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For the Gardener Series

Title

Growing Dahlias (Cocoxochitl) of Every Shape, Size, and Color

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Growing Dahlias (Cocoxochitl) of Every Shape, Size, and Color

Because of their prolific nature and diversity, dahlias are an excellent crop to grow no matter the scale. Whether it be a plant or two in your backyard or a half-acre for commercial production, dahlias will always be worth the amount of space they take in your cropping system. Dahlias are relatively free of pests and diseases, have moderate fertility and water needs, and are fairly straightforward to grow. Basically, anyone who has an interest in growing flowers, or who can appreciate the simple, beautiful things in life, should be growing dahlias!

A BRIEF HISTORY

The dahlia is an herbaceous perennial plant grown primarily for its ornate flowers. For thousands of years, the indigenous people of Central Mexico cultivated and foraged for the Cocoxochitl, the dahlia's original name. Little is known about this period of pre-colonial dahlia history as any recorded information was lost during Spanish colonization.

We do know that dahlias originated in the uplands of Central Mexico at elevations up to 10,000 feet. As with roughly 1/10 of all flowering plants, the dahlia belongs to the Asteraceae or daisy family. Other members of the Asteraceae family include artichokes, lettuce, sunflowers, and chrysanthemums.

Sometime in the 16th century, Spaniards took interest in the dahlia and shipped seeds from the flowers (which at the time had very simple daisy-like blooms) to Europe. European botanists and horticulturalists quickly discovered the dahlia could be bred into an ornate double form. They dubbed the plant *Dahlia pinnata*, for Swedish botanist Andrew Dahl and in reference to the arrangement of the leaves. Within a few decades, thousands of varieties of fully double blooming dahlias were available. Fast forward several hundred years and the dahlia is one of the most popular cut flowers grown by amateur gardeners and professional flower growers alike.

Many growers treat dahlias like a tender annual crop, when in fact their tuberous roots make them a perennial. If left to their own devices, dahlias go dormant in cold winter months and resprout from the same starchy tuber in the spring. Plant dahlia tubers after the threat of the last frost has passed and you can expect flowers from late summer until the first frost in your region. The sheer number of flowers on one dahlia plant is remarkable; along with the ever-popular zinnia, dahlias are one of the most productive cut flowers you can grow.

Since the early period of breeding in 19th century Europe, hobbyists and professional plant breeders have been hard at work creating thousands of new varieties of dahlias. Thanks to these breeding efforts, dahlias are now one of the most diverse species of flowers in terms of shape, color, and size.

GROWING CULTURE/SEASONAL TIMELINE

This seasonal timeline is intended to serve as a short how-to guide for growing dahlias at your farm or garden.

Propagation Methods

Although dahlias can be successfully grown from seed, they display incredible genetic diversity and therefore don't breed true to type. A seed from a popular variety such as *Café au Lait* will likely look nothing like its parent flower. For this reason, dahlias are typically grown asexually by tuber divisions, which are available through a variety of sources (see Tuber Sources, below). You can also take cuttings from tubers forced in a greenhouse in the winter. The rest of this article assumes you will be growing dahlias from tubers, although growing culture is roughly the same no matter how you propagate your dahlias.



FOR THE GARDENER

Climate

Because of their geographical origins, dahlias cannot handle frost. Always plant after the last expected frost date and consider covering the planting with row cover fabric to give the plants a boost and protect them from unexpected cool temperatures.

