

HOPS



Humulus lupulus
[HUM-uh-lus lup-OO-lus]
(previously *H. americanus*)

Family: Cannabaceae

Pharmaceutical Name: Fructus Humuli

Names: lupulo (Mexican); chmiel (Polish);
Flor de lupulo, Flor de cervesa

Description: Perennial. Tall, spindly, clinging vine reaching a height of 15-30 feet. The flowers are green-yellow catkins. The female flowers are enclosed in strobiles. The male flowers hang in 6- to 10-inch narrow bract pairs. The leaves are bright green, opposite, usually 3-5 heart-shaped lobes with coarsely serrated edges resembling grape leaves, with long twirling petioles. The fruit are conical strobile, 11 inches long. Blooms from July to August.

Cultivation: Easily grown in a good garden soil in sun or semi-shade. Prefers a deep rich loam and a warm sheltered position. Plants can

succeed in dry shade if plenty of humus is incorporated into the soil, once established they are also somewhat drought tolerant. Hops are reported to tolerate an annual precipitation of between 31 and 137cm and a pH of 4.5 to 8.2. Plants are very hardy tolerating temperatures down to about 12°F when dormant. The young shoots in spring, however, can be damaged by any more than a mild frost. A climbing plant, supporting itself by twining around the branches of other plants. Hops are frequently cultivated, both commercially and on a domestic scale, in temperate zones for their seed heads which have many medicinal qualities and are also used as a flavoring and preservative in beer. There are many named varieties. They grow best between the latitudes of 35 - 51°N and 34 - 43°S, with mean summer temperatures of 48 - 50°F. Generally, for beer making, the unfertilized seed heads are preferred and so most male plants are weeded out.. Hops are fairly deep rooted, but with a network of shallow feeding roots. These horizontal feeding roots spread out at depth of 20 - 30 cm in the soil and give rise to fibrous roots in upper layers of soil. The vertical roots develop downwards to a depth of about 150 cm with a spread of 183 - 244 cm and have no fibrous roots. The bruised leaves are refreshingly aromatic whilst the flowers cast a pleasing scent. A food plant for many caterpillars. Dioecious. Male and female plants must be grown if seed is required. Seed - sow spring in a cold frame. Germination is fairly quick. Prick out the seedlings into individual pots as soon as they are large enough to handle and plant out in the summer or following spring. Division in spring as new growth begins. Very easy, you can plant the divisions straight out into their permanent positions if

required. Basal cuttings in March. Harvest the shoots when they are about 10 - 15cm long with plenty of underground stem. Pot them up into individual pots and keep them in light shade in a cold frame or greenhouse until they are rooting well. Plant them out in the summer. The female cones are gathered as they start to ripen and are not yet brown and dried at 72-82F. This opens up the inflorescence and the hop glands which secrete the sticky yellow hop flour, drop out. The herb has an aromatic smell and a spicy, slightly bitter taste. Young shoots are cut in spring for culinary use.

History: The Roman historian Pliny dubbed hops *lupus*, or wolf, after noticing the way it twines tightly around other plants. The word hops comes from *hoppa*, to climb. Hops were grown by the Romans but were not widely cultivated until the 9th and 10th centuries, mostly in France and Germany. In less than 100 years, a new drink called *bier* made from Bavarian hops became famous. It was developed after hops was added to bread to encourage fermentation and preservation. Since bread was sometimes used in brewing, it was discovered that hops increases beer's alcohol content. The English preferred to sleep on hops pillows instead. Henry VIII warned that hops was a wicked weed that "would spoil the taste of the drink and endanger the people" and forbade its use. In the 17th century, English herbalist John Evelyn was still claiming the ingesting hops could result in disease, melancholy and a shorter life. In Russia, the word *hmel* describes both the herb and a slightly drunk person. Appearing in folk wedding songs throughout Poland, hops is always associated with strength and enduring, as well as with secret, love.

