

## Hops of The Northwest

Hops were introduced into North America by the Massachusetts Company in 1629 and were grown for domestic use in New Netherlands as early as 1646. By 1648 production had spread to Virginia. Hops were not an important field crop in this country, however, until about 1800. The first commercial hopyard was established in New York about 1808, and by 1849 New York produced more than 1 million pounds annually. Total production along the eastern seaboard at that time amounted to 1,500,000 pounds annually.

In 1869 the industry had spread through Pennsylvania and into Wisconsin, where 5 million pounds of hops were produced. New York's hop industry was growing at the same time and in 1879 more than 21 million pounds were produced. Sadly in the 1920's the New York hop industry was nearly wiped out by downy mildew. New York made a small come back during the 1930's.

The industry in the Pacific Northwest started between 1849 and 1869. Although New York led hop production at the turn of the century, Oregon and California were out producing it by 1909. Since 1950 Oregon, Washington, California, and Idaho have become the Major hop-producing States since the industry reached the Pacific Coast.

Hops have an annual top with a perennial root system. The top freezes or dies back after flowering. The root will survive with no care in the garden and sprout next spring. Hops have a very vigorous root and do poorly in pots or containers of any sort. They quickly become "pot bound" and die.

Hops will flower the second year. The flowers of Brewers Gold are sterile - they have no seeds. This is due to the fact they are polyploids. Hop plants are generally unisexual, but male and female flowers may form on the same plant at times. Only the female plants produce the hops of commerce. The female flowers are borne in clusters on the upper part of the main stem and on the side-arms. As the female flowers mature, they form cone like structures composed of a central stem that bears many petals. The mature hop cones are 1 to 4 inches long, oblong, yellowish green, and papery to the touch; the petals and the seeds bear yellowish, glandular bodies called lupulin. These mature cones, after they are processed are the hops of commerce. The essential oils and resins contained in the lupulin are what is used for brewing and medicines, also they are what give the hops its characteristic aroma.

Hops are either seedless or seeded. Seeded hops result when the female flowers are fertilized by pollen from the male flowers. Seedless hops result when pollination is prevented by the elimination of all male plants in the area. In general, seeded hops are larger and heavier than seedless hops; but brewers feel that seeds in hops are undesirable. Seedless hops tend to shatter less during picking than do seeded hops. More seedless hops are grown today because growers usually receive a premium price for them.

The vines are quite ornamental and if they are given 12 to 15 feet of string they will trellis nicely. In a single season hops will grow 20 to 25 feet. They make nice patio screen in the summer keeping the sun out and die back to let the sun in, in the winter.

The leaves of the hop are dark green and hairy. They are somewhat heart shaped and deeply lobed (3 to 5 lobes) with toothed edges. Leaves are borne in twos, opposite each other on the stem. Long lateral branches bear most of the crop.

Hops have two main disease problems. Number one is red spider mite which you can research in the library. The mite causes the leaves to dry up and die as they feed on the sap. The other problem is mildew, which should not be too severe in dry climates, unless you water the leaves directly with a sprinkler. This causes the mildew spores to spread by the water bouncing off the leaves. Mildew and red spider can be controlled to a certain extent by sulfur dust. Sulfur aids plant growth, is organic and has fungicidal qualities.

Start training 3 - 4 of the spiraling shoots as they appear in the spring. Break off other shoots as they appear. Hops should last many years in the garden.

**Planting:** Hop rhizomes should be soaked for several hours prior to planting. Close examination of the buds will indicate up from down. Plant hops with the buds up. Hops thrive in ordinary garden ground, but grow more vigorously in soil enriched with manure and wood ash or with fertilizer.

**Willamette:** Improved Fuggle type. Excellent all-purpose hop. 4-6% bitterness. Disease resistant.

**Nugget:** Vigorous producer of large hop cones. High bittering: 11-14%.

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