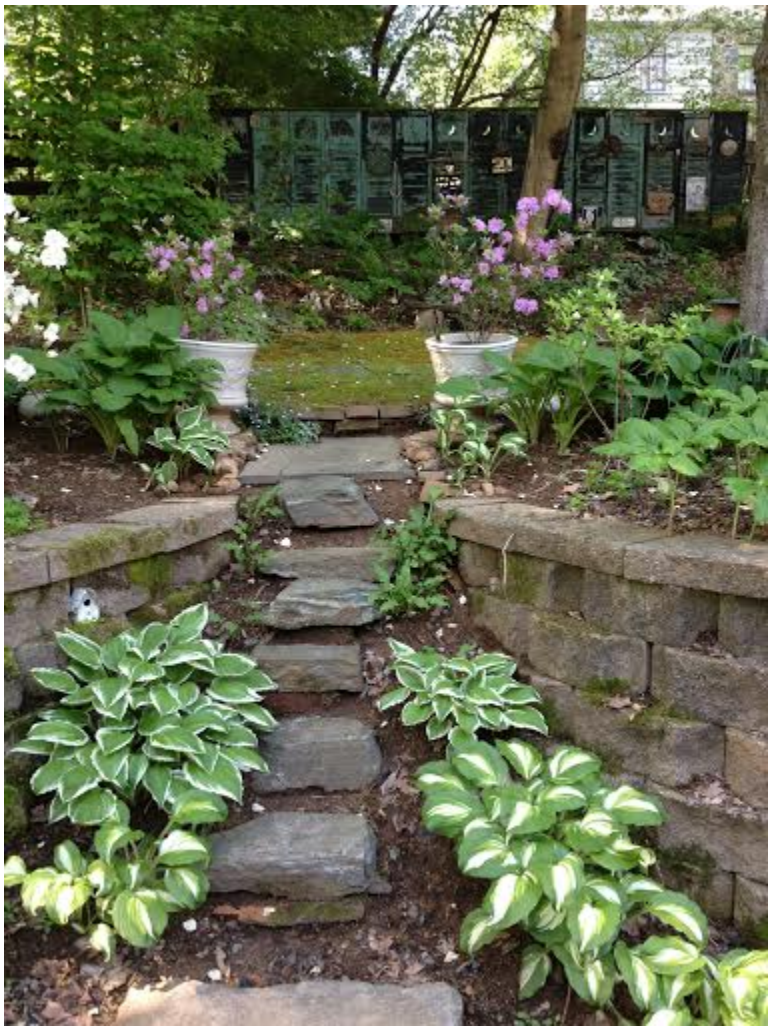
July 2015 - Vol. 1 No. 7



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Getting Started in Ornamental Gardening

By Cathy Caldwell | July 2015 - Vol. 1 No. 7

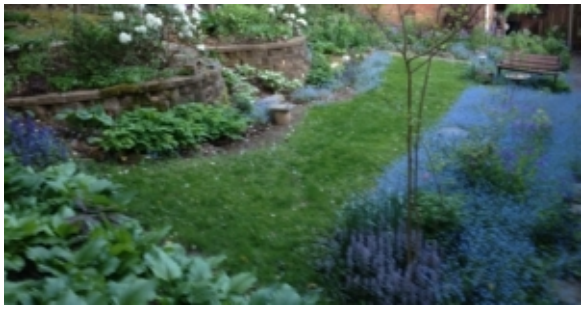

Photo: Kate Galligan

by Cathy Caldwell

Are you just starting out as an ornamental gardener? Welcome to the best club on earth. Gardeners of all stripes tend to be the best sort of person — kind, eager to learn new things, and helpful. Plus, you'll be working with the earth — so elemental an enterprise that it confers a deep soul satisfaction on all practitioners.

Not that there won't be frustrations. That happens to all gardeners, amateur and veteran alike. Why, just last week I was out spraying deer repellent on my daylilly buds, hoping I'd actually get to see a few of them open. With my other hand, I was madly grabbing at weeds. The irony of my dual protect-and-destroy mission was overwhelming, and that's how it is when you're working with — or against — Mother Nature.

Perhaps your path can be smoothed a bit. I've outlined some of the mistakes I made as a newbie in the hope that you'll be relieved from even just a few trial-and-error mishaps. That way you can get going on making your own mistakes!

First of all, do NOT start planting this month. Sorry, but July is not a good month for planting much of anything. The heat will stress new transplants, and coupled with the periods of drought we often get in July, may shrivel up that beautiful plant you just bought. Even if you're conscientious about keeping your new transplants moist, you're risking disappointment, especially if you go on vacation and must rely on volunteers to do the watering. So save the planting for fall, which is an ideal time for starting most garden plants, shrubs and trees.

While you're waiting for fall, you can do the **preparatory work and planning** that will lead to a beautiful garden next spring and summer. You didn't think you could just slide a few seeds or plants into the ground, did you? Well, that only works if you've inherited beds that were already prepared by a previous owner. And true confessions time: in my early years, I tried this myself — and on our red Virginia clay soil to boot. Needless to say, my early efforts were complete failures. Mother Nature needs a little help — unless you're a weed.

A life in gardening seems like one long series of mistakes. But mistakes lead to learning, wisdom even, right? In this way, gardening seems like the ultimate metaphor for life. Still, a newbie can **learn from the mistakes — and successes — of veteran gardeners.** And that's the way to go if you're just getting started — or even if you're experienced. All gardeners expand their fund of knowledge through learning from other gardeners. If you have a neighbor or friend with a garden you admire, ask for a personal "tour" and start asking questions. Most gardeners are happy to share their experiences. And you'll have your first gardening mentor.

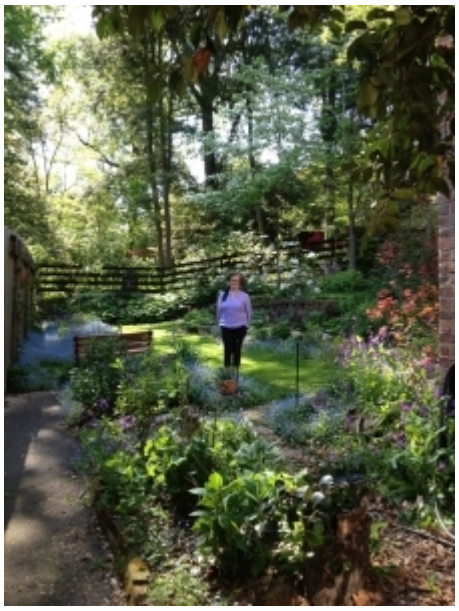

Photo courtesy of Kate Galligan

Gardening mentors can come in the human format, but there are other types as well, such as garden tours and garden publications, as well as educational programs offered to the public.

