

Dahlia Culture

R. McNeilan

Dahlias are a native flower in Mexico. Hernando Cortez found them to be a long-established favorite in the gardens of the Aztecs when he invaded Mexico in 1519 to establish the colony of New Spain. Seeds of these Mexican flowers reached Spain in 1789.

About this time, the name *dahlia* was given them in honor of Andreas Dahl, the famous Swedish botanist who established order from a condition of chaos in the plant world.

Soil

You can grow dahlias in almost any garden soil, but they do respond to a little extra care. An ideal planting site must receive several hours of sunlight each day—and it must have good soil drainage.

The dahlia is a heavy feeder. Therefore, a good, loose, organic soil is essential for a large, efficient root system.

Keep your soil loose while the plants are growing, especially during the early part of the season. Light, sandy soils require the least preparation if they contain enough organic matter to hold adequate moisture.

You can supply this organic matter by using manure or peat moss, or by adding any kind of vegetative refuse such as leaves or lawn clippings.

Sowing a cover crop like red clover or annual ryegrass in the fall and turning it under in the spring also is a good way to add organic matter to your soil.

Heavy clay soils also benefit from the addition of organic matter. When you work it into the entire garden or bed, organic matter helps loosen the soil.

Lime also tends to loosen the soil, but don't apply it more often than every 3 or 4 years—and *never with fresh barnyard manure*.

Fertilizers

Nitrogen is needed for the heavy bush growth of dahlias and for large flowers. If too much nitrogen is applied, weak growth, late blooming, and poor keeping quality of the tubers results.

Phosphorus is essential to all plant functions and is a very important fertilizer. It hastens blooming, stiffens stems, increases root development, and balances any excessive nitrogen applied.

Potash increases root development and the general vigor of the plant.

A good fertilizer practice would be to apply 5 or 6 pounds of a 0-20-20 fertilizer per 100 square feet or a handful under and around the hole where each tuber is to be planted. Mix the fertilizer so that it does not come in direct contact with the tubers.

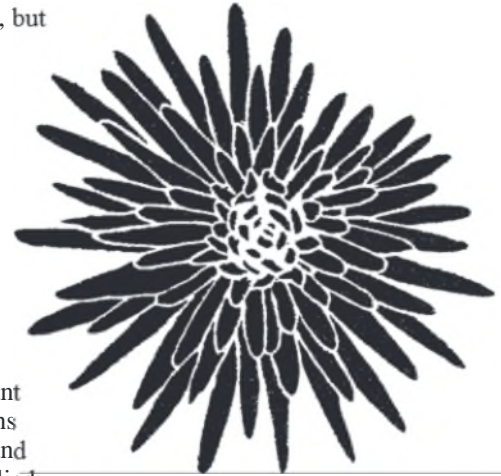
If nitrogen is needed, you can apply it later as the buds form. Scatter it lightly about a foot away from the plant. Ammonium sulfate or ammonium nitrate would be a good fertilizer to supply nitrogen.

Propagation

You can propagate dahlias from seeds, cuttings, or root division.

Single-flowered dahlias produce lots of seed. It is from seed that new varieties are produced. Early-sown seeds make plants that bloom freely in late summer.

If you save tubers formed by the best of these seedlings, you'll have better results the next year.



Propagation by cuttings is done early in the year. Place tubers in light soil or sand and give them some bottom heat. When the third or fourth set of leaves forms, place the cuttings in clean, moist sand in a propagating bench.

In 2 or 3 weeks, the cuttings will root, and you can pot them in small pots. Grow them in a 60° to 65°F temperature until all danger of frost has passed. Then gradually harden them off and plant them out in the open ground.

Division of the roots probably is the easiest method of propagation. Use a sharp knife. The eyes from which shoots emerge are not in the tuber but on the crown.

Be sure that each division has at least one eye and a tuber to help start off the young plant. If you place your roots in a warm, moist place a short time before division, your job of division will be much easier.

Ray McNeilan, Extension agent emeritus, Multnomah County, Oregon State University.



Use pesticides safely!

- **Wear** protective clothing and safety devices as recommended on the label.
 - **Bathe or shower** after each use.
 - **Read** the pesticide label—even if you've used the pesticide before.
Follow closely the instructions on the label (and any other directions you have).
 - **Be cautious** when you apply pesticides. **Know** your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.
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Planting

Don't plant your dahlias, whether you use plants or divisions, until the soil has warmed up and danger of frost has passed.

