

Recommended Lawn Care Products

Every effort has been made to provide correct, complete and up-to-date pest management product information. However, changes in pesticide registrations, regulations, and recommendations occur frequently. Therefore, these recommendations are not a substitute for pesticide labeling. Read labels thoroughly before purchasing, applying and storing any pesticide.

I've always been extremely hesitant to put specific product recommendations in writing for several reasons. Product labels and contents change constantly, making it almost *impossible* to find the same, exact product from one year to the next. Also, new research results frequently suggests the use of new and/or different products. Meanwhile, this fact sheet may end up collecting dust in a file or on a shelf for years before you refer to it again - long after these recommendations are no longer valid!

However, my greatest concern is that you'll expect these recommended products to work like "*magic bullets*," solving every problem with a simple squirt here and there. Unfortunately, just like everything else in life - nothing is that simple!

A healthy, attractive lawn takes time, effort and attention to detail. In particular, if you can't mow your lawn correctly (three inches high, *twice* each week in spring and fall, and with a consistently sharp blade) for any reason, no amount of money spent on chemicals, fertilizers and other lawn care products will guarantee you a problem-free, picture-perfect lawn!

Crabgrass Control

Crabgrass plants do not survive from one year to the next. Rather, they release seed (tens of thousands of seed per plant in some instances) from July until they're killed by the first hard frost each autumn. The seed then germinates the following spring about the time that the bright yellow flowers of forsythia are fading - usually between the middle and end of April or early May across most of Central New York.

The good news, considering the enormous number of crabgrass seed that may be released into your lawn each year, is that the seed is most likely to germinate only in locations exposed to a lot of sunlight - along the hot, dry, sunny edges of driveways, roads, sidewalks and on south-facing slopes. These are all areas where lawns often grow poorly, resulting in very thin grass and even bare soil. On the other hand, crabgrass seed often doesn't receive enough sunlight to germinate where grass is thick and healthy, and in shaded areas under trees, along the north side of homes and buildings, etc.

Therefore, considering this basic characteristic of crab-

grass - ***NEVER, EVER*** USE "WEED N' FEED" CRABGRASS PRODUCTS!

Since crabgrass is likely to be a problem in only relatively isolated parts of your lawn, you're just wasting your money and adding pesticides needlessly to our environment by applying the product over your entire yard. More importantly, research has shown for many, many years that the *worst* time of the year to apply fertilizer to lawn areas is between March and mid-May - exactly the time you'll need to apply crabgrass killer if you want it to be effective!

Now that I've gotten that off my chest . . .

To be effective, crabgrass killers (herbicides) must be applied several weeks *before* crabgrass seed germinates - ideally between mid-March and early April. As the herbicide granules dissolve, a thin chemical barrier will spread across your lawn. Crabgrass seedlings are then killed as they grow through the chemical barrier in late April and early May.

If you decide that crabgrass is a serious problem in parts of your lawn look for crabgrass-specific herbicides that contain Team (a combination of benefin and trifluralin as the active ingredients), or pendimethalin (Scott's Halts, for example, containing pendimethalin as the active ingredient). Lawn care companies may use similar products and/or products containing Dimension® (dithiopyr is the active ingredient), Balan (the active ingredient is benefin), Betasan (the active ingredient is bensulide), or Barricade (the active ingredient is prodiamine).

An exception to the above list occurs when parts of your lawn, such as along the edge of your driveway where a snowplow scraped up a strip of lawn during a winter snowstorm, need to be reseeded in the spring. In these situations, crabgrass herbicides listed above will kill grass seedlings just as effectively as they'll kill crabgrass seedlings! The only preemergent herbicide that will reduce crabgrass establishment without affecting desirable grass seedlings when used according to label directions is Tupersan® (the active ingredient is siduron).

Finally, remember that research has shown many times that a healthy, vigorous lawn is just as effective as any herbicide in

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preventing crabgrass infestations. Therefore, simply mowing and fertilizing your lawn correctly will go a long way toward reducing crabgrass problems over the course of several years.

Fertilizer

If you choose to make a late May application of fertilizer (see the March and April, and May entries in my **Central New York Lawn Care Guide**) the only product I currently recommend is LESCO's 24-5-11 turf fertilizer at the rate of four pounds per 1,000 square feet of lawn. This product provides a well-balanced combination of nitrogen, phosphorous and potassium. In addition, about 50% of its nitrogen is "slowly available," which means that this essential element will be released gradually over the course of the entire summer.

