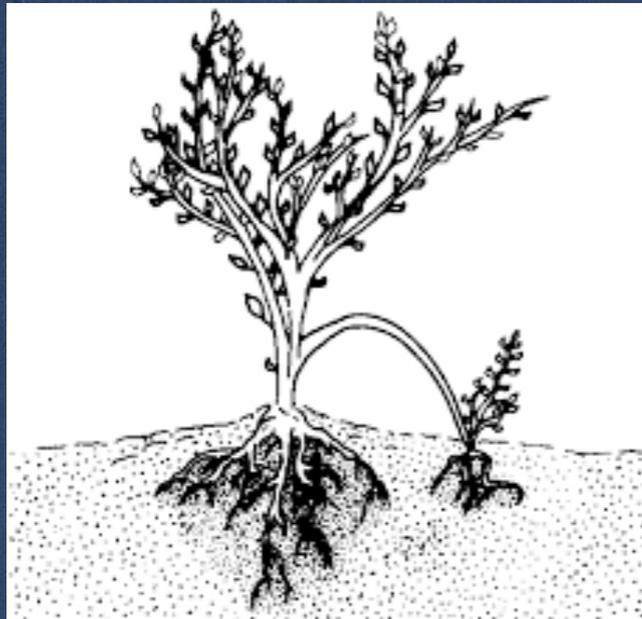


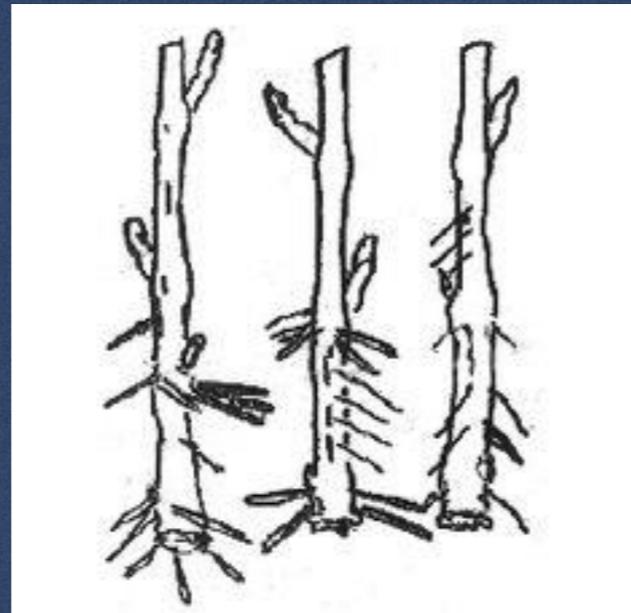
**PLANT**

**PROPOGATION**

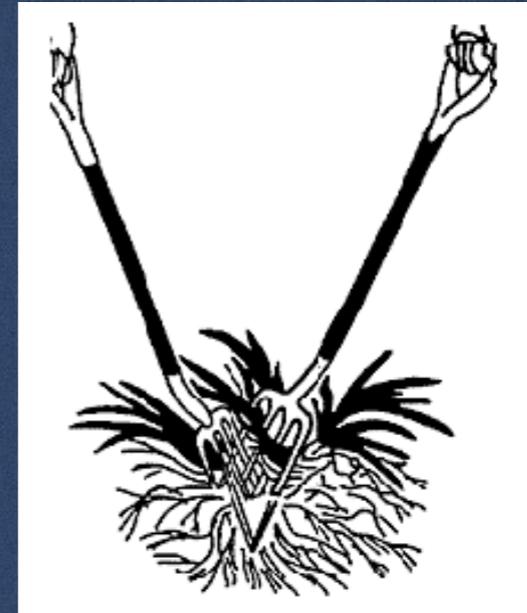
# Making More Plants



*Layering*



*Cuttings*



*Division*

WASHINGTON STATE UNIVERSITY



LEWIS COUNTY EXTENSION

*Master Gardener Program*

*WSU Extension programs are available to all without discrimination.  
Evidence of non-compliance may be reported through your local WSU Extension office.*

# Plant Patents

***Definition:** A **plant patent** is a patent issued for newly invented strains of asexually reproducing plants. Patented plants cannot be propagated to sell.*