Extreme hardening of the plants may occur if planting is done too early, soil is cold, plants are too dry, there is excessive water present, roots are injured, or plants are not properly hardened off before setting out.

It is not easy to bring a hardened plant back into healthy growth.

For field planting, a furrow or trench about 5 or 6 inches deep is quite satisfactory. Lay the root in the trench and cover it with 2 or 3 inches of soil. Fill in the rest of the soil as the plant grows.

Place large varieties 36 inches apart in the row and smaller types from 16 to 24 inches apart.

Set potted plants about 1 inch deeper than they have been growing. If you soak your potted plants a few minutes before planting out, they will need no further watering at that time, and puddling of the soil will be eliminated.

Frequent, rather deep cultivation in the early part of the season is beneficial to the plant. Later, you can decrease the depth.

Don't let your plants suffer for lack of moisture. When you water, do a thorough job—and then wait until there is need for another application before watering again.

How to handle cut flowers

You can lengthen the life of cut dahlia flowers considerably if you take certain precautions when you cut them. Cut only fully matured flowers for best keeping qualities.

Cut flowers early in the morning before they start to wilt, or in the evening after they have revived from the effects of the sun and wind. Cut with a sharp knife so that the water-carrying tubes are not crushed.

Cut your flowers at least 8 hours before you expect to use them. Place the stems in deep, cold water in a cool, draftless room. If you cut off an inch of the stem under water, it will take up water better. This also applies when you use the flowers later. Use only clean water and clean containers.

Digging and storing tubers

When the dahlia plant is blackened by frost or continued cold rains, it is ready to lift. Cut the top down to about 6 inches. Lift the plant carefully to avoid injuring the tender tubers. Remove as much of the soil as possible without injuring the tubers, and allow them to dry for a few hours in the open air.

Store in a cool, dry, frostproof place. If the air is very dry, pack the clumps in barrels or boxes in peat moss or sand, or wrap them in newspapers.

Use *dry* packing material. It takes up moisture at first and then has a tendency to prevent drying out at the end of the storage season. Some varieties shrivel under these conditions, but others remain firm.

Insects and diseases

Insects usually are not a great problem for Oregon dahlia growers.

Cucumber beetles may be a pest, and red spider mites sometimes become troublesome.

The most serious diseases of dahlias are caused by viruses. *Mosaic disease* is a virus typically characterized by yellowish or pale-green bands along the midveins and branch veins of affected leaves. Certain varieties of dahlias develop dead streaks on the midvein and a distortion of the leaf.

Infected plants often are stunted, with many lateral shoots, short flower stems,

and poor flowers. Cuttings and root divisions from diseased plants will be diseased.

Mosaic also is spread in the field by aphids feeding on diseased plants and then working on healthy dahlias.

There are three possible controls of dahlia mosaic: (1) grow only tolerant varieties, (2) control aphids, and (3) propagate only from selected healthy plants and grow them away from diseased dahlias.

Ring spot has become a serious virus disease. The leaves of the affected plant have a disfiguring ring, chevron, or watermark pattern showing as a yellow band or white or brown lines. The degree of injury varies with the variety.

Certain ring spot symptoms in dahlias are evidence of infection with a virus disease known as *spotted wilt*. This virus affects a wide range of plants, including tomatoes.

The best control for spotted wilt is to use stock free of ring spot symptoms or to use seedling plants.

Since pesticide registrations change frequently, resulting in more or fewer available pesticides and changes in permissible pesticide practices, this publication doesn't make specific pesticide recommendations.

For current recommendations, refer to the *Pacific Northwest Insect Control Handbook*, published and revised annually by the Extension Services of Oregon State University, Washington State University, and the University of Idaho.

In addition, detailed instructions for pesticide use are provided on pesticide container labels and in other literature provided by pesticide manufacturers.

For more information

Pacific Northwest Insect Control Handbook and *Pacific Northwest Plant Disease Control Handbook* are published annually—be sure to use the latest edition. Order either book from:

Publication Orders
Extension & Station Communications
Oregon State University
422 Kerr Administration
Corvallis, OR 97331-2119

Single copy is \$25.00

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