"Through the Garden Gate" Tours

Take advantage of the opportunity to visit local gardens offered via the "Through the Garden Gate" tours, sponsored every spring and summer by Piedmont Master Gardeners. No fancy estates on these tours, though such gardens undoubtedly provide inspiration. Instead, you'll see the gardens created by ordinary people through their own dedication and hard work. You'll discover new plants, see arresting plant combinations, and get some ideas for lay-outs that might suit your own site. Best of all, the gardener who did all the work is there to answer your questions. You can pick up brochures at the Extension Office or check the schedule of tours online at Garden Gate Brochure. The next tours are on **Saturday, July 11** and **Saturday, September 12.** Don't miss these opportunities!

Demonstration Gardens

The volunteers of the Piedmont Master Gardeners recently created a native plant garden near the amphitheater at the new Martha Jefferson Hospital. PMG also maintains a rose garden at the Senior Center. In addition, PMG has collaborated with other groups, including the Master Naturalists, on a butterfly garden at the Ivy Creek Natural Area. More information on these demonstration gardens is available at the PMG website, PMG Demonstration Gardens.

Spring Garden Lecture Series

Every spring the Piedmont Master Gardeners offer a series of four evening lectures on a variety of garden topics. Watch the PMG website for the dates of the lecture series next spring. Not only will you learn from experts, you'll meet other gardeners. Who knows, maybe you'll meet a new garden mentor.

Virginia Tech/ Va. Cooperative Extension Publications

Check out the extensive list of research-based publications at http://pubs.ext.vt.edu/. Look at the Lawn and Garden category for information on everything from the best plants for Virginia to how to compost. You'll eventually want to do this. Really.

Gardening Magazines, Books and Catalogs

Those splashy photos in gardening magazines and books will not only inspire you, they'll increase your knowledge of plants and how to combine them. Ornamental gardening is a creative endeavor; you can spark your own creativity by studying the combinations and designs you'll find in magazines and books. This is true for catalogs, too. In my early years, I kept copies of garden catalogs at my bedside. I fell asleep stumbling over Latin names, but I slowly acquired a knowledge base — not only of plant names but which need sun vs. shade, which are easy to grow vs. demanding, etc.

I'm going to go out on a limb here and name names. Here is a list of catalogs to get you started:

Southern Exposure Seed Exchange, southernexposure.com (based here in Virginia)

Brent & Becky's Bulbs

Niche Gardens

White Flower Farm

J.L. Hudson

Sandy's Plants, (a Virginia wholesaler of native plants that sells to individuals only at their nursery in Mechanicsville, Va.)

Gardening magazines worthy of your attention include Fine Gardening, Hortus, Garden Gate, and Horticulture.

Remember that many gardening magazines and catalogs have a financial interest in pushing NEW cultivars and varieties. Be aware that sometimes that heavily-advertised newly-developed plant becomes a garden bully, wiping out other plants in its zeal to take over. I urge new gardeners to stick with the tried-and-true garden classics and natives.

A couple books that are recommended for beginning gardeners are *The Garden Primer b*y Barbara Damrosch (Workman Publishing Co. 1988) and *Beginner's Illustrated Guide to Gardening: Techniques to Help You Get Started* by Katie Elzer-Peters (Cool Springs Press 2012).

Nurseries

Yes, nurseries and garden centers can be helpful, especially if the nursery has a staff with expertise to share. Keep in mind while you're drooling over a gorgeous blooming plant or shrub that in all probability, it was grown in the artificial conditions of a grower's nursery. In your garden, it will probably bloom at a different time. You'll learn more about what plants bloom when by driving around town and walking through neighborhoods.

In July, some nurseries will have plants on sale, and this can be an opportunity to acquire plants you want at bargain prices. But proceed with caution, or you could end up with a diseased plant. This happened to me. One cheap but sickly rhododendron spread disease to an entire bed of rhodies. A false economy if ever there was one! So examine sale plants carefully for signs of disease. An end-of-season sale once worked out quite well for me. I had a plan for a new bed and spotted most of the plants I needed in the sale section of a reputable nursery. I left the plants in their pots in a semi-shaded spot for the rest of the summer. With no vacation planned, I was able to keep them well-watered until fall, and they were in good shape at the right time for transplanting to their new home.

Make it Small but Beautiful

Start small. Your aim is to have a small garden so lovely that it brings you and others joy every time you pass it. You'll be buoyed by your success and feel confident enough to proceed with bigger projects. Spend some time and thought on choosing the best site for your starter garden (choose a spot where it will be seen often) — and also on choosing the right plants for that spot (sun vs. shade) — and in designing the bed (when it comes to shape, consider the curve).

Do NOT buy one of everything at the garden center. Believe me, I know how tempting that is. But most plants are more appealing in drifts and masses. How you arrange your groups is part of the creative process, but make sure your combinations include different heights, textures and plant habits (soft mounding plants make a delightful contrast to spiky, tall plants). Even if you're mostly after flowers, the "bones" of your garden will be shrubs or small trees. Please do NOT try to pick plants whose blooms are the same color as your house. You don't want your flowers to "disappear" into the walls; contrasting colors are much more pleasing.

Mass planting

Take a look at the design principles in Planning the Flower Border, a Va. Cooperative Extension publication. Oh, about that word "border" — it's the term gardeners use for the long beds that are sited along a borderline of some sort — the neighbor's property line or the front of your house (also called foundation plantings) or the rock wall that marks the edge of a terraced hillside.

Improve Your Soil

I've got this listed last, but it's the most important element. Soil is what it's all about, the foundation upon which your garden depends. If you're working with heavy clay soil — and most of us are here in central Virginia — do some soil prep NOW, so you'll be ready for planting in fall.

Some plants are quite fussy about soil, but you'll want to avoid those, at least in the beginning. But almost all desirable garden plants need soil that has the fundamental nutrients they need to prosper and a loose enough structure to permit the passsage of air, water and roots. Most clay soils lack these essentials, at least to some extent. In fact, clay soil may look and act like concrete on a hot, dry summer day. That's why you'll need to work in amendments, which are materials like compost. Compost is basically just decayed organic matter, often a combination of plant matter, sometimes including manure. If you're wise, you'll add a top layer of compost to your garden once a year. Nothing could make your plants happier!

When I was just starting out, I tried to scrimp on **soil amendments**. The prices of compost, whether bagged or delivered, seemed really high. But whatever money I might have saved was more than outweighed by the money lost on plants that didn't make it. These days I do pay for delivered compost as well as mulch, but there are indeed some ways to save, including:

— Make use of the **autumn leaves** you rake up in the fall. You can mow them to break them into smaller pieces and use them as mulch, or pile them up in a shady spot and let them rot for a while, turning them into free soil amendments. When you work them into your garden bed, they'll not only add nutrients, they'll improve the structure and drainage of your soil, all of which are key elements to healthy plants.

–If your neighbors are bagging leaves for collection, ask if you can have them. More free soil amendments and mulch!

