

Healthy Lawns



A healthy, natural lawn is more resistant to weeds, bugs, disease, and drought!

Do you want a lush green lawn safe for kids and pets?

- Children take in more pesticides relative to body weight than adults¹.
- Some studies have found that dogs exposed to lawn pesticides were more likely to be diagnosed with bladder cancer².
- Weed & bug killers are designed to be toxic. Just because they can be bought at a store doesn't mean they're safe.
- Fertilizers are often used unnecessarily, which wastes money and pollutes our waters.
- Healthy lawn care practices will help you reduce the use of fertilizers and weed & bug

Follow these six easy steps:

1. Mow better

Set mower blades at 3-inches for vigorous roots and to shade out weeds.

2. Let the clippings lie

Clippings are high-quality, low-cost fertilizer.

3. Fertilize?

Fertilize in the fall, if at all! Lawns older than 10 years need only clippings. Younger lawns need nitrogen. Look for 10–0–0 slow release fertilizers.

4. Got weeds?

Liberal apply perennial ryegrass seed all season long.

5. Got bugs?

Overseed with insect resistant fescue grasses or use beneficial nematodes, fungi, or bacteria.

6. Water wisely

If needed, water once or twice a week with a deep soaking (1–1.5 inches).

¹ <http://www.epa.gov/pesticides/food/pest.htm>.

² Glickman et al., 2004. Herbicide Exposure and the Risks of Transitional Cell Carcinoma of the Urinary Bladder in Scottish Terrier Dogs, Journal of the American Veterinary Medicine Association.

SUSTAINABLE SCARBOROUGH | Healthy Lawns



Town of Scarborough, Maine | 259 US Route 1, Scarborough, ME 04074 | scarboroughmaine.org | 207.730.4000

Adapted from Cumberland County Soil & Water Conservation District.

Funding for the Project was provided, in part, by the U.S. EPA under Section 319 of the Clean Water Act. The funding is administered by Maine DEP in partnership with EPA.

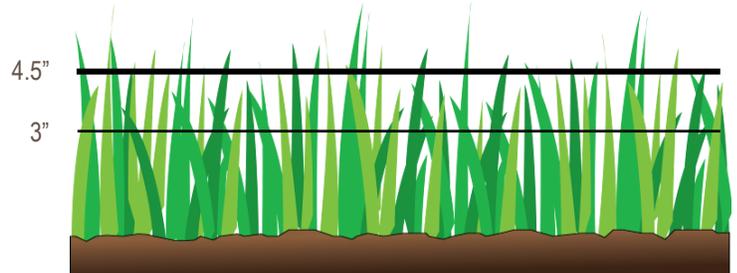
MOWING

Taller grass has deeper, healthier roots, making it a stronger plant. If you want grass resistant to disease, weeds, and drought, three inches is the rule!



Cut only 1/3 of grass blade.

Grass blades make food for the plant through photosynthesis. When you cut off most of the grass blade, you cut off the plant's food supply and force the blades of grass to grow faster. This forced growth spurt uses up the plants' stored food, hurting the roots and leaving the plants weaker overall.



Set mower blades at 3"

- Results in healthier grass roots.
- Quickly leads to thicker grass.
- Increases drought resistance.
- Taller grass shades out weeds.

Use sharp blades

- Dull mower blades rip and tear grass, leaving the plants at risk of disease.
- Sharp blades make clean cuts, and clean cuts heal faster.