*Tuber propagated plants or wild uncultivated plants may not be patented.*

*Not all countries allow **plant patents**.*



*(From White Flower Farm)*

***NEW! Echinacea Mama Mia***

*A lively combination of vibrant red-orange, coral, and pink petals surrounding a bronzy orange cone. The 3-4" fragrant flower heads last up to two weeks and make excellent cut flowers.*

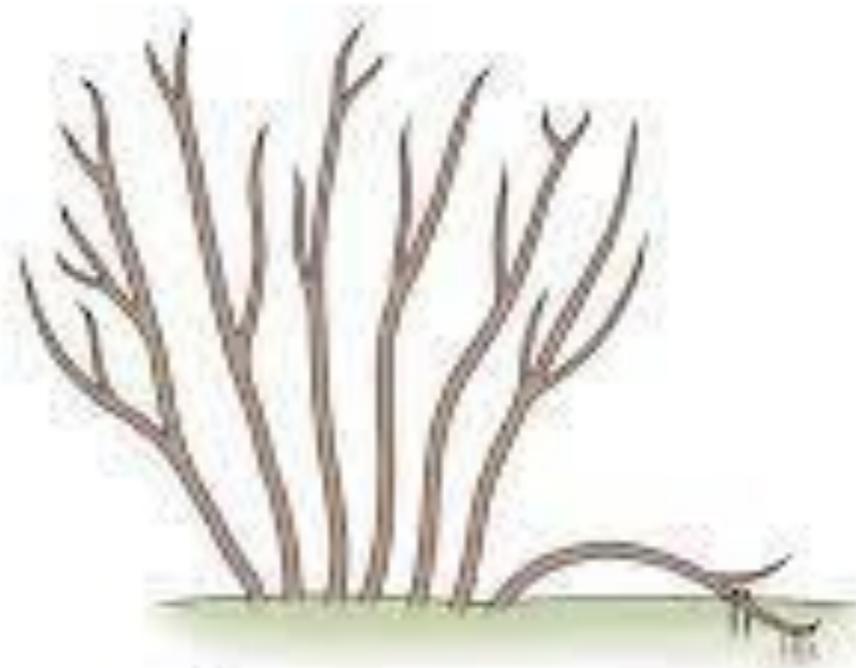
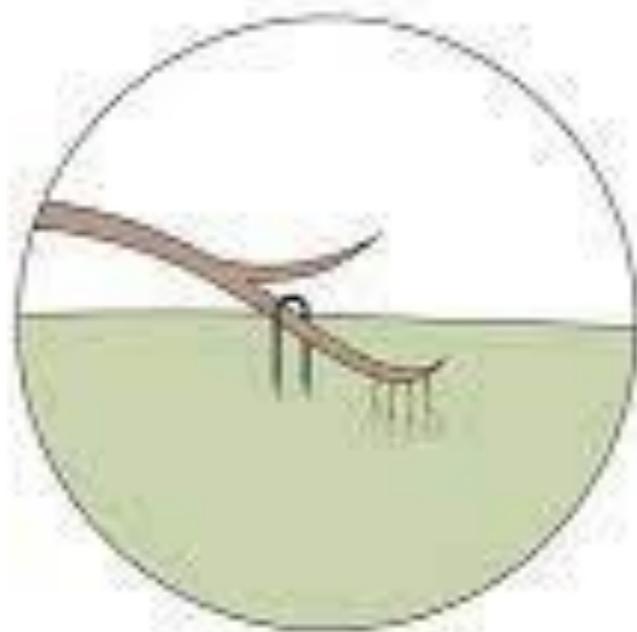
*Rated among the top ten perennials in trials at the Massachusetts Horticultural Society. PP 23,172*

