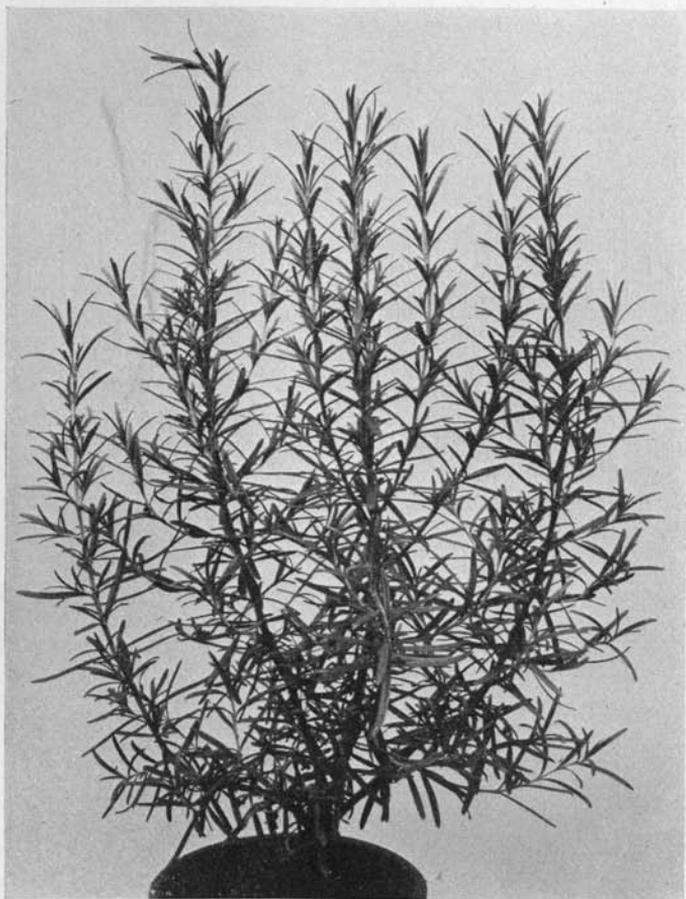


# Herbs and Their Culture

RUTH M. HENDRICKSON AND FRANCES M. JOHNSON



Rosemary

Connecticut  
Agricultural Experiment Station  
New Haven

## FOREWORD

During the past year the Connecticut Agricultural Station at New Haven has received many requests for specific information on growing herbs, both in kitchen gardens and on a commercial scale. On the disease and insect pests of these plants we can handle all inquiries, either with our own publications or by letter. But the Station has had little or no occasion to work on the cultivation of herbs.

The usual recourse in such cases is to refer correspondents to publications of other Stations or Agricultural Colleges, or to those of the United States Department of Agriculture. Unfortunately there is a dearth of such material. There are a number of good books available, but, at the present, brief bulletins of general instructions are not easily obtained.

Hence this "circular", which we hope offers in fairly condensed form the information needed by Connecticut people. The writers have drawn freely on published sources without giving specific credit in every case. A bibliography is appended for those who wish to pursue the subject further.

# Herbs and Their Culture

RUTH M. HENDRICKSON and FRANCES M. JOHNSON

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THE growing of herbs, which can be traced far back in the history of medicine and cookery, is again on the increase in this country. This is due to many reasons — probably the primary one being the war in Europe. Now that we can no longer import the dried plants and seeds, we must produce our own herbs.

Herbs, on the whole, require very little attention. They are easily cultivated, relatively hardy and comparatively free from fungous diseases and insect attack. Their great popularity doubtless lies in their use in many common foods. Simple, ordinary dishes are transformed into gourmets' delights by the addition of a dash of some fragrant, sweet-smelling herb. Only a few plants, from a half-dozen to a dozen, of each variety are necessary to fill the needs of the average family. The farmer or commercial herb grower may have a garden of considerable size, the suburbanite a small kitchen garden just outside the door, where it will be convenient for the housewife, while the city-dweller may have space for only a window box or a few potted plants. Yet each may enjoy the delightful aromatic odors and flavors ranging from licorice-like Anise to piny Rosemary.

Herbs may be defined as aromatic plants having culinary or medicinal value. Most culinary herbs belong to the carrot family (*Umbelliferae*) or to the mints (*Labiatae*). This circular will deal with representatives of both the medicinal and the culinary groups, with the main emphasis on the latter.

## HISTORY

It is interesting to trace herbs back to their original sources. Practically everyone is familiar with thyme, used in seasoning chicken and turkey stuffings. But few of us realize that, two thousand years ago, nectar from carpets of thyme on the slopes of Mt. Hymettus in Greece was daily gathered by bees to make the honey which had no rival in classical times, and is famed even today.

Practically all our present-day herbs are native to the Mediterranean region and were known centuries ago. In Biblical times, Anise and Dill were part of the tithe, while Coriander was eaten by the Jews during the Passover. Throughout the works of Virgil, Horace, Theocritus and the pastoral poets are found allusions to the medicinal and culinary uses of herbs, as well as to the many myths and superstitions surrounding them. Pliny, in his "Natural His-

tory", mentions many herbs familiar to us today. In 812 A. D., Charlemagne issued a mandate requiring the people of his empire to raise certain herbs.

