

Why YardScape?



YardScaping helps build healthy soil to grow all kinds of landscapes from lawns to rain gardens and minimizes your reliance on pesticides, fertilizers, and watering.



Benefits of YardScaping

- Creates a low-maintenance yard that saves you money, time, and effort.
- Makes your yard more functional for how you want to use it.
- Makes your yard more resistant to pests and prepared for drought.
- Puts native and native-friendly plants where they want to grow.
- Attracts more birds, butterflies, and other wildlife.
- Uses less water.
- Builds up organic matter in your soil to retain nutrients and moisture.
- Prevents erosion and drainage issues.
- Protects our water! Yard care products like fertilizers and pesticides can be carried by stormwater runoff to our local streams, rivers, ponds, lakes, and bays and make them unsafe to drink, fish, and swim in.

Quick Tips

- **Test your soil.** Check your soil's ability to drain water with a percolation test and check its chemistry (pH, organic matter, heavy metal levels, and nutrient amounts) with a University of Maine soil test.
- **Make a site design.** Plan your landscaping based on use, infrastructure, sun exposure, soil drainage, and soil chemistry. Consider adding improvements for pollinators and other wildlife too!
- **Build your soil.** Based on your soil chemistry results, add any needed organic matter and nutrients through materials like compost and compost tea.
- **Water wisely.** Use a rain gauge to determine if you need to provide additional water to your gardens and lawn. Most plants like about an inch of water a week. Water deeply and infrequently to help your plants grow wide and deep roots.

Just look for the duck!

We partner with local nurseries, hardware stores, and Home Depots to mark products and plants that align with YardScaping practices to help streamline your choices.



Mowing



Why should I mow high?

Taller grass means deeper roots that have more access to nutrients and are more drought resistant. It also shades out weeds and helps thicken your turf.



Mow High

Cut only 1/3 of grass blade at a time. Wait until the grass is 4 to 4.5 inches tall, then cut it to 3 inches. Grass in ditches can be trimmed to 6 inches.

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

Use Sharp Blades

Dull mower blades rip and tear grass, leaving the plants at risk of disease.

Sharp blades make clean cuts that heal faster.

Leave the Clippings

Clippings are a free source of fertilizer; leaving them in place saves time and money! Grass clippings do not create thatch.

Mow Late

Mow in early evening, after the heat of the day, and before the dew settles.

Vary the Mowing Pattern

Vary the mowing pattern every time you mow to prevent soil compaction, scalping, and weed invasion. This will keep your soil and grass healthier.

Seasonal Changes

If you have annual weeds, like crabgrass, use your mower bag when they have seeds to help reduce the amount of weeds you have in the future.

In the fall, use a mulching blade to help turn fallen leaves into organic matter for your soil. You can also mulch the early leaves and leave the later leaves where they lie as overwinter habitat for pollinators and other beneficial insects.

In the spring, try to wait as long as possible before raking and mowing. This allows pollinators to emerge once the weather is suitable and their food sources, early flowers like violets, daisies, and dandelions, are in bloom.



Soil Drainage



What's a Percolation Test?

It helps you measure drainage in your lawn or garden soil to keep your plants properly hydrated.



Testing Your Soil Drainage

1. **Dig** a hole with straight sides at least 12" in diameter by 12" deep.
2. **Fill** the hole with water and let it sit overnight.
3. **Refill** the hole with water the next day.
4. **Measure** the water level every hour. Lay a straight edge across the top of the hole and then use a yardstick or measuring tape to read the water level until the hole is empty.

Ideal soil drainage is about 2" per hour.

If your soil drains less than 1" per hour, you'll need to add sand and organic matter to create space between soil particles.

If your soil drains more than 4" per hour, you'll need to add organic matter to help retain moisture.

Types of Soil

- **Clay** is the finest type of soil and drains the slowest.
- **Silt** is the intermediate size between clay and sand. It holds moisture well but is easily eroded.
- **Sand** is the largest type of soil and drains the fastest. Sand also increases soil aeration.
- **Loam** is a mixture of sand, silt, and clay.
- **Humus** is organic material that forms in soil as plant and animal matter decomposes. Humus helps soil retain moisture, improve aeration, and holds nutrients. This is what builds our topsoil.



Working with Poor Drainage

If you know your soil's drainage type but can't fix your soil across large areas, pick plants suited to your soil type (wet or dry) or use raised beds and planters to provide proper soil to designated plants.

Fixing Soil Drainage

Most drainage problems can be addressed by aerating and topdressing with compost. Instructions for both are on the back of this handout.



What's aeration?

Over time all soil becomes compacted, especially with lots of walking, snow piles, or vehicle traffic.

Aeration loosens the soil so that air, water, and nutrients can reach plant roots. Aeration also reduces thatch, reduces the need for fertilizer, improves root growth, and improves drought resistance.

How to Aerate

1. **Call DigSafe at 811** to check for any underground utility lines. Also check the depth of any irrigation systems to avoid puncturing.
2. **Rent a core aerator** for a few hours or an entire day. Consider splitting the cost with a neighbor or two. Some landscaping companies will also perform this service.
3. **Check the soil plugs.** If they crumble, you can leave them where they lie. If they hold their shape, rake them up and compost them.

When to Aerate

- When the soil is moist, but not wet.
- Twice a year (in the spring and fall) in heavy clay soils, high use areas, or where thatch is over one inch thick.
- Every few years as maintenance.



What's topdressing?

Topdressing is spreading a thin layer of compost to the top of your soil. This adds nutrients and organic matter to your soil to reduce the need for fertilizer, reduces compaction, and helps retain water.

How to Topdress

1. **Dump wheel barrow loads** of compost 3'-4' apart.
2. **Lightly fan out** the compost with the rake so the grass blades poke through. If aerating, compost will lightly fill in the holes created to help build quality topsoil faster.
3. (Optional) Overseed the bare spots with grass or clover to thicken your lawn and prevent weeds from growing.

How Much Compost Do I Need

You want a $\frac{1}{4}$ " to $\frac{3}{8}$ " **thick layer**, so to cover 1,000 sq. ft., you need 0.75 cubic yards of compost.

What Type of Compost

Food waste and shellfish-based compost has higher amounts of nitrogen; manure-based composts has higher amounts of phosphorous. Check your soil test results to see which will help your soil more.

When to Topdress

After aerating in late spring or late summer, when you have several days of dry weather in a row.

Topdressing is **not recommended** if you live next to a waterbody or on a steep slope.

Overseeding



What's overseeding?

Overseeding is adding new grass seed to existing lawn to thicken turf, crowd out weeds, and fill in bare spots.



When to Overseed

Any time during the growing season when you have a bare spot of soil. Keep the seeds moist to germinate. The best time is mid-August through mid-September.

