

NORTH COAST YARD & GARDEN

HORTICULTURAL NEWS AND INFORMATION FOR THE OHIO GARDENER

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IN MY GARDEN

Honeybees have had a rough time since the late twentieth century. Varroa mites, tracheal mites, small hive beetles, the effects of commercial pesticides, and now colony collapse disorder have made it difficult to ensure crops get pollinated. It is more important than ever for gardeners to take steps to preserve native pollinators in our own gardens. Bumblebees, mason bees, carpenter bees and leaf-cutter bees are only a few of the insects responsible for keeping flowering plants productive. Butterflies, moths, flies, wasps and beetles are each important for pollinating plants.

It is not very difficult to encourage wild pollinators in your garden. The most important step is to reduce the amount of insecticides applied to plants. Some insect infestations are merely cosmetic, creating no health issues for the plant. Plant-feeding insects generally appear just before their predators arrive, so waiting a few days may eliminate the need to spray. Beneficial insect populations do not recover as quickly from chemicals as populations of damaging insects, so a kill-'em-all approach is unwise.

A variety of flowering plants that bloom throughout the year keeps pollinators fed while keeping your yard colorful. Crocus is a favorite early-season flower for honeybees. Heath, butterfly bush, St. John's wort, coneflower, daisies, cleome, coreopsis, sedum, mints, thyme, borage,

hyssop, salvia, strawberries, blackberries, raspberries, blueberries and just about any flowering fruit tree are all good choices for attracting pollinating insects. For more information, contact the Xerces Society at www.xerces.org.

TURF TALK

FOUR-STEP LAWN PROGRAMS

Some turf grasses are heavy feeders and require regular applications of nitrogen. This is especially true of bluegrass, which is still considered the standard for lawns. Most fertilizer companies offer a four-step lawn program to provide these regular doses of nitrogen, along with the other main ingredients of fertilizer - phosphorus and potassium. Four-step programs typically have herbicides or insecticides added to some of the steps to prevent or kill weeds and insects.



A simple way to remember the timing for each step is to think of the name **EMIL**: **E**aster, **M**emorial Day, **I**ndependence Day and **L**abor Day. More specifically, the first step with crabgrass preventer should be applied when forsythia is blooming. This method accounts for weather variations and more closely predicts the amount of time before crabgrass begins to sprout.

The second step with broadleaf weed killer should go on the lawn when dandelions are in full bloom all around the neighborhood. Don't apply it when just a few are in bloom, or if they are blooming only in a few yards or areas with more sun exposure. The weed killer will work best when weeds are growing most vigorously.

FIRST STEP

The first application contains fertilizer and a pre-emergent herbicide to prevent crabgrass. Crabgrass is an annual weed that dies in the fall, but leaves behind thousands of seeds that sprout when the soil warms up. Crabgrass is difficult to kill once it sprouts and matures, so it is best to apply a preventative each year. As with most fertilizers, the first step should be applied to a dry lawn, and then watered in right away.

Be aware that crabgrass preventer will kill all sprouting seeds, including new grass seed. If you intend to sow grass seed in a given area, do not use crabgrass preventer in that area for the previous three or four months. If you must sow grass seed and prevent crabgrass, use a product containing siduron. This chemical is very specific and kills seedlings of only a few weedy grasses, including crabgrass, but it is more expensive than regular pre-emergent herbicides.

SECOND STEP

The next application contains fertilizer and a post-emergent herbicide. This product is

often called weed and feed. The herbicide is selective, meaning it will kill broadleaved weeds (and plants) but not grass. Weed and feed, unlike other fertilizer products, must be applied to a wet lawn, kept dry for 24 hours, and then watered. This is necessary to allow the granules of herbicide to stick to weed leaves, dissolve, and be absorbed by the weed. After one day the fertilizer can be watered in without affecting the action of the weed killer.

I do not recommend weed and feed products for three reasons: they are not very effective in killing weeds, they apply weed killers to the whole lawn whether there are weeds there or not, and the watering instructions for the herbicide run contrary to the watering procedures for fertilizer. Instead of using weed and feed, it is best to apply fertilizer by itself, water it in right away, and then go back and spot treat any lawn weeds with a liquid weed killer once the lawn has dried.

The weed killing ingredients in weed and feed products are the same as in weed killing sprays for lawns, and these ingredients must be in liquid form to be absorbed by the weed. That is why weed and feeds must be applied to a wet lawn – the granules containing herbicide must stick to the weed leaves and dissolve in water. Any granules that fall to the soil will not work, and those that do stick to the weed only administer weed killer to the tiny portion of the leaf under the granule.

Liquid herbicides work much better to eliminate weeds because they coat the entire weed, covering all leaf surfaces, allowing for maximum absorption of weed killer. After the lawn has had a couple of applications of liquid weed killer, all weeds should be gone, and the very few new weeds that appear can be sprayed individually as needed. A thick, well-fed lawn has little space for new weeds to grow.

Spot treatment of weeds is the best practice. Applying herbicides to the entire lawn wastes product and money, adds unnecessary chemicals to the environment, and increases the chance that weed killer will damage non-target plants in flower or vegetable beds.