If, however, you've been fertilizing your lawn three or four times a year for a number of years, recent studies suggest that the levels of both phosphorus (the middle number on a bag of fertilizer) and potassium (the third number on a bag of fertilizer) are either high, or very high. While, excessive potassium hasn't been shown to cause detrimental health or environmental effects, excess soil phosphorus can contribute to oxygen-depleting algae blooms in our streams, creeks and lakes.

Therefore, if you have fertilized regularly, my recommendation would be to apply LESCO's phosphorus-free 18-0-18 turf fertilizer at the rate of 5.5 pounds per 1,000 square feet of lawn in late May, instead of the 24-5-11 product mentioned above.

The slow-release fertilizers above provide all of the major nutrients your lawn will need until late summer. However, as days start getting shorter and cooler in early September an application of any "winterizer"-type fertilizer (at the rate of one pound of nitrogen per 1,000 square feet) will provide the nitrogen, phosphorous and potassium your lawn needs to strengthen its root system in preparation for the coming winter.

Finally, make a second application of "winterizer" fertilizer during the second or third week of November—after your lawn has stopped growing. This is especially true if you've shredded a lot of leaves into your lawn. Nutrients supplied by this "late fall fertilization" will be taken up and metabolized into a variety of compounds that will support root growth in your lawn next spring.

Grub Control

Along with crabgrass and weeds, grubs are the most dreaded of all lawn-related maladies! Yet, despite our near-hysterical concern about this pest, research across the country has shown that less than twenty percent of all lawns harbor enough grubs (more than eight per square foot of lawn) to warrant the application of a control product! And, even where damaging numbers of grubs are found, they're almost always in isolated pockets rather than throughout entire lawns.

Therefore, the *only* way to know for sure if there are grubs in your lawn is to get down on your hands and knees and look for them! During the first couple of weeks in August - ideally after a heavy rain - cut and peel back a dozen or more square foot pieces of sod throughout your lawn and run your fingers through the ex-

posed soil and roots to dislodge the tiny (at this stage several can fit on the head of a dime) gray to creamy white grubs.

If you find eight or more grubs in any of the sampling areas, you may want to consider applying a grub control product - *only in those areas where you've found grubs*. Keep in mind, however, that a healthy lawn can tolerate a dozen or more grubs per square foot. Therefore, as I said in my lawn care guide, "if you've regularly applied grub control products over your entire lawn, you've most likely wasted a lot of money and needlessly added a lot of pesticides to our environment."

If you do find potentially damaging numbers of grubs, the question is "which grub control product to use?"

The answer has become pretty straight-forward as there are very few grub control products that can still be legally purchased in New York State without being a certified pesticide applicator. In fact, the only effective active ingredients still available to consumers that can be applied after grubs are observed are carbaryl (Sevin), and trichlorfon (Dylox). Trichlorfon-based products, such as Bayer Advanced™ "24-Hour Grub Control Granules," are most effective in lawns having a significant layer of thatch, and are the ones I recommend, but *only* after actually seeing potentially damaging numbers of grubs in your lawn!

Meanwhile, in the 2003 edition of this guide, I stated . . . , "Two new active ingredients with grub control properties, imidacloprid and halofenozide, have become available in the last couple of years. They're marketed under the brand names of "Grub-Ex," "Grub-B-Gon," and others, and have been heavily promoted in print and radio advertisements."

I went on to say that . . . , "my concern is that these products are being promoted as providing season-long control of grubs when applied in April and May. Unfortunately, this simply isn't true! Large grubs you see in your lawn in the spring did their damage the previous fall. While they may look menacing, they'll do little additional damage before burrowing deep into the soil to pupate into adult beetles in May and early June. Also, there's no connection between the grubs you see in your lawn in the spring and the possibility of damaging numbers of grubs in your lawn the following fall. And, remember that grubs tend to reach damaging levels in relatively isolated sections of a lawn."

Well, fast-forward to 2007 and all formulations of halofenozide and all but one formulation of imidacloprid (Merit) are now "restricted use" pesticides in New York State. In fact, these products are completely banned on Long Island because of their detection in groundwater sampling wells located near large-scale agriculture production operations.

The bottom line?

Once again, to insure that you're not wasting your time and money - or applying pesticides needlessly to our environment - there's simply no alternative to getting down on your hands and knees to look for potentially damaging numbers of small grubs *in early to mid-August*. Then, only if you actually count more than eight grubs per square foot should you consider the application of a grub control product containing trichlorfon - *only* in those areas where you observed the grubs, *not* your entire lawn!

