

Plant Propagation

STEM CUTTING

Materials List

Plant material

Small pots

Growing medium

Rooting hormone

Numerous plant species are propagated by stem cuttings. Some can be taken at any time of the year, but stem cuttings of many woody plants must be taken in the fall or in the dormant season. To find out how a particular plant is propagated, you can look up the plant on the INTERNET for details of propagation.

Advantages of propagating stem cuttings are: It is more rapid, simple, and cheaper than other asexual methods. You will get greater uniformity (clones) of your plants. The plant will reach maturity at an earlier age.

Disadvantages of propagating stem cuttings are: You will get a lack of genetic diversity and you may potentially increase Insect and Disease weakness in the new plant. The genetic flaws will be passed on and magnified in the new plant.

Rooting Hormone: Keep refrigerated to increase shelf life. Prevent contamination of the entire supply of hormone by putting a small amount in a separate container and discarding after use.

Rooting Medium: You can use sterile coarse sand, vermiculite mixes, potting soil, mixtures of peat and perlite. If using potting soil, sift to remove the large chunks of material. Do not use vermiculite by itself because it compacts and tends to hold too much water. Moisten the medium before inserting the cutting and keep it evenly moist while the cuttings are rooting and forming new roots and shoots.

How to make a stem cutting: With a sharp nipper so that you do not damage the parent plant, cut a 2 to 6 inch piece of the stem. Cut at an angle to have more surface area for the roots to develop. Make the cut about 1/8 inch below the node (or bud) ---the node is where the leaf is coming off the stem. Don't cut at the top of the stem where the tender new growth is. You should cut at the current growth or the past years growth ---on the upper part of the plant ---but not the tip. Remove the lower leaves that would be touching or be below the growing medium. Dip the end of the stem in water, tap off, dip in rooting hormone, tap off. Use a dibble to make a hole in the medium so that the hormone is not rubbed off when placing the stem into the medium. Insert the cutting deeply enough into the medium to support itself. At least one node must be below the surface. Gently firm the medium around the cutting. Remove flowers and buds and all but one leaf from the stem. If the leaf is large, cut it down. You want to reduce the leaf area to reduce water loss and to allow the cutting to use its energy and stored carbohydrates for developing roots and shoot formation rather than developing more leaves or flowers. Make sure you get the cutting right side up.

Place the stem cutting in indirect light (under a shade tree in the summer). In the winter, indirect light with a room temperature of about 70 degrees.

Soda Bottle Propagator---Cut the bottom off a clear plastic bottle. Do not remove the cap of the bottle. Place bottle over cutting. When the bottle stops fogging, it is time to add a little more water. Bottle propagators or especially important in propagating roses.

Let the cutting get well rooted before transplanting . It may take 6 to 8 weeks. Some plants root faster than others. To test for roots, gently tug at the cutting. If there is resistance, rooting has started. You can also gently slip the medium and cutting out of the pot and check for root development. If roots are seen emerging from the bottom of the pot, it is surely ready to transplant. It is best to advance the plant into larger pots gradually.

GOOD LUCK AND HAPPY GARDENING!!

Resources:

Plant Propagation, Phillip McMillan Browse

The Complete Book of Plant Propagation, Graham Clarke and Allan Toogood

Prepared by JoAnne Dieterich

Master Gardener, Plant Propagation Specialist

Supplies:

Plant material

small pots

bottle of water

dibble

nippers

Soda bottle propagators

Growing medium

Rooting Hormone with tiny container for separating hormone

Table

Paper towels