— If there's tree work going on in your neighborhood, you might acquire some free **wood chips**, which you can use for mulch. I was able to do this after that big ice storm a few years ago. I hailed the driver of a truckload of wood chips, who was delighted to unload them in my yard because it saved him time and dumping fees. The chips were not quite ready to be good mulch until after a season or two of decay, but

time turned them into a huge and wonderful mulch pile that I am still using.

By the way, **mulch** is organic matter, though not as decayed as **compost**, and it's spread on the surface of the soil beneath plants to conserve moisture and prevent weeds. Most ornamental gardeners use wood chips or leaves as mulch, which then slowly decomposes and adds nutrients just as compost does. In fact, one easy way to improve your soil — assuming it's reasonably good soil to begin with — is by adding a layer of mulch every spring. Over time, the decomposing mulch will work some magic on your soil.

— Ask your neighbors how they acquire compost or mulch. They may even want to "go in on" a delivery of mulch or compost and share the cost. Or, as happened to me, your gardening friend or neighbor may tell you about a farmer that provides them with compost or manure at a good price.

If your new bed will be in an area that's currently lawn, you need not employ herbicides to clear it. Instead, read about "**lasagna gardening**" — which involves layers of newspaper, cardboard, and piles of leaves or other organic matter. These thick layers of bio-degradable materials will kill the grass — and weeds — and you'll have a site that has more nutrients and better soil structure than before. You can make holes through the layers where you insert the plants. Did I say earlier that you can't just *insert* the plants? Well, with lasagna gardening, you can! Read all about it in ***Lasagna Gardening: A New Layering System for Bountiful Gardens: No Digging, No Tilling, No Weeding, No Kidding!*** by Patricia Lanza (1998). I found this book in the Jefferson Madison Regional Library.

If you're new to gardening — or just new to this area — we'd love to hear from you. Let us know about your experiences and your questions and your needs. We'd like to help. Write to us here at The Garden Shed, garden-shed@pmgarchives.com and feel free to call the Master Gardener Help Desk: 434- 872-4580.

Zucchini Insurance?

By Cleve Campbell | July 2015 - Vol. 1 No. 7

Last week, my Saturday afternoon nap was interrupted by a knock at the back door. Now what? The person standing at the door was Scott, a neighbor, a really nice guy, and very active in many of our local charities. Over the years I had gotten to know Scott and his passion for helping the community. I knew the drill: I was going to be hit up for a donation for his current community mission. So I waited for him to pop the question, but what he said was a surprise: "I am volunteering at the local food bank and wondered if you could donate some zucchini squash." Hmmm. Donate zucchini squash?

Now, I have about 12 zucchini hills (36 plants) that are going gangbusters, and to be truthful, I am having trouble keeping up with the harvest. Zucchini is one of the most prolific producers in the garden, and arguably one of the most versatile vegetables (actually from a botanical standpoint, they are a fruit). You can eat them raw, as an appetizer with a dip, in soups, in salads, grilled, grated and added to breads, cakes, and muffins, casseroles, stir fries, made into pickles or relish forms– the list of possibilities are endless. I couldn't think of a more versatile vegetable to donate to the food bank than zucchini squash.

"Sure Scott, it would be my pleasure to help the food bank." I grabbed several paper bags along with two knives and headed to the garden. On the way, Scott became a chatter box, asking endless zucchini questions — where they come from, how to grow them and if there were any problems growing them. So I shared a bit of the information I had collected over my many years of gardening.

History

Zucchini is one of many varieties of summer squash that originated on the American continent. Archaeological findings document that Native Americans cultivated squash as far back as 8000 years ago.

During the 14th and 15th centuries, European explorers would often return to Europe from America with plants and seeds. Squash seeds were transported back to Europe, and for the next 300-400 years, squash grew steadily in popularity on the European continent, becoming an important food source, especially in Italy and in other countries bordering the Mediterranean. Zucchini was cultivated and improved in the late 1800's in Italy. Italian immigrants then brought the new improved squash back to the U.S. in the early 1920's. The name "zucchini" comes from the Italian language and it means "little squash."

The popularity of zucchini in American cuisine increased in the 1940's as the result of soldiers returning from World War II and Americans traveling in Europe or Asia after the war. America was soon fascinated by the beautiful squash they found in the farm markets and by the sight of orange zucchini blossoms busting open in skillets of hot butter in Italian restaurants. Thus, a new and improved zucchini came back home to American gardens, kitchens, and restaurants.

CULTIVATION

Zucchini, unlike winter squash, grows on nonvining bushes, requiring less space than their cousins. In the spring, after the soil temperature exceeds 60º F., plant 2 to 3 seeds every 2 to 3 feet (some gardeners prefer planting 3-5 seeds in a hills placed every 3-4 feet and then thinning the number of plants to 2-3 plants per hill). Zucchini seeds may also be started inside three weeks before transplanting outside. The seedlings should be transplanted outside after the danger of frost has past, which is May 15th in central Virginia. Zucchini plants will mature in about 50 days. A second crop may be planted in our area from July 1- July 15th.

Soils—Well-drained, sandy loams with high organic-matter content and a pH of 6.0 to 7.5 are the most productive for zucchini. For early crops, choose a lighter soil that warms rapidly. Avoid low, poorly drained soils on which waterlogged conditions are likely to occur. To reduce the likelihood of soil-borne diseases, plant on soils that have not had squash, cucumbers, watermelons or cantaloupes for at least three years.

Nutrient Requirements—Squash are considered medium-to-heavy feeders. A soil test should be performed every couple of years to determine the need for nutrients and the type to be added to the soil. Organic fertilizers, such as alfalfa meal, blood meal, cottonseed meal, feather meal or fishmeal, may also be utilized as a source of nitrogen. Soil containing a high percentage of compost or well-rotted manure is ideal.

Zucchini Pests:

The squash bug and the squash vine borer are major pests to zucchini, often collapsing a plant overnight.

Squash bugs damage the plant by removing sap, causing the leaves to wilt and collapse. Squash bugs are also carriers or vectors of a deadly disease called Yellow Vine Decline. The bacterium that causes this disease is injected into the plant while the squash bug feeds. The disease results in yellowing, wilting and death of the plant. Early infection by the bacteria that causes the disease can result in severe yield loss; therefore, it is important to prevent the squash bugs from feeding on young plants early in the season.

Adult Squash with recently laid eggs.
Photo Credit: Whitney Cranshaw, Colorado State University, Bugwood.org

Cultural control involves proper gardening sanitation to reduce debris that act as a squash bug shelter, the use of disease-resistant varieties, early planting (to limit early colonization), and crop rotation. Elimination of weeds may also be helpful as weeds provide an area for the squash bug to hide.

