

Herbs in Your Garden



A Guide to the
Use, Cultivation
& Selection of
Culinary Herbs



Anne Schellman | UCCE Master Gardener Coordinator
University of California Cooperative Extension, Stanislaus County

GROWING HERBS IS a fun and easy way to always have ingredients on hand for recipes.

This publication focuses on culinary herbs; the leaves or stalks of a plant used to flavor food. It will mention a few spices: the seeds, bark, roots, or flowers of a plant.

Some plants are both herbs and spices. Cilantro leaves are an herb, while the seeds (called coriander) are a spice.

HERB LIFE CYCLES Sometimes people believe they “killed” their plant, when actually their annual herb died naturally.

Annual herbs live for less than a year. Some, like dill and borage, reseed themselves the following spring.

Biennial herbs like parsley live for two seasons. They bloom and die during their second year.

Perennial herbs like sage and lavender live for 3-5 years before becoming woody and may need to be replaced.

HERB PLACEMENT Most herbs prefer a sunny location, with at least 6-8 hours of sunlight per day. However, some herbs can do well with less.

Plant herbs near a water source. Some herbs need more water than others, but all herbs need regular water after planting to get established.

Here are some examples of herbs to group together. You’ll notice some

herbs are in more than one category since they tolerate various conditions.

#1 Full Sun, Low Water

Low water using herbs include rosemary, sage, oregano, thyme, marjoram, tarragon, and lavender.

In general, this group of plants tends to die from poor drainage and overwatering. Allow these plants to dry out in between watering. Be careful using these plants in containers; make sure they have adequate drainage.

#2 Full Sun, Moderate Water

Plants for this situation include anise hyssop, bay laurel, borage, calendula, catnip, chamomile, fennel, hyssop, lavender, and scented geranium.

#3 Full Sun, Regular Water

Herbs in this group need regular water and can tolerate full sun. They include basil, beebalm, chives, dill, epazote, horseradish, hyssop, lemon balm, lemon grass, lemon verbena, mint, nasturtium, parsley, and scented geranium.

#4 Partial Shade, Moderate Water

These plants can do well in part shade but need moderate water: anise hyssop, bay laurel, borage, catnip, hyssop, sage, and thyme.

#5 Partial Shade, Regular Water

Plants in this group don’t like to dry out. They include beebalm, chives, cilantro (also called coriander), hyssop, lemon balm, mint, nasturtium, and parsley.

AGGRESSIVE & INVASIVE The term “invasive” describes plants that escape gardens and usually

reproduce by seed, bulbs or roots. They may spread from one yard to another, and to wildlands and natural areas where they clog up waterways and displace native plants. Many are also a fire hazard.

In California, fennel is invasive. It spreads rapidly by seed and underground stems. If you live near a waterway or natural area, avoid planting it unless you plan to cut off blooms before they set seed.

Aggressive plants like epazote, spearmint, peppermint, and lemon balm aren’t invasive, but they can annoy gardeners by spreading into places they aren’t welcome. They can also be time consuming to control.

DESIGN YOUR GARDEN When designing your garden, take note of the sun exposure and then choose plants that have similar requirements.

Consider the mature size of the herbs you choose. Give large plants like bay, rosemary, pineapple sage, and lemon verbena enough space to spread out.

Include a focal point like a stunning tree, shrub, or grouping of an herb that has a “wow” factor. Include plants with different leaf textures, growth patterns, flowers, and foliage.

Often gardeners are smitten by a large number of plants and then buy one of every plant. Later, they are disappointed when their garden looks like a hodgepodge and lacks cohesion.

Before visiting a nursery, make a list of plants you want and then

narrow the list down and purchase at least three of each plant or more.

Planting herbs in groups or using them as a border will help unify your garden.

Steel yourself before you shop to stay on target and not deviate from your task! Allow yourself to purchase one “fun” plant you weren’t planning to buy.

Planting in groups also attracts pollinators. Honey bees, native bees, hummingbirds and others seek out gardens with large groupings of flowers to visit.