How to Overseed

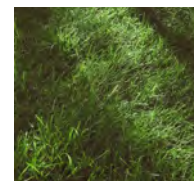
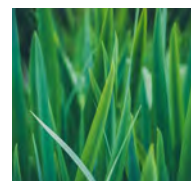
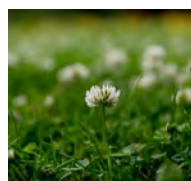
- Can be spread by hand or with a broadcast spreader. For best results, spread $\frac{1}{4}$ to $\frac{1}{2}$ the seeding rate (lbs. per 1,000 sq. ft.) recommended for new lawn on the bag. Some bags will provide an overseeding rate.
- Further divide the amount of grass seed and spread half the amount walking north to south, then spread the second half east to west for more even coverage.
- Ensure good seed to soil contact by lightly rolling the area, walking on it, or gently watering it.
- Keep soil lightly watered for the next three weeks. Make sure the soil is moist but not soggy.
- Spread straw over the seed if seeding a large bare spot to help hold moisture and keep soil from eroding.

Where to Overseed

Grass needs 6 hours of daily sunlight to thrive. In areas of your yard that receive less than 6 hours of sunlight, try planting shade tolerant native groundcovers.

What Grass Seed to Use

- An ideal low-maintenance mix will contain roughly 60-70% fescues and 30-40% perennial ryegrasses with at least two varieties of each species.
- Mix in 5-10% white clover to add food for pollinators and to add nitrogen to the soil.
- Look for and select “endophyte enhanced” for natural insect resistance.
- Keep Kentucky Bluegrass to 10% or less. Kentucky Bluegrass is more likely to develop thatch than other varieties of grass.



Thatch

Thatch is a dense layer of dead grass stems and blades that slows down water, air, and nutrients reaching the soil below. Some grasses naturally develop thatch over time but any grass can develop thatch if it is regularly overwatered or over fertilized. Remove thatch buildup with a special dethatching rake.

Water Wisely



Should I water my yard?

You should water your lawn and gardens only when they need it! This saves you time and money, conserves water for other uses, and grows stronger plants with wider and deeper root systems.



How to Water

- Depending on rain, water deeply and infrequently once a week, allowing water to seep into the ground.
- Use a rain gauge to track how much rain your lawn and gardens received. Supplement any additional water needs through watering.
- Lawns use 1" to 1.5" of water per week during the growing season (May to October).
- Determine your sprinkler output by placing cans on the lawn and timing how long it takes for them to fill with an inch of water.
- When possible, use drip irrigation in gardens. Otherwise focus water to soil rather than foliage.

When to Water

- Between 6:00 AM and 10:00 AM to ensure the water soaks into the ground and doesn't evaporate.

Ways to Reduce Watering

- Add more organic matter to your soil to help it retain moisture.
- Add three inches of mulch to garden beds.
- Capture rainwater in rain barrels for future use.
- Use native and regional plants well suited for your yard conditions.

When in Drought

For fescue and ryegrass lawns:

- Allow the grass to go dormant (change from green to brown). If the grass feels fleshy but is brown in color, it will come back with cooler and wetter weather.
- Lightly water grass (about 1/2") every two weeks to keep moisture in the soil without breaking the dormancy.
- Keep grass tall to shade out the soil and help keep moisture. Don't mow during a drought, it will stress out and damage your lawn.
- Don't fertilizer or apply compost tea, this will break the dormancy too early!
- Healthy lawns can survive in a dormant state for four to six weeks without rainfall or irrigation.

For gardens:

- Water deeply (1") once a week in the early morning.
- Increase weeding to reduce water competition with desired plants.
- Don't fertilize or apply compost tea.
- Dead head flowering plants early to prevent it from using valuable energy and water forming seeds.



Soil Test



What's a soil test?

A soil test is an easy and inexpensive way to determine your soil's level of nutrients, pH, and organic matter, all of which impact plant growth. A soil test will save you time and money by telling you to **add only what your soil needs**.



When to Test

A soil test should be done at least every three years and before you decide to add any fertilizer or lime to your lawn. The ideal time of year to test your soil is mid to late spring or early fall.

Collect a Sample

- 1. Take several samples** 3" (lawn), 6" (most herbaceous plants), or 12" (trees and shrubs) deep in different locations of a garden or section of yard with a clean trowel. Remove any large leaves, roots, and sticks from your sample.
- 2. Mix the samples** in a clean container. If soil is wet, allow it to dry.
- 3. Label the sample box** with your name, address, and sample identification (e.g. front lawn) and fill with soil. If you are sending samples from discrete areas, each must be placed in a separate sample box.
- 4. Complete the accompanying form.** The form will accommodate up to 10 samples.
- 5. Place the sample box(es), top form, and payment in a mailing container** and send it to the soil testing service at the address on the form.

Test Results

Your results should arrive in two to three weeks. Request your results be emailed to you for faster results and so you can forward them to your local District or Cooperative Extension if you have questions. Results will include information on:

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




Free soil test kits are available from Cooperative Extension offices, USDA-Natural Resources Conservation Service offices, or your local Soil and Water Conservation District.



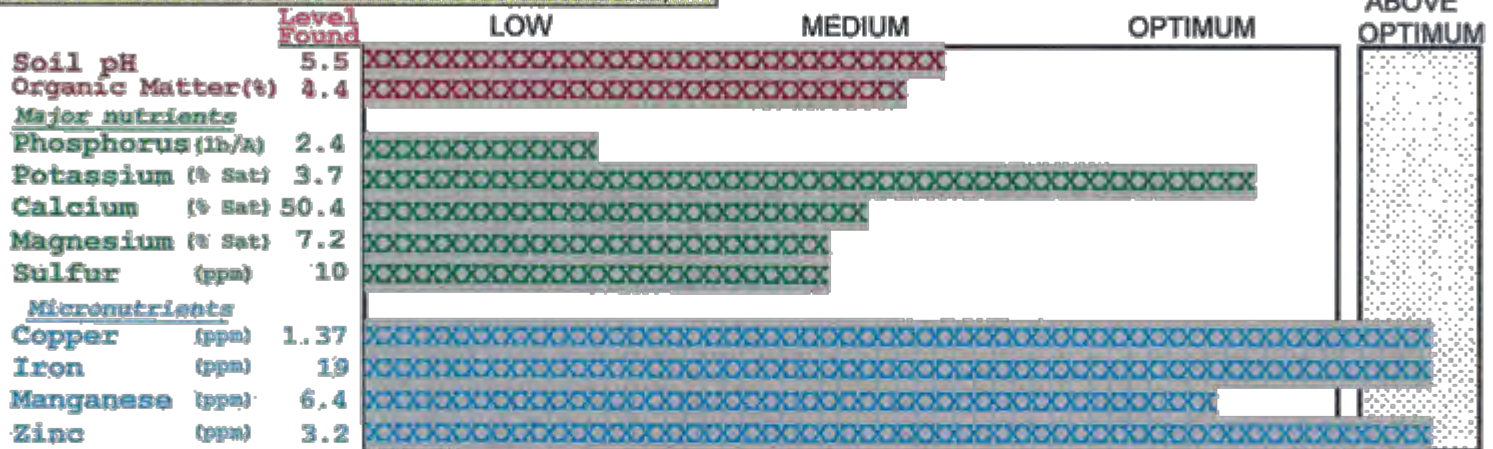
04/30/2010	3458	Lawn-Exisiting	CUMBERLAND	298 sq. ft
PRINT DATE	LAB NO.	SAMPLE IDENTIFICATION	COUNTY	ACRES OR SQ. FT.