Constituents: volatile oil, about 0.4-0.85%, composed mainly of humulene (caryophyllene) with β -caryophyllene, myrcene, farnesene, 2-methylbut-3-ene-2-ol, 3-methylbut-2-ene-1-ol, 2,3,5-trithiahexane and similar compounds; with traces of acids such as 2-methylpropanoic and 3-methylbutanoic, which increases significantly in concentration in stored extracts;

flavonols mainly glycosides of kaempferol and quercetin; resin, about 30-12%, composed of bitter acids such as humulone, cohumulone, adhumulone and others; and β -bitter acids such as lupulene, colupulone, adlupulone, etc; Estrogenic substances of undetermined structure; tannins; lipids; the chalcone xanthohumol and others.

Properties: nervine, sedative, hypnotic, bitter tonic, antiseptic

Energetics: bitter, cool

Meridians/Organs affected: heart, liver

Medicinal Uses: The strobiles of hops are mildly sedative and diuretic. They are a bitter digestive that is especially suited for treating nervous indigestion, ulcers, insomnia, irritable bowel syndrome and Crohn's disease. They relax nerves and smooth muscles, especially in the digestive tract, within 20-40 minutes after ingestion. A 1980 study suggested that they contain a muscle-relaxing constituent in addition to lupulin, which had been assumed to be the only active chemical. Hops' antibacterial agents, responsible for preserving bread and beer, also fight digestive tract infections. Hormonal effects from estrogen-like compounds were first noted when female hops pickers experienced changes in their menstrual cycles (some even stopped menstruating) after absorbing quantities of the essential oil through their hands. Aphrodisiacal effects were observed in men. Regular doses of the herb can help regulate the menstrual cycle. GLA which also occurs in evening primrose oil, has been found in hops, suggesting its usefulness for PMS and menstrual problems, especially muscle cramps, headaches, and sore breasts. Hops also helps insomniacs. A hops poultice can relieve the pain and inflammation of earache or toothache. Experiments in Germany have shown that hops tinctures are more stable than dried hops, which quickly degrades with exposure to light and humidity. Externally used for skin infections, eczema, herpes, and leg ulcers. Combined with

Valerian as a sedative and Roman Chamomile or Peppermint for nervous digestive problems.

Dosage:

Infusion: for insomnia, drink one cup at night

Sachet: make a sachet with 100g dried herb. Put inside a pillow to aid sleep

Tablets: take for stress or sleeplessness

Tincture: For excessive anxiety, take 20 drops diluted in a glass of water 3 times a day. For digestive headaches, take 10 drops with water up to 5 times a day

Capsules: to stimulate the appetite, take a 500mg capsule 3 times a day before meals. It is a delicate herb and should be used fresh or freshly tinctured.

Sleep-inducing Mini-Pouch

1 cotton or linen pouch (2 ¾ in x ¾ in)

2 ¾ oz hop cones, dried

1 oz catnip leaves, dried

¾ oz linden flowers, dried

Combine the plants and insert into the cloth pouch. Slide the pouch inside your pillow to induce inspiring dreams

Aromatherapy Uses:

EXTRACTION: Essential oil by steam distillation from the dried cones or catkins, known as 'strobiles'. An absolute is also produced by solvent extraction for perfumery use.

CHARACTERISTICS: a pale yellow to reddish-amber liquid with a rich, spicy-sweet odor.

BLENDS WELL WITH: pine, hyacinth, nutmeg, copaiba balsam, citrus and spice oils

ACTIONS: anodyne, aphrodisiac, antimicrobial, antiseptic, antispasmodic, astringent, bactericidal, carminative, diuretic, emollient, estrogenic properties, hypnotic, nervine, sedative, soporific

USES:

Skin Care: dermatitis, rashes, rough skin, ulcers

Respiratory System: asthma, spasmodic cough

Digestive System: indigestion, nervous dyspepsia

Genito-urinary and endocrine systems: amenorrhea, menstrual cramp, supports female

estrogens, promotes feminine characteristics, reduces sexual overactivity.

Nervous system: headaches, insomnia, nervous tension, neuralgia, stress-related conditions

Other Uses: employed as a fragrance ingredient in perfumes, especially spicy or oriental types. Used in flavor work in tobacco, sauces and spice products, but mainly in alcoholic drinks, especially beer.

Toxicity: Not given to patients with a history of depression.

Other Uses: Dried hops are added to sleep pillows. Used in perfumes of the *chypre* and *fougere* types. Hops can be used for basketry and wickerwork. The fiber is also good for producing paper.