SELECTING HERBS

You can plant herbs from seeds or plants. Most gardeners purchase perennial herbs as 4” or 1-gallon plants, and annuals from seeds or plants.

Some annuals like dill, fennel, and cilantro have a taproot and do better when planted from seed. You can still purchase them as a plant.

Purchase healthy plants that don’t have a circling root ball. You can tell this by looking at the edge of the container and sliding the plant out a little bit. If a container has roots coming out the bottom, chances are it has been in that pot for too long.

If you already have a lot of herbs in your garden, look for other interesting cultivars to add like Sage ‘Tricolor’ ‘Purple Ruffles’ basil; chocolate, ginger or apple mint or any number of the scented geraniums listed in the guide.

NOTES ABOUT SEEDS

When a seed germinates, tiny leaves attempt to push through the soil to reach the surface. If your seeds don’t germinate after the days-to-germination listed on the

packet, it could be for various reasons:

- Your seeds might be old or damaged.

Seeds are living organisms that have a shelf life. After 2 years, many seeds may not be alive.

- It’s not warm enough.

In order for seeds to germinate, the soil temperature must be warm enough. Basil prefers soil temperatures of 65-85 degrees. If you don’t have a soil thermometer, wait until outdoor temperatures reach 70 degrees before planting.

- You planted seeds too deep.

Seeds buried too deeply don’t have enough resources to sprout and then grow up out of the soil to reach sunlight. Always follow planting depth instructions listed on the packet. If the directions say to bury the seed 1/8 to 1/4 inch deep, set seeds on top of the soil or seed tray and lightly sprinkle some soil over the top. Water gently.

P LANTING SEEDS INDOORS

You can start warm season herb seeds indoors in a potting mix that has a slow release fertilizer 4-6 weeks before you plan to move them outdoors. Using a grow light will greatly enhance the success of your seeds. Heating mats are also helpful.

If you use a regular potting mix, you can wait and fertilize the seedlings when they are 2 weeks old with any water-soluble fertilizer at 1/4 strength one time per week.

When watering seeds, use care as tiny seedlings can be knocked over or damaged by heavy spray.

If your seedlings become long, lanky, and even fall over, they may not be getting enough light or you may have over-fertilized them.

Before planting outdoors, “harden off” your small plants to help them adjust to cooler outdoor temperatures. Put them outside on a nice day in a sheltered and shady location for a few hours each day. Gradually increase the time outside each day and move to partial and then full sunlight after a week, then plant them outside.

OUTDOORS

After danger of frost has mostly passed, plant seeds directly in the ground. In Stanislaus County, there is only a 10 percent chance of frost after March 23. The soil may not be warm enough for seeds to germinate, but you can still plant them.

Some annuals, such as cilantro and dill, can be planted twice a year. Plant in spring or fall.

While small and tender, your herbs may need protection from snails, slugs, centipedes, earwigs, and even birds.

P LANTING PLANTS Follow these planting steps for healthy herbs:

Step 1: Add 3-4 inches of compost over the top of your soil. Work it in gently to a depth of 2-3 inches using a rake or a hoe.

Step 2: Dig a hole twice as wide as the container, and 2 inches shallower.

Step 3: Gently remove the plant from the container. Examine the root ball (area of soil and roots). If needed, pull apart or prune the roots using small pruning shears.

Step 4: Place the plant in the hole. The top of the root ball should sit slightly above soil level. Fill in around the root ball with remaining soil. Pack lightly, being careful not to pile soil on top.

Step 5: Water deeply. Use a garden hose or drip irrigation to keep plants well-watered. Create a basin around the plant to hold water.

After watering, the plant should sink so the top of the root ball is even with the soil. There should not be any soil over the top of the root ball.

Keep the soil area around the plant moist. Be aware that dryer soil around the root ball can pull away moisture and dry out the root ball.

C ONTAINER HERBS

Use potting soil from a nursery or garden center. Never use garden soil. This makes pots heavy and harder to move around, and you may introduce weed seeds or diseases. Some soils in Stanislaus County contain clay, which can become compacted and cause poor drainage.

