then check for grubs by cutting three sides of a 1-square-foot piece of sod about 3 inches deep with a spade at the edge of one of the off-color areas in the turf. Pull or pry the sod back like a flap and examine roots for chewed off remnants and check the soil for grubs. Use your fingers to sift through soil and roots. If you find three or four grubs per square foot, treat your lawn with a quick-acting product containing halofenozide (Mach 2) or trichlorfon (Proxol or Dylox). The advantage to this method is that pesticides are used only when the grubs are causing a problem. The disadvantages include extra work and sometimes having to replant where the grubs have destroyed the turf.

The other control for Japanese beetle grubs is to use imidacloprid in late May or early June each year. Imidacloprid is sold under brand names such as Merit, Advanced Lawn Grub Control or Season Long Grub Control. The advantage to treating every year is that the grubs are always killed before they create a problem. The disadvantage to this method is that by applying so early there is no way to be sure whether you will need the pesticide. Unfortunately, by the time the grubs are large enough to see, they are beyond the point where imidacloprid works the best.

While not as prevalent as white grubs, members of the butterfly and moth order occasionally attack turf. This includes sod webworms, armyworms and other caterpillars. To scout for these insects, mark off a 1-square-yard area on the edge of the damaged turf. Damage will normally occur

between late May and the end of October. Mix 2 fluid ounces of liquid dishwashing soap in 4 gallons of water and drench the area with the solution. Insects will emerge to the grass surface. Kneel to observe the area closely. Insects will return to the soil in 5 or 10 minutes. If no insects are found, examine other suspected areas. Treat if you find in the 1-square-yard area an average of 40 or more sod webworms, or eight or more caterpillars. For caterpillars, use halofenozide (Mach 2), trichlorfon (Proxol or Dylox) or one of the pyrethroids labeled for turf. Pyrethroids have active ingredient names that end in "thrin" and include brand names such as Bayer Advanced, Bug B-Gone, Deltagard, Scimitar, Talstar or Tempo.

If you have St. Augustine grass you might suspect chinch bugs. While some chinch bugs will come to the surface with a soapy water treatment, a better method is to use a zip-lock bag. Cut out a piece of sod and place it in a large, clear, zip-lock bag. Place the bag in the sun for a few minutes. As the turf heats up, the chinch bugs leave the turf and can be seen on the inside surface of the bag. Examine three or four places in the suspected area. If you find an average of 20 or more chinch bugs per square foot, treat with pyrethroids.

Closely examine turf for evidence of damage by other insect pests such as ants, bees, wasps and leafhoppers. Also check for a white frothy spittle-like mass that gives away the spittlebug. Always check the turf where the damaged area meets the green, healthy grass. That is where the insects are likely to be most abundant. Once you find an insect, proper identification is important. The pyrethroids will control many insects that you will find in the turf, but will not kill nematodes, ground pearls, crayfish, slugs or moles. For proper identification or additional control measures, contact your local Cooperative Extension Center.

David Goforth

Bedding Plant Preparation

Flowering annuals can provide months of color to brighten your home landscape. Proper bed preparation for annual beds is essential for good growth. The first step is to take a soil sample. Soil sample boxes and instruction sheets are available at your county Cooperative

Extension Center. The test is a free service provided by the North Carolina Department of Agriculture. The test results will give a fertilizer recommendation and the liming requirement of the soil if it is too acidic.

see Plant Preparation on page 3 ▶

gardentalk



Spring is nature's way of saying, "Let's party!"
Robin Williams



Now that diazinon has been removed from the market, what can I use as an alternative?

Diazinon was widely used in homes, yards and gardens to kill insects such as ants, aphids, crane flies, cockroaches and fleas. The U.S. Environmental Protection Agency (EPA) found that the risks of the pesticide to children, fish, birds and drinking water were high, and removed it from the market. To make the switch to safer alternatives, identify your pest problem and its sources. It is likely you can control household and garden pests without harmful chemicals.

For lawns, an alternative to diazinon may be better care of your lawn. By

following the basic rules of turf care – mowing, fertilizing and watering correctly – damage from white grubs can often be a thing of the past. If white grub problems cannot be solved by cultural means, look for one of the following products: Sevin, Merit, Mach 2, Proxol or Dylox or insecticides containing permethrin, which have labeling for white grub management in residential lawn areas. Another alternative is the biological product, *Bacillus thuringiensis* (Bt), or even some of the beneficial nematodes now showing up on the market.

Karen Neill

Plant Preparation

continued from page 2

All plants have a preferred pH range for optimum growth. If the pH is too high or too low, the bedding plants will not thrive, no matter how much fertilizer you apply. If you can't wait for the test results, a general recommendation is to apply 10 pounds of 10-10-10 and 20 pounds of dolomitic lime per 1,000 square feet. After you have received the soil test results, you can add additional lime and fertilizer if necessary.