Physical and mechanical control is another tool that can be helpful in controlling squash bugs. Ambush those pesky bugs by placing boards or pieces of plywood on the ground around the squash plants. The boards provide shelter and a place for the squash bugs to concentrate. Once the boards are flipped over, the bugs can be destroyed. Scout the squash plant leaves for egg masses; newly-laid eggs are usually light-colored, but become coppery and turn darker. Egg masses are commonly laid in a diamond or v-shaped pattern along leaf veins. Once you have located and identified the egg masses, squeezing them between your thumb and forefinger can destroy them. Row covers, when tightly secured, have been shown to be helpful in field trials in West Virginia and Iowa.

Biological Control: A native tachinid fly, *Trichopoda pennipes*, attacks adult squash bugs in the field. There are a few parasitoid wasps, including the *Platygastrid* wasp and *Eupelmid* wasp, which lay their eggs in the eggs of squash bug eggs, effectively limiting initial colonization of the squash bug.

Squash Vine Borer is a type of caterpillar and is the most destructive squash pest, killing almost every plant it infests. The moth (having the appearance of a wasp) of the squash vine borer will fly around the plant during the day, depositing its eggs on the stems near the soil level of the squash plants. Thus begins the infestation. In a few weeks the eggs will hatch and the borers will drill into squash stems, where they feed for four to six weeks. It is this feeding activity that kills the squash plants. If your squash crop has squash vine borers, the lower stems will have holes, from which emerges a wet sawdust-like material know as frass. The only treatment at this point is to split one side of the stem with a razor blade or sharp knife and puncture the worm. Burying the wound under a mound of moist soil will encourage rooting.

Squash vine Borer
Photo Credit: Jim Jasinski, Ohio State University, Bugwood.org

Reducing the Risk:

Plant early with transplants. A planting made in early spring may bear fruit before the squash vine borer can kill the plant.

Floating row covers have been found to be help, as they prevent the adult squash borer moth from laying eggs at the base of the stem. However, row covers must be removed to allow pollinators to visit the blossoms.

Other means of reducing borer populations include crop rotation, removing crop debris from the garden at the end of the growing season, and destroying the infested plants during the season (do not place them in the compost as the squash vine borer may overwinter).

Chemical controls:

Many of the articles cited in this article suggest various chemicals for controlling the squash bug and squash vine borer. In all situations, if you elect to follow the recommendations, whether it be a natural or synthetic chemical, **timing is critical.** Application should coincide with maximum egg hatch, because the nymph stage is most vulnerable to the pesticide. Waiting until the plant is damaged or infected is often too late. Timing can be judged by frequent and careful garden scouting trips searching for pest egg masses.

Unfortunately, the peak pest activity coincides with the bloom time and occurs just when the squash flowers need to be pollinated in order to bear fruit. Squash plants have separate male and female flowers on the same plant. Pollen must be transferred from the male flowers to the female flowers by pollinators. Several of the sources cited below recommend applying insecticides late in the evening when the pollinating activity is reduced in order to prevent killing the pollinators.

Read the insecticide label and follow the law — yup, the directions on the label are the LAW! Also, be sure that the insecticide is specifically labeled for the plants you wish to protect and is effective against the pest you want to control. Always follow the recommended application rates and frequency of application. Heed all instructions on the label, as some insecticides are toxic to fish and by law cannot be used adjacent to bodies of water.

Harvesting:

Zucchini is a very versatile vegetable and has an endless variety of uses in the kitchen. Therefore, the harvesting size may depend on your intended usage. The 5-8 inch lengths are excellent for raw snacks, for using on appetizer trays, for soufflés, and for adding to soups. The larger zucchini, especially if it has gotten tougher, seedier and less flavorful, will work best in recipes that call for stuffing or grated zucchini. Zucchini is a very fast growing squash, and left in the garden for even a few extra days will grow into 15 to 18 inches in length, so daily trips to the zucchini patch are a must if you wish to harvest tender zucchini in the 5-8 inch range.

Storage:

Zucchini is not a long keeper and does not store well like winter squash. They may be kept a couple of days in the refrigerator; if they are kept longer, they may develop water spots and become soft. The recommended long storage method is freezing for, or caning as, pickles or relishes.

Scott and I finally arrived at the garden, and as we began harvesting the zucchini, I smiled. Scott was harvesting everything from 4 inches and up, even those baseball-bat-size zucchinis. Man, they can get big in a hurry; they were only 5-6 inches long a couple of days ago, and I knew from experience that the more you harvest, the more productive the plants. I figured we could drop the baseball bats off at the compost bin on the way back to the house. Well, Scott was doing a good job of keeping the large zucchinis separate from the “eatable” size, and that would make the composting easier.

Man, there were more zucchinis than I had expected to harvest, and we were running out of bags, so I needed to make another trip back to the house for more bags. To speed things up, I grabbed a couple of bags of the oversized zucchinis to drop them off at the compost bin. As I headed to the house, I was stopped in my tracks by a yell from Scott — “Just throw those bags in the back of the truck.” I slowly headed back to the garden to inform Scott that these huge zucchinis were useless, that they were dry, tough and had huge seeds. Scott absorbed that bit of information and responded, “Cool, just toss them in the back of the truck.” Now somewhat speechless, I asked meekly, “What are you going to do with those oversized zucchinis?” Scott replied, “They’ll be donated to those folks that didn’t buy zucchini insurance last spring.” I recall muttering, “Zucchini insurance?”

“Yep,” Scott replied, “zucchini insurance. Most gardeners plant too many zucchini plants, so they end up giving them to their friends and neighbors to the point that the neighbors run and hide when they see those bags of zucchinis coming. Last spring the food bank needed money, so we sold “zucchini insurance” to protect the folks from getting overwhelmed by generous gardeners, and those large zucchinis will be donated to those folks who didn’t support the food bank by buying zucchini insurance.”

Now in my many years of gardening, I had heard a lot of strange things — planting in the sign of the moon, planting tomatoes next to carrots, putting moth balls in the garden to repel rabbits and raccoons, and collecting hair from the barber shop to keep deer out of the garden — but this was the first time I had ever heard of zucchini insurance. But what the heck, it’s for a good cause.

We had a good harvest; we estimated we had about 4 bushels of eatable zucchini for the food bank and another 2 bushels of “insurance zucchinis.”

The morning after Scott’s visit, with coffee in hand, I headed out to pick up the morning paper. As I closed the screen door, I stopped dead in my tracks,. There on the porch were 2 bags of baseball-bat- size zucchinis. Ugh! Next year I will be cutting back on the number of zucchini plants (4-6), and I will be making a zucchini insurance purchase!

Thanks for joining us in The Garden Shed. Hope to see you next month, and in the meantime, happy gardening.