Ritual Uses: Gender: Hot. Planet: Mars. Element: Water. Part Used: Fruit. Basic Power: Healing. Hops can be mixed with most other herbes associated with dream magick and put in dream pillows. It is believed that hops increases the restfulness and serenity of your dreaming time. Hops may be brought into rituals which honor the gods and goddesses who brought the gifts of ale and beer to humankind. Healing incenses and sachets. A pillow stuffed with the dried herb helps bring on sleep.

Cosmetic Use: Used in skin softening creams and lotions, its effectiveness is possibly due to hormonal actions. From the newly opened flowers, an otto is distilled which is an astringent skin lotion and gives a pleasing fragrance in perfume.

Hops Hair Potion

½ cup mayonnaise

½ cup hops blossom

1 qt water

Boil hops and water for ten minutes. Strain. Wet hair with this mixture, capturing it in a basin and rewetting it again. Rub in the mayonnaise and wrap with a terry towel for an

hour or so. Shampoo as usual. Conditions hair.

Culinary Uses: Young shoots are eaten raw or cooked like asparagus. Hops are the main flavoring in beers. Distilled oil and extracts are also used in food flavorings and soft drinks.

Recipes:

Humulus Quiche

9 inch pastry crust
1 medium onion, chopped
1 ½ oz butter or margarine
½ pint milk
small bay leaf
1 oz flour
1 egg yolk
2 Tbsp double cream
6 oz young hop shoots chopped and lightly poached in boiling salted water
salt and pepper
sprinkling of nutmeg

Prick the bottom of the crust with a fork and leave in the refrigerator. Melt the butter and cook the onion until soft but not brown. While it is cooking, warm milk with bay leaf and leave to infuse for a few minutes. Stir the flour into the butter and onion mixture and stir in the strained milk gradually to make a smooth sauce. Return to heat and stir until the sauce comes to boiling point. Remove from heat. Mix together the egg yolk and cream and stir into the sauce. Add the hop shoots and seasoning. Pour into the prepared pastry case and decorate the top with a lattice of pasty strips or shapes if desired. Bake at 425F for 30 minutes or until the pastry is lightly browned. Can be eaten hot or cold. (Food from the Countryside)

Split Pea Soup

8 oz split peas
5 ¼ pint water
small knuckle of bacon
1 medium onion
1 large potato
sprig lovage
½ tsp celery seeds
bunch hop shoots

Soak the peas in the water overnight, and in a separate bowl soak the knuckle of bacon. Add the drained knuckle to the pan with the peas and water, together with the onion, peeled and finely sliced and the potato peeled and cubed, the lovage and the celery seeds. Simmer, stirring from time to time, until the peas are mushy, remove bacon knuckle and lovage and blend or sieve the soup. Lightly poach the chopped hop tops, shred up the meat from the knuckle. Return the soup to the pan, add the meat and hop shoots and reheat. Taste and correct seasoning before serving. Serve with chunks of wholemeal bread and butter. (Food from the Countryside)

Hop Lemonade

½ oz fresh hops or ¼ oz dried hops
a small piece of bruised ginger root
1 bunch of fresh apple or other mint
1 thinly sliced lemon
2/3 cup brown sugar

Fill a large pan with 4 ½ pints of cold water and add the hops, ginger, mint and lemon. Bring to a boil and simmer fast for 30 minutes. The liquid will have reduced by about half. Strain and stir in the sugar. Stir to dissolve and boil for 5 minutes. Pour into a jug and cool (The Complete Book of Herbs and Spices)

Hops Bud Pie

4 cups of milk
10 oz semolina flour
4 Tbsp butter
4 eggs
10 oz hops buds
4 tbsp of tomato sauce
4 tbsp extra virgin olive oil
1 bunch of basil
salt & pepper
nutmeg

Blanch the hops buds, drain and chop them. Then mix in the eggs and lightly sear the concoction in butter and nutmeg. In a separate pan, bring the milk to a boil and add salt. Add the semolina flour and stir continuously for about 15 minutes, add the hops and other ingredients and pour the whole mixture in a

baking dish. Cook at 350F heat for about 30 minutes. Serve cold with a light salsa made from the tomato sauce, oil, basil, salt and pepper.

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