We are indebted to the monks of long ago for preserving not only the history of herbs in their meticulously transcribed manuscripts, but the herbs themselves. These they tended during times of war and stress, within the peaceful cloistered walls of monastery gardens. Among monastic manuscripts are found catalogues of cultivated herbs which may be considered the earliest form of herbal.

Gerard's Herbal appeared in 1597 and this was followed by many similar works published both in England and on the Continent. A number of early herbals were written by physician-botanists, who made widespread use of herbs in the treatment of all types of ailments, from cataract of the eyes to melancholia. Our modern pharmacopoeias found their origin in herbals. In 1801 the first American herbal was published by Stearns. When the early settlers came to this country they brought with them the few herbs which they needed for cooking and medicinal purposes, the latter called "simples". The Shakers were among the first in this country to raise medicinal herbs on a commercial scale. When steam transportation was introduced, people replaced the old-time culinary herbs with imported oriental spices and seasonings.

The current revival of herb culture has been stimulated by the efforts of botanical gardens and interested individuals.

#### PROPAGATION AND CULTURE

Most of the better known herbs are easily grown in New England. A warm sunny spot with good drainage is best. The soil need not be particularly fertile, and very little manure or plant foot should be used. Rich soil will produce more luxuriant foliage, but this results in the loss of much of the aroma for which herbs are chiefly treasured. Manure may introduce fungi to which many of the plants are very susceptible. Parsley, Chives, and Basil, being cut frequently, may be fertilized sparingly.

The problem of drainage is most important in herb culture. In a garden which is poorly drained the soil may be removed to a depth of 18 inches to accommodate a bottom layer of about three inches of crushed stone or ashes. The available soil, mixed with sand to lighten it, is then replaced in the beds. The area should be filled to a somewhat higher level than originally, to allow for settling. Drainage need not be considered in the case of mints, Cress, Lovage and Angelica, as they prefer a moist situation.

For a kitchen garden an area 20×4 feet, with plots 12×18 inches for individual herbs, is of ample size. Parsley or Purple Dwarf Basil makes an attractive border. Perennial and annual herbs should be segregated, as the annual bed will have to be reset or seeded each year. Perennials are best renewed after three or four

years. It is a good idea to draw up a diagram of the garden before planting and to label the plants when they are set out.

All annual herbs may be grown from seed, as may most of the perennials. If facilities are available it is wise to sow the seed indoors in flats or shallow boxes in late winter, so the seedlings may be transplanted outdoors as soon as conditions are favorable in the spring. Those sown in open ground are ready for transplanting or thinning as soon as the second set of leaves appears. Anise, Chervil, Coriander, Dill and Fennel should always be sown where they are to grow as they are difficult to transplant.

The soil for the seed bed should be carefully prepared by digging to a depth of 18 inches to 2 feet and raking the top few inches. A good formula is 1 part compost, 2 parts sand, and 1 part loam, well sifted. To help prevent damping off of young seedlings the soil can be sterilized. That in flat boxes may be baked or steamed, but treatment with a fungicide is more easily managed for an outdoor seed bed.

Seeds of biennials, such as Caraway and Parsley, are sown in late spring; these are followed by others as soon as the danger of frost is over. After the surface of the soil has been worked fine and wet down, seeds are sown in very shallow drills. The bed can then be pressed down with a board or spade. A cover of wet burlap or paper keeps the bed from drying out while the seeds are germinating. It should be watered carefully with a fine spray whenever it begins to dry out. This procedure is used for small seeds such as Marjoram, Balm, Savory, and thymes, which may be mixed with sand to better distribute them in sowing. Larger seeds are sown more thinly, and covered with one-eighth to one-fourth inch of dirt. Some of the slower germinating seeds, like Marjoram, Parsley and Rosemary, may be soaked in lukewarm water for a few hours to soften the seed coats before planting.

Tarragon, Chives, mints and Pennyroyal are always propagated by divisions or cuttings. Rosemary, Lemon Balm, and Lavender seeds germinate very slowly so cuttings often prove more satisfactory. Savory, Sage, thymes and the mints are frequently increased by layering. Branches still attached to the main plant are pegged down at a joint which is covered with an inch or so of soil. When roots have formed at the joints a few weeks later, the branches may be cut off and each newly rooted part set out. The mints spread naturally by rooting at the nodes and often need restraining, so it is recommended that thin sheets of metal be driven into the ground around the edge of the mint plot. Thyme also spreads rapidly and should be clipped often. Care of the herbs after they have become established in their beds is limited to removing weeds, and cultivating to keep the surface soil loose and fine. A little lime may be dug in around the roots of Rosemary two or three times during the season. Watering is required only if there is severe drouth.