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Virginia Cooperative Extension Publication ENTO-64NP, “Squash Bug” ext.vt.edu/ENTO/ENTO-64/ENTO-64.html

North Carolina State University, “Act Now to Protect Squash Plants from Vine Borer,” ncsu.edu/2012/05/act-now-to-protect-squash-plants-from-vine-borer

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Tips and Tasks in the Vegetable Garden

By Cleve Campbell | July 2015 - Vol. 1 No. 7

The weather in central Virginia is often unpredictable, ranging from 75-80 degrees in February to snow in April, but we can say with certainty that in July, it is going to get **HOT**! The heat brings many challenges, not only to the garden but also to the gardeners, who must somehow protect themselves from the hot summer sun with clothing and sunscreen while remembering to maintain hydration.

July in the vegetable garden is primarily a month of maintenance: watering, applying additional mulch, weeding, and harvesting. The ambitious gardener may take on additional tasks, such as sequential planting of select vegetables and preparing for the planting of fall crops.

Weeding

It's important to control weeds around vegetables, as weeds will out-compete vegetable plants for nutrients, water and sunlight. The best method to control weeds is by mechanical extraction, meaning good old-fashioned weed pulling or the use of a hoe. For small weeds, the "**hoop" or "stirrup" hoe** is highly recommended because it allows for shallow cultivation. Another plus for the hoop hoe: it does not bring weed seeds to the surface of the soil! Many weed seeds require sunlight to germinate, so deep cultivation or utilizing a tiller often brings seeds to the surface of the soil, facilitating seed germination for a new crop of unwanted weeds.

For additional weed information see: pubs.ext.vt.edu/456/456-018/Section_2_Home_Vegetables-4.pdf.

Succession Planting and Fall Crops

The following vegetable seeds may be planted in the latter part of July: green beans, Swiss chard, collard greens, spinach, mustard, turnips, summer and winter squash.

Brussels' sprouts, cabbage, Chinese cabbage, and cauliflower plants may be transplanted into the garden beginning in late July, depending on the temperature. Transplant in the late afternoon and avoid days with 90-degree weather.

For additional information on what and when to plant see:

Vegetable Planting Guide and Recommended planting dates pubs.ext.vt.edu/426/426-331/426-331_pdf

More Tips and Tasks for July

To save space in your garden, you can construct temporary or permanent woven wire fences, which will provide vertical support for runner varieties of beans, as well as for cucumbers. Plants can be trained to climb the fences, saving not only space but also making harvesting easier as the vegetables will be hanging down.

A New Threat to Basil Watch out for a fungal disease specific to sweet basil called fusarium wilt of basil. The fungus attacks the water-conducting tissue (xylem) within the stem. Infected plants will grow normally until they are six to twelve inches tall. Then the plants become stunted and will suddenly wilt. Symptoms include wilting and brown streaks along the stems. The stem may become curved — often referred to as a shepherd's crook appearance.

Once established, the fungus can over-winter and survive many years in the form of spores, ready to cause new infections if basil or other members of the mint family are replanted in the same area. Currently, there is no fungicide approved for the treatment of this fungal disease, but it can be controlled somewhat by removing all diseased plants, by avoid planting basil in the same location, and by planting disease-resistant varieties.

For addition information on basil see http://www.ces.ncsu.edu/depts/hort/hil/hil-125.htmlGrowing Small Farms-Basil problem ncsu.edu

Wondering if your **blueberries are ripe enough to pick?** Just try pulling a few berries from the stems. If they come off easily, they are ready to harvest. If not, they need to ripen more. Cover with netting or the birds will beat you to the fruit.

Continue to monitor water moisture levels around plants. The rule of thumb is that plants need one inch of water per week to maintain productivity. Mulching reduces the need for frequent watering and improves yields. Early morning is the best time to water. Evening water is less desirable because leaves that remain wet through the night are more susceptible to fungal diseases.

- **Pepper plants** are more productive if given appropriate moisture. Placing mulch (such as wood chips or leaf mulch) around plants will help retain soil moisture and reduce the need for frequent watering. In addition to conserving water, mulch provides the extra benefit of becoming a weed barrier.
- Dry weather causes **Swiss chard** to bolt—or prematurely go to seed. Water your plants to extend the season.
- **Cucumbers** develop a **bitter taste** if the soil is not kept **consistently moist.** Leaf mulch works great to help maintain soil moisture.

Harvest cucumbers for pickling when they reach 2-4 inches in length; for table use, harvest when no longer than 5-6 inches. Remove any over-ripe cucumbers to encourage continuous production.

Withhold water on **storage potatoes** when they begin to die down, as water and fertilizer may disturb the dormancy stage and cause regrowth; it can also cause potatoes to crack.

If **potatoes** are visible along the soil surface, they probably look **green.** This coloration is caused by exposure to light. Green-skinned potatoes will taste bitter. How to avoid this problem: make sure potatoes are protected from the light by covering them with soil or mulch.

Pumpkin and squash blossoms are both beautiful and edible. To prepare squash or pumpkin blossoms for an appetizer, pick them after they open. To remove insects and dirt, wash and drain the blossoms, dip them in a flour or beer batter, and fry until golden.

Although **tomatoes** are self-pollinating, they **need movement to transfer pollen**. If it is hot and calm for several days, gently shake plants to transfer pollen and assure fruit set. Hot temperatures can also interfere with blossom set.

Shredded **Chinese cabbage** is a good hot weather substitute for lettuce in salads and sandwiches. A second crop may be started now for fall harvesting.

Too many cucumbers, zucchini, or tomatoes? Think pickles, relishes, and tomato sauces.

Frikart’s Aster

By Sara Elizabeth | July 2015 - Vol. 1 No. 7

While asters are normally associated with the autumn garden, Frikart’s aster (*Aster x frikartii*) blooms during the summer months. A hybrid of Italian *A. amellus* and Himalayan *A. thomsonii*, this plant is a welcome addition to the mid-summer mixed border. Starting in June or July, it puts on a show that lasts until late summer or early fall. Although not native to this country, Frikart’s aster is well behaved and non-invasive. It forms a 2- to 3-foot tall, loose, bushy mound with dark green leaves and 2- to 3-inch wide blue-violet blossoms. It prefers full sun to partial shade and tolerates dry soil. Excellent drainage is an absolute must for this plant, especially in the winter. This drought-tolerant plant enjoys a long blooming period and, if dead-headed, can continue blooming well into fall. When deadheading, be careful not to cut off the buds of new flowers that are forming next to the spent blooms.

