

Niwot Hops: Hop growing tips

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Receiving rhizomes

When you receive rhizomes, they will be in a resealable baggie. The rhizomes are slightly moist, and we usually include a moist piece of paper towel to help with this.

Put the the rhizomes in the refrigerator until you're ready to plant them. We like to leave the corner of the baggie unsealed to allow a little air exchange. Check them every few days to make sure they aren't drying out. If they're dry, use a spray bottle and spray a little water in the baggie (not much – one spray is plenty).

They can stay in the fridge this way for several weeks or even months.

Preparing to plant your rhizomes

You can start your rhizomes indoors in pots, or directly outdoors.

Starting indoors

Fill a moderate sized pot (six inches or bigger in diameter) with good potting soil. Place the rhizome in the soil, covering it with about an inch or two of material. We like to orient the rhizome diagonally under the soil, neither vertically nor horizontally. Add enough water to moisten the soil. Don't over water. Place the pot somewhere warm, near a window is best. Make sure the soil doesn't dry out. Check every day. In a week or two, you'll begin to see shoots, and soon the plants will begin making small leaves.

See the next section, "Starting outdoors" for the next steps.

Starting outdoors

First, pick a sunny location. The soil should be loose and worked well with mulch and good quality compost. The soil should drain well. Hops don't like to be too wet.

The hops need something to climb on. We use rough sisal twine tied to a 16' trellis wire. You'll need to either build a trellis or attach strings to something like a balcony or eave. It's good to figure this stuff out before planting. There are lots of ideas and inspirations for trellises on the net.

Plant the rhizomes (or starter plants that you started indoors) in April or May close to or after the last frost date. Check your growing zone to confirm the best planting time. The main concern is avoiding a hard freeze, which could kill a young plant. If you need to, you can temporarily cover your plants to protect them in the event of a freeze warning.

Water the plants just to keep them moist. Do not over water. Stick your finger in the soil to test it.

Twining the plants

When the plants reach a foot or so in length, twine the bines clockwise around the trellis string. Don't use wire – use a rough string – something the hop bines can cling to. They always go clockwise around the string.

During the growing season

Again, during the summer be sure to check the plants regularly. Don't let them dry out, and don't let them get too wet. Hops are hardy, but especially when they are young, you need to take care of them.

If you have any insect problems, consult with your local garden store. We grow organically, so our main defense against pests has been attracting and introducing beneficial insects like lady beetles to our hop yard. We always encourage exploring organic alternatives.

Harvesting hops

The hop cones start forming just after the summer solstice, and they continue to mature through late August. We usually harvest starting the third week of August. Open up a few cones, smell them, inspect them. When mature, the inside part of the cone (the lupulin glands) should be a nice yellow-orange color. If the cones have an overly grassy smell, they may need a little more time on the bine.

Using your hops

If you intend to brew with your hops, you can make a wet-hopped beer (something we love) or dry your hops before brewing with them. There are lots of ways to dry hops. A food dehydrator will work for smaller quantities. Don't let the temp get much above 110 degrees. Let them dry with as little heat as you can. There are lots of plans and ideas for solar drying mechanisms on the net.

Note: Typically, the weight of properly dried hops will be around 20-25%% of the wet weight.

Post Planting Cultivation Tips

Here is some more detailed info on how to care for your hop plants.

Hops cone production can be improved/reduced by as much as 25% by monitoring:

- Weed pressure
- Inadequate/too much water
- Incorrect pruning, twining
- Insect/virus pressure
- Inadequate/over fertilization

Fertilization

Hops require adequate fertilization at specific times during their seasonal growth.

In early Spring or late Fall (after the plant goes into dormancy) we add a healthy shovel of mature (not hot) dairy compost on top of the plant crown. Early in the Spring-Summer, you can add nitrogen as needed, but testing the soil first is advisable. Too much nitrogen will almost certainly invite aphids.

From the first Spring growth up to the Summer Solstice, hops plants are all about climbing and increasing biomass. Some varieties of hops can grow up to one inch per hour prior to the Summer Solstice! After approximately June 25th, the plant intuitively stops the pursuit of putting on biomass and focuses on making cones.

We send off petiole samples for testing in late June. This gives us a scorecard for our fertilization program. Typically the cone production will benefit from supplemental phosphorus and a wee bit of copper, manganese and boron. We apply this as a foliar spray, in the evening, to avoid burning the

leaves in direct sunlight. An example of a simple organic product that offers a 5-10-5 formula and the micronutrients that hops appreciate is Age Old Bloom. This can be found at local garden centers and works quite well. Timing is important, so try to apply when the plant is starting to set burrs. With a garden sprayer, spray the bottom 5-6ft of the bines and avoid spraying burrs or cones of course.

Water

Hops need adequate water, but won't do well in soil that doesn't drain properly. In general, it is well known that they hate wet feet. Avoid wet leaves in direct sunlight.

First year transplants need to be watched a little more closely and kept moist. They will become far more resilient in year two and beyond...

When the plants have a lot of biomass trained high above the ground, they transpire quickly in the hot sun. Wind can also increase transpiration. The need for water increases at this time. We recommend finger testing the soil to a depth of 8". You might find plenty of moisture down low and you won't know until you explore.

Weeding

Stay on top of weeds and do not permit other rhizomous plants, i.e. rhizomous grass to compete with your plants nutrients and habitat.

Pruning/Twining

In the first two years, pick a few (3-6) stronger bines and help them travel upward with your strings or trellises of choice. Once you give them something to climb on, they will naturally travel upward and in a clockwise pattern. They can and will travel laterally, but this growth habit will not produce more cones. If cone production is the goal, do not encourage additional bines to grow. Cones are dependent on light and generally will not produce until approximately 4ft off the ground. The higher the plant can be managed, the greater probability of cones. If cone production is not a priority, let her run wild.

It is recommended in year three to prune back the first Spring runners and then wait a couple of weeks. Then select only the next growth of 3-6 bines to trellis. Use caution in pruning and don't cut too close to the ground. Again, for cone production, discourage bines that you don't intend to trellis.

Side arms are to be encouraged and should offer excellent cone production. It is not recommended to impede their growth by twining or cutting back.

Insect/disease pressure

Hops are well known for attracting not-so-beneficial insects and plant diseases.

We choose to grow organically and always plant a nearby habitat to attract beneficial insects as part of our IPM (Integrated Pest Management Program).

You might wish to add an informational sheet of yellow sticky paper near one of the plants. It can be useful in identifying insects du jour.

Powdery Mildew and other plant fungal diseases are typically not a big issue in Colorado, but they can be a real problem in the Pacific Northwest and other growing climates.

We wish you an enjoyable journey and hope these tips will help!