When designing a container, take note of the mature size of herbs, otherwise they may quickly outgrow their pot.

Choose herbs with different leaf textures, habits, and heights. For a container in full sun that needs regular water, you could plant basil (tall), lemon thyme (trailing), and chives (interesting texture and flower color). Add your favorite annual flower for a “pop” of color.

W ATERING

New Plants

All young plants need special care until established. After planting, keep the root ball moist until the plant begins to grow. For perennials, water regularly during the first year.

Pay special attention on windy and hot summer days when soil may dry out quickly. If plants start wilting, they may need more water. However, wilting is also a sign of overwatering. Dig a few inches deep to check if soil is moist below the surface.

Established Plants

Plants usually need irrigation May through October. During the rest of the year, rainwater may be enough for plants.

When watering, water deeply enough to wet the root system. For deep-rooted perennials, such as rosemary or bay, the soil may need to be wet to 18 inches deep.

For shallow rooted annuals like basil, moisten soil 4-6 inches deep.

Sandy soils feel gritty when you touch them, and have large particles that allow water to flow easily. Plants in sandy soils need water more often, especially during summer.

Clay soils hold moisture the longest. Small particles hold onto water and nutrients. Allow the soil to drain between watering.

Use your finger or a shovel to check if soil is moist a few inches below the surface before adding additional water.

Containers

Choose containers with holes in the bottom to allow water to drain.

Plants in pots are “contained” in a small amount of soil, so even low-water users need more water than plants in the ground.

You may need to water containers in full sun daily during the summer. You can also move herbs in containers into partial shade during days over 95 degrees.

F ERTILIZING

Most established herbs do well without fertilizer, but if you decide to use one, purchase an all-purpose type such as 10-10-10 and follow package directions.

Herbs in containers can use some fertilizer, just remember this may cause them to outgrow their container sooner than they would without fertilizer.

P ERENNIAL MAINTENANCE

Herbs are fairly low maintenance; however, they look best when pruned for size and shape.

In winter, if perennial herb plants appear to have died from frost, wait a month to see if they grow out. After a hard frost, you may need to replace some perennials.

Major pruning should only be done in spring, after danger of frost has passed.

P ESTS

In many cases, if your plant has an insect infestation it may be stressed. Make sure it is getting adequate water, or that you aren't overwatering it.

For problems with aphids, spider

mites, and whiteflies, hose pests off with a gentle spray of water daily. If caterpillars are munching your herbs, hand pick them off and give them to chickens or drop them in a bucket of warm, soapy water.

Striped caterpillars found on dill and fennel may be the larvae of the beautiful yellow tiger swallowtail butterfly.

Consult the UC IPM website <http://ipm.ucanr.edu> for other problems.

HARVESTING HERBS
In general, herbs are freshest before they start flowering.

Remove spent flowers regularly to promote new leaves. Harvest early in the morning after dew has dried.

Use pruning shears for perennials; pinch off leaves or stems of annuals with your fingers or pruners.

Annual herbs can be cut back to 75% of their foliage and still recover. For perennials, don't remove more than 1/3 of the plant at any one time.

PRESERVING HERBS
Since herbs aren't always available fresh year-round, you may want to preserve them.

Drying

Dry herbs by gathering them into bundles and tying them with string. If you plan to save the seeds, tie a paper bag loosely over the tops of the herbs, then hang the bundles upside down in a cool, dry place. Most herbs are ready within 2 weeks.

You can also dry herbs in the oven or microwave. Before placing herbs in the oven, spread them on a baking pan. Set the oven on the

lowest setting and leave the oven door open slightly. Stir occasionally. Herbs are dry when leaves can be crumbled with a finger.

In the microwave, place 1 cup of herbs in a single layer between 2 paper towels. Microwave on high for 3 minutes. If herbs aren't completely dry, keep drying them in cycles of 20 seconds, being careful not to scorch them.