Winter protection for perennial and biennial herbs is usually

necessary in Connecticut. Straw, marsh hay, leaves or evergreen boughs may be used as mulch. Before covering, thymes and Sage are trimmed to within 6 inches of the ground, but the other perennials may be cut much shorter. When Chive flowers have passed, their stalks are cut to ground level. Sometimes perennial herbs, especially thymes, are thrust out of the ground by successive thawings and freezings and require pushing back into place. Woody perennials are better able to withstand winter injury if they get an early start in the spring so their new growth hardens up before cold weather sets in.

If a home owner lacks space for a garden or wishes to have fresh herbs on hand for winter use, there are many which may be grown indoors in pots or window boxes. A satisfactory mixture for potted herbs consists of 3 parts soil and 1 part compost or well rotted manure. The seedlings for an indoor herb garden are potted early in September and left outdoors till well established, or as long as the weather permits. Cuttings of Parsley, Chervil and mints are best made in midsummer and left in a cool shaded spot.

Care of herbs indoors is like that for most other potted plants. They need regular watering and inspection for plant insects or diseases. Spraying every few weeks with a nicotine insecticide which contains a soap spreader should be sufficient to keep them free of plant lice or aphids, one of the most common pests. All herbs require plenty of sun, but Parsley, Chervil and thymes will do best in a cool window. Most of the plants can be pinched back to secure compact growth.

#### HARVESTING AND CURING

Most herbs are richest in aromatic oils just before flowering, so that is the ideal time to collect them for drying. The foliage is cut on a clear day, early in the morning after the dew has gone. Annuals are cut to the ground, and perennials about one-third of the way down the main stalk and the side branches. After removing all decayed and dead parts the harvested portions may be rinsed lightly in water if there is dirt on the foliage.

The larger plants are usually tied in bunches and hung over lines in a room with good cross circulation. Leaves of thymes and other short-stemmed herbs are stripped from the stems and spread out thinly on drying frames. A frame can be made by stretching cheesecloth over curtain frames or between two chairs. Leaves are turned each day to expose all surfaces. An attic makes a useful drying room as the light is not strong. Drying and storing are done in the shade in order to preserve the fresh green color of the herbs. The drying will take about a week in the case of plants which are hung up, and about 3 or 4 days when leaves are spread out on frames.

When thoroughly dry, all leaves are stripped from stems, crumbled and stored in jars. If so desired, they may also be sieved to a

fine powder when stored or immediately before using. The jars are watched carefully for a few days and if any moisture is detected the herbs are taken out and dried more thoroughly.

Parsley and Celery tops may be cured in small quantities by dipping the stems and leaves quickly into boiling salted water, shaking them dry and spreading them on racks in a moderately cool oven. When dried they are stored in covered jars or tins. If glass jars are used they are kept in a shady place.

Seeds to be dried should be gathered as soon as ripe. The seed heads are cut and spread on heavy cloth in a warm airy room for 3 or 4 days. For a small quantity the heads can be rubbed between the hands to separate the seeds. Beating, which is necessary for large harvests, often bruises the seed and must be done with great care. After the seeds are cleaned they are spread out on a drying screen for a week or 10 days before storing.

Herb vinegars, which have come into rather wide use, are easily prepared. They must be made from fresh leaves. Tarragon, mints, Marjoram, Basil, or a combination of these is used. One cup of the fresh leaves, bruised and packed down in a two quart jar, with one quart of vinegar added, is set aside for two weeks. The leaves are then strained out and, if the flavor is not strong enough, another cup of leaves can be added and the vinegar stored for ten days more. The final product is filtered through flannel or filter paper.

#### SOME COMMONLY GROWN HERBS

**Anise** (*Pimpinella anisum*) is a hardy perennial, but does not readily transplant. Fresh seed, not more than two years old, can be sown in a warm, light soil. The plant is graceful and grows to an approximate height of 18 inches. The basal leaves are lobed like those of celery, while the top leaves, being finely divided, resemble Fennel. The small, yellowish-white flowers are borne in lacy umbels. The seeds are tiny, round and gray-brown in color. Anise blossoms about three months after planting and, one month later, the seeds are ready for harvesting. This is done by cutting off the flower heads and rubbing out the seeds.

Anise seeds are used in flavoring many foods, such as soups, stews, salads, breads, cakes, apple sauce, tea and candies. In the list of Hippocrates' simples, Anise was designated as a cough medicine, and today its essential oil, anethol, is used as an ingredient of such medicines. Pythagoras said it could cure epilepsy; according to Pliny, it could be used in curing at least sixty different ailments. The ancient Romans chewed the seeds to sweeten the breath.

**Balm, Lemon** (*Melissa officinalis*) is a perennial plant native to southern France and Switzerland. It reaches a height of 24 inches. The leaves are dark green, broadly ovate, opposite, toothed and hairy.

Pale yellow flowers appear in small clusters and bloom from June to October. The seeds are extremely small. Balm is propagated by division, cuttings, and seed.