•SOIL TEST REPORT FOR:
EXAMPLE
 Exisiting Lawn

MAINE SOIL TESTING SERVICE
UNIVERSITY OF MAINE 1865
 5722 DEERING HALL
 ORONO,MAINE 04469-5722



SOIL TEST SUMMARY & INTERPRETATION
 (see Numerical Results section for more information)



RECOMMENDED ADDITIONS FOR EXISTING LAWN - Crop Code # 201

To raise soil pH to 6.0, apply 60 pounds of lime per 1000 sq. ft.

To meet crop magnesium requirement, use a magnesium lime.

Calculated major nutrient requirements as follows:

- 2.0 pounds nitrogen per 1000 sq. ft.
- 0.9 pounds phosphate per 1000 sq. ft.
- 0.7 pounds potash per 1000 sq. ft.

To meet major nutrient requirements:

- Apply 10 lb 20-4-8 or 22-6-8 (or similar ratio) fertilizer/1000 sq ft.
- Apply 1/2 in early spring and 1/2 in late August.
- If clippings are left on, apply only 1/2 rate in late August.
- Apply fertilizer when grass is dry and water in immediately to prevent burn.
- For organic fertilizers: adjust the rate to provide 1 lb nitrogen/1000 sq. ft.
- To supply sulfur, alternate the recommended fertilizer with 5 lb 21-0-0/1000 sq ft, once every other year. Organic fertilizers will also supply sulfur.

For information on micronutrient management and recommendations, see enclosed form.

NUMERICAL RESULTS (Test methodology: pH in water and Mehlich buffer, available nutrients by modified Morgan extract; Organic matter measured by LOI, P determined colorimetrically, all others measured by ICP-OES)

CEC and nutrient balance calculations assume the pH will be raised to 6.0

Level Found	5.5	5.76	2.4	203	122	1408	6.9	3.7	7.2	50.4	38.7
	Soil pH	Lime Index 2	Phosphorus (lb/A)	Potassium (lb/A)	Magnesium (lb/A)	Calcium (lb/A)	CEC (me/100 g)	K	Mg (% Saturation)	Ca	Acidity
Optimum Range	5.5-6.5	N/A	7-10	see % Saturation levels	see % Saturation levels	see % Saturation levels	> 5	2.8-4.0	10-20	60-80	< 10
Level Found	4.4	10	1.37	19.0	6.4	3.2					
	Organic Matter (%)	Sulfur (ppm)	Copper (ppm)	Iron (ppm)	Manganese (ppm)	Zinc (ppm)					
Normal Range	5 - 8	> 15	0.8-1.2	6 - 10	4 - 8	1 - 2					
Level Found	N/A	N/A	N/A	N/A	N/A	N/A					
(Extras)	Boron (ppm)	Sodium (ppm)	Soluble Salts (mmhos/cm)	Nitrate-N (ppm)	Ammonium-N (ppm)						
Normal Range											

Additional Results or Comments:
 Lead scan: NORMAL BACKGROUND LEVEL - no health risk.

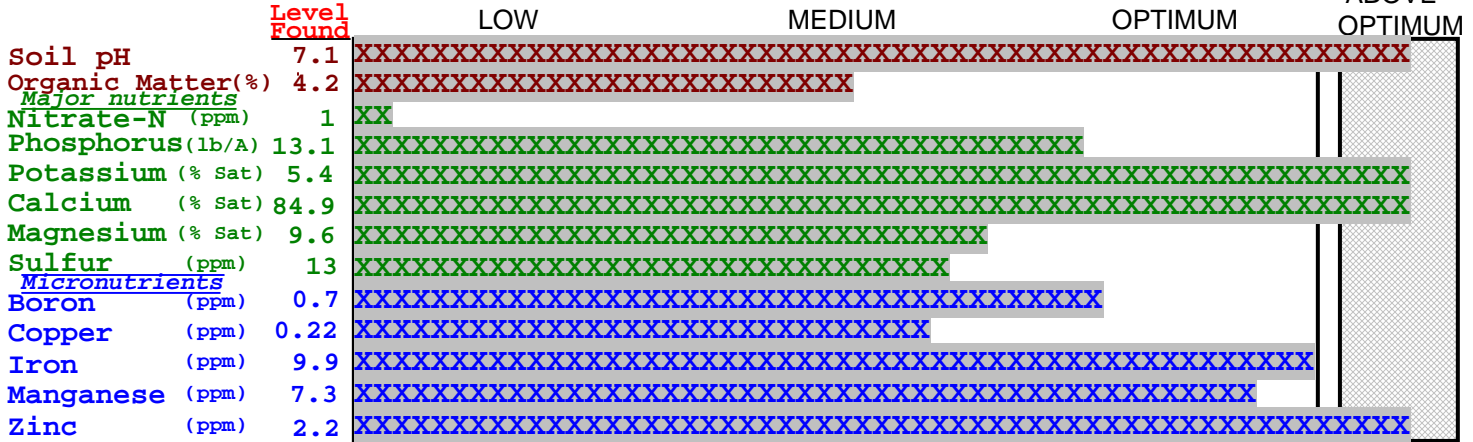
06/24/2019		Lawn-NEW	CUMBERLAND	100 Acres
PRINT DATE	LAB NO.	SAMPLE IDENTIFICATION	COUNTY	ACRES OR SQ. FT.

●SOIL TEST REPORT FOR:

EXAMPLE
New Lawn

MAINE SOIL TESTING SERVICE
UNIVERSITY OF MAINE 
5722 DEERING HALL
ORONO, MAINE 04469-5722

●SOIL TEST SUMMARY & INTERPRETATION
(see Numerical Results section for more information)



●RECOMMENDED ADDITIONS FOR ALL TURF-NEW SEEDING - Crop Code # 211

No lime recommended. Soil pH is at or above the optimum level for this crop.

To meet crop magnesium requirement, use a fertilizer containing magnesium if possible.
Calculated major nutrient requirements as follows:
2.0 pounds nitrogen per 1000 sq. ft.
1.1 pounds phosphate per 1000 sq. ft.
0.0 pounds potash per 1000 sq. ft.

To meet major nutrient requirements:
Apply 20 lb 10-10-10 fertilizer/1000 sq. ft.

Other fertilizers of similar N-P-K ratio may be substituted.
Till in lime (if needed) and fertilizer to a 4-6 inch depth.
Till in an inch of compost or peat, with lime & fertilizer, to a 4-6 inch depth before seeding to improve soil nutrient & water holding capacity.

For information on micronutrient management and recommendations, see enclosed form.