Frikart’s Aster

Four cultivars of Frikart's aster were developed in the 1920s by German hybridizer Frikart: 'Wonder of Staffa' (or 'Wunder von Stafa'), 'Monch,' 'Jungfrau' and 'Eiger.' Of the four, the two most commonly available in this country are 'Monch' and 'Wonder of Staffa.' Both have daisy-like blooms with lavender-blue rays and yellow centers. 'Wonder of Staffa' blooms earlier than 'Monch' and is taller with a looser habit. It has paler lavender-blue blossoms that combine well with deeper blues and yellows in the landscape. According to the Thomas Jefferson Center for Historic Plants, 'Wonder of Staffa' was praised in 1939 as "one of the most constant blooming plants in existence producing freely branching sprays of clear lavender-blue flowers in lavish profusion." The color harmonizes particularly well with deeper shades of lavender-blue and violet. 'Homestead Purple' verbena is an excellent companion as well as magenta-colored globe amaranth (*Gomphrena globosa*). Another good companion plant is 'Grand Parade' beebalm (*Monarda didyma*) with its deep violet color.

Frickart's aster can become floppy as the season progresses. Cutting it back in May or June can improve the growth habit but will delay flowering. Toward the end of the growing season, the foliage tends to become sparse, so it is wise to hide its stalks with a lower-growing plant. Deep purple petunias are ideal for this purpose and offer a stunning contrast with the paler aster blossoms.

Although hardy to Zone 5, Frikart's aster appreciates being left standing during the winter months and then cut back in spring. It may be propagated though cuttings or division in the spring. Growing from seed is possible but not recommended because the new plant will not be true to color.

While no plant is ever completely deer proof, Frikart's aster is generally not bothered by either deer or rabbits. It also has good mildew-resistant qualities.

Photo by Magnus Manske

The Ornamental Garden in July

By Sara Elizabeth | July 2015 - Vol. 1 No. 7

Mid-summer heat and humidity can overwhelm even the most experienced gardener. But take heart! The following basic strategies will help keep your July ornamental garden looking its best.

Plant the **right plant in the right place.** Yes, you've heard this old adage before, but it really is the best strategy for combating July's challenging weather. Select tough-as-nails annuals such as Melampodium, Globe Amaranth, annual Salvia, and mildew-resistant varieties of zinnia. Some good drought-tolerant perennial choices for the sunny border include Rudbeckia, Penstemon, Helianthus, Sedum and Salvia. They will keep things looking fresh and interesting when many gardens are suffering mid-summer meltdown.

In the absence of sufficient rainfall, **water plants early in the morning**. Be water-wise! Use drip irrigation or a hand-held hose or watering can to water slowly and deeply at the base of each plant. About 1 inch of water per week should be adequate. If needed, add mulch over the root zone of each plant to help hold moisture in the soil. Avoid using overhead sprinklers. Much of the water evaporates in the air. See http://pubs.ext.vt.edu//426-713/ on Creating a Water-wise Landscape.

Pay attention to the moisture needs of newly planted perennials, shrubs, and trees. Their root systems are too small to cope with drought conditions initially. Even drought-tolerant plants require ample moisture during their first year or two in the garden.

Check containerized plantings daily for sufficient moisture levels. Potting soil dries out at the surface but it may be wet deeper in the pot. Stick your finger about two inches into the soil. If the soil at the tip of your finger feels dry, then add water. Water the soil – not the leaves. Bear in mind that plants have different moisture needs. Succulents and cactus, for example, prefer to be kept on the drier side whereas many annuals prefer evenly moist soil. How often you need to water will depend on the planting medium used, the type of container, the amount of sunlight, and the plants themselves.

Inspect ornamentals frequently for fungal diseases, such as powdery mildew. This easily recognized fungus appears as white or grayish talcum powder-like spots or splotches, usually on the upper sides of leaves. Powdery mildew affects a wide range of plants including crape myrtles, lilacs, garden phlox, sunflowers, zinnias, and dahlias, just to name a few. To avoid the problem in the first place, buy healthy plants. Select mildew-resistant varieties if possible. For example, 'David' garden phlox (*Phlox paniculata*) has a higher tolerance to powdery mildew than 'Franz Shubert,' which is highly susceptible to the disease. And 'Jacob Cline' bee balm (*Monarda*) is more resistant than 'Cambridge Scarlet.' Space new plantings far enough apart to allow good air circulation. Provide adequate moisture and nutrients to keep them healthy. Remove any diseased plant material in order to minimize the spread of fungal disease. If only a few leaves are affected, there may be little, if any, action required. But if the problem is severe and a fungicide is called for, follow the manufacturer's directions carefully before applying the product to the affected plant.

Remove weeds promptly. They compete with ornamentals for moisture and nutrients.

Deadhead daylilies (*Hemerocallis*) to keep them looking tidy. Snap off each spent blossom at the base but be careful not to snap off adjacent flower buds by accident. After all buds on a scape (stalk) have bloomed, cut the scape all the way back to the ground. Deadheading is particularly important for re-blooming daylily cultivars. 'Stella de Oro' and 'Happy Returns' are the two best known re-blooming daylilies but many more re-blooming cultivars have been developed for the home garden. They start blooming early in the summer

and continue blooming until fall, particularly if they are consistently deadheaded during the growing season. Deadheading diverts the plant's energy from making seeds to pushing out blossoms.

Shear or pinch back the spent blossoms of Lavender, Scabiosa, snapdragons, garden phlox, and thread-leaf Coreopsis so that the plant will develop more blossoms.

Divide and transplant bearded Irises in July or August, but do it on a day when the temperatures are below 90 degrees. Irises grow from rhizomes, which are elongated stems that grow horizontally below ground and have roots attached to them. Snap off or use a sharp knife to cut off the vigorous ends of the rhizomes. Make sure that there are roots attached to each portion. Before re-planting, inspect each portion and discard any that indicate the presence of Iris borers or soft rot. Cut the foliage on healthy rhizomes to about 8 inches. They prefer dry feet, so replant them 18 inches apart in well-drained soil just at or slightly below the soil line. Don't pile mulch over the roots. Mulch can retain more moisture than the rhizomes can handle.

Pinch back new tip growth on chrysanthemums and asters by early to mid-July. This will keep the plants compact and full of blooms. Caution: Do not pinch back these plants after the middle of July. Otherwise, the plant will not have time to develop flower buds for the fall.

Stake tall plants, such as asters, that are susceptible to wind damage. Loosely tie the plant to the stake with soft twine or twist ties. Note: Make sure the tip of the stake is flat and not pointed. Otherwise, the pointed end might pose a safety hazard.

Inspect plants for red spider mites. Pale, green coloration on foliage may be an indication of spider mite damage. Roses, evergreens, and marigolds in particular are prone to spider mite damage. Hold a white sheet of paper underneath a leaf and briskly tap it. Tiny, crawling mites will drop onto the paper if they are present on the leaf. If infestation is light, discourage mites with a forceful, direct spray of water from the hose. Severely infested annual plants should be removed and destroyed.