Tea made from the leaves has been used to cure fevers and to induce sweating. The foliage is used in flavoring and in salads and iced beverages. The oil is used in furniture polish and in toilet preparations. Balm has a delightful lemon minty scent and, like thyme, is attractive to bees. Shakespeare in several of his plays alluded to the healing qualities of balm.

**Basil, Sweet** (*Ocimum basilicum*) is a popular culinary herb. There are fifty or sixty other species, including the Bush or Dwarf



Basil

Lavender

(From *Herbs and the Earth* by Henry Beston)

Basil which grows to a height of 6 inches, and Purple Basil which has purple stems and foliage, adding unusual beauty in contrast with the green varieties. Basil seed germinates quickly in ordinary well-drained soil. The seed may retain its germinating power for 8 years. Sweet Basil is an annual which reaches a height of 24 inches. The leaves are opposite, ovate, smooth and delightfully clove-scented. The greenish-white flowers grow in whorls.

The leaves may be used either fresh or dried and are especially good in seasoning bean and turtle soups, salads and stews, cream and cottage cheese chopped meat and sausages. Basil, which forms

an essential part of the Italian cuisine, is excellent in omelettes, egg dishes and tomatoes. Basil, originally a tropical Asiatic plant, was used in India for a thousand years. Holy Basil (*Ocimum sanctum*) was sacred to the Hindus. The botanical name, *Ocimum basilicum*, is thought to refer to the Greek word "basileus", meaning king. In Italy, pots of basil were kept in open windows to keep away flies.

**Borage** (*Borago officinalis*) is a spreading, branched annual, weed-like in growth with clinging burs and rough, hairy foliage. It grows about 2 feet high. The leaves are ovate, alternate and dark green. The pretty flowers are arranged in clusters of sky-blue, five-pointed stars. Borage is easily grown, and if left alone, the seed self-sows and comes up year after year.

The young leaves may be cooked like spinach but, after the plant flowers, the greens are too rough and hairy to be edible. Fresh leaves have a cucumber flavor which adds a cooling touch to salads, pickles and iced drinks. The flowers can be crystallized and used in cakes and potpourris. To ancients, Borage stood for courage. Pliny said it drove away sadness and brought pleasant forgetfulness; thus it is thought to have been the "nepenthe" of Homer's "Odyssey", the drink which lulled the senses into oblivion. Its name is derived from the Latin "burra", or rough hair, referring to the hairy foliage.

**Caraway** (*Carum carvi*) is a hardy biennial and grows especially well in northern climates. It prefers a dry, clay soil and attains a height of 24 inches. It is a very valuable plant, for the foliage can be used in soups and salads, the roots boiled as a vegetable, the oil in perfume and the seeds for flavoring. Caraway has pretty, feathery green leaves, and umbels of yellowish-white flowers. The seeds, which are dark brown with ridges of light brown, appear in midsummer if sown the preceding autumn, and are harvested as soon as ripe.

Caraway seeds are used in rye bread, cakes, cookies, cheese, apple sauce, soups and confectionery. After distillation of the oil, the seed is sometimes used as a cattle food, because of its high protein and fat content. Caraway was named after the district of Caria in Asia Minor. This was the "Chara" of Julius Caesar and Caraway was also mentioned years later, in the royal cook book of Richard II of England. The seeds were used for the relief of colic and digestive disturbances. Dioscorides, the famous Greek physician and botanist, prescribed it for pale-faced girls. Caraway was once thought to have the power to prevent theft, and hence became an ingredient of love potions to counteract fickleness in one's beloved.

**Catnip** (*Nepeta cataria*) is a perennial usually grown from seed. The Romans used it for nose and throat ailments. It is sometimes still prescribed to combat fevers and induce sleep. The plant reaches a height of 2 or 3 feet and bears purplish-white flowers. The heart-shaped toothed leaves are downy, and a gray-green color. Catnip

is easily grown and does not require a great amount of moisture, as the other mints do. The characteristic mint odor appeals to cats and so gives it its common name.

**Chervil** (*Anthriscus cerefolium*), an annual resembling Parsley, grows to a height of about 18 inches. It requires the shade of taller plants. Aside from the fact that it does not transplant readily, the culture is simple. Leaves are ready for gathering in 6 or 8 weeks from the time of sowing. Chervil is much branched with fine leaves and tiny white flowers borne in umbels. It has black, slender, needle-shaped seeds. Sweeter and more aromatic than Parsley, Chervil is very popular in the French cuisine, where it is an ingredient of "Fines herbes". The chopped leaves may be used in salads, meat loaf, soups, fish sauces and salad dressings.

**Chive** (*Allium schoenoprasum*) is a hardy perennial belonging to the lily family. Propagation is by division of the bulbs which grow in clumps. It is best to leave about six of these tiny bulbs together when planting. Replanting is done every three or four years. Chive leaves are long, slender, tubular, and about 10 inches long. It has clover-like lavender flowers which grow in clusters. Seeds are small and black when ripe, much like those of onion. The green leaves add a delicate onion flavor to soups and salads and are especially tasty in cottage cheese, omelettes, croquettes and sandwich fillings.

