



# HOP PLANT PROPAGATION TIPS

Compliments of the Clean Plant Center Northwest

## You bought some unrooted hop cuttings. Now what?!

The first documented cultivation of hops was 736 AD in the Hallertau region of present-day Germany. Hop cultivation began in the United States in 1629. So, rest assured, it is a hardy crop and propagates with a modest amount of care. You have made an investment in virus-tested hop plant material so you will be wise to follow proven methods for propagating and nurturing your stock, and taking precautions to keep it as free from pests and diseases as possible.

### Growing from unrooted green cuttings

The cuttings that you are receiving are kept moist for transport in Oasis® Rootcube foam. The cuttings will have one or two nodes, with leaves attached to the upper node.

1. Carefully remove the cuttings from the foam and dip the lower 1 to 2 inches in IBA solution (recipe on next page). If you use other commercial rooting hormones, be sure to follow the instructions for that product.
2. Leave in IBA solution for 1 to 2 minutes.
3. Rootcubes are the most convenient and easiest media to use for rooting your individual cuttings. Soak new cubes in clean water for 5 minutes to make certain they are saturated. (See <http://homeharvest.com/oasisinstructions.htm> for detailed instructions.)
4. Prepare individual rooting environments for each hop cutting by putting a moist Rootcube (or small pot filled with potting medium) into a clear Ziploc® bag—the 1-gallon size should work for a single hop cutting.
5. Push the cutting directly into the Rootcube foam (the predrilled holes are usually too big to hold a hop cutting firmly). Do not push the stick all the way through the foam and out the bottom (Oasis recommends inserting to at least 1/3 of the depth of the cube and no more than 3/4 the depth).
6. If you received a cutting with two nodes, be certain that the bottom node is fully in the foam (or other rooting medium if Rootcubes are not used).
7. Seal the plastic bag with the entire cutting enclosed, and prop upright in tray or other holder so that the cuttings can stand upright. If using pots or trays, cover them completely with a plastic cover or plastic wrap.
8. Check daily to make sure the planting medium is not drying out—add water as needed, but do not over water.

You can root the cuttings in other pots or planting trays instead of Rootcubes, if you prefer—just keep in mind you will need to cover the containers with clear plastic for a week or so, to retain humidity. Another option is to use a misting chamber.

If you use potting medium instead of Rootcubes (Sunshine potting soil or other clean rooting mix), add enough water that a fist-full of medium will hold together loosely. If you squeeze it and water runs out, it is too wet—add more soil.



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9. When new shoots emerge, open the bag or remove the plastic cover from the container, to start hardening off the plants. If using Rootcubes, you should be able to see roots emerging along the side of the rooting material. Be certain to keep the roots moist, particularly if they are exposed.
10. After 3 to 5 days, the plants should be ready to transplant directly outdoors or into greenhouse pots. At this point, you can begin feeding them with a diluted fertilizer and slowly increase the fertilizer strength over time.
  - a. In order for hop plants to form rhizomes that allow them to survive through the dormant period, at least one node must be buried below the soil. If you received a cutting with two nodes, transplant so that the bottom node is in the ground (this is likely where the roots started to develop).
  - b. If you received a cutting with a single node, encourage rhizome formation as follows: place the rooted cutting (still in its individual Rootcube) into soil in the bottom of a pot that is large enough to leave at least 4 to 6 inches of additional growing space between the top of the soil and the top rim of the pot; the lowest node(s) on the cutting needs to be lower than the rim of the pot. Add soil only to a level that covers the Rootcube; do not yet fill the additional space in the pot.

Once the plant has grown several sets of leaves, remove the leaves at the lowest exposed node and add potting medium to bury the node. Roots and a rhizome will eventually grow from this buried node.

### IBA Root Solution Recipe

Any commercial rooting hormone mixture can be used, some of which contain talc so that the base of the cutting can be dipped in the powder. The boric acid/ IBA solution below has worked the best for the CPCNW program.

**Prepare two stock solutions:**

- 2000 ppm boric acid (0.4 g in 200 mL water).
- 2000 ppm IBA (indole-3-butyric acid) (0.4 g in 200 mL ethanol). You can use any alcohol to dissolve the IBA.

**To use:** Mix equal parts of both stock solutions.

Store the IBA solution or the mixed solution in a cool, dark location.

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