Soil Preparation and Planting Site

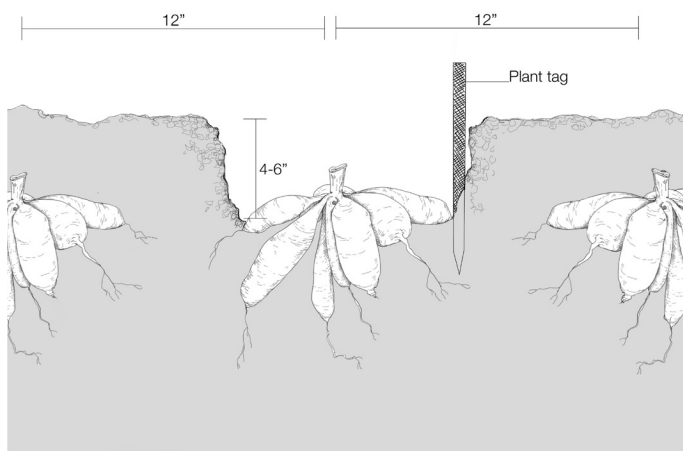
A well-worked soil with lots of drainage is important so as not to rot the succulent tubers. Soil temperatures should reach 60°F before planting. Dahlias need at least 8 hours of sun a day to grow and flower successfully, so it's best to plant your tubers in an area with full sun. Amend your soil with 1-2 inches of a high-quality organic compost before planting.

Fertility

Dahlias are "heavy feeders" but will take up nutrients efficiently and do not require large amounts of supplemental fertility. If needed, a weekly application of liquid organic fertilizer can be used after the tubers sprout, especially if you are growing in a marginally fertile soil—but keep in mind that dahlias can become leggy if over fertilized with nitrogen. Incorporating a high phosphorus granular fertilizer at planting will increase flower production, as phosphorus generally encourages blooming, branching and root growth. Ask your local nursery to recommend a high phosphorus fertilizer and application rates.

Planting

Plant dahlia tubers horizontally, 4-6 inches deep. Planting tubers horizontally will ensure the eyes will be facing up and guarantee the most efficient growth. Allow 1-foot minimum between plants so they do not crowd each other. This is a good time to label your varieties with stakes and a permanent marking pen.



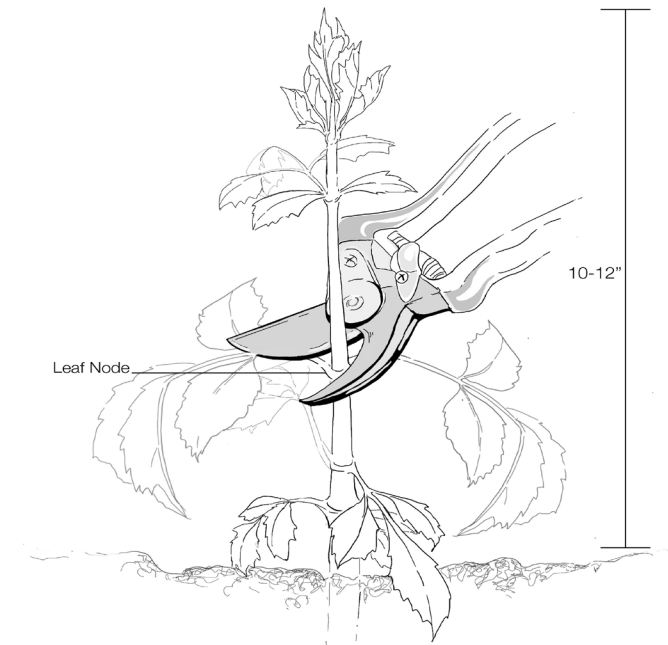
Irrigation

After planting tubers and during the first few weeks of their life cycle, be careful not to overwater. Dahlia tubers are prone to rotting in soil that is too moist. Once shoots appear it is safe to assume the dahlia plant has an established root system. At this point, you can water without any fear of rot. Dahlias require between 1-2 inches of water per week. In a climate with no summer rain, watering deeply 1-2 times a week should encourage good growth. You may need to water more or less often depending on your climate.

Overhead irrigation can be used until the tubers have sprouted, at which point, many growers transition to using drip tape or inline emitters. This will both save water and minimize risk of foliage diseases.

Pinching or Topping

Most growers recommend pinching or "topping" the center growth tip of each plant. When the first shoots reach between 10-12 inches long, simply cut them in half with sharp pruning shears just above a leaf node. This action encourages branching at the base and will grow a fuller, more productive plant.



PESTS AND DISEASES

The few pests and diseases that affect dahlias can wreak havoc on the plants. Cucumber beetles (*Diabrotica undecimpunctata*) love to munch on the flowers and foliage. Use sticky traps (available in nurseries or online) to manage this beetle. If the pressure gets too intense, consider using an organically approved pesticide with Spinosad. Some growers cover unopened flower buds with jeweler bags to keep the beetles off, which works well on a small-scale.