**Coriander** (*Coriandrum sativum*) is a slender, branched annual. It grows best in sunny, fertile, well-drained soil and reaches a height of 24 inches. Since Coriander does not transplant readily, it should be thinned out when about 2 inches high. The seeds are round, as large as sweet pea seeds, and straw-colored. The foliage and unripe seeds have a very disagreeable flavor, but the ripened seeds have a pleasant, pungent flavor. The seed germinates quickly and, if not promptly harvested, may easily become a garden pest. The flowers are rose-tinted and resemble Queen Anne's Lace. The basal leaves are rounded, toothed and yellow-green, while the top leaves are thin segments.

The seeds are used in flavoring bread, gingerbread, cookies, cakes, poultry stuffings, baked apples, sausages, cheese, cordials and confectionery. It is also used in Indian curry. Coriander derived its name from the Greek word "koris", meaning bedbug, because of the peculiar, disagreeable odor of its foliage. In China this herb was a symbol of immortality. The seeds were found buried in ancient Egyptian tombs.

**Dill** (*Anethum graveolens*) is a hardy annual grown from seed, requiring two and one-half months from planting to harvest. A native of the Mediterranean region and Southern Russia, it has spread to the northern part of Europe and grows in Scandinavia. It prefers a warm, dry, sandy soil, and must be staked for it grows

to a height of 2 or 3 feet, and seldom has more than one stalk. The seed germinates rapidly. It does not like transplanting. Dill resembles Fennel but is smaller. The leaves are feathery, and the stems gray-green. Flowers are borne in greenish-yellow umbels. The seeds are thin, small and flat, brown in color with cream-colored veins.

Being strongly aromatic, oil from the seeds is used in scenting soaps and perfumes. The leaves are used in beef gravy, cottage cheese and potato salad; the seeds in gravy, apple pie, spiced beets and in vinegar. The primary culinary use of Dill seeds is in pickling cucumbers. If desired for use in dill pickles, seeds are planted about 2 months before the cucumbers will be ready. The seed heads and part of the stem and leaves are cut when the seeds begin to ripen, tied in bunches and placed in jars in alternate layers with the pickles. The name, Dill, is derived from the Old Norse "dilla", meaning to lull. In Germany, brides carried it in bouquets. Since witches were thought to hate Dill, it became a charm against witchcraft.

**Fennel** (*Foeniculum vulgare*) is a perennial, but, not being winter hardy in Connecticut, is usually grown as an annual. The roots are strong and the stems thick, hollow, and much-branched, so that it must be staked. Sweet Fennel, the most popular variety, grows very tall, reaching 3 to 5 feet. It prefers a lime or chalk soil. The leaves are divided into thin thread-like segments, and the flowers are yellowish-green. Florence Fennel or Finocchio is a thick-set, low-growing annual, seldom exceeding 2 feet in height. This requires richer soil and more watering than Sweet Fennel. The thick part of the base, resembling celery, is a popular Italian vegetable; it is boiled and served with cream sauce or a rich butter dressing or may be baked with Parmesan cheese. Fennel leaves are used in garnishing, and in salads, soups, and fish sauces. The seeds provide seasoning for soups, cakes, puddings, sauerkraut and spiced beets. Fennel leaves are used with mackerel, salmon, and other fish to counteract their oiliness. Fennel received from the Romans the name "foeniculum" meaning a variety of fragrant hay. It was mentioned several times by the ancients and was highly lauded for its power to sharpen the eyesight. Henry Wadsworth Longfellow used this theme in his "Goblet of Life". To the ancient Greeks, Fennel denoted success and was called "marathron", shortened later to marathon, the famous battle-ground where the Athenians defeated the Persians in 490 B.C. In Elizabethan times Fennel was synonymous with flattery.

**Lavender** (*Lavandula sp.*). There are many species of lavender ranging from quite tall shrubs to dwarf rock garden types. The flowers vary from white to deep violet blue. Though perennials, they require winter protection in this climate and are best transferred to a cold frame. The foliage and stems are gray and hoary. The flowers are usually borne in spikes. The lavenders may be grown

from seed, but since they germinate slowly, are often started from cuttings. A light spot, airy and warm in dry alkaline soil is best. As in the case of most perennials the plants last only about 3 years. The whole lavender plant is aromatic but the dried flower buds yield the most fragrant oil for perfumes. The flowers are gathered when the lower buds on the spike begin to open and are dried in the same way as the foliage of the culinary herbs. The drying of the flowers is a much longer process.

*Lavandula vera*, the true English Lavender, is the most commonly grown. It reaches a height of 1 to 3 feet. This is much the most desirable for its aromatic oil though several others, including spike lavender and the dwarf French, are grown in herb gardens.



Sage

(From *Herbs and the Earth* by Henry Beston)

Marjoram

Lavender in the Bible was called Spikenard. The Romans perfumed their baths with lavender, the name being associated with the Latin "lavare", to wash.