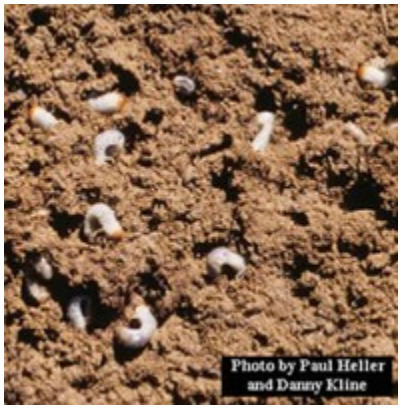
Minimize Japanese beetle damage by removing flower blossoms as soon as they begin to fade and all fruit as soon as it is ripe. Japanese beetles are especially fond of overripe fruit and deteriorating flower blossoms. Also, take a wide-mouthed jar of soapy water to the garden each daily and knock any Japanese beetles into the jar.

To the extent practical, hand pick slugs, stink bugs, and other pests and drop into a jar of soapy water. For Aphids, try a sharp spray of water from a hose to knock them off plants. If it is necessary to resort to the use of a pesticide, water plants several hours in advance so that they are well hydrated. Drought-stressed plants have less water in their plant tissues. The chemicals that enter the leaves will consequently be more concentrated and may burn the leaves. Be sure to read all pesticide directions carefully and take steps to prevent killing beneficial insects. For more information on pesticides, go to http://pubs.ext.vt.edu/ **426-706/ – Choosing Pesticides Wisely** and **http://pubs.ext.vt.edu/ 426-710/ – Applying Pesticides Safely**.

Control mosquitoes by eliminating all sources of stagnant water. Mosquitoes require only a very small amount of water to breed. Stagnant water in saucers under potted plants are excellent places for mosquitoes to breed.

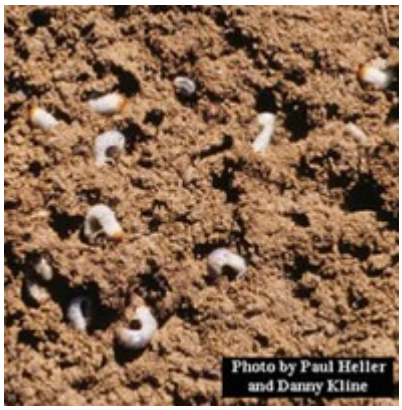
Got Grubs?

By Melanie | July 2015 - Vol. 1 No. 7



By the time the 4th of July comes around, your lawn is probably the last place you want to be during Virginia's hot summers. Quality lawns in Virginia can be challenging, especially during the hot, humid summers. Virginia is located in a transition zone for turfgrasses, with climates that can be harsh in both winter and summer. Cool-season grasses most commonly used here, such as Kentucky bluegrass, rye and tall fescue, grow strong enough and deep enough to cope with our hot summers and cold winters. Warm- season grasses such as Zoysia and Bermuda grass are sun-tough, plus drought and humidity tolerant, but they do go dormant in the winter, making for a brown lawn until spring. There is actually a green spray paint that supposedly conquers this problem, but why bother?

In recent lawn care articles for The Garden Shed, I have emphasized the **importance of mowing high and watering long and infrequently**. As a reminder, mowing height is 3-3.5 inches for fescue type grass or even 4 inches in the stressful heat of July and August. The warm season grasses such as Zoysia and Bermuda can be about 1.5-2 inches. A lawn prefers 1-1.5 inches of water per week and possibly more in July and August. It is the natural cycle of cool season grasses to go dormant with the heat, and then to green up in the fall — and that's fine if you can stand to look at brown grass for the summer months.



White grubs

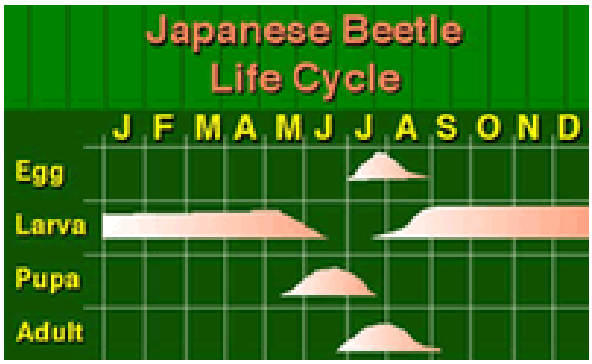
Grubs

Besides proper mowing and watering, there is actually very little else to do for your lawn in July. However, making some observations now may lead you to consider whether grubs are a problem in your lawn. The mere presence of grubs is not always a problem and may not require treatment.

Not sure you know a grub when you see one? When you first turned over the garden soil in the spring, you may have spotted some of the C-shaped white grubs. I know I did and instinctively, pulled them out of the way when planting, thinking they would eat my flowers or vegetables. However, grubs prefer eating the roots of your lawn! Their favorite place is grass in the sun with high moisture — such as beautiful green lawns that have an irrigation system. If this lawn is surrounded by dry non-irrigated lawns, it is a prime target for egg-laying grubs. Grubs usually do not like shady lawns. Thus, highly maintained lawns, golf courses and athletic fields are the most susceptible to grub damage.

Grub Life Cycle

Grubs are the larval stage of scarab beetles. Japanese beetles and northern masked chafer grubs are the predominant white grubs associated with damaging home lawns. Grubs are dirty white in color with a soft bodies, brown head and 6 legs. The size varies with the species and age, but full grown Japanese beetle grubs average about an inch. Japanese adult beetles are a brilliant metallic green, 3/8 inch to 1/2 inch long, with coppery brown wing covers, five lateral spots with white hairs on each side of the abdomen and short gray hairs covering the underside of the insect. I must say I have never examined a Japanese beetle this intensely to know for sure. What I do know is that these insects can sure eat their way through an ornamental garden, consuming foliage voraciously. The adults can cause more damage than the grubs themselves in a home landscape.



The life cycle of most of these beetles is 12 months. May or June beetles have a three year life cycle. The adult beetle lays its eggs in the ground during the summer. As soon as they hatch, they start feeding on the grass roots until cold weather drives them down two to eight inches deeper into the soil where they overwinter. When warm weather arrives in the spring, the grubs (now at their largest size) move up from the lower soil regions and begin feeding again near the surface until they become mature and pupate, usually in June and July. This is when you begin to see Japanese beetles in your yard. These adults again lay thousands of eggs throughout the summer.

Damage

Grub damage

How do I know if I have grub damage in my lawn? Look for patchy, wilting and browning of irregular shaped areas of the lawn. Also, think back to late last spring or fall, when grub damage is easier to spot. If the turf can be easily pulled from the soil, this suggests grub damage because of the lack of a root system. The other sign of grub damage is from skunks and raccoons digging up lawns in search of grubs to eat. The only way to confirm that this damage is from the grubs is to actually see them. In midsummer, though, they will be too small to identify. Most of the damage done by the skunks and raccoons is far worse than the grub damage itself. Late spring and mid-fall are the easiest time to see the damage rather than midsummer.