●NUMERICAL RESULTS

(Test methodology: pH in water and Mehlich buffer, available nutrients by modified Morgan extract)
(Organic matter measured by LOI, P determined colorimetrically, all others measured by ICP-OES)

CEC and nutrient balance calculations are based on present pH of 7.1

Level Found	7.1	0.00	13.1	421	233	3884	9.9(A)	5.4	9.6	84.9	0.0
Soil pH	7.1	Lime Index 2	Phosphorus (lb/A)	Potassium (lb/A)	Magnesium (lb/A)	Calcium (lb/A)	CEC (me/100 g)	K	Mg (% Saturation)	Ca	Acidity
Optimum Range	5.5-6.5	N/A	10-20	see % Saturation levels			> 5	2.1-3.0	10-20	60-80	< 10
Level Found	4.2	13	0.22	9.9	7.3	2.2					
Organic Matter(%)	4.2	Sulfur (ppm)	Copper (ppm)	Iron (ppm)	Manganese (ppm)	Zinc (ppm)					
Normal Range	5 - 8	> 15	.25-.60	6 - 10	4 - 8	1 - 2					
Level Found	0.7	N/A	N/A	1	2						
(Extras) Boron (ppm)	0.7	Sodium (ppm)	Soluble Salts (mmhos/cm)	Nitrate-N (ppm)	Ammonium-N (ppm)						
Normal Range	0.5-1.2			20-30	< 10						

Additional Results or Comments:
Lead scan: NORMAL BACKGROUND LEVEL - no health risk.

Full payment received for this sample. Thank you.

Soil Lead



Start with a soil test!

Lead can be in your soil from lead paint, gasoline emissions, contaminated fill, or other sources. If lead is above normal background levels in your soil, use these methods for growing plants you want to eat.

Ask for Help

If you have lead in your soil, **contact the Cumberland County Soil & Water Conservation District at (207) 892-4700** for assistance.

How to Garden

- **Grow plants you want to eat in planters.** Buy new soil to put in your planters.
- **Add a barrier to your raised beds.** Use clean, untreated, rot-resistant wood like cedar or pine to add a bottom to your raised bed. Make your plants easier to reach by also adding legs to really separate your plants from the contaminated soil. Buy new soil to put in your raised beds.

Areas to Avoid

Don't plant edible plants or place edible planters and raised beds **next to roads, driveways, and buildings** as these areas are likely to have soil lead and other harmful chemicals.

Limit Contact

Wash your hands after gardening, even if you wore gloves.

Cover any bare soil in the area with mulch or ground cover plants to prevent contaminated dust blowing around and landing on your crops.

Wash

Wash produce and give extra attention to cleaning berries, leafy greens, and other produce with rough surfaces that trap soil.



Peel

If possible, peel fruits and vegetables.



Enjoy



Amending Soil



Start with a soil test!

You don't know what your lawn *needs* without one! Test kits are available from your local Cooperative Extensions, USDA-NRCS, Soil and Water Conservation Districts, and online at umaine.edu/soiltestinglab/home/kit-request/.



Fertilize Smarter

- **Only use what your soil needs:** Follow your soil test recommendations to build healthy soil and save time and money! Use phosphorus-free fertilizer unless establishing seed. **See the back page for instructions on how to calculate your fertilizer.**
 - If your soil needs **nitrogen**, add blood meal, corn gluten, cottonseed meal, or soybean meal.
 - If your soil needs **phosphorus**, add bone meal or aged/composted manure.
 - If your soil needs **potassium**, add greensand, kelp meal, or wood ash.
- If using conventional fertilizer, use a 60% to 70% slow release/water insoluble nitrogen source.
- **Time it right:** The best time to add nutrients is between August 15th and September 15th.

Fertilizer Alternatives

- **Leave your grass clippings:** Clippings are free and return important nutrients back to the soil.
- **Plant white clover:** Clover takes nitrogen from the air and adds it into the soil!

Change your pH

- Grass needs a pH **between 5.5 and 7** to thrive (slightly acidic).
- If your pH is **greater than 7**, add sulfur in the spring to lower it, and if it is **less than 5.5**, add lime in the fall before the first frost to raise it.

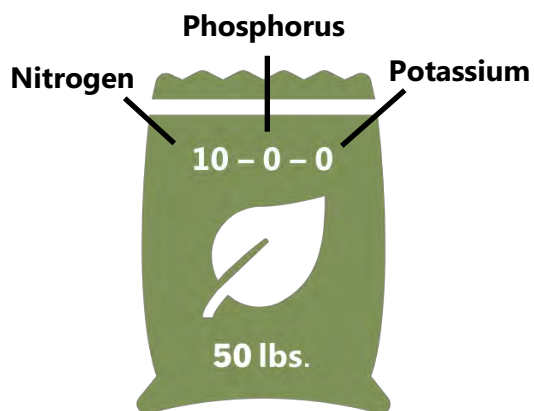


Mix It In

Soil amendments work best when they're mixed into the top two to three inches of soil. Try to time your pH and/or fertilizer applications between aerating and topdressing.

Ordinance Check

Check your municipal ordinances for fertilizer use restrictions and setbacks that are in place to protect water quality.



Applying Fertilizer

If your soil test indicates your soil needs fertilizer, here's how to match the recommend ratio.

As an example, let's say you're looking at an 18 lbs. bag of fertilizer with 22-4-8 on the front. This means the bag is 22% nitrogen (3.96 lbs.), 4% phosphorus (0.72 lbs.), 8% potassium (1.44 lbs.), and the rest of the bag (66% or 11.88 lbs.) is filler.

If your **soil test** says you need 2 lbs. of nitrogen per 1,000 sq. ft, use the following equation to determine how much fertilizer to spread:

2 lbs. nitrogen based on soil test ÷ 0.22 (% nitrogen in bag) = Apply 9 lbs. of the 22-4-8 fertilizer* per 1,000 sq. ft. to achieve desired nitrogen levels.

*If you leave grass clippings, only apply half the calculated amount of fertilizer and apply it in the fall.

Sometimes it may be difficult to find bagged fertilizer that has the right ratio to meet your soil nutrient needs. In these situations, consider buying fertilizer with only one nutrient to ensure you aren't over or under applying another nutrient.

Know the Ratio

Fertilizer bags list the percentage of the bag weight for nitrogen, phosphorus, and potassium.

Spread Better

Calibrating your spreader properly and applying at the right time will ensure you're applying the correct rate and reduces the risk of fertilizer ending up in local water bodies.

- Use a drop spreader that spreads much more precisely than a broadcast spreader.
- Fill the spreader on a hard surface.
- **All spills should be swept up immediately.**
- Reduce spreader settings by half and apply north to south, then east to west to evenly cover lawn.
- Walk at a steady pace to ensure even distribution.
- When turning with the spreader, make sure it is closed and on the yard.
- Avoid fertilizing before rainstorms or on already-saturated soils. However, fertilizer should be gently watered in after application to prevent grass burning.

Contact Cumberland County Soil & Water Conservation District for assistance understanding your soil test results and fertilizer recommendations.



Compost Tea



What's compost tea?

Compost tea is compost that has “steeped” in room temperature water. This process grows beneficial microorganisms and suspends nutrients in water so that they are immediately available for the grass. Compost tea immediately greens up the grass and is the best way to transition a lawn from conventional methods to a natural yard. Compost tea is very concentrated and must be diluted when applied to prevent burns.



