



NORTHERN BREWER

# HOP RHIZOME

## GROWING GUIDE

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A **HOP RHIZOME** is the cone-producing plant used to grow hops. Hops can be planted almost anywhere in the continental United States, and require ~120 frost-free days to fully flower. Yields up to 2 lbs of hops per bine.

### PLANTING THE RHIZOME

Plant rhizomes once the soil is workable. Hops can survive a frost as long as the ground does not freeze solid. Bines ideally break ground with the first spring flowers.

Keep rhizomes refrigerated until soil is ready for planting. In storage, do not let rhizomes get either too wet or completely dry. Mist regularly to keep moist.

#### Choose a good location.

Hops prefer southern exposure with as much sunlight as possible. They thrive in light-textured, well-drained soil with a pH of 6.0-8.0. If drainage is a problem, build mounds using the surrounding topsoil mixed with organic matter. Urban growers must ensure hops are not in the immediate vicinity of a strong 24-hour light source, as this will prevent flowering.

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### HOW TO PLANT

1. Dig a hole ~1 ft deep.
2. Fertilize: mix soil with manure & other slow-release organic fertilizers, like cottonseed meal, bone meal or rock phosphate. **Do not over-fertilize** as too much nitrogen causes initial buds to burn. Return fertilized soil to hole.
3. Plant rhizome horizontally, about 4 in. below surface of soil.  
*Note: rhizomes can also be planted vertically, with buds pointing up.*
4. Separate different varieties by at least 5 ft to prevent tangling. Hops of same variety can be planted as close as 3 ft.
5. First-year hops have a minimal root system. The soil should NOT be allowed to remain dry for prolonged periods. Frequent, short waterings are best. You may mulch soil surface with organic matter to conserve moisture & control weeds.

#### After hop bines are one foot long...

Select the heartiest 2-3 bines and wrap them clockwise around a trellis or support. Prune all subsequent bines from the base of the hop.

### TRELLIS/SUPPORT SYSTEM

For the first year, the support system can be a thin, 8 ft stake. In subsequent years, you will need a support system of 10-12 ft.

*Note: a commercial trellis is 18 ft tall, but home growers can use a shorter one.*

You may also drop twine from a tree, pole, or house roof. Ensure twine is taut and strong, as mature hop bines are quite heavy.

### SUBSEQUENT YEARS

Hops retreat back to the permanent root stock (crown) each fall. The crown is hearty, and relatively unaffected by even the deepest winter freeze. Hops grow back much stronger [the second year,] after they have developed a good root system. Prune the earliest shoots back to the ground to encourage heartier second growth.

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## HARVEST & DRYING

Harvest hops before the first frost. Harvest date varies by location, but mid-August to mid-September is most common. Hops are ready to harvest when their aroma is strongest. Test aroma by smelling a crushed hop cone.

### HOW TO HARVEST

1. Test aroma & texture. Mature hops leave a yellow powder when squeezed between your fingers. Ripe cones feel dry and papery. Slight browning of lower bracts of the cone is normal, and a good sign of maturity.
2. Lower the hop bine to the ground.
3. Pick only the cones, not the leaf material. Dry hops before usage or storage.

### HOW TO DRY

1. In dry weather, air drying is preferable. Spread them shallowly onto a window screen and keep them out of direct sunlight.
2. Every day, "fluff" hops to bring moist hops to outside of pile. Hops are dry when inner stem is brittle: breaks rather than bends.
3. Store hops away from oxygen. Most home growers don't have access to oxygen-barrier bags and vacuum sealers. The best compromise is to pack as many hops as possible into a ziplock-style freezer bag. Squeeze them tight to remove as much air as possible and seal the bag.
4. Store hops frozen until used.

*Note: If you must dry hops with a food dehydrator or in the oven, keep the temperatures under 135° degrees.*

## USAGE

Homegrown hops are typically used for aroma, flavor & dry hopping. Bittering is a challenge, as precise alpha acids are not known. Run a few test batches to get the feel for potency.

### HOW TO USE (QUANTITIES)

- Homegrown hops = commercial hops (by weight)
- Leaf hops = about 15% less than pellets

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