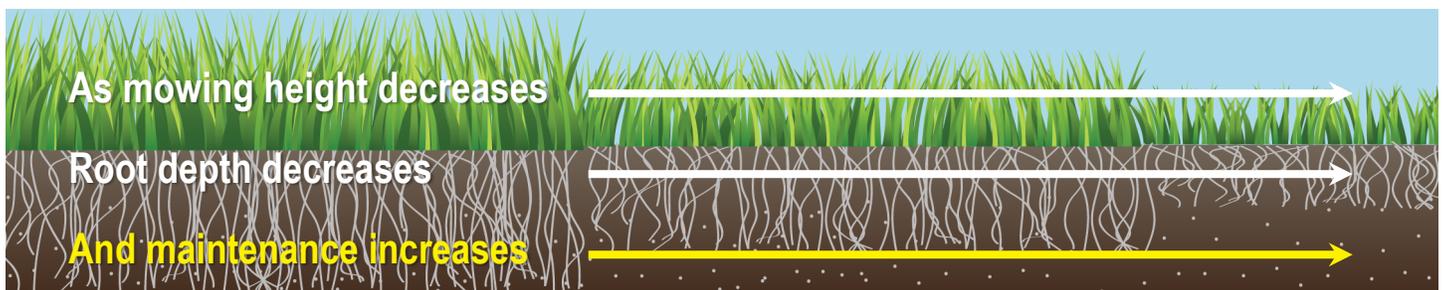
Leave the clippings

- Clippings are a free source of fertilizer; leaving them in place saves time and money!
- They do not cause thatch.

More tips:

- **Mow the right way at the right time of day.**
Mow in early evening, after the heat of the day and before the dew settles. Lawns should be cut down to 2 inches twice a year – in the fall to prevent snow mold and in early spring to help stimulate growth and green up.
- **Vary the mowing pattern.**
Varying the mowing pattern every time you mow prevents soil compaction, which will keep your soil and grass healthier.
- **Tune up your lawnmower.**
Did you know that one gas powered mower puts out the same emissions as 40 new cars? Save gas and have your mower run more efficiently by changing your spark-plugs, air filter and oil every year.

3"



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AERATE

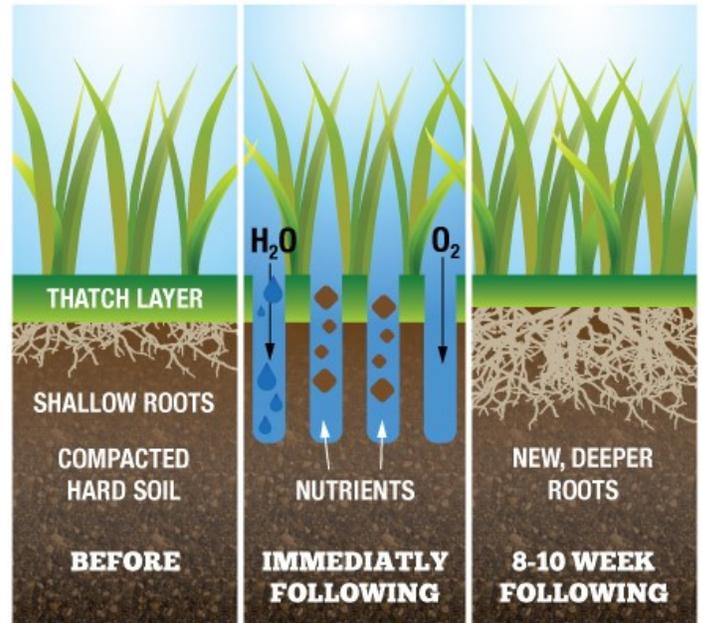
A core aerator removes plugs of soil from your lawn so water, air, and nutrients more easily reach grass roots. The plugs left behind improve your lawn. They contain microorganisms that help decompose thatch.

Benefits of aeration:

- Loosens the soil so that air, water, and nutrients reach the roots.
- Makes existing nutrients more available to the grass.
- Improves root growth and thickens the turf.
- Reduces thatch.
- Reduces water runoff and increases drought resistance.

Healthy lawns need healthy soil.

- Over time soil becomes compacted, especially with heavy mower and foot traffic.
- Heavy clay soils are especially prone to compaction.
- When the top four inches of the soil is compacted, the grass becomes stressed and weeds have the advantage.
- Aeration is part of the solution!