Build Your Own Compost Tea Kit

- Mesh bag or stocking
- High quality compost
- 5 gallon bucket
- 1 quart garden siphon sprayer & hose

How to Make Compost Tea

1. **Using a compost tea kit, 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. Brew for 24-36 hours.
4. **Store any unused tea in fridge** for up to one week.

How to Apply Compost Tea

1. **Soil test before applying.**
2. **Wear PPE (glasses and dust mask).**
3. **Apply in the morning** any time of year your grass is growing.
4. **Fill siphon sprayer** with compost tea.
5. **Attach sprayer to hose.**
6. **Spray 1,000 square feet of lawn.**
7. **A little goes a long way, most lawns are fine with one application each year.**

You can buy a complete kit from the
Cumberland County Soil & Water Conservation District.
Call (207) 892-4700.



How Much Compost Tea Do You Need?

One quart of compost tea will cover a 1,000 square foot lawn. Extra compost tea can be applied to the soil in other gardens.



Pets & Yards



Pets enjoy a healthy yard too.

However, pets can damage our lawns and some yard care products aren't safe for pets.



The Scoop on Poop

- The average dog produces $\frac{3}{4}$ of a pound (or 340 grams) of waste a day— that's 274 lbs. a year!
- One gram of dog waste (the size of a pea) contains 23 million fecal bacteria which can negatively impact our health and the health of our animals too.¹
- 2 to 3 days of pet waste from 100 dogs can close 20 miles of waterway to swimming and shell fishing due to high bacteria (*E.coli*) and nutrient levels.²



Dog Spot

Do you have round brown dead spots surrounded by healthy lawn? This can be caused by high concentrations of nitrogen in your dog's urine (typically female dogs).

- Talk to your vet about dietary supplements and make sure your dog is hydrated.
- Dilute the area with a garden hose.
- Use fescues and perennial ryegrasses which are more tolerant of high nitrogen than other grasses.

¹ van der Wel, B. 1995. Dog Pollution. *Hydrological Society of South Australia*. 2(1)12.

² US EPA. 1993. *Guidance Specifying Management Measures for Sources of Nonpoint Source Pollution in Coastal Waters*. 4-125.



How to keep pets safe from yard products

- Understand the risks and proper uses of yard chemicals by thoroughly reading the labels.
- Use the least toxic product available to control pests. If using one, talk to your landscaper about other methods of pest management that are pet-friendly.
- Keep your pets away from treated areas.
- Start YardScaping to reduce your use of yard chemicals by improving soil health and growing a stronger, more pest-resistant lawn!

What should I do if my pet has been exposed to lawn chemicals?

If you suspect your pet has been exposed to lawn chemicals, immediately contact your veterinarian, emergency veterinarian clinic, or call:

National Pesticide Information Center:
1-800-858-7378

ASPCA Animal Poison Control Center:
1-888-426-4435

The 24-hour emergency contact number listed on the product label (not available on all products).

Ants



Ants are your lawn's friend!

Ants prey on other insects, recycle organic matter, 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.



Managing Ants in Your Yard

- Topdress with compost and overseed any bare areas of soil or thin grass.
- Keep plants and mulch at least 6" from foundations.
- Trim plant branches to prevent them from touching buildings and creating a bridge for ants.
- Identify the ant, as each type has different nesting behavior and food preferences. This will help choose the most effective form of management to remove the colony and nest, if necessary. Check with your local Cooperative Extension or gotpests.org for assistance identifying ants.



Keeping Ants Outside

- **Seal cracks and crevices** with silicone caulking around items like baseboards, pipes, outlets, sinks, and toilets.
- **Store food and trash in airtight containers**, clean up all spills right away, bring compost outside daily, and clean pet food dishes after each meal.
- **Replace rotten wood** and ventilate moist areas to deter carpenter ants from establishing colonies.

Inside Ant Control

- **Use an ant-specific bait labeled for indoor use** (sweet or grease/protein). Follow all safety instructions. Keep traps away from children and pets.

If You Find an Indoor Nest

- Use a HEPA filter vacuum to remove all visible ants. Seal and dispose of the bag immediately.
- Clean the area with soapy water to remove their trails. Monitor the area for additional ants.
- Continue vacuuming up any additional ants and set out ant-specific bait labeled for indoor use.

European Fire Ants

Contact Cooperative Extension or a licensed commercial applicator for assistance as these ants are very tenacious.

Grubs



What are grubs?

Grubs are the larval form of beetles that feed on grass roots. Some grubs are a natural part of all lawns but having too many means they eat the roots faster than the grass can regrow them.



Do You Have a Grub Problem?

Cut a 1' x 1' square of turf and pull it back. If you count more than 5-10 grubs in that area then you have a grub population that is large enough to damage your lawn.

The most common grubs to cause lawn damage are non-native species including the European Chafer, Japanese beetles, and Asiatic Garden beetles. Contact your local Cooperative Extension office or visit ohioline.osu.edu/factsheet/hyg-2510 for help identifying your grubs.

How to Reduce Grub Damage

Don't use Japanese beetle traps, they can attract more adult beetles to visit and lay eggs in your yard.

Remove undesired beetles from plants and put them in soapy water. Beetle-damaged plants emit chemicals that attract more beetles!

Cover plants with fine netting to prevent beetles from reaching them (don't do this when plants are in bloom and need pollinators to reach them).

Watering wisely can help the grass regrow roots after grub damage.

Use beneficial nematodes to spread grub-eating bacteria. Beneficial nematodes need to be special ordered and used quickly. They will target any type of grub but they must be applied under the right conditions to work.

Beneficial Nematodes

Carefully follow package instructions when applying nematodes to ensure maximum effectiveness. Plan to apply nematodes at least three years in a row to improve your odds of success.

Before applying, rake up dead grass and thatch to help nematodes enter the soil. Apply early morning or on a cloudy day.

Water nematodes in with a half inch of water when grubs have recently hatched:

- For European Chafer grubs, apply nematodes **late-July**.
- For Japanese and/or Asiatic Garden grubs, apply nematodes in **mid-late August**.

Reseed areas damaged by grubs.

Keep in mind that nematodes are living creatures and cannot be used at the same times as pesticides. This will kill them before they can help get rid of the grubs.



Ticks & Mosquitos



Personal Protection is Key

Wear light colored clothing, long-sleeved shirts, long pants tucked into socks, and mosquito netting around your head when spending lots of time outside. Use insect repellants. Find one that works for you at: <https://www.epa.gov/insect-repellents>.

Examine gear and pets before returning indoors. Conduct a full body tick check and carefully remove any found. Dry clothing on high heat for one hour to kill any ticks.

Walk in the center of cleared trails and avoid brushing up against vegetation.

Landscaping Changes for Tick Reduction

In your high use yard areas, like around patios, gardens, and playsets, use the following maintenance tips:

- Create open space in your yard by trimming or removing trees to let in more sunlight. Sunny areas are less likely to harbor deer ticks.
- Mow lawns to 3" and clear leaf litter and brush from your high use areas.
- Discourage close proximity of tick hosts (deer and small animals) by moving woodpiles and birdfeeders away from your home and plant native deer resistant plants.
- Create a combined 12' wide zone of fencing or woodchips and lawn between the woods and your yard high use areas.