Broadleaf Weed Control

Dandelions, clover, creeping veronica and creeping Charlie are all examples of broadleaf weeds. Contrary to what you might think they don't "crowd out," "smother" or "overrun" your lawn. Rather, just as with crabgrass, these weeds become a problem only where lawns are sparse or have died out due to undesirable conditions (e.g., too shady, too dry, etc.) or poor cultural practices (e.g., mowing too short, applying too much fertilizer at the wrong time, etc.).

Therefore, the first step toward managing broadleaf weeds is to identify and understand the conditions (sun, shade, dry soils, wet soils, etc.) found throughout your lawn and accept the fact that there may be areas where grass isn't the best groundcover option (e.g., in the shade of a large maple tree). You'll also need to assess how you've cared for your lawn in the past and whether you can care for it correctly in the future.

Unless you can improve the growing conditions in your lawn and commit yourself to caring for your lawn correctly don't spend any time or money applying any of the following weed killers. While you may reduce the number of weeds in the short term, they'll keep coming back unless your lawn is dense and growing vigorously.

Introduced more than 50 years ago, 2,4-D (2,4-dichlorophenoxy acetic acid) in combination with other herbicides remains the most effective herbicide against many weeds. Some of the more common 2,4-D-based broadleaf weed herbicides include "Trimec" (contains 2,4-D, 2,4-DP, and dicamba), and "Triamine" (2,4-D, MCPP and dicloprop).

Meanwhile, to control weeds such as creeping veronica, creeping Charlie, and wild violets, which aren't susceptible to 2,4-D, Ortho's "Weed-B-Gon Chickweed, Clover & Oxalis Killer" (which contains triclopyr as the active ingredient) can be quite effective when used according to label directions. Ortho's consumer-oriented "Weed-B-Gon Max" which also contains triclopyr, along with MCPA and dicamba, is effective against the broadest range of weeds.

If, however, your lawn contains dandelions, creeping Charlie, wild violets and many other weeds you may want to contract with a lawn care company that has access to herbicides such as "Turflon II Amine" and/or "Chaser." These products contain both 2,4-D and triclopyr, making them among the most effective broadleaf weed herbicides currently available.

As I explained in my **Central New York Lawn Care Guide**, research shows that fall (mid-September through mid-October) applications of broadleaf weed herbicides offer several advantages over spring (late April through May) applications.

First, broadleaf weeds are most susceptible to herbicide applications in early to mid-fall. At the same time, it's less likely that any "drift" of herbicides onto non-target plants (e.g., vegetables, annual flowers, shrubs, etc.) will cause significant damage. Herbicides applied at this time of year will also kill seedling weeds that germinate in late summer. And, bare spots created as large weeds die will have several months to fill in before more weed seed is dispersed the following May and June.

Finally, as with crabgrass control products, ***NEVER, EVER USE "WEED N' FEED" WEED CONTROL PRODUCTS!***

Rarely will weeds be evenly dispersed over your entire lawn, which means you may apply a lot of weed killer where there are no weeds. And, also remember that the best time to fertilize your lawn and the best time to control weeds *never* overlaps!

Grass Seed and Mulch

I've always dreaded writing this section because there are so many different brands of seed in the marketplace and the specific varieties of seed contained in a given product (Scotts® "Shady Lawn," for example), and the product name itself changes from year to year depending upon seed availability and cost, marketing objectives, etc.

However, with the help of Drew Kinder, longtime turf seed distributor and founder of the innovative SeedSuperStore in Buffalo, I can now recommend to you the following lawn seed mixes in relatively convenient 10 pound increments. They've been created with some of the best-performing and most modern turfgrass seed varieties as determined by the National Turfgrass Evaluation Program, www.ntep.org (accessed 8/6/07).

"Terry's Best" Sunny Lawn Mix

This mix will result in a lawn dominated by Kentucky bluegrass varieties that have performed well under typical lawn conditions (two to three applications of fertilizer per year, high mowing and little or no watering during dry spells). Meanwhile, two of the four Kentucky bluegrass varieties in the mix along with two fine leaf fescues insure that it has at least some tolerance to lightly shaded conditions. And, there's just enough fast-germinating perennial ryegrass to get something green and growing within a week of seeding to hold the soil in place until the fine fescue and Kentucky bluegrass germinates roughly fifteen to twenty five days after sowing. This mix should be sown at the rate of 2.0 pounds per 1,000 square feet of new lawn, and 1.5 pounds per 1,000 square feet when overseeding a lawn.