When to aerate:

- Aerate twice a year (in the spring and fall) in heavy soils, high use areas or where thatch is over one inch thick.
- Aerate once a year in moderately used areas.
- Aerate every other year once the soil is improved.
- Aerate when the soil is moist, but not wet. (Aerating wet soil causes further soil compaction.)

Rent with a neighbor!

Core aerators are very affordable to rent for a few hours or an entire day, especially if you split the cost with a neighbor or two.

Next steps:

- Once you are finished aerating your soil, consider topdressing it with compost. (Topdressing with good quality compost improves your soil.)
- Overseed - now is the perfect time!

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TOPDRESS

Healthy lawns need healthy soil. Most properties do not have enough good soil to grow a healthy lawn. Topdressing with compost will help!

What is topdressing?

Topdressing means spreading a thin layer of compost over the entire surface of the lawn.

Why use compost?

- Contains organic matter and nutrients.
- Improves soil structure and health (lawns need 6-inches of good soil to thrive).
- Enhances root development.
- Reduces need for fertilizers.
- Increases soil's ability to retain water.

Just a few easy steps:

1. Have the compost delivered to your home and dumped in a convenient location. (Make sure the dump truck does not drive on the lawn!)
2. You'll need a wheel barrow, metal rake, and lawn rake.
3. Dump wheel barrow loads of compost all over the lawn, 3-4 feet apart.
4. Push and fan out these piles with the flat end of a metal rake.
5. Lightly rake, fanning out with the lawn rake so the grass blades poke through.



When is the best time?

- Late summer or late spring.
- If you have very little topsoil: twice a year for 1-2 years.
- If you have 6-inches of quality soil there is no need to topdress.
- If aerating: topdress afterward.
- Dry weather is always best. If the compost is dry and lightweight, your job is much easier.

Know how much you need

- 1/4 to 3/8 inch layer of compost spread over the lawn.
- 1,000 square foot area needs roughly .75 cubic yards of compost.

Find the right compost

- Find finished compost: it should smell earthy and sweet and should not be steaming hot.
- Know what it's made of: many local sources are organic and contain shellfish. They are great for lawns and gardens.

Next steps:

- Overseed with a low maintenance grass seed.
- Apply compost tea.

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OVERSEED

Overseeding means spreading seed over an existing lawn to rejuvenate the grass, fill in thin areas, and incorporate low maintenance seed mixes into your lawn.



Benefits

- Rejuvenates lawn.
- Thickens grass.
- Crowds out weeds.

Timing

- You can overseed at any time during the growing season.
- Best time is mid-August through mid-September.
- Next best time is in May, after spring cleaning your lawn.

Best methods

- Overseeding is the ideal next step after aerating and topdressing your lawn.
- For best results, spread 1/4 to 1/2 the normal seeding rate recommended on the bag.
- Lightly water to ensure seed to soil contact.
- Keep soil lightly watered for the next three weeks. Make sure the soil is moist but not soggy.

Don't seed in the shade

- Grass needs 6 hours of daily sunlight to thrive.
- Don't waste time and money trying to get grass to grow in the wrong place.
- Try shade tolerant native groundcovers that require little or no maintenance.

Use a low maintenance mix

- Mixes mainly comprised of fescues and perennial ryegrasses are best suited to tough Maine summers and winters. Most varieties of shady mixes contain a good blend of these grasses.
- An ideal low-maintenance mix will contain roughly 60-70% fescues and 30-40% ryegrasses with at least two varieties of each species.
- Look for “endophyte enhanced” for natural insect resistance.
- Many local stores stock low maintenance seed mixes. Look for some of the following:
 - YardScaping or BayScaping Mix
 - TuffTurf Mix
 - Cottage Mix
 - Shady Mix

Adding 5% white clover to your seed mix will increase nitrogen in your soil to naturally fertilize your lawn!

