

Lawn Maintenance and Pesticides



Lawn care products used to keep your lawn green, lush and beautiful may require special techniques when applying them.

Common chemicals used on lawns in Alaska are:

- pesticides such as
 - › herbicides
 - › insecticides
- fertilizers
- special soil amendments (e.g., lime)

Anytime you decide a chemical solution is necessary, it is very important to choose the product that will do the job you want done while minimizing exposure to yourself, your family and nontarget areas such as wildlife and water resources.

First — Gather information

The first step is to gather as much information as possible about the problem. If you have a pest problem such as a weed or insect you cannot identify, call the Cooperative Extension Service for assistance. The Cooperative Extension Service has an online resource

called the Integrated Pest Management (IPM) portal at www.uaf.edu/ces/invasives/. If you are unsure what nutrients your lawn area needs, have your soil tested. The Extension office has information on soil testing. Ask your local greenhouse or garden center if they do pH testing.

Second — Assess the problem

The second step is to assess the problem and decide if you need to use intervention. If it is a pest problem, decide whether a pesticide is necessary or if a non-chemical solution will be adequate.

Third — Choose the chemical

If you decide that pesticidal intervention is needed, the third step is choosing the correct product. Some pesticides are made to control very specific pests. Others are made that will kill all insects or all plants. Many products are available that are made with natural ingredients and can be less toxic to people, pets and wildlife. However, keep in mind that **all pesticides are poisonous!**

The label on the product container will tell you how to use it for the intended results. **Careful reading** of the label is essential in protecting yourself and your family from unintentional exposure. The label is a legal document and must be followed exactly.



Careful reading of the pesticide label also will tell you:

- what equipment you need to apply the chemical
- what personal safety equipment you need to wear to protect yourself from exposure
- other special precautions to take

*It is important to note that personal safety equipment should be worn **before opening** the container.*

If the label does not specify what clothing to wear, as a minimum you should always wear:

- long pants
- long-sleeved shirt
- gloves (chemical resistant)
- goggles
- shoes or boots (water resistant)

Sometimes the label will give you clues for additional personal safety equipment that should be worn, such as: “Avoid breathing vapors or spray mist.” This should tell you that a respirator would be a good addition to the above list.

When mixing pesticides, it is important to measure exactly — it is against the law to apply pesticides at rates higher than what is recommended on the label.



Applying the product stronger than recommended will not kill the pest any deader than if applied according to directions. More is not better! By applying the product at rates stronger than recommended, you may be increasing the risk of exposure to yourself, your family and nontarget organisms and wildlife. Never use

mixing or measuring utensils for anything other than pesticides.

Before applying the pesticide, look at the way your lawn drains. Lawns located on slopes require special consideration. Soil-active herbicides and weed-and-feed formulations will move through the soil along with water. Trees and other ornamental plants are at risk of herbicide injury if their roots contact herbicide runoff.



Not only are ornamental plants at risk of pesticide contamination through runoff, but our water sources, fish, aquatic organisms and wildlife are at risk as well. Always use a product according to its label. Mixing away from wellheads, septic areas and storm drains will greatly reduce unintentional contamination.

Things You Can Do to Avoid the Need for Pesticides and Chemicals

Maintaining a healthy lawn will help discourage pests and diseases, thereby limiting the use of pesticides.

The first step is to look at your lawn’s soil. Grass roots need air, water and nutrients. By maintaining the health of the soil, the lawn will be healthy, too. Soil compaction is common in lawn areas in Alaska. Aeration of the lawn will increase the amount of water, fertilizer and air that reaches the roots. By enabling water to penetrate to the root zone, runoff is reduced and so is the potential of chemical runoff into water resources.



You can rent a lawn aerator from an equipment rental agency or hire a lawn care company to do it for you. Apply amendments after the lawn has been aerated. This way, the amendments will be able to reach the root zone and be incorporated into the soil. Extension has several publications on establishing and maintaining lawns in Alaska for more information.

Thatch

Thatch is the buildup of organic matter close to the soil surface. Buildup can be so severe that fertilizer, water and air cannot reach the roots, leading to increased disease and pest problems. By controlling the thatch buildup on your lawn you will be reducing disease and pest problems.

Research has suggested that leaving clippings on the lawn helps to improve soil structure and fertility. Mulching mowers have enabled homeowners to eliminate the time-consuming task of raking the grass from the lawn area. However, in Alaska's environment, decomposition is slow. Prudent monitoring of the thatch layer will help you decide when to rake and when to leave the clippings. A thatch layer more than ½ inch should be removed. Check local rental companies for a mechanical dethatcher.

Water

Lawn areas should receive enough water to moisten the top 2 to 4 inches. Most Alaska lawns need about ½ to 1 inch of water per week. However, soil structure and location will have an effect on how much water should be applied. Sandy/rocky soils will need more water than clay/high-humus soils. Watering your lawn infrequently but deeply is more beneficial than watering daily but shallowly. A shallow watering will not encourage roots to grow in the soil and will decrease the lawn's ability to withstand a drought.



Lime

Most Alaska soil is considered acidic and requires an amendment to increase the soil pH. Most garden centers sell kits to test for soil pH.

What is pH? The letters “pH” refer to “potential hydrogen.” Potential hydrogen refers to chemical processes within the soil that result in the level of alkalinity or acidity of the soil. The pH scale goes from 0.0 (acidic) to 14 (alkaline) with 7.0 being neutral. Most Alaska lawn grasses experience optimum growth with a soil pH of 6.0-6.5 (assuming all other growth factors are optimum as well).

Lime is commonly added to increase the pH and is available in several forms.

- **Dolomitic lime** includes magnesium and is more expensive. Typically, Alaska soils are not lacking in magnesium.
- **Quicklime** should not be used because it can draw water from plants, causing dehydration and death.
- **Hydrate of lime** dissolves quickly in the soil and has a tendency to leach out of the reach of the plant roots.
- **Agricultural lime** consists of calcium carbonate. This type of lime dissolves slowly in the soil solution so it will be available for an extended amount of time.

Fertilizer

Fertilizer requirements will depend on a soil analysis. However, most Alaska lawns are in need of at least two applications per year of 22-11-11. In areas where rainfall is heavy, an additional application may be necessary. Be aware that:



**Fertilizers and lime are corrosive chemicals!
Proper personal safety equipment should be worn
when using these materials.**

www.uaf.edu/ces or 1-877-520-5211

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