So in late August to October, turn the turf back in any damaged areas by taking a shovel and digging up a square foot of turf samples around the suspicious area, down to a depth of 2 inches. Look for the 3/4 inch white grubs. Some experts say if there are more than 6-10 grubs/square foot, treatment may be justified, but there are many variables and the number itself should not always lead to treatment. Be sure to lay the sample back down, pack it firmly and water the area to prevent it from drying out and completely dying.

Predicting grub damage

Trying to predict grub damage is difficult as insects go in cycles. They may have been in your lawn previously and now they are at your neighbor's. But if you see lots of adult beetles, specifically Japanese beetles, in July, that is an indication they are laying eggs there. The masked chafers are more active after sundown, so it will be difficult to identify them. They are chestnut brown and covered with fine hairs and are about 1/2 inch long.

Can I prevent grub damage?

One option is allowing the lawn to go into dormancy as conditions dry in July (assuming there is little rainfall), reducing the odds of grub damage. Also, monitor the lawn closely as we advance into summer and fall. Then if you see damaged areas, you must determine for sure if grubs caused it, and whether it is worth treating.

To treat or not to treat

If you're sure you have grub damage, but the turf is reasonably healthy and summer drought and heat stress are minimal, it is likely that treatment is not necessary, even on cool season grasses, which can withstand a bit of grub feeding. Warm season grasses have an even greater inherent tolerance to grubs since they are actively growing during the summer months. This is an individual decision, but treatment should not be done if the damage is just minimal and spotty. If treatment is necessary, try the least toxic methods first.

Preserve Invertebrate Natural Enemies of Grubs: In addition to the various *vertebrate* natural enemies that unfortunately tend to cause turf damage when preying on white grubs, there are numerous more subtle *in*vertebrate natural enemies. Ground beetles, ants, and other beneficial insects prey on eggs and young grubs. Various parasitic wasps and flies parasitize the older grubs. Various naturally occurring pathogens (insect-parasitic nematodes, fungi, bacteria, protozoa) kill or weaken the grubs. **Preserve these natural enemies** as important buffers against grub outbreaks by using insecticides only when and where necessary to avoid intolerable damage.

Nonchemical-Cultural Controls: Good turf management (proper irrigation, fertilization, mowing) results in vigorous turf with a deep, extensive root system that can tolerate higher grub densities without showing damage. While no grub-resistant turfgrasses exist, species with a deeper root-system and higher heat/drought tolerance are generally more tolerant of grub feeding. Among the cool-season grasses, tall fescue is the most tolerant species and perennial ryegrass the least tolerant.

Your **watering practices** can also control grubs. Watering during peak beetle activity in summer tends to attract egg-laying females, especially when the soil in surrounding areas is dry. Watering also increases survival of eggs and young larvae. In late summer and fall, however, irrigation makes the grass more grub-tolerant. Thus, if homeowners can keep their lawns dry during July and early August, beetle eggs may dry up and die. Obviously, the down side is your lawn will be brown until water is applied.

Nonchemical-Curative Controls:

Milky spore can be applied in late August. However, it is only effective on the Japanese beetle grub population and may take 3-5 years to become sufficiently established in your lawn to suppress the Japanese beetle. Also, insect parasitic nematodes can suppress several white grub species. Nematodes are very small, live unsegmented worms. They search out the white grubs and after entering the grub, release a bacteria that kills the grub. This product should be applied late in the day in moist soil and watered in afterwards.

Chemical-Curative Controls:

We encourage the cultural practices listed above. If the damage is serious and large, contact a professional in regards to the use of any curative products. Curative grub control has to be done at the appropriate time when they are small and actively feeding. For Virginia, this is July and August. Treatment in the spring when the grubs are large is not as effective. The need for preventative applications can be based on historical monitoring and current season adult Japanese beetle population. .ALWAYS FOLLOW THE LABEL INSTRUCTIONS TO MAXIMIZE CONTROL AND MINIMIZE NON-TARGET EFFECTS. THE LABEL IS THE LAW.

Sources:

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Blueberry Cobbler

By Sara Elizabeth | July 2015 - Vol. 1 No. 7

Blueberry Cobbler

Severs 6-8

Cobbler, crisp, pandowdy, shortcake, strudel, pie. Each of these baked fruit desserts are similar and each has its followers. For berries, few can beat the cobbler with its biscuit crust. The following recipe comes from Cook's Illustrated, America's Test Kitchen in Brookline, Massachusetts, where the science of cooking is taken very seriously.

I picked blueberries in Scottsville from bushes laden with beautiful berries and served them in individual cobblers, topped with vanilla ice cream, that night. Raves all around!

Ingredients

Filling

½ cup sugar

1 tblsp. cornstarch

Pinch ground cinnamon

Pinch salt

6 cups (30 oz) fresh berries, rinsed and picked over

(*or 5 peaches and 1 cup blueberries*)

1 ½ teaspoon grated zest and 1 tblsp. juice from 1 lemon

(or 1/4 cup freshly squeezed o.j.)

Biscuit Topping

1 cup unbleached all-purpose flour

2 tblsp. stone-ground cornmeal

¼ cup plus 2 teaspoons sugar

2 teaspoons baking powder

¼ teaspoon baking soda

¼ teaspoon salt

4 tblsp. unsalted butter, melted

1/3 cup buttermilk

½ teaspoon vanilla extract

1/8 teaspoon ground cinnamon

Directions

Adjust oven rack to lower-middle position and heat to 375 degrees.

For Filling: Stir the sugar, cornstarch, cinnamon, and salt together in large bowl. Add the berries and mix gently with a rubber spatula until evenly coated; add the lemon zest and juice and mix to combine. Transfer berry mixture to 9-inch glass pie plate (or place in individual ramekins as pictured). Place pie plate or ramekins on rimmed baking sheet, and bake until filling is hot and bubbling around edges, about 25 minutes.

For Biscuit Topping: Meanwhile, whisk the flour, cornmeal, 1/4 cup sugar, baking powder, soda, and salt in large bowl to combine. Whisk melted butter, buttermilk and vanilla together in small bowl. Mix the remaining 2 teaspoons of sugar with cinnamon in a second small bowl and set aside. One minute before

berries come out of oven, add wet to dry ingredients; stir with rubber spatula until just combined and no dry pockets remain.

To Assemble and Bake Cobbler: Remove the berries from the oven; increase the heat to 425. Pinch off 8 equal pieces of biscuit dough and place them on the hot berry filling, spacing them at least ½ inch apart (not touching). Sprinkle each mound of dough with cinnamon sugar. Bake until the filling is bubbling and biscuits are golden brown, 15 to 18 minutes. Cool the cobbler on a wire rack for 20 minutes and serve with vanilla ice cream.

VARIATION: Follow recipe, adding 3 tblsp. minced **crystalized ginger** to the flour mixture and substituting an equal amount of ground ginger for the cinnamon mixed with sugar for sprinkling on biscuits.