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WATERING

A healthy lawn needs water. How much you water and when you water can have an affect (positive or negative) on your lawn.

Water is essential!

- Without water, grass can't grow.
- Most perennial grasses will go dormant (turn brown) during dry spells. Brown grass is still very much alive and can survive for weeks until moisture returns.
- Note: allowing grass to brown will provide an opportunity for weeds to take root.

How much water do I need?

- Lawns need 1 to 1.5 inches of water per week during the growing season (May to October).
- Buy a rain gauge - they are inexpensive and are available at local hardware stores.
- Monitor rainfall and only apply what is needed to equal 1 to 1.5 inches of water.
- Watering too much wastes time and money and creates a weak, stunted root structure

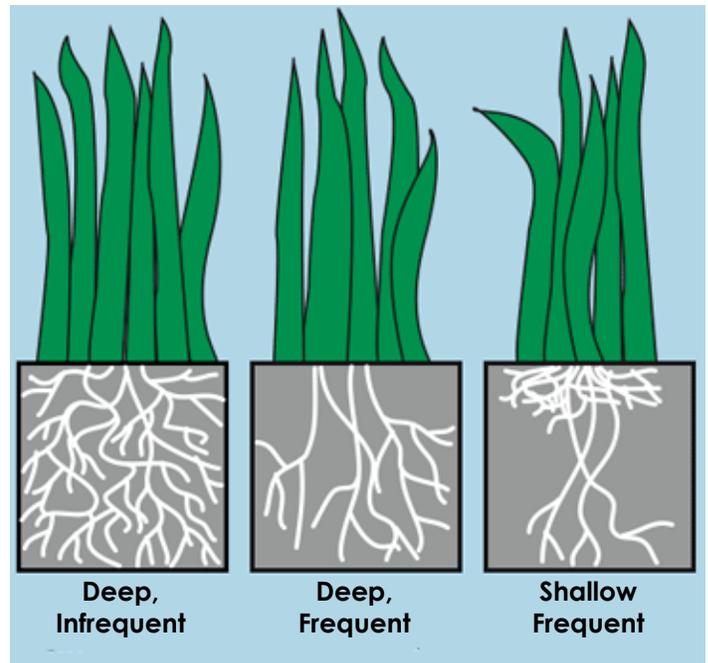


Tip:

Determine your sprinkler output by placing jars on the lawn and timing how long it takes for them to fill with an inch of water.

How often should I water?

- Only once or twice a week (depending on the rain).
- If you water twice a week, be sure to only apply half of the lawn's weekly needs (0.5 to 0.75 inches at each watering).



Water deeply, not quickly.

- If you've been setting your mower blades at 3" then your lawn's root system has grown deep and strong.
- Allowing water to seep into the ground will help the grass stay healthy.

When should I water?

- Between 6:00 a.m. and 10:00 a.m. is ideal.
- The afternoon is too hot and sunny; most of the water will evaporate.
- Watering at night increases the risk of fungal diseases.

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SOIL TEST

Testing your soil is an essential step in healthy lawn care. There is no way to know what your lawn needs without one!

Why should I test my soil?

Healthy soil is the key to a great looking lawn, but it is impossible to know what your soil needs without doing a soil test. Levels of pH, nutrients, and organic matter all impact plant growth. A soil test will save you time and money by telling you to add only what your soil needs.

When should I test my soil?

A soil test should be done at least every three years and before you decide to add any fertilizer or lime to your lawn.

What will my soil test tell me?

- Soil pH
- Levels of the nutrients phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg) and sulfur (S)
- Amount of organic matter
- If there is lead contamination
- Fertilizer and lime needs

Collecting a soil sample

1. Using a clean spade or trowel, take several samples in different locations on your lawn.
2. Mix the samples in a clean container.
3. Label the sample box with your name, address and sample identification (e.g. front lawn) and fill with soil. If you are sending multiple samples, each must be placed in a separate sample box.
4. Complete the accompanying form (Note: the crop code for existing lawns is 201; the crop code for new lawns is 211). The form will accommodate up to 10 samples. Remove the top copy and send to the lab with your sample; keep the remaining copies for your records.
5. Place the sample box(es), form, and payment in a shipping box and send it to the soil testing service at the address on the form.