Freezing

Chop herbs and add a teaspoon or tablespoon of herb to each cube with a small amount of water. Most frozen herbs retain their flavor less than dried herbs. However, freezing pesto (with basil) is an ideal way to keep this herbs' flavor.

STORING HERBS
Fresh herbs can be stored as sprigs in jars of water just before you use them.

To store for a longer period, cover the top of the herb loosely with plastic wrap and place the jar in the refrigerator for up to two weeks.

For dried herbs, store in a cool, dry place away from your oven. Glass containers work well for storage. Keep herbs in cupboards as sunlight fades both color and flavor.

You can also use a mortar and pestle or coffee grinder to grind dried herbs. Dried herbs should not be kept for more than 6-8 months.

MAKING TEA
When making tea, for fresh herbs add 2 tablespoons per cup, for dried add 1 tablespoon.

Pour boiling water into a teapot and let it steep for 5 minutes. Keep

the teapot covered to retain heat. Strain the herbs once the tea has reached the desired strength. Serve tea with honey, lemon, or milk.

For iced tea, use 3 tablespoons of fresh herbs or 2 tablespoons of dried herbs. The extra tablespoon allows for the melting of ice.

If you are pregnant or nursing, do not consume any herbs as a tea without first consulting your physician.

MAKING SPA WATER
Spa water is a healthy take on flavored water. You can use a large, clear container filled with water, ice, and a few herbs or even fruits and vegetables.

You can create combos like lemon slices with lemon verbena, strawberries with basil, or cucumber with lemon balm.

ABOUT THE HERB GUIDE

The guide is broken into four categories. "Common and Latin Name" lists the herbs alphabetically by common name. "Life Cycle" lists the letters A, B and P which stand for annual, biennial and perennial. "Part Used" mentions the edible part of the herb and how it's used. "Growing Tips" describes the growing conditions the herb needs.

BIBLIOGRAPHY

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List of Common Herbs. University of Illinois. Retrieved March 4, 2019 from. <http://extension.illinois.edu/herbs/directory.cfm>

The Herb Guide

Common & Latin Name	Life Cycle	Plant Part Used	Plant Description, Growth, & Culinary Tips
Basil <i>Ocimum basilicum</i>	A	Leaves used fresh or dry for pesto, soups, salad, etc.	Full sun; regular water. Grows 2' tall & 1' wide. Plant after danger of frost. Pinch the top when young for a bushier form. Various varieties exist. Great in containers.
Bay <i>Laurus nobilis</i>	P	Use larger, older leaves for soups, stews & meat.	Full sun to part shade; moderate water. Shrub or tree 12-40' tall & wide. Needs good drainage. Makes a nice topiary. Watch for black scale & laurel psyllid insects.
Beebalm <i>Mondarda didyma</i>	P	Fresh flowers for salads; leaves dried for tea.	Full sun to partial shade; keep moist. Grows to 3-4' tall. Dark green, 4-6" leaves have a pleasant citrus-mint scent (similar to bergamot). Flowers attract pollinators.
Borage <i>Borago officinalis</i>	A	Fresh flowers for salads or beverages. Remove flower from prickly sepal.	Full sun to part shade; moderate water. Grows 2-3' tall and 1' wide. Reseeds itself yearly. Thin to keep desired plants. Leaves are prickly. Bright blue flowers attract pollinators.
Calendula <i>Calendula</i>	A	Fresh flowers for salads or beverages.	Full sun; moderate water. Grows to 1 1/2' tall. Plant in spring or fall. Bright orange and yellow flowers add a nice "pop" of color to herb gardens. Great container plant.
Chamomile <i>Matricaria recutita</i>	A	Flowers used fresh or dry for tea.	Full sun; moderate water. Grows 2' tall & wide. Self-seeds. Flowers in late spring have a pleasant scent & attract pollinators. Save fully open flowers for tea.
Chives (Onion) <i>Allium schoenoprasum</i>	P	Leaves have a subtle, onion-like flavor. Best used fresh.	Full sun to part shade; regular water. Grows in 2' tall clumps. Snip stems for fresh use only. Use chives to tie carrots or asparagus together while cooking. Makes a nice container plant.
Cilantro & Coriander <i>Coriandrum sativum</i>	A	Harvest young leaves for cilantro; seeds for coriander used ground or whole.	Part shade; regular water, especially in summer. Grows 2-3' tall & 9" wide. Plant in spring or fall. To harvest coriander seeds, wait until flowers have bloomed. When seeds start to form, cut stems & place in a paper bag. Tie & put it in a warm, dry place. Seeds should be ready in 10 days.
Dill <i>Anethum graveolens</i>	A	Leaves used in salads; seeds used whole for making pickles, or ground for use in other recipes.	Full sun, regular water. Grows 3-4 feet tall & wide. Plant in spring. Self-sows readily; plant every 2-3 weeks for fresh supply. Protect the plant by staking or growing it in a well-protected area. Harvest white umbel flowers by picking just before seeds are fully dry. Hang upside down in a paper bag. Seeds should be ready in about 10 days.
Epazote <i>Chenopodium ambrosioides</i>	A	Young or old leaves used fresh or dried in Latin American dishes.	Full sun, regular water. Grows to 2-4' tall. Self-sows readily, may become a pest. Has an extremely strong flavor described as a combination of cilantro, anise, licorice, pine, eucalyptus, & camphor scent.

