

Growing Herbs

Resource: U of M Extension

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Herbs offer great versatility for the gardening enthusiast. While chiefly grown for seasoning foods, herbs have many other uses. Their oils and fragrances have long been valued in the manufacture of cosmetics, perfumes, dyes and potpourris. Their medicinal properties are currently the source of research worldwide. Herbal materials are also used in dried flower arrangements and related crafts. Many culinary herbs grown in Minnesota are members of two plant families. The mint family, Lamiaceae, includes basil, oregano, marjoram, catnip, all the mints, as well as rosemary, thyme, lavender, summer savory, and sage, are all grown for their aromatic leaves. Hardy perennials in this family can become invasive, especially mints. These plants tend to be bushy, and most have some tolerance of excessive heat and dry soil.

The carrot family, Apiaceae includes dill, parsley, chervil, cilantro (also known as coriander), fennel, and lovage. They are all grown for foliage and some for seeds as well. These plants have a more upright, leggy habit, and require somewhat moister conditions, and deeper, looser soil.

Common culinary herbs from other plant families include chives (Alliaceae), borage (Boraginaceae), tarragon (Asteraceae), and sorrel (Polygonaceae).

Culture

Soil Properties

The majority of herbs demand a well drained soil with a pH range of 6.0-7.5 for successful growth. Outdoors, avoid planting in heavy clay soils as well as wet areas. Also, avoid soils that have a high nutrient content. These rich soils may actually prove detrimental to the herb's quality by promoting rapid, lush growth that will contain only small amounts of the volatile oils that give herbs their characteristic aromas and flavors.

Containers used for growing herbs, whether indoors or outside, should always have holes in the bottom for proper drainage.

Light

Most herbs require at least 6 hours of direct sunlight in order to grow well. All-day sun is even better. The more intense the light, the more oils will develop within the glands of foliage and stems, creating stronger fragrances and seasonings. A southern or western exposure will meet the needs of most herbs, although some may do well in a bright east-facing location. Indoors, it is crucial to give herbs the best light available. During winter, when days are shorter and typically darker, fluorescent lights will probably be necessary to maintain healthy plants. Twelve hours of artificial light daily is adequate for most indoor-grown herbs. Inadequate light will result in spindly, thin growth.

Propagation

Seeds may be started indoors under fluorescent lights during the late winter months. Lights should be set for 14-16 hours daily, placed approximately four to six inches above the seedlings and raised as they grow, to maintain that distance.

Transplant herbs outdoors once frost danger has passed, and the soil has warmed and is firm enough to work. Space seedlings with the mature plant size in mind. Crowded conditions will result in tall, weak plants and poor air circulation will encourage disease. If a friend has a successful herb planting, some perennial herbs may be propagated by division. A clump of chives or a mound of creeping thyme, for example, can be divided with a shovel in early spring and transplanted.

Watering

Water thoroughly once a week by soaking the soil to a depth of 8 inches, to ensure that the root zone is receiving adequate moisture. Outdoors, container-grown herbs must be watered more frequently, even daily, if days are hot and sunny. Indoors, water thoroughly when the soil feels dry a half inch or so below the surface, depending on pot size. Never allow the plants to wilt between waterings, but avoid constant soggy soil conditions. Constantly wet soil encourages root rots which are the most common problem of herbs grown indoors, especially during winter.

Fertilizer

Fertilize sparingly. In most cases, garden beds can benefit from using a 5-10-5 commercial fertilizer at the rate of 3 ounces per every 10 feet of row. Apply once during the growing season, unless the site is particularly poor or the plants show signs of deficiency. Too-vigorous growth will produce foliage low in essential oils and therefore bland. Use a liquid fertilizer at half the label-recommended strength once every 6 weeks or so for indoor plants and every 3-4 weeks for herbs in containers outdoors.

Mulching

Mulching materials such as straw, marsh hay, compost, and leaves provide good winter protection for hardy perennial herbs. Depending on the size of the plant, mulch 2-5 inches thick will keep the temperatures around the plant more constant during late fall and early spring, keeping winter damage to a minimum. Mulching can also be beneficial during hot, dry periods of the summer by helping maintain soil moisture.

Growing Tender Perennial Herbs in Minnesota

Perennial herbs that are not winter-hardy in Minnesota may be cultivated with a mixed indoor-outdoor regime. In this way you can grow a rosemary shrub, flowering lavender, bay tree, or a fragrant sage that otherwise might be killed during a harsh winter. Although Minnesota winters can be too cold for these plants, they thrive in hot, sunny Minnesota summers. Plant the herbs in unglazed clay pots filled with potting mix. In spring, sink the entire pot in your garden. The porous clay will allow water and nutrients to pass from the soil into the pot.