Your results should arrive in two to three weeks.



Free soil test kits are available from county extension offices or your local Soil and Water Conservation District.

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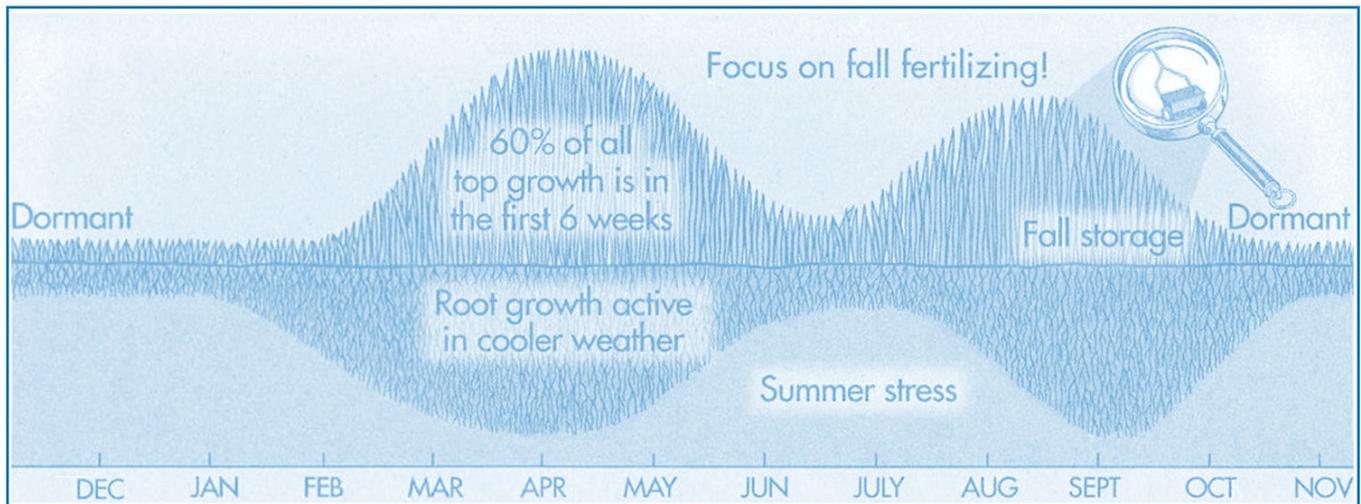
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FERTILIZING

Research shows that lawns need less fertilizer. Follow these tips for great results at less cost to you and our environment.



Graphic adapted from *Lawn Care Without Pesticides* by Frank Rossi. (<http://hdl.handle.net/1813/3574>)

Do a soil test

You don't know what your lawn needs without one!

Fertilizer basics

- Unless you have a soil test that identifies a need for phosphorus and potassium, all you need is nitrogen. Look for 10-0-0 on the bag (corn meal gluten is a good choice).
- For free fertilizer, always keep grass clippings on your lawn.
- If an unfertilized lawn is acceptable, then don't fertilize!

Older lawns - 10+ years

- Lawns older than 10 years need only clippings.
- If fertilizing necessary, apply it according to the results of a soil test.

New lawns - 10 years or less

- Younger lawns need nitrogen.
- If fertilizing necessary, apply it according to the results of a soil test.

When should I fertilize?

- **The best time to fertilize** is between August 15th and September 15th.
- Grass needs to be growing to take up fertilizer.