Discouraging Mosquitos in Your Yard

- Prevent water from gathering in rain gutters, buckets, toys, and other containers.
- Put a screen over your rain barrels.
- Refresh water in wading pools, birdbaths, and animal water dishes weekly to eliminate larvae.
- Remove or trim dense vegetation around doors and windows where adult mosquitos like to rest.
- Use fans to create breezes.
- Provide housing or habitat for predators such as dragonflies, bats, birds, and frogs that eat mosquitos.
- Install and maintain tight-fitting screens on windows and doors.
- Use outdoor lights with motion sensors to reduce insects hanging out by entry doors and outdoor spaces.
- Use pyrethrum or citronella candles to reduce mosquito bites in limited areas.
- Use properly placed carbon dioxide traps to deter mosquitos.



www.maine.gov/dacf/php/gotpests/bugs/factsheets/ticks-ct.pdf

Find a Comfortable Balance

Ticks and mosquitos are part of Maine's outdoors. Completely eliminating these pests can cause more harm to our environment than personal benefits.

www.cumberlandswcd.org | 207.892.4700 | EOE

Maintenance Calendar



How many steps should I do?

Each step depends on your time and budget. You may want to do some steps multiple times a year if budget and time allows until soil conditions improve.

After your soil conditions improve, steps like aeration only need to be done once every few years as maintenance.



Spring (April-June)

- Remove weeds
- Overseed
- Sharpen mower blades
- Participate in “No Mow May” or mow to 3 inches, leave clippings
- Take soil percolation and chemistry tests
- Water deeply but infrequently

Summer (June-early August)

- Water deeply but infrequently unless in a drought
- Mow to 3 inches, leave clippings
- Apply nematodes late July for European Chafer grubs
- Take soil test (if not already done)



Fall (August-October)

- Apply nematodes mid-late August for Japanese and/or Asiatic Garden grubs
- Follow soil chemistry test results (adjust nutrients & pH)
- Aerate
- Topdress (if organic matter is low in soil test)
- Overseed
- Mow to 3 inches, bag clippings when weed seeds are present and compost
- Water deeply but infrequently
- Consider leaving some leaves as winter habitat for pollinators



Winter (November-April)

- Avoid piling snow on lawn
- Sweep up sand and salt from driveways and walkways
- Plan for spring!

Addressing Roof Runoff



Did you know?

850 gallons of water come off a 1,500 sq. ft. roof during a 1" rainstorm. Rain barrels, dry wells, dripline trenches, and rain gardens are all ways to address roof runoff.



Rain Garden

Rain gardens are bowl-shaped gardens that collect and absorb rain water. They can be used at gutter downspouts and other places where large quantities of concentrated water flows off rooftops.



Materials List

- Possible soil amendments
- Native plants that can tolerate fluctuations in soil moisture
- Erosion control mix

Installation

1. **Select a location** at least 10' downslope from existing structures yet above the seasonal high groundwater table. Direct rainwater into garden using a grassy swale, stone trench, or gutter extension.
2. **Size the garden** to be a third of the area being treated. Calculate square feet of treatment area and multiply by 0.3. For example, a 1,000 sq. ft. roof will require a 300 sq. ft. garden.
3. **Call DigSafe** at 811 to avoid underground utilities.
4. **Do a percolation test** (see soil drainage factsheet for instructions). Amend soil if needed to improve drainage.

5. **Dig a bowl-shaped, shallow, flat-bottomed hole** with gradually sloping sides between 4" to 6" deep. Create a berm on the downhill side of the garden using excavated material.
6. **Plant and cover any bare soil** with erosion control mix.

Maintenance

- **First Year:** Water deeply each week, allowing plant roots to establish deep into the soil.
- **After First Year:** Only water during extended periods of drought. Weed and divide plants as needed. Replace mulch as needed.

Your rain garden doesn't need fertilizer! Using fertilizer adds unnecessary nutrients and reduces the ability for the garden to effectively remove pollution from stormwater runoff.

Plant Recommendations

Select native plants that can tolerate fluctuations in soil moisture with water-tolerant plants planted in the center of the garden and drought-tolerant plants planted around the outer edge.

If you have gutters consider using rain barrels and/or rain gardens.

If you don't have gutters, use dripline trenches.



Rain Barrels

Gutters and downspouts direct rainwater into rain barrels to capture and store rainwater from your roof that would otherwise run off your property and pick up pollutants along the way.



Materials List

- Gutters and downspout or rain chain
- Barrels with screen and spigot (can be purchased from the Cumberland County Soil & Water Conservation District)
- Blocks or lumber
- Connector hose to chain multiple barrels together

Installation

1. Use crushed stone or mulch to **level the ground** where the rain barrel(s) will go. Multiple rain barrels can be connected together to hold more water.
2. **Place the barrel on blocks or lumber** to allow room for a faucet or spigot on the lower drain.
3. **Connect the hose to slowly release the water** into a garden or allow it to soak into the ground; the higher the barrel is, the more flow and pressure through the hose.
4. **Install a screen cover** to prevent debris clogging the spigot and insects from breeding in the water.

Maintenance

- Use your rainwater between rain events so the barrel doesn't overflow.
- After each storm, remove leaves or other debris that may plug the screen.
- Clear gutters and downspouts of debris on a regular basis.
- To prepare for winter, drain and store the rain barrel indoors or turn it upside down and anchor it with something heavy if storing outside. Detach or cover the faucet/spigot so it isn't broken off.

Dripline Trench

A dripline trench, also called a infiltration trench, collects runoff from a roof **without gutters** and prevents erosion along your foundation. Dripline trenches work best in sand and gravel soils and should not be used next to structures with improperly sealed foundations, as flooding may occur.

Materials List

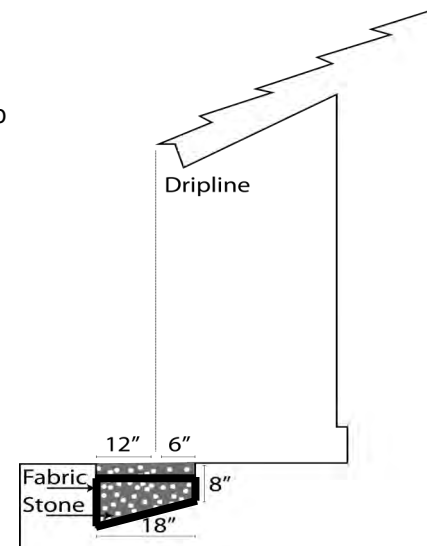
- ½" to 1½" washed crushed stone
- Non-woven geotextile fabric

Installation

1. **Dig a trench 18" wide and at least 8" deep** along the drip line. Slope the bottom away from the house so that water will drain away from the foundation. Dispose of the soil in a flat area where it will not wash away.
2. Line the sides of the trench with **non-woven geotextile fabric** and fill to within 3" of the ground level with **crushed stone**.
3. Fold a flap of the fabric over the stone, then fill the trench with the remaining stone.