**Marjoram, Sweet** (*Origanum majorana*), a perennial, is grown as an annual in this climate as it is often killed out in winter. It is a small erect bushy plant with a somewhat red, delicate, woody stem. The opposite leaves are small and narrow, the upper ones bearing the flowers in the axils. The green-bracted purplish flowers are arranged in round close heads which have given the plant the name Knotted Marjoram. A dry chalky soil with ample sunlight is ideal

for Marjoram. The plants, raised from seed or cuttings, are set in rows about 12 inches apart with 8 inches between plants. A great deal of care must be taken to have the soil worked fine as Marjoram is quite difficult to transplant. If the seed is sown in the open, it should be planted by April. As germination is slow, weeds must be kept out or they will choke the young plants.

The leaves of Marjoram are used, fresh or dried, in soups, sauces, stuffings, egg dishes, chicken and meats. They also go in spinach, tomatoes, beans, peas and, with a few leaves of Basil, in salads. Fresh leaves are used for making vinegar and for garnishes. The flowering tops are added to sachets and potpourris. Commercially the oil is of importance for scenting soaps and perfumes. Marjoram represented happiness to many of the ancients, while in Crete it stood for honor. The Greeks and Romans crowned married couples with it. This herb, like Basil, was sacred in India. The botanical name, *Origanum*, comes from the Greek, "horos ganos", meaning mountain decoration.

**Mints** (*Mentha* sp.). There are several mints which are widely grown for both fragrance and flavor. The most common are Spearmint (*Mentha spicata*), Peppermint (*M. piperita*), Applemint (*M. gentilis*), and Orange-mint (*M. citrata*). The latter two have the most delicate flavors. All these mints are hardy perennials with creeping rootstocks and are easily propagated by cuttings, divisions or layers. They rarely produce viable seed. A cool damp place is their preference, but they will grow in the sun.

They make fragrant house plants as well as garden subjects. Before being brought indoors for the winter, the roots are allowed to freeze in the pot. Indoors, they are placed in a shady spot until new growth starts, then transferred to a sunny window in a cool room. Spearmint grows to a height of 2 feet, is quite erect and has narrow sharply toothed tapering leaves with conspicuous oil glands. Peppermint is very similar to Spearmint, but grows somewhat taller. Orange-mint is decumbent, much branched and has broader leaves. There are two forms of Applemint which are most decorative. One has red stems with smooth green leaves, the other green stems with variegated green and ivory leaves.

The fresh leafy tops of mint are used for jelly, vinegars and in iced beverages. The chopped or powdered leaves are used in lamb and fish sauces, apple sauce, fruit cup, ice cream, confectionery, sprinkled over vegetables (e.g. peas and boiled potatoes), in pea soup and currant jelly. Commercially the oils are distilled for use in tooth paste, mouth washes, liqueurs, chewing gum and soaps. In ancient Greece, mint was used as a rub-down after bathing. The botanical name, *Mentha*, was attributed to the plant because Pluto, god of the underworld, became infatuated with a nymph, named Menche. Proserpine in her jealousy changed the nymph into a humble plant to be trampled upon.

**Parsley** (*Petroselinum hortense*) is probably the best known and most widely grown of all herbs. There are several forms, among them, Double-curved, Moss-leaved, Fern-leaved and Turnip-rooted. As in most biennials, a rosette of leaves is produced the first year and the flower stalks, with umbels like those of Caraway, appear the second year. The seeds of Parsley germinate very slowly, especially when fresh, hence soaking in lukewarm water for about 24 hours is recommended. If the seeds are sown outdoors a quick germinating seed such as radish is often planted with it to mark the rows. They may be sown in late October or November or very early in the spring in the open garden, but if started indoors will do better. The plants are transplanted or thinned out to a distance of 6 to 8 inches. The leaves may be cut first about the early part of July and may be used all winter if protected from frost by a cold frame. Plants may be dug up and potted in the fall. Most of the root system should be taken up with a good ball of soil.

Parsley is used either fresh or dried as a garnish, in soups, mixed in butter sauces and sprinkled over potatoes, fish and cooked meats. References to Parsley appear in Homer's "Odyssey" and in the pastoral poems of Theocritus and Moschus, the Sicilian poet. It was used to decorate the tombs of the ancient Greeks and to crown the victors of the Nemean games. Parsley was woven into garlands at sumptuous Roman banquets to absorb wine fumes and dispel the after-effects of excessive drinking. Superstitious people believed it bad luck to transplant Parsley. There was once a belief that by sprinkling powdered Parsley on the head three times a year, baldness could be prevented.

**Rosemary** (*Rosmarinus officinalis*) is a shrubby perennial, but not being reliably hardy, is often treated as an annual in this region. In Southern Europe where it is native, it is a woody evergreen shrub and is often planted as a hedge. The long narrow leaves are rough, gray-green above, with rolled margins, and much lighter and glandular beneath. Cuttings and divisions are easily made and grow well, but Rosemary may also be grown from seed. It should be sown indoors early in the spring in sterile soil and transplanted when about an inch high. The seedlings are set in rows about 12 inches apart in a poor limy soil. Lime may be added to the soil several times during the season.