Soil structure is another consideration in annual bed preparation. Plants need water to survive, but the roots also need an adequate supply of oxygen. Improve drainage and aeration by adding organic matter to the soil. If you have a sandy soil, adding a soil amendment will improve the water-holding capacity of the soil. The organic matter also helps hold nutrients. Clay soils typically have poor aeration and drainage. The addition of organic matter will loosen the soil and encourage better root growth. Composted leaf mold and pine bark fines are most often used as soil conditioners. Add at least 25 percent by volume of the organic matter to see a benefit. Incorporating more than 50 percent by volume of organic matter may have a negative effect on plant growth. For more information on bedding plant bed preparation, contact your local Cooperative Extension Center.

Mark Danieleley

ENVIRO-TIP

From Waste to an Enviro Booster

We talk a lot about compost in this newsletter. That's because it has many benefits and is a way to productively use materials that otherwise would end up in landfills. Extension agents like to say "feed the landscape, not the landfill" as a reminder to recycle waste and use it to boost the environment.

Millions of tons of organic waste are composted by homeowners, municipalities and commercial composters each year. Composting is the aerobic decomposition of organic materials into a stable material by microorganisms such as bacteria and fungi. This process generates heat, which kills harmful pathogens and weed seeds.

Compost is used as an amendment to improve the physical, chemical and biological properties of soils by adding air space and relieving compacted conditions. When added to sandy soils, moisture-holding capacity increases to reduce drought injury to plants. When added to

heavy clay soils, drainage and aeration improve. These changes create a better environment for root growth, enabling the soil to hold and release nutrients better. The activity of earthworms and soil microbial activity improves. Over time, repeated amendments with compost result in soil that is easier to work and better for plant health.

Compost is mostly used as an amendment in planting beds. It can also be used as mulch, turf or plant topdressing and as an amendment to commercial growing mixes. Home and commercial vegetable growers, nursery and greenhouse operators and landscapers use compost regularly. It is also useful in pollution prevention and remediation. Compost is used to prevent erosion of hillsides, embankments and roadsides. It also can bind heavy metals in contaminated soils and degrade many pesticides. In addition, it is used in wetland damage mitigation, stormwater filtration and biofilters. *Mike Wilder*



Robert E. Lyons ©



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Gardening in April

Lawns

- Do not fertilize centipede grass or fescue grass now.
- Fertilize Bermuda or zoysia grass with 1/2 pound of nitrogen per 1,000 square feet. Use a slow-release turf fertilizer.
- Mow your turf at the correct height: fescue at 3 to 4 inches, Bermuda at 2 inches, St. Augustine at 2 to 3 inches, centipede at 1 to 1.5 inches and zoysia at 1 to 2 inches.
- Begin spot treatment of summer annual broadleaf weeds. Be sure the herbicide you select can be used on your type of turf.

Ornamentals

- Begin to check your azaleas for lace bugs. Turn the leaf over and look for tiny tar spots, a good indicator of lace bugs. Treat with an insecticide for lace bugs.

- Prune spring-flowering plants, such as forsythia, azalea, spirea and weigela, immediately after flowering. If you wait until summer or fall to prune, you will remove next season's flowers.

- If your annuals are flowering vigorously when you plant them, remove at least half of the flowers to give the plants a good start on root, leaf and flower growth.
- After your Easter lilies fade, plant the bulb in your garden. Choose a sunny, well-drained location and cut the foliage back after it has withered.

Edibles

- Make sure it is past the average last frost date in your area and nighttime temperatures are above 50 degrees before planting your warm-season vegetable transplants or seeds.
- Rotate the location of vegetable plants in your garden to lessen the possibility of a buildup of soilborne diseases.
- Blossom-end rot on tomatoes is caused by a calcium deficiency. Have your soil tested to determine whether you need to add lime.

Emily Revels

'Mrs. Moon' Lungwort
Robert E. Lyons ©

The Center for Environmental Farming Systems (CEFS) focuses on

developing farming systems that nurture the environment as well as ensuring productivity and profitability of agriculture. The center has five research farming system units and is located 45 miles east of Goldsboro, off US Highway 70. The center integrates Cooperative Extension and teaching with its research, and hosts many visiting groups and training workshops. The small farm unit is a place where visitors can observe an operational farm, which includes organic farming. Organic produce sales are among the fastest growing sector in the North Carolina retail food industry, and CEFS works to help North Carolina farmers learn about innovative crop production practices. From May to November, you can enjoy the fresh, in-season produce, which is sold on the NC State University Main Campus Plaza Brickyard. To learn more about CEFS and the produce sale, visit www.cefs.ncsu.edu/frsu.htm.

Don Breedlove

Extension's



April 7 - 9

- Southern Ideal Home Show
- State Fairgrounds, Raleigh
- Get your gardening questions answered by Extension agents and Master Gardeners
- www.southernshows.com
- www.successfulgardener.org

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