Use slow release fertilizer

- Improves soil health and fertility.
- Slowly releases nutrients so they feed your lawn, not our streams, rivers and groundwater.
- Most come from sustainable, renewable resources.
- Look for corn meal gluten, a byproduct from milling corn. It's a great source of Nitrogen for your lawn!

Notes on synthetic fertilizers

- Derived from natural gas, a nonrenewable resource.
- Many contain soluble nitrogen that can wash into rivers and streams, wasting your time and money.
- If you do use synthetic fertilizer, look for slow release nitrogen. Using slow release nitrogen helps ensure that your lawn's root system takes in the nutrients before they wash away.

Other tips

- Try compost tea!
- Choose grasses such as fescues that require less fertilizer and water.
- Check out our Overseeding & Compost Tea fact sheets!

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COMPOST TEA

Using compost tea is a great way to quickly transition to a healthy lawn!



What is compost tea?

- Compost tea is compost that has “steeped” in water.
- This process grows populations of beneficial microorganisms and suspends nutrients in water so that they are immediately available to the grass.

The many benefits

- Immediately greens up the lawn.
- Improves soil health.
- Protects against insects and disease.
- Can be applied as often as you like without harming your lawn or polluting local waterways.
- Best way to transition a lawn from conventional methods to a natural system.

When can you apply it?

- Apply early spring through late fall.
- You do not need to consult your soil test results to apply compost tea. You can not damage your soil or your grass with fresh compost tea.

Easy to make

1. Fill the bucket with water (allow water to sit for 24 hours if it is chlorinated).
2. Fill the mesh bag with compost and submerge it in the water.
3. Attach air stone to tubing and sink into bucket.
4. Connect tube to aerator and turn on pump. Allow to bubble for 24-36 hours.
5. Mix in one heaping tablespoon of molasses 2 hours before applying.

Easy to apply

- Fill lawn sprayer with compost tea.
- Attach sprayer to hose.
- Spray lawn!

Note: One full lawn sprayer container (1 quart) of compost tea will cover a 1,000 square foot lawn! Extra compost tea can be used on vegetable gardens, flowers, trees, and shrubs!

Home brewing? Here's what you'll need:

- Mesh bag or stocking
- Good quality compost
- 5 gallon bucket
- Aquarium air pump, stone & tube
- Garden sprayer
- Garden hose



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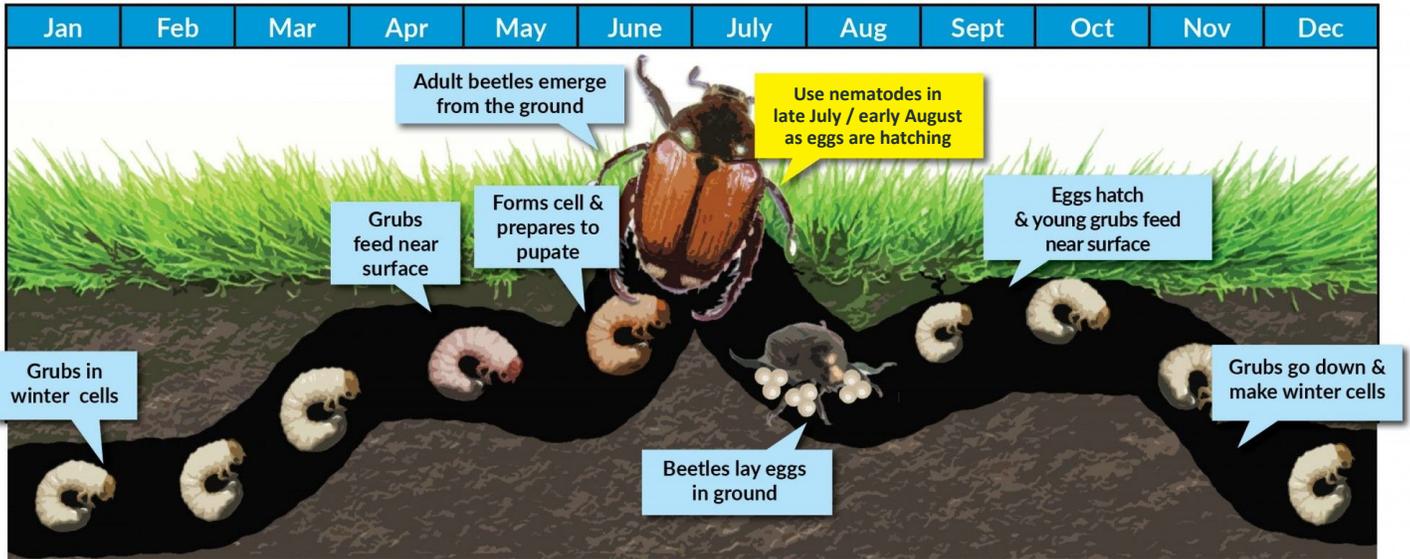
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GRUBS