Gophers also love to feast on dahlia tubers. If you grow on a small scale and have considerable gopher pressure, planting in gopher wire or baskets can prevent gophers from eating your costly investment.

Powdery mildew is common at the end of the season almost anywhere you grow dahlias, but if you live in a region with high humidity (including summer fog) or summer rains, you may find mildew on your dahlias earlier in the season. Although mildew won't kill your plants, it can disrupt photosynthesis and decrease the market value of your flowers, if you sell them. A good preventive strategy is to use an organically approved spray such as Serenade, which includes a beneficial bacteria that reproduces so prolifically it crowds out other disease-causing pathogens. Another approach is to remove 12-24" of the lower leaves from the plants, which will allow more airflow and can reduce the presence of mildew.

Slugs and snails can eat your dahlias to the ground when they first sprout, but aren't much of a problem once the plants are bigger and more established. If you have large slug or snail populations, put a small amount of organically approved Sluggo around the base of each tuber.

STAKING

Dahlias can grow anywhere from 2 to 8 feet tall. Depending on your situation you may consider staking and stringing your plants to prevent lodging (falling over). Simply pound 2-inch wooden stakes or metal T-posts every 8 feet, and weave a synthetic string through the posts to provide extra support for your plants.

DISBUDDING

Some growers choose to "disbud" their dahlias on a regular basis. Disbudding your dahlias will provide you with fewer but larger flowers. Although this process can take a long time, the effort is arguably worthwhile.

To disbud your dahlias first find an unopened flower bud at the apical end of a branch. Once you find this bud, which will soon become your flower, work your way down the plant removing all other buds by pinching or rubbing them off with your fingers.



HARVESTING DAHLIAS

It's best to harvest dahlias early in the morning or late in the evening, and roughly twice a week. Regular cutting will encourage your plants to give you more flowers. Try dipping the ends of your stems in a hot water plunge for 20 seconds and then immediately place them into a bucket of cool water and refrigeration if you have it. This can lengthen the vase life of your dahlias, which are notoriously short-lived.

DIGGING TUBERS

Dahlia tubers can be left in the ground for several years before being divided, however, most growers dig them in the fall to protect their investment. Between gophers, rain, and frost, winter months could destroy overwintering tubers.

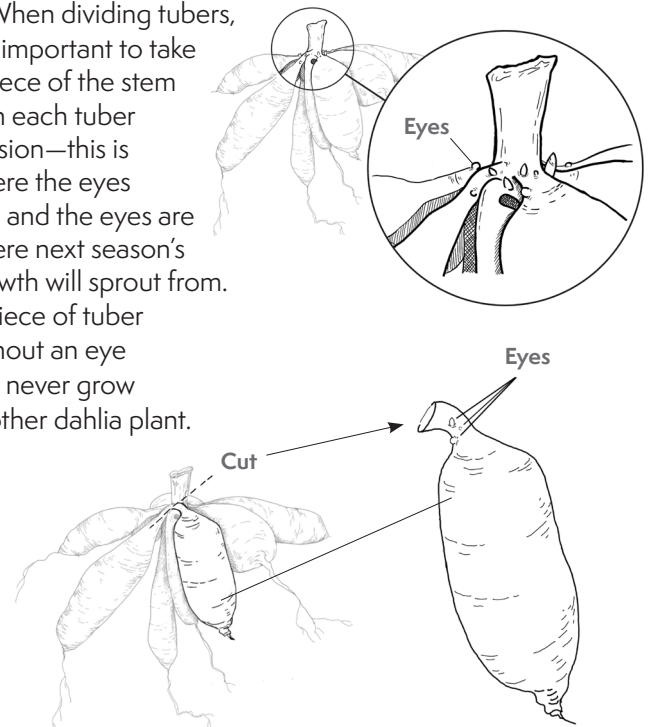
If you live in a climate with frost, it is recommended to wait until the second frost before digging your dahlias (a hard frost thickens dahlia tubers and helps them store longer).