Maintenance

- Periodically remove accumulated debris and weeds from the stone.
- Every few years, or when the trench is draining slowly, remove the stone to clean and dispose of accumulated debris and sediment.



Groundcovers



What's a groundcover?

Groundcovers are great lawn alternatives and some will grow in poor soil and light conditions. When flowering and bearing fruit, they add important food sources to the landscape.



Wild Strawberry (*Fragaria virginiana*)

Grows 4"-7" tall and spreads through runners. White flowers April to May form edible red berries. Zones 4-9.

○●≡



Lowbush Blueberry (*Vaccinium angustifolium*)

Grows from 2"-24". Prefers untilled, acidic soil. Edible fruit are attractive to wildlife and humans. Red fall foliage.

Zones 2-6. ○●≡



Cranberry (*Vaccinium macrocarpon*)

Grows 9" tall and spreads easily. Small pink flowers bloom in the spring and produce edible red berries. Zones 2-6.

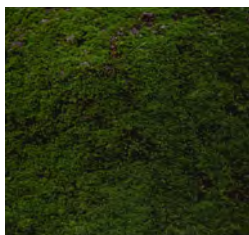
○●



Ostrich Fern (*Matteuccia struthiopteris*)

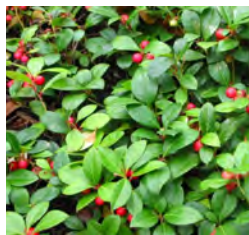
Grows 2'-3' tall and forms dense colonies. Fiddleheads are edible. Fronds have feathery appearance.

Zones 3-7. ●●●



Moss Varieties (*Bryophyta*)

Many varieties of moss, identify what is already in your yard and add more of the same. Grow in low and gentle traffic areas. ○●●●



Wintergreen (*Gaultheria procumbens*)

Also known as teaberry. Grows 6" tall and spreads 4"-6" annually. Prefers acidic soils. Evergreen leaves and red berries all winter. Zones 3-5. ●●≡



Bunchberry (*Cornus canadensis*)

Grows 6" tall and spreads easily. Prefers rich, acidic soils. White bracts surround small green flowers. Red berries in the fall attract birds. Zones 2-6. ○●●



Marsh Blue Violet (*Viola cucullata*)

Grows 5"-10" tall with 1' spread. Foliage attracts butterfly larvae. Blue violet flowers from late spring to mid summer. Zones 4-8. ○●●●

Plant Identification Key

- More than 5 hours of direct sun per day
- 2 to 5 hours of direct sun per day or full day of dappled sun
- Less than 2 hours of direct sun per day
- Poorly drained soils and/or wet
- ≡ Well draining soil and/or dry year round



Bearberry (*Arctostaphylos uva-ursi*)

Grows 6" tall with 3' spread. Prefers rich, acidic soil. Light pink, cup-shaped flowers turn to red berries in the fall. Can be used to prevent erosion along banks. Zones 2-6. ○●≡



Lingonberry (*Vaccinium vitis-idaea*)

Also called Crowberry or Mountain Cranberry. Grows 7" tall and spreads. Small, glossy-green, leaves and small pink or white flowers, followed by small, red fruit. Zones 2-6. ○●●≡



Creeping Juniper (*Juniperus horizontalis*)

Evergreen shrub grows 2' tall with 8' spread. Foliage is often a silvery blue color. Small, blue, berry-like fruit. Zones 3-9. ○≡



Appalachian Barren Strawberry (*Waldsteinia fragarioides*)

Grows 8" tall with 1' spread. Mats of evergreen leaves with yellow flowers. No edible fruit. Prefers acidic soil. Zones 3-9. ○●●≡



Virgin's Bower (*Clematis virginiana*)

A climbing vine up to 20' tall. Grows best on a trellis or fence. Clusters of silky seeds follow white flowers. Zones 2-10. ○●≡



Bloodroot (*Sanguinaria canadensis*)

Grows 6"-12" tall and is usually found in colonies. Leaves and root contain an orange/red juice that is poisonous. Flowers in early spring. Zones 3-8. ●●●



Hay-scented Fern (*Dennstaedtia punctiloba*)

Grows 1' tall. Foliage light green with finely-divided fronds that are sweet-scented when crushed. Zones 3-8. ●●≡



Creeping Phlox (*Phlox stolonifera*)

Grows 6"-10" tall and spreads easily. Small flowers in spring, ranging from white to purple with evergreen foliage. Zones 2-9. ●●≡



Virginia Creeper (*Parthenocissus quinquefolia*)

A climbing vine up to 40' tall. Small white flowers in spring and small purple berries. Foliage turns red in the fall. Zones 3-9. ○●●≡



Round-leaved Violet (*Viola rotundifolia*)

Grows 2"-5" tall. Yellow flowers bloom in late spring. Leaves are large and glossy. Zones 3-9. ●●●



Marsh Marigold (*Caltha palustris*)

Grows 1'-2' tall with 1' spread. Bright yellow flowers bloom in late spring to early summer. Prefers organic, acidic soils. Zones 1-8. ●●●



Foamflower (*Tiarella cordifolia*)

Grows 10" tall with 1' spread. Masses of tiny white or pink flowers remain up to 6 weeks. Zones 3-8. ●●≡

Wildflower Meadow



What's a wildflower meadow?

Wildflower meadows are a low maintenance and colorful alternative to a traditional lawn. They attract pollinators and the plants' longer roots hold soil in place to prevent erosion and reduce water pollution.



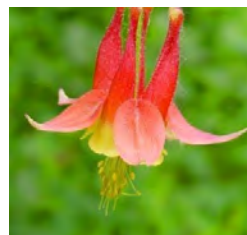
Maintenance

Mow 6' paths through your meadow to reduce picking up ticks while walking in the area.

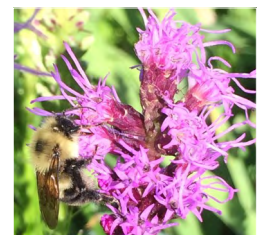
Mow your meadow every two to three years, typically in the late fall after the flowers have dropped their seeds. This will allow for biennial flowers to grow. It will also prevent trees and woody shrubs from establishing in your meadow.

Installation

1. **Select a location** that gets at least six hours of sunlight each day and is not wet. If planting in the spring, waiting until after the threat of frost. If planting in the fall, wait until after a killing frost.
2. **Cut back existing vegetation** with a mower. Bag the clippings to eliminate unwanted seeds from your meadow.
3. **Loosen the soil** to prepare it for seeding. Use a rake for small areas and shallow rototilling for larger areas.
4. **Divide your seed mixture equally** into two buckets. Mix 10 parts sand or vermiculite to 1 part seed in each bucket. A quarter pound of seed will cover approximately 1,000 sq. ft. More seed can be used for a denser stand of flowers.
5. **Sow the seed** by spreading one bucket east to west and the second bucket north to south to prevent bare spots.
6. **Press the seed into the soil** with a lawn roller or walking to ensure good seed to soil contact.
7. **Keep the soil moist** but not wet until seedlings are 4"-6" tall. Once the plants reach this height they should be able to survive with normal rainfall.