"Terry's Best" Shady Lawn Mix

As the name implies, this mix is designed to perform well in lawns that receive less than four hours of direct sunlight per day. This mix obtains its tolerance to moderately shaded conditions from its three fine fescue varieties along with three of the most shade-tolerant Kentucky bluegrass varieties currently on the market. This mix will also do well in sunny spots in your lawn because all of the fine fescues and Kentucky bluegrass thrive in full sun! This mix should be sown at the rate of 3.0 pounds per 1,000 square feet of lawn, 2.0 pounds per 1,000 square feet when overseeding existing lawn areas.

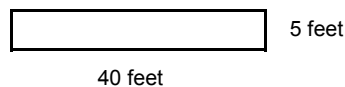
Once the seed has been sown, cover it with a recycled paper mulch product such as LESCO's "Seed-Starter 3." This type of mulch is weed-free, holds a tremendous amount of water and breaks down completely over the course of a month or so.

In summary, *please* remember that none of the products described in this fact sheet are magic bullets. Rather, when used judiciously in combination with proper mowing practices, they can help you maintain an attractive, healthy, environmentally beneficial lawn around your home.

Lawn Care Calculations

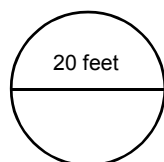
The amount of product (e.g., fertilizer, weed killer, insecticide, and/or seed) to apply to your lawn is frequently stated in 1,000 square foot units. For example, bags of fertilizer often indicate that they'll cover 5,000 square feet, 15,000 square feet, etc. Therefore, you have to know the total square feet of lawn area on your property to purchase lawn care products and/or services. The following formulas will help you calculate the area of your lawn.

Area of a Rectangle or Square:



$$\text{Area} = 5 \text{ feet} \times 40 \text{ feet} = 200 \text{ square feet}$$

Area of a Circle:

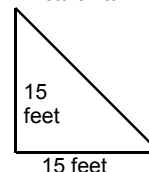


$$\text{Area} = 0.8 \times \text{circle diameter}^2$$

$$\text{Area} = 0.8 \times 20 \text{ feet} \times 20 \text{ feet}$$

$$\text{Area} = 320 \text{ square feet}$$

Area of a Triangle:



$$\text{Area} = 0.5 \times \text{base} \times \text{height}$$

$$\text{Area} = 0.5 \times 15 \text{ feet} \times 15 \text{ feet}$$

$$\text{Area} = 112.5 \text{ square feet}$$

Once you know the square footage of your lawn you can use the enclosed form to guide you in the purchase of products for your lawn and/or help you compare estimates provided by lawn care companies. One quick screening test for comparing lawn care services is to ask each of them to measure your lawn. Companies that provide square footage estimates dramatically different than your own should be questioned in greater detail about their qualifications! For more specific information regarding the legal responsibilities of any person and/or company that applies pesticides on your property or in your home contact the local office of the New York State Department of Environmental Conservation or New York State Attorney General. The Attorney General's office also maintains an informative website, "Home and Garden Pesticides: Questions and Answers About Safety and Alternatives," at www.oag.state.ny.us/environment/home_pesticides.html#in_new_york_state (accessed 8/6/07).

I also suggest that you keep copies of the labels of specific products that are applied to your lawn. These labels can help you assess the effectiveness of various products over time. The labels and accompanying invoices can also be helpful in diagnosing potential problems should they arise.

Fertilizer and seed sources:

SuperSeedStore - email: info@seedsuperstore.com, phone: 716-683-0683, website: www.seedsuperstore.com

LESCO, Inc. Service Center - 6030 Drott Drive, East Syracuse, NY 13057-2943, phone: 315-437-3423

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- Watschke, Thomas, 1999. Maximize pre-emergence control in cool-season turf. Grounds Maintenance, February 1999, pages 20-24.

Internet/World Wide Web Resources:

"Turfgrass Management for Protecting Surface Water Quality" - University of Minnesota

<http://www.entomology.umn.edu/cues/extpubs/5726turf/DG5726.html> (accessed on 8/6/07)

This site provides a thorough discussion of environmental issues associated with the application of fertilizers to lawn areas.

Nitrogen Fertilizer Calculations "Cheat Sheet" - Texas A&M University

<http://publications.tamu.edu/publications/Turfgrass/nitfertcalculations.pdf> (accessed on 8/6/07)

The simple formulas and tables on this webpage can help you determine exactly how much fertilizer you should apply to your lawn based on the amount of nitrogen in the fertilizer product that you're applying.

Calibrate Your Fertilizer Spreader - Texas A&M University

<http://aggie-turf.tamu.edu/aggieturf2/calculators/spreadcal.html> (accessed on 8/6/07)

This site provides an interactive calculator that will help you calibrate your lawn spreader so that you'll apply exactly the right amount of fertilizer to your lawn!