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Fennel <i>Foeniculum vulgare</i>	P	Best fresh. Leaves & stems in salads, fish. Stem used as a vegetable. Seeds used whole or ground.	Full sun, moderate water. Grows 3-6' tall, depending on variety. Self-sows & can become invasive. Has yellow, umbel-like flowers. Bronze fennel has a bronzy-purple foliage. Leaves & seeds have a licorice flavor.
Horseradish <i>Armorica rusticana</i>	P	Peel & grate root for sauces; young leaves in salads. Very spicy flavor.	Full sun; regular water. Grows 3' tall in clumps. Thrives in moist, rich soil. Purchase bare-root in the fall or as plants in spring. Pieces of the root can be harvested off the side as the plant begins to clump. Harvest during fall, winter & spring.
Hyssop <i>Hyssopus officinalis</i>	P	Minty leaves & flowers are somewhat bitter; used to flavor meat & salads.	Full sun or light shade; moderate to regular water. Tolerates dry conditions. Grows 1 1/2 to 2' tall. Makes a nice border or container plant. Flowers may be pink, white, or blue & attract pollinators.
Lavender (English) <i>Lavendula angustifolia</i>	P	Use leaves sparingly in desserts & jelly. Use <i>L. angustifolia</i> cultivars only, others lend a soapy taste.	Full sun; little to moderate water. Grows 1-3' tall. Good drainage essential, grow in raised beds if necessary. Flowers attract pollinators & may be purple, pink, or white. Harvest stems as flowers start to open. Choose cultivars like 'Munstead,' & 'Hidecote.'
Lemon Balm <i>Melissa officinalis</i>	P	Fresh or dried leaves used in tea or spa water. Fresh young leaves in salads.	Full sun to part shade; regular water. Grows 2' tall & 1 1/2' wide. Can be invasive; self-sows by seed & rhizomes. Makes a good container plant. Shear tops occasionally to keep form bushy; cut flowers before they go to seed. Flowers attract pollinators.
Lemon Grass <i>Cymbopogon citratus</i>	P	Leaves used for tea; also in Southeast Asian dishes such as soups & curries.	Full sun, regular water. Grows 3-4' tall & wide. Can be sensitive to frost. Large parts of the stalk can be added to stews & soups. Use gloves when harvesting, leaf edges can cut skin.
Lemon Verbena <i>Aloysia triphylla</i>	P	Dried leaves make a flavorful tea. Fresh leaves added to salads.	Full sun; regular water. Grows 6' tall & wide. Can be somewhat leggy. Prune in midsummer & spring. Can be sensitive to frost. Also sensitive to spider mites, clean with a spray of water to prevent dust buildup.

