Slug: Ask the Master Gardener
Date: June 13, 2004
Contact: WSU/Skagit County Cooperative Extension: 428-4270

Many gardeners have a limited budget to garden with, yet they still love to have a wide colorful variety of new plants each year. Many therefore purchase seeds and attempt to grow their desired plants from them, others buy fairly cheap starter plants, and many do both. But there is another method of obtaining multiple plants of specific varieties that few gardeners consider, and that is to grow plants from cuttings.

Professional growers and nurseries grow many of their mass-produced plant starts, such as fuchsias, geraniums, chrysanthemums, and wax begonias from cuttings. It is a fairly simple, surefire way of growing plants that do not grow well or easily from seeds. It is also a method used to grow those plants that do not reproduce true to form from a seed.

The best time of the year for a home gardener to take cuttings is generally in the spring or early summer before plant stems become hard and woody. It is also the time when all plants are growing robustly.

Technically, a cutting is part of a stem, leaf, or root that is removed from a plant and forms a new plant that is a replica of its parent. The cutting must be taken from a healthy, vigorous specimen that will readily produce roots if grown under the right conditions. This process, known as vegetative propagation, works because cells of plants can revert to their embryonic stage and reorganize themselves to perform any needed function as parts of a leaf, root, or stem.

Before a person actually starts taking cuttings from a chosen plant, they need to decide on the planting medium they intend to use and have it already prepared. The medium may be as simple as sand, or even soil out of the garden or flowerbeds from around one's home, but either of those has the potential of being disease laden. Therefore better results are to be had if one uses a pre-sterilized medium such as peat moss, sphagnum, perlite, vermiculite, or soil. Most professional growers use their own recipe combining several of the above growing mediums and many garden books have suggested recipes that a person can mix up themselves. The goal of a good sterile planting mixture is to combine water-holding capacity with good drainage and an open structure that air can enter. There are also many types of pre-mixed growing mediums that can be bought.

To have cuttings that are in first class condition, use good tools. A sharp razor blade or knife should be used as most garden clippers and even scissors will crush a stem badly, injuring the plant cells and a ragged cut is also more likely to become infected and cause the cutting to die.

Take the cuttings after a rain or a few hours after the plant has been well-watered so that it will be in a fully saturated condition and do it during the coolest part of the day. Cut the bottom end of the stem on an angle to allow a larger surface for rooting. A smooth clean cut will readily heal over better than a ragged cut. Often a fleshy growth is seen forming on the cut end. This is a healing over of the cambium layer and is called a callus; it normally precedes any root growth. It is also a common practice to dip the bottom ends of softwood and hardwood cuttings in a rooting compound, as it will stimulate faster rooting but it's not always necessary.

A cutting taken from the tip of a plant stem needs to have at least three sets of leaves left on it. Therefore using a sharp knife slice off the segment at a point one-fourth inch below the third leaf joint, which is called a node. If the tip of the cutting has buds or flowers, pinch them off leaving at least two sets of leaves, this forces the cutting to concentrate on root production rather than on producing tip or flower formation. Strip off the lowest set of leaves on the cutting and bury that node well below the surface of the medium. Do not remove the upper set of leaves, as the cutting will need them as a source of energy while it continues its growth process. Any other cuttings taken from farther down the stem only need a minimum of at least two sets of leaves on the stem. On those, strip off the lower leaves and bury the node.

Most cuttings should be stuck into the rooting medium as soon as they are made so they won't dry

out. If that isn't possible keep the cuttings in water until ready to stick them into the rooting medium. Don't try to insert the cutting into the medium without making a hole first, or you may bend the stem or damage the cut end. A blunt pencil is a handy hole-making instrument.

After planting keep the medium moist, but not wet, and place it in an area where the temperature can be kept between 70 and 80 degrees if possible. Most home growers find that it is advantageous to also cover the cuttings with some type of plastic wrap for at least the first week. Place the potted cutting in a spot where it will get light but no direct sun.

In most cases rooting occurs in two to four weeks and a good indication that roots have developed is when the cuttings begin to show small new leaves. The next part of the growing process is to transplant the cuttings after the roots are a half to an inch long into good soil and then to acclimatize the plant gradually into its permanent place in the garden.

For more information on this type of propagation consult the many gardening books that are available. Many of them graphically show each step. They also describe hardwood, leaf and root cuttings. Plus most list a variety of plants that are easily grown from cuttings.

The information provided in this newsrelease is for education purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Cooperative Extension is implied. Cooperative Extension programs and employment are available to all without discrimination.

This column is written by Washington State University/Skagit County certified Master Gardeners. Questions may be submitted to WSU/Skagit County Cooperative Extension, 306 S. First, Mount Vernon, WA 98273-3805.