As the days start to cool off in September, dig the pots up and clean them off. Inspect your herbs for insect infestation and treat them before bringing the plants inside, since they can spread pests to any other indoor plants you may have. Your herbs may drop a few leaves after being brought indoors, and certainly will not thrive during the darker days of winter. Do not fertilize them, and water them only as necessary when the soil feels dry. Do not use too much of the foliage in cooking, as the plants will be unable to recover from the harvest until they go back outside. In April, start taking your potted herbs outside on warm days, and bringing them back in at night, keeping them out of direct sunlight at first. Sink them into the garden soil again in May.

A large unglazed clay pot, or even a large plastic bucket with the bottom removed, sunk into your garden is also a way to contain invasive mints, including catnip. In this case, you may leave the pot in place over winter, since mints are quite winter hardy.

Harvesting

Culinary herbs may be harvested throughout the growing season by snipping sprigs and leaves as they are needed. Many will contain the best flavor if harvested just before flowering. Mid-morning hours are the best time to pick herbs, as this is when oil content is highest. This is usually just after the dew has dried and before the heat of the day begins. For fresh use, gather only what you'll use each day.

For drying or freezing, gather only as much as you can dry or freeze at one time. For mint-family herbs, make the cut a few inches down the stem and just above a set of leaves. New growth will arise from buds at this point, and a bushier plant will result. This is especially important with annual herbs such as basil and marjoram, which can become woody, less productive, and somewhat bitter if allowed to set seed. Seed production will also hasten the end of any annual herb's life.

For carrot-family herbs, cut each leaf stalk at the base of the plant, rather than just trimming off the tender leaf blades of parsley or cilantro, or the ferny growth of dill. For these plants as well, flowering signals the end of the plant's life, and the flavor of the foliage may not be as pleasant once the plant flowers.

Drying Herbs

Once picked, herbs should be kept out of bright light. Washing the herbs may be necessary if there is dirt or debris on the foliage. If this is the case, wash the herbs gently with warm water and pat them dry or use a salad spinner to remove water from the leaves. Excess water will slow the drying process.

Air Drying

Slower, cooler drying preserves the flavors of herbs better than faster drying, so air drying is the preferred method, provided conditions are right. Gather 4 or 5 stems, and tie the ends together with clean string or heavy thread. Larger bunches of herbs will not dry properly because air can not circulate between the stems as easily. Hang the herbs upside down in a dark, warm, dry, well ventilated room.

Label them, as they will look different once they dry, and mix-ups can easily occur. The foliage should dry in 7-14 days depending on conditions. This method also works well for drying seed pods and collecting seeds. To collect seeds, simply place a paper bag around the hanging herb with holes in the side for air circulation. As they dry, the seeds will collect on the bottom of the bag.

Air drying can also be done using screen racks. Make sure the herbs are spread out only one layer deep. A cookie sheet or solid surface will not work as well, as only one surface will dry properly.

Oven Drying

Again, using a screen-type tray, spread the herbs evenly and set the oven no higher than 100° F or at its lowest temperature. Keep the door open and check every thirty seconds. The herbs will dry very quickly, within a minute to a minute and half.

Microwaving

Microwave ovens provide the fastest means of drying herbs. But because of different wattages and models, specific settings would best be determined by experimenting with your own microwave. Start with 15-second intervals and keep checking the herbs until they are thoroughly dried. (It is likely that you will cook, rather than dry, a number of batches before you find settings that will work). This is the least desirable method of drying. The dried herbs tend to lose more of the essential oil in the process.

Storing Dried Herbs

Once herbs are dried, strip the leaves from the stems. Do not keep stems as they tend to retain moisture long after the leaves have dried and may become moldy in storage. Store leaves whole if possible: the larger the piece, the better the flavor retention. Store the herbs in airtight containers. Herbs stored using these methods can usually last up to a year. Keep stored herbs away from bright light and heat sources and check them periodically for any moisture buildup within the container. If there are signs of moisture, empty out the container and re-dry the herbs.

Freezing Dried Herbs

Freeze small quantities of herbs at a time. A few leaves or sprigs placed in a labeled plastic bag works well. The material can also be chopped up and packed into ice cube tray compartments. Top off with a little water and freeze. Avoid freezing large quantities, as they can't be refrozen once thawed. Properly frozen herbs should be used within a year.