Some grubs are a natural part of all lawns, but too many can create a problem. Improving soil health and building your lawn's root system will help ward off grub infestations.



What constitutes a problem?

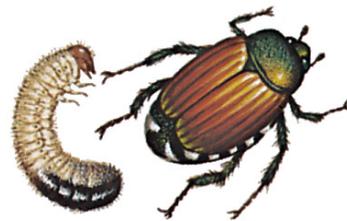
Use a shovel to cut a 1-foot by 1-foot square of turf and pull it back. If you count more than 10 grubs in that area then you may have a grub population that is large enough to damage your lawn.



Fight back

In northern New England, the best way to naturally combat grubs is by using beneficial nematodes. Nematodes are living organisms that are naturally found in most soil. Unfortunately, Maine's winters get too cold for them to survive year-round, so they need to be purchased and added to lawns. Because they're alive, nematodes should only be purchased from reputable retailers that properly store, handle, and transport them. Nematode products that are sitting on a store shelf are not recommended.

Carefully follow package instructions when applying nematodes to ensure maximum effectiveness.



White Grub Japanese Beetle

Treat your lawn in late July or early August when the grubs are in the larval, root feeding stage.

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ANTS

Ants are a natural and useful part of a healthy lawn ecosystem. You should be concerned with keeping them out of your house but not out of your lawn.



Ants are your lawn's friend!

Ants prey on the larvae of flies and fleas and naturally aerate soil. They should only be considered a problem if they are getting into your house or if they are European Fire Ants, which sting.

Keeping ants outside

To keep ants from moving into your house there are a variety of things you can try:

- Use silicone caulking to seal cracks and crevices that could provide access. Check around baseboards, moldings, pipes, outlets, ducts, sinks, toilets, etc.
- Keep the kitchen as clean as possible. Any food that is not sealed in an airtight container or in the fridge could attract ants.
- Clean up all spills right away, bring compost outside daily, and store garbage in airtight containers.
- Ants could be attracted to pet food as well, so don't leave pet dishes out and full of food constantly.
- Replace rotten wood and keep moist areas well ventilated to deter carpenter ants from establishing colonies.



Control methods

- Pour hot, soapy water into the nest. This will kill some of the ants and force others to relocate.
- Use diatomaceous earth or boric acid dust to dehydrate and kill them. Caution should be used with these substances, especially if anyone in your family has lung problems. Be sure to follow all safety instructions that come with the product.
- If you discover an indoor nest, spread corn meal to attract ants to one location then use a vacuum with a HEPA filter to capture as many ants as possible. Seal and dispose of the bag immediately.



A note about pesticides

Controlling ants with pesticides is not recommended for a couple of reasons in addition to the health issues associated with pesticides in general:

- About 95% of ants never leave the nest so if you use pesticides to kill the ones that are foraging for food you'll only be killing 5% of the total population.
- Using pesticides on indoor nests has been shown to cause the colony to split and establish two completely separate nests, doubling your problem.

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