The fresh tops of Rosemary are used as garnishes, in summer drinks and pickles. The chopped and powdered leaves are added to jams, sweet sauces, stews and soups, and sprinkled over pork and beef roasts. The fragrant oil, which seems to be a blend of nutmeg, pine needles and heliotrope, is widely used in perfumes and soap. Rosemary was called in Latin "ros maris", translated "dew of the sea", for it seemed to thrive especially well near the salt sea spray. In later Christian times, it was connected with the Virgin Mary who turned the blossoms blue as her cloak passed over them. In Shakespeare's "Hamlet", Ophelia offers Laertes Rosemary for remembrance.

**Sage, Garden** (*Salvia officinalis*) is a hardy perennial which grows about 2 feet tall. The soft woody stems, like the leaves, are quite hairy. The oval tapering leaves are dull grayish green with a pebbled texture. Cuttings and divisions of Sage are easily made, but it is usually grown from seed. The seed should be sown outdoors early in the spring in rows and thinned out to stand 12 to 18 inches apart. Sage grows best in a well drained loam.

Chopped fresh leaves of Sage flavor sausages, cottage cheese and pickles. When dried and powdered they are sprinkled over poultry, veal and pork, and used in poultry stuffings, sausage, stewed tomatoes and string beans. The flavor is very strong so the leaves should be used sparingly. Sage, as its name implies, was believed to be capable of strengthening the memory. In a manuscript of the year 1393, Sage was used with "Pygges in sawse sawge", or pork sausage. Charles Lamb in his "Essay on Roast Pig" recommended the use of Sage in the stuffing. It was thought not only to increase wealth but to prolong life, which gave rise to the saying "How can a man die who has Sage in his garden?"

**Savory, Summer** (*Satureia hortensis*) is a small erect annual. This fragrant little plant has slender blunt-tipped leaves and pale lilac flowers on slender stalks in the upper axils. The seeds may be sown indoors or in the open in very shallow drills as soon as the frost is out of the ground. They should be thinned out so that the plants are 6 to 8 inches apart each way. Plants started in hotbeds are usually ready for cutting by the end of May and those started in the open about a month later. Savory is not used fresh as it does not stand cutting back very well. When it begins to flower the whole plant is cut down and dried. The leaves are then used in salads, meat cakes, string beans, croquettes, peas and stuffings.

**Tarragon** (*Artemisia dracunculus*) is a perennial shrubby plant with twisted leafy branches. The leaves are slender, pointed and alternately arranged on the woody stems. This is one of the herbs which must be grown from divisions or cuttings as it does not produce seed. The plants spread, so should be set 18 to 24 inches apart. A warm dry soil is preferable and winter protection must be given. Fresh Tarragon leaves are used in vinegars, pickles, and salads. Dried leaves are added to soups, stews, tartar, fish and cream sauces, egg, chicken and mushroom dishes.

**Thyme, Garden** (*Thymus vulgaris*) is a shrubby perennial about 8 to 12 inches tall. It has tiny grayish green leaves closely set on small wiry stems. The lavender blossoms are born in spikes. Thyme may be propagated from divisions, layers, or cuttings, but is usually started from seed. The seeds, though they germinate readily, are very small and should be sown in a well prepared bed of fine loose soil. The plants are thinned out to stand about 6 inches apart. The beds run out in about 3 years and may be renewed by

cuttings, layering or seeding. A good winter covering is required in this climate to prevent heaving of the soil.

The fresh tops of Garden Thyme are used for garnishes. The whole plant is cut and dried for winter use, but chopped fresh leaves may also be added to sauces for fish, meats, poultry and game, vinegars, soups, stews, chowders, fricassees, vegetables and cheese. The oils find commercial value in perfumes and deodorants. There are many other thymes several of which are prostrate and grow in thick mats. They are often used over walls, in rock gardens and as house plants. The lemon scented ones are very popular and have a variety of foliage — silvery, golden and variegated. The blossoms also appear in a wide range of colors, from white to reddish purple. Clippings are used for flavoring and in sachets. Propagation of these varieties by cuttings is especially recommended to insure retention of their unique characters. Thyme comes from the Greek meaning to fumigate. Pliny mentioned it, and Virgil also in his "Georgics". This herb was symbolic of bravery and energy.

**Verbena, Lemon** (*Lippia citriodora*) is a perennial shrub from Argentina and Chile where it often attains a height of 10 feet or more. In this region it is low growing and not particularly hardy. The woody branches are rather weak and bear long narrow leaves in whorls of 3 or 4. The upper side of the leaves is shiny; the lower dull, rough and glandular. The small white flowers are arranged in terminal spikes or panicles. Lemon Verbena is propagated from cuttings. It is often grown as a pot plant, the whole pot being plunged in the ground outdoors in early summer. Then they can be brought in as house plants for the winter, or cut back and kept without watering in a cool cellar. They like moderately rich soil. The leaves are used for flavor in cold drinks, tea, and jellies. Their fragrance is especially popular in cologne, sachets, potpourris and finger bowls. They may be harvested any time during the summer.

