

Fertilizer

Extra fertilizer does not make stronger plants!

Over-fertilization can cause quick, weak growth, leaving plants vulnerable to disease.

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Fertilizer adds missing nutrients to the soil. In our area, soils tend to be low in nitrogen, calcium, and sulfur. They can also be acidic. This is due to our rains, the rocks that make the soil, and sometimes human disturbance. When we grow demanding, non-native plants such as vegetables, lawns, and many flowers, fertilizer may be needed for those plants to thrive.

Compost builds good soil structure. While fertilizer adds nutrients, it cannot change soil structure. Good soil structure is loose, crumbly, and teeming with life. These conditions help plants take up nutrients and water to thrive. Poor soil is compacted and depleted of organic matter and soil organisms. In these conditions, plants struggle to meet their needs even if fertilizer is added. Add 1-2" of compost to garden beds and 1/4" to lawns each year to improve soil structure and vitality.

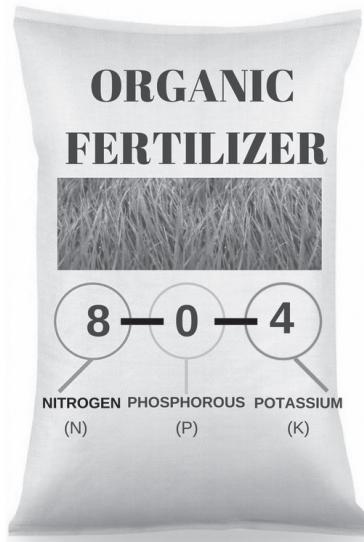
Step 1: Choose slow-release fertilizer

Nutrients from slow-release fertilizers are available to plants throughout the growing season. Slow-release fertilizers rely on soil organisms and other processes to release nutrients at a rate that plants can use them. The nutrients are unlikely to wash away beyond the root zone of the plants.

Look at the fine print on the label for the percent of water-insoluble nitrogen. In slow-release fertilizer, this number will be at least half the total amount of nitrogen.

Example of the "fine print"

8-0-4	
GUARANTEED ANALYSIS	
(N) TOTAL NITROGEN.....	8.00%
Water Insoluble Nitrogen.....	7.00%
Water Soluble Nitrogen.....	0.89%
Ammoniacal Nitrogen.....	0.11%
(P) AVAILABLE PHOSPHATE.....	0.00%
(K) SOLUBLE POTASH.....	4.00%
Calcium	1.50%
Magnesium.....	1.00%
Boron	0.02%
Sulfur.....	2.00%
Iron	2.00%
Zinc.....	0.05%



Primary nutrients are listed in the order N-P-K. The numbers refer to the percentage of Nitrogen (N), Phosphorus (P), and Potassium (K) in the fertilizer.

For example, if the fertilizer contains 8% total nitrogen, water-insoluble nitrogen should be at least 4%.

Most organic fertilizers are slow-release, including aged manure, seed meal, bone meal, rock phosphate, ground limestone, many poultry and fish by-products, and kelp meal.

Avoid fertilizer-pesticide combinations like "weed and feed." Fertilizers and mulches combined with weed or insect killers are not recommended by most professional landscapers, WSU Extension, or Thurston County.

Primary Nutrients in Fertilizer

(N) Nitrogen promotes strong leaf growth. Look for water insoluble nitrogen that is at least half the amount of total nitrogen.

(P) Phosphorus encourages roots, flowers, seeds, and fruits.

(K) Potassium or Potash is critical for overall plant health.

Secondary and micronutrients are also important for overall plant health.

The problem is that combination products spread pesticides all over, even where it is not needed, wasting much of the product.

Double check the label and use "straight" fertilizer or mulch. Spot treat problem areas with weed or insect killers after trying less-hazardous methods first. Protect your health, your family's health, and our community's drinking water by choosing the safest tools and products for weed and pest control.

Step 2: Follow package directions

Fertilizers are blended differently. Follow the directions on how much to apply, and how often it is needed. For lawns, use the spreader settings described on the package. Look for label precautions (especially dog owners, as those pets will eat almost anything). Sweep fertilizer off sidewalks or driveways and spread it onto the lawn or garden. Follow watering directions. Store extra fertilizer in a cool, dry place (not the wellhouse) for future use.

Too much fertilizer does not make stronger plants!

In fact, over-fertilization can cause quick, weak growth, leaving plants vulnerable to disease and wind damage. In addition, extra fertilizer washes away and can pollute streams, lakes, Puget Sound, and groundwater – our source of drinking water.

Consider a soil test. Soil tests provide accurate information about your fertilizer needs. The relatively low cost of a soil test may save you money because you can avoid applying unneeded nutrients. Soil tests are available from:

Thurston County Conservation District:
360-754-3588 / www.thurstoncd.com

Blossom Organic Garden Store:
360-943-5670 / www.blossomera.org
Contact them for pricing and instructions.

What about lime? Lime is ground limestone or calcium carbonate, which adds calcium to the soil. Another form, dolomite lime, adds magnesium as well as calcium. Lime is used to raise the pH, or "sweeten," the soil.

When to Fertilize:

Lawns

- Leave grass clippings on the lawn to provide 1/4 of your lawn's nitrogen needs.
- If you fertilize once a year, do so in fall (September - mid-October).
- If you fertilize twice a year, do so in spring (April - May) and fall (September - mid-October).
- If needed, fertilize again in early summer (first week of July).

Flower/Vegetable Gardens

- Before planting, mix fertilizer into soil below plant or seed.
- Fertilize established plants in spring.
- High demand plants may need a second fertilization in early summer.

Berries

- For best results, choose berry-specific fertilizer blends.

Raspberries and Blackberries:

- In spring when growth begins.

Strawberries:

- June harvest: after harvest
- Day-neutral and everbearing: small amounts throughout growing season

Blueberries:

- At bud break, in May, and in late June

Many garden plants do best when the soil pH is between 5.5 and 7.5. However, blueberries, rhododendrons, and some native plants prefer more acidic soil (lower pH), so do not add lime near these plants. Soil pH is important because it affects the availability of plant nutrients and the activity of important soil microorganisms.

A general guideline, if you have not yet tested your soil, is to add 30 lbs of lime per 1,000 square feet every 2-3 years in the fall.

For more information on fertilizers or to receive free or alternative format copies of Common Sense Gardening guides, call 360-867-2674 (TDD/TTY 1-800-833-6384) or visit: www.thurstoncountywa.gov/healthy-gardening

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and Social Services Department
Environmental Health
3000 Pacific Ave SE, Suite 225
Olympia, WA 98511



www.thurstoncountywa.gov/phss

Resources

GrowSmartGrowSafe
A database of safer pest, disease, and weed control products: www.growsmartsafes.org

Natural Yard Care
www.olympiawa.gov/services/water_utilities/storm_surface_water/natural_yard_care.php

Home Gardener's Guide to Soils & Fertilizers
(WSU Extension publication EM063E)
extension.wsu.edu/thurston/gardening-in-fo-fact-sheets/

Composting Information
tilthalliance.org/resources-category/compost/

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