If you live in a frost-free climate, growers recommend stubble cutting your dahlias to a height of approximately 4-6 inches and then waiting a week or two before digging sometime in early to mid-November. Cutting the plants down is thought to simulate a hard frost and helps to thicken and strengthen the skin of the tubers for good winter storage (see below).

DIVIDING TUBERS

Tuber divisions can be made in the fall after lifting them or, more commonly, in spring just prior to planting. Divisions made in the fall are easier to cut because of their high moisture content, but eyes can be easier to see in the spring once tubers have begun to sprout.

When dividing tubers, it is important to take a piece of the stem with each tuber division—this is where the eyes are, and the eyes are where next season's growth will sprout from. A piece of tuber without an eye can never grow another dahlia plant.



Fun Fact: Spanish horticulturalist Antonio José Cavanilles named the dahlia after Swedish scientist Anders Dahl, but the Aztecs who first cultivated the plant named it COCOXOCHITL which loosely translates to water cane, presumably named after the hollow stems for which the plant is well known.

STORAGE

Every dahlia grower seems to have a different idea of how best to store dahlias tubers. Most recommend placing dahlia clumps or individual tubers in crates, bins, or boxes filled with an inert bedding material. Coco peat, peat moss, sawdust, or wood chips all make a good substrate for tuber storage. Very lightly moisten this material (similar to a wrung-out sponge) and then pack tubers into your desired vessel. Note: never store in closed plastic bins; always make sure there are vents for air to move in and out of your storage vessel.

Check your bins once a month in the winter to remove any rotting or damaged tubers and to adjust the moisture of your bedding material as needed. The goal here is to keep the tubers dry enough so they won't rot but not so dry that they shrivel up and are no longer viable to plant in the spring. Tubers should be kept in a cool dark place with temperatures ranging from 40-50° F.

POPULAR VARIETIES

- Café Au Lait – Perhaps the most sought-after dahlia variety today is very popular in wedding floral design.
- Gerrie Hoek – Rumored to be Alan Chadwick's favorite, this pink waterlily with 5-inch blooms has been gracing gardens since 1942 and never disappoints.
- KA's Cloud – This dinnerplate-sized dahlia bred by breeder Kirsten Albrecht of Santa Cruz Dahlias is like a giant cloud kissed with pink blush. Plus it's local and local is better!
- Crichton Honey – This plant produces honey-yellow 2 ½-inch ball type flowers. A good candidate for small backyard gardens as the dwarfing plants won't take up too much space.
- Bishop of York – For something different, and to get an idea of what the original open centered dahlia may have looked like, try this simple yellow variety, which has beautiful dark red foliage.

TUBER SOURCES

Dahlia tubers are costly upfront, but a single tuber planted in the spring can multiply into as many as 15 plants when divided in the fall or following spring. For small orders, Swan

Island is our favorite source. They offer hundreds of varieties of dahlias at a reasonable price and are always of the highest quality. Availability for the following spring is usually posted in the late summer/fall so make sure to order early to get the varieties you want.

For large quantities, look for a reputable wholesaler such as Eden Bros or Gloeckner, where bulk prices are much more affordable. Additionally, tubers can be found at local Dahlia Society Plant Sales in the spring and at local plant nurseries. My favorite source for dahlias is local growers, who are eager to share new and exciting varieties and chat about dahlias endlessly.

RESOURCES

Local Dahlia Societies can help with all dahlia growing concerns. The Monterey Bay Dahlia Society meets the second Friday of the month at the Simpkins Swim Center Community Room in Santa Cruz. <http://www.mbdahlias.org/>

American Dahlia Society – <https://dahlia.org/>

Dahlia Addict can help you locate an online vendor who sells a variety you are looking to grow. They have at least 2,900 listed varieties. <http://dahliaddict.com/>

—Evan Domsic

ABOUT THE AUTHOR

Evan Domsic is the farm manager at Singlethread Farms in Healdsburg, CA. He is an alumnus of the CASFS Apprenticeship in Ecological Horticulture and former Alan Chadwick Garden assistant manager.

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