#### COMMERCIAL RAISING OF HERBS

Many people are interested in raising herbs on a commercial scale to compensate for the shortage brought about by the present war. Herb raising has never been an industry of great profit in the United States because of the competition of much cheaper labor in Europe. At the close of the war, when normal trade is resumed, we may once again receive our supply of herbs from European countries. At present the price range is quite high, with some herbs selling at five times their former cost.

There are many medicinal plants which grow wild and are collected and sold by farmers and nearby inhabitants. Among these native botanical drugs are dandelion roots, boneset, cascara bark, ginseng and goldenseal. The last two mentioned are grown also under cultivation as is pyrethrum, used in insecticides.

The beginner would do well to start with the condiments such as Sage, Basil and Savory. The following culinary herbs are in demand for their medicinal value also: Anise, Caraway, Coriander, Dill, Fennel, Peppermint, Spearmint and thymes.

New England is good country for raising herbs for, on the whole, the soil is not overly rich. In the South, the foliage sometimes grows too rank, thus diminishing the strength of the essential oils. Most herbs grown commercially are treated as annuals. A light sandy soil, with some clay or humus, is preferable. There is more profit in raising herbs for their essential oils than for their foliage, yet this necessitates a steam boiler and condenser or some means of distillation.

Herbs are used in many industries, including the manufacture of dyes, polishes, tinctures, lotions, extracts, insecticides, dentifrices and liqueurs.

Before any attempt is made to produce herbs commercially, the grower should make a thorough study of their culture. The drug content of the seed may not be very high in plants improperly grown, or the foliage may lose much of its value through careless curing. Since some herbs are naturally more in demand than others, market conditions should also be considered. These are only a few of the problems the commercial grower has to contend with. Those interested in the commercial raising of herbs are advised to read the following publications of the United States Department of Agriculture:

American Medicinal Plants of Commercial Importance, Misc. Pub. No. 77  
 Drug Plants Under Cultivation, Farmers' Bul. No. 663  
 Peppermint and Spearmint as Farm Crops, Farmers' Bul. No. 1555  
 Drying Crude Drugs, Farmers' Bul. No. 1231

## SOME EASILY GROWN HERBS

Name	Duration	Average Height	Method of Propagation	Uses
Anise, <i>Pimpinella anisum</i>	Perennial	18 inches	Seed	Seeds for flavoring
Balm, Lemon, <i>Melissa officinalis</i>	Perennial	24 inches	Seed or Cuttings	Leaves for flavoring
Basil, <i>Ocimum basilicum</i>	Annual	24 inches	Seed	Leaves for flavoring
Borage, <i>Borago officinalis</i>	Annual	24 inches	Seed	Leaves for flavoring
Caraway, <i>Carum carvi</i>	Biennial	24 inches	Seed	Seeds for flavoring
Catnip, <i>Nepeta cataria</i>	Perennial	30 inches	Seed	Foliage
Chervil, <i>Anthriscus cerefolium</i>	Annual	18 inches	Seed	Leaves for flavoring
Chive, <i>Allium schoenoprasum</i>	Perennial	12 inches	Division	Leaves for flavoring
Coriander, <i>Coriandrum sativum</i>	Annual	24 inches	Seed	Seeds for flavoring
Dill, <i>Anethum graveolens</i>	Annual	30 inches	Seed	Seeds for flavoring
Fennel, <i>Foeniculum vulgare</i>	Annual	48 inches	Seed	Stem, leaves, seeds for flavoring
Lavender, <i>Lavandula vera</i>	Perennial	24 inches	Cuttings	Flowers for fragrance
Marjoram, Sweet, <i>Origanum majorana</i>	Annual	18 inches	Seed or Cuttings	Leaves for flavoring
Parsley, <i>Petroselinum hortense</i>	Biennial	12 inches	Seed	Leaves for garnishes
Peppermint, <i>Mentha piperita</i>	Perennial	36 inches	Cuttings	Leaves for flavoring
Rosemary, <i>Rosmarinus officinalis</i>	Perennial	18 inches	Cuttings	Leaves for flavoring
Sage, Garden, <i>Salvia officinalis</i>	Perennial	24 inches	Seed	Leaves for flavoring
Savory, Summer, <i>Satureia hortensis</i>	Annual	12 inches	Seed	Leaves for flavoring
Spearmint, <i>Mentha spicata</i>	Perennial	24 inches	Cuttings	Leaves for flavoring
Tarragon, <i>Artemisia dracunculoides</i>	Perennial	24 inches	Cuttings	Leaves for flavoring
Thyme, Garden, <i>Thymus vulgaris</i>	Perennial	8 inches	Seed or Cuttings	Leaves for flavoring

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