Lawn fertilizers should be applied to a dry lawn and watered in immediately. This allows the granules to fall all the way to the soil without sticking to the grass blades. Water then releases the fertilizer and helps the roots absorb it. The water also helps protect the lawn against "burning", or the drying out of plant tissue by exposure to concentrated fertilizer. When a weed and feed is applied, fertilizer will stick to the wet lawn grass just as the weed killer sticks to the weeds. This provides a 24 hour window of opportunity for the fertilizer to dry out the leaf tissues before the lawn gets watered. Again, it is far preferable to fertilize and spot treat for weeds separately instead of using weed and feed products.

THIRD STEP

The next application contains fertilizer, and sometimes also has an insecticide for insects that feed on grass above the soil surface. This includes chinch bugs, billbugs and sod webworms. It is also useful to control fleas, ticks and chiggers in the lawn. This insecticide will not protect against grubs or kill grubs, as they feed below the soil surface.

Insecticide for surface-feeding insects should be used only if and when a problem develops, and it is correctly diagnosed as this type of insect problem. Unless the lawn has a chronic insect infestation, or flea control is desired for pets, it is best to use plain fertilizer in the third step, and any insecticide can be applied separately if it is truly needed.

On the other hand, grub control should be applied as a preventative every year. White

grubs are the larvae of beetles, and these beetles seek out the lushest, sunniest, most well-watered lawns to lay their eggs. In other words, the nicer your lawn, the more attractive it will be to grubs. Unless your lawn is shady all day, use a preventative season-long grub control containing imidacloprid each year. It can be applied any time between May and mid-July for best results. May applications will still be effective for grubs and can protect against some of the surface-feeding pests that are targeted by the third step's insecticide.

This is the hottest time of year, and most cool season grasses slow their growth considerably. Some may even go dormant. There is a growing notion that fertilizer is unnecessary at this time of year. A bluegrass lawn, however, does require regular fertilizing, and a lack of fertilizer coupled with heat stress may actually predispose the lawn to disease or insect attack. If there is enough moisture to keep bluegrass green and growing, it is best to fertilize it now. It is especially important in heat and drought that the fertilizer gets watered in immediately.

FOURTH STEP

The fourth step contains just fertilizer. Often, the fourth step will have a higher percentage of potassium in it to help the lawn prepare for freezing weather. Since this step is applied in early September, and the first frost doesn't usually occur in our area until at least mid-October, a regular fertilizer formula is fine for this time of year.

This fertilizer application may be the most important for the appearance of your lawn in the following spring. As temperatures begin to fall, grass growth is diverted from the blades to the roots. Nutrients are stored in the roots over the winter, and these stored reserves are available to grass plants even when the soil is still very

cold. Spring fertilizers can improve a lawn's appearance, but the fall fertilizer allows it to look good as soon as it begins to grow. Again, apply fertilizer to a dry lawn and water it in right away.

WHAT ABOUT A WINTER FEED?

Some fertilizer companies offer a fifth step or a winter fertilizer to be applied in mid- to late October. This formulation is generally much lower in nitrogen, and higher in phosphorus and potassium, than summer fertilizers. Less nitrogen is needed since there is little top growth this late in the year, while additional phosphorus promotes root growth, and potassium helps the turf prepare for freezing temperatures.

For maximum storage of nutrients, the last application of fertilizer should go down around the same time as the last mowing of the season. Of course, no one knows for sure when the last mowing will take place. The latest I have ever had to mow a lawn due to continued growth was on a Christmas Eve in the late 1980s (possibly 1988 since that was an exceptionally warm year). In most years, you will recognize the last mow because the grass has grown only about half as much as it normally would in the same time interval.

CONCLUSIONS

A four- (or more) step lawn program is helpful to keep heavy feeding lawns like bluegrass looking their best and growing well. Four-step programs have extra ingredients that might be unnecessary, such as insecticide in the third step, or not maximally effective, such as weed and feed in the second step. There are also

elements of lawn care that are very useful, but are not included in the four-step program, such as grub preventer and winter fertilizer. It is up to each gardener to decide what makes the most sense based on the type of lawn, the lawn's history, the weather conditions and the desired results.

GARDEN CALENDAR

- Get a soil test for vegetable beds and add any amendments recommended.
- Turn under cover crops if the soil is dry enough to work (a fistful crumbles after being squeezed).
- Top dress new and existing beds with compost to improve soil structure and add nutrients.
- Purchase summer-flowering bulbs such as dahlias, gladiolus, cannas and callas, but do not plant them outdoors until all danger of frost has passed. They may be potted up indoors and started under lights.
- As temperatures rise and daylight increases, rake mulches off the soil to allow it to warm up.
- Rake debris from lawns when the grass is dry.
- Begin watching for forsythia to bloom late this month. Apply fertilizer with a crabgrass preventer when forsythia is in full bloom. If you plan to sow grass seed this spring, use a product that allows seeding.
- Begin sowing grass seed in bare areas.
- Plant pea, turnip and spinach seeds, plus onion, garlic and shallot sets outdoors this month.



ROGER S. BOLGER HAS OVER TEN YEARS OF PROFESSIONAL HORTICULTURAL EXPERIENCE AND HAS GARDENED ALL HIS LIFE IN NORTHEAST OHIO. HE HAS GIVEN DOZENS OF GARDENING TALKS AND SPECIALIZES IN WOODY PLANTS, PERENNIALS, TURF, ENTOMOLOGY, INTEGRATED PEST MANAGEMENT, ORGANIC GARDENING, PONDS AND BACKYARD WILDLIFE.

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