Eastern Red Columbine



Blazing Star

Recommended Plants

Mix in sedges, grasses, and legumes with your perennial flowers like asters, figworts, milkweeds, butterfly weed, echinacea, blazing star, columbine, and black-eyed Susan.



New England Aster



Red Milkweed

Common Weeds



What's a weed?

A weed is unwanted and may be impacting nearby desired plants. What you consider a weed, others might enjoy or desire. Weeds can be used as indicators to help improve our soil for desired plants.

Annual Versus Perennial

Annual weeds die every year and come back from self-seeding. Perennial weeds grow back every year.

Annual Weeds



Broadleaf Plantain: Broad oval leaves in a rosette, stock rising from the center, deep taproots

Indicates: Poor drainage/compacted, low pH; High calcium, potassium, phosphorus

Removal: Aerate, add lime, compost, compost tea



Chickweed: Forms mats with pairs of yellow-green leaves on slender stems.

Indicates: Low calcium, phosphorus; High nitrogen, organic matter, potassium, magnesium

Removal: Pull by hand, overseed late in the summer before weed reestablishes

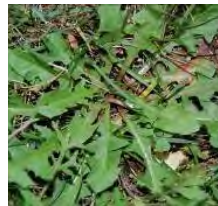


Crabgrass: Coarse textured yellow-green grass with reddish, branched stems.

Indicates: Low calcium, bacteria; High compaction, nitrogen, potassium, mowing too short

Removal: Pull by hand before going to seed, aerate, add calcium, compost, compost tea, overseed late in the summer before weed reestablishes

Perennial Weeds



Chicory: Leaves resemble dandelions, blue flowers on wiry stem early summer to fall, taproots

Indicates: Low calcium, nitrogen, humus; High potassium, sulfur, anaerobic

Removal: Dig deeply to remove taproot, add calcium, nitrogen, compost, compost tea



Creeping Charlie: Low-growing, creeping plant with scalloped leaves and small, purple flowers

Indicates: Poor drainage, low nitrogen, bacteria; High calcium, iron, sulfur

Removal: Dethatch, add nitrogen, compost, compost tea



Curly Dock: Often confused with dandelion, has long serrated leaves and taproots

Indicates: Poor drainage, low calcium, pH, bacteria; High phosphorus, potassium, magnesium

Removal: Aerate, add calcitic lime, compost, compost tea



Hawkweed: Hairy, long leaves, bright orange and yellow flowers on leafless stems

Indicates: Low calcium, nitrogen, phosphorus, humus, bacteria, pH

Removal: Add nitrogen, compost, compost tea, calcitic lime



Violet: Common ground cover with heart shaped leaves, purple or white flowers in the spring

Indicates: Low calcium, pH

Removal: Remove root system, add calcitic lime

Invasive Plants



What's an invasive plant?

There are many non-native plants that coexist with native plants. Invasive plants, however, are non-native plants that cause harm to Maine's economy and environment.

Addressing Invasive Plants

Caution: If not removed properly, they can spread!

1. **Positively identify** the plant. Measure the invaded area and decide whether you can DIY or need a professional.
2. **Each species has specific recommendations for proper removal or management.** Companies that offer pesticide-alternative invasive control can be found here: <https://tinyurl.com/NoPesticidesRemoval>. Animals (like goats) eat certain invasive plants and can clear larger areas.
3. **Sometimes it is better to prevent the invasive plant from spreading** instead of trying to completely remove it.
4. **Contain all removed plant material** (leaves, branches, berries, vines, stems, roots) in containers or tarps and allow it to dry out and die (preferably where you just removed it to reduce risk of spreading while moving).
5. **Check with your municipality** for allowed methods of disposal after the plant is dead (burning, transfer station, etc.).

Contact your local Soil & Water Conservation District or UMaine Cooperative Extension or the Maine Natural Areas Program office for help.



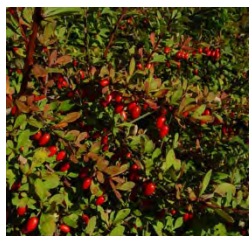
Common Invasive Plants

There are over 60 invasive plants that are illegal to import, export, buy, sell, or intentionally transplant in Maine. An additional 30 plants are being monitored and discouraged from spreading. Common invasive plants in yards include:



Asiatic Bittersweet (*Celastrus orbiculatus*)

Spreads by seeds and through roots. Woody vine with pointed leaves and red berries in fall. Manually remove with persistent cutting.



Japanese Barberry (*Berberis thunbergii*)

Spreads by seeds found in red berries. Branches can grow roots. Shrub grows to 6 feet tall, small rounded leaves. Remove manually, continue to cut new growth.



Japanese Knotweed (*Fallopia japonica*)

Spreads through its roots. Tall hollow stalks with wide leaves, late summer blooms. Remove manually, cover with thick material to prevent new growth.



Multiflora Rose (*Rosa multiflora*)

Spreads through seeds and rooting branch tips. Serrated leaflets, pale flowers in spring. Manually remove, with persistent cutting.

Maine's Full List of Invasive Plants:

<https://www.maine.gov/dacf/php/horticulture/invasiveplants.shtml>

How to Compost



What's composting?

Composting makes organic matter which improves the soil's ability to hold air and water and adds nutrients.



Where to Use Compost

Everywhere! Work compost into your **garden** soil in the spring or fall. Topdress your **lawn** with compost around Labor Day to build your topsoil. Thinly spread compost up to an inch from the **base of trees or shrubs**. When using your compost regularly, send a sample to the UMaine Soil Lab or Woods End for nutrient testing.

Location, Location, Location

Place it in a **convenient location** as you'll be adding material several times each week, even in the winter.

What to Compost

Build a healthy compost pile with a mix of green and brown materials. Never compost diseased plant materials.

From the Kitchen: Fruit and vegetable scraps, eggshells, houseplant cuttings, coffee grounds and filters, bread, rice, pasta, tea bags, and paper napkins.

From the Yard: Flowers, vegetables, plant trimmings, small amounts of grass clippings, leaves, straw and hay, small twigs, and dried weeds.

Cautions

Keep your compost away from waterbodies and wetland as it will leach nutrients into the water and grow algae.

Completely dry out any invasive plants before composting them so they don't regrow.

How to Compost

Speed up the process with these 4 tips:

1. **Chop:** Cut up larger items like watermelon rinds before putting them in the compost.
2. **Stir:** Mix the new material into the pile to add oxygen.
3. **Cover:** Cover your food waste with leaves to add carbon and reduce the chance of odors or fruit flies.
4. **Moisture:** Keep the material in your composter moist by adding water to your kitchen transport container. This also helps remove the scraps easily from your container when you empty it.

Harvesting Your Compost

Once you can't identify the materials you added and it looks like soil, your compost is ready to use!

1. **Using a compost bin:** Open the door and dig the finished material out of the bottom for small amounts or set aside any unfinished compost before emptying the bin.
2. **Using a compost pile:** Have two or more sections to allow you to rotate the piles. You'll actively add new material to one section while the other section matures for harvesting. Once you've used the mature compost, you'll switch section sides and begin adding new material to the empty section while allowing the other pile to mature for use.