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Marjoram <i>Origanum majorana</i>	P	Fresh or dried leaves used to season meat & stuffing.	Full sun; little to moderate water. Grows 1-2' tall & wide. In same family as oregano, similar in appearance & scent. Flowers are tiny & white or pink & attract pollinators. More floral than spicy.
Mint <i>Mentha species</i>	P	Use young leaves only. Peppermint for tea; spearmint for salads	Full sun or part shade; regular water. Grows 1-3' tall & wide. An aggressive plant that can take over a large space. Keep in pots or harvest often for best control. Flavored mints include apple mint, pineapple mint, chocolate mint & orange mint.
Nasturtium <i>Tropaeolum majus</i>	A	Add peppery young leaves & flowers are to salads. Pickle flower buds.	Full sun to part shade; regular water. Plant in spring & fall. Does not tolerate frost. Grows 1' tall & 3' wide. Both vining & compact forms exist. Flowers may be red, yellow, orange, maroon & off white.
Oregano (Greek) <i>Origanum vulgare var. hirtum</i>	P	Leaves used to flavor sauces in Mediterranean dishes.	Full sun; little to moderate water. Grows 2' tall & wide. Nice border plant along edge of a garden. <i>O. vulgare</i> 'Compactum' has best flavor for cooking. This cultivar is what gives food spicy flavor. Marjoram is often suggested as a substitute for oregano, but it does not have the same effect.
Parsley <i>Petroselinum crispum</i>	B	Fresh & dried leaves used to flavor soups, stews, stuffing, & vegetables.	Full sun to part shade; regular water. Best treated as an annual; replant every year. Flat-leaved Italian parsley grows 2-3' tall & wide & is considered the most flavorful. Curly-leaved French parsley grows 6-12" tall & wide & is used as a garnish.
Pineapple Sage <i>Salvia elegans</i>	P	Leaves used in teas, cocktails, & salads. Flowers added to salads.	Full sun, regular water. Grows 3-4' & as wide. Leaves have a strong pineapple scent. Needs well-drained soil. Bright red flowers attract pollinators, especially hummingbirds.
Rosemary <i>Rosmarinus officinalis</i>	P	Use fresh or dried sprigs when cooking with meat or vegetables.	Full sun; little to moderate water. Heights vary. Used as a groundcover or small to large shrub. Tall types make a good hedge. Prune lightly on a regular basis for shape. Flower color may be blue, purple, pink or white. To harvest: remove 4" pieces from the branch tips.

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Sage <i>Salvia officinalis</i>	P	Fresh or dried leaves used in fish, pork, & poultry dishes. Also vegetables &	Full sun to part shade; little to moderate water. Grows 1-3' tall & wide. Replace woody plants every few years. Leaves can be harvested anytime but are best used fresh. Several colorful cultivars available like 'Tricolor,' &
Scented Geranium <i>Pelargonium</i> species	P	Leaves fresh or dry in deserts, beverages, vinegars, & jellies.	Full sun to part shade; moderate to regular water. Grows 1-3' tall & as wide. Flowers mostly insignificant. Leaves are brightly scented . Cultivars include apple, almond, lime, nutmeg, mint, rose, & peppermint.
Tarragon <i>Artemisia dracunculus</i>	P	Fresh or dried leaves in salads, vinegars, & oils. Leaves have a licorice flavor.	Full sun; little to moderate water. Grows 2-3' tall, creeps along the ground. Makes a good container plant. French tarragon is used in cooking, Russian tarragon has little flavor. Divide every 3-4 years to reinvigorate plant.
Thyme <i>Thymus vulgaris</i>	P	Leaves fresh or dry in soups, stews, casseroles, stuffing & poultry dishes.	Full sun to part shade; little to moderate water. Grows 1' tall & 2' wide. Makes a good container plant, keep on the dry side. For best flavor, pick before flowering. Pollinators are attracted to the small white or purple flowers. Renew by cutting the plant back severely in the spring every few years. May need to be replaced when it gets too woody.