*Also look for:  
PPAF (Plant Patent Applied For)  
Patent Pending*

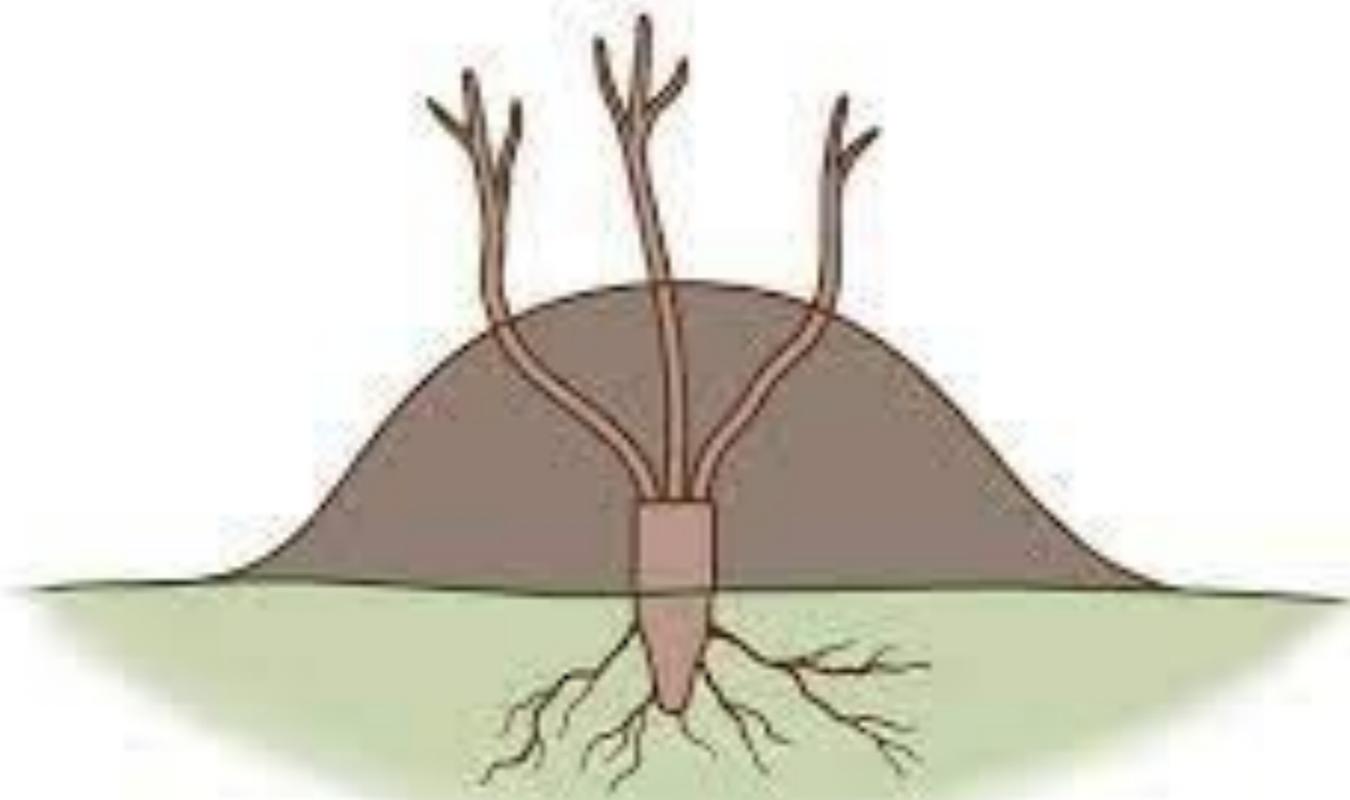
# Layering

Stems are still attached to the plant and root where they touch a rooting medium

When roots form, cut from the parent plant.



**Tip Layering**



**Mound Layering**

# *Growing Plants from Cuttings*

*Many parts of a plant can be used*



*Indoor Gardening Guide*

*Root cuttings*  
*Leaf cuttings*  
*Stem cuttings*

## *Root cuttings*



*A section of root is buried just below the soil surface and produces new shoots*



*Fine Gardening*

*Take root cuttings between November and February, when plant is dormant, and when it has the maximum amount of energy stored in its roots.*



*Fine Gardening*

*Take pencil-thick cuttings.*

*Cut into sections 3-6" long.*

*Make a straight cut on the end closest to the plant and a diagonal cut on the other end.*



*pinterest*



*The Gardener*

*For perennials:*

*Place horizontally 1/2" deep in a flat of moist potting soil.*

*Cover with clear plastic and place under lights.*



*For trees and shrubs:*

*Tie cuttings in bundles, straight-cut side up.*

*Bury several inches deep outside.*

*Leave at least 4 weeks but as long as all winter.*





*Mock orange  
(Philadelphus)*

*Red-twig dogwood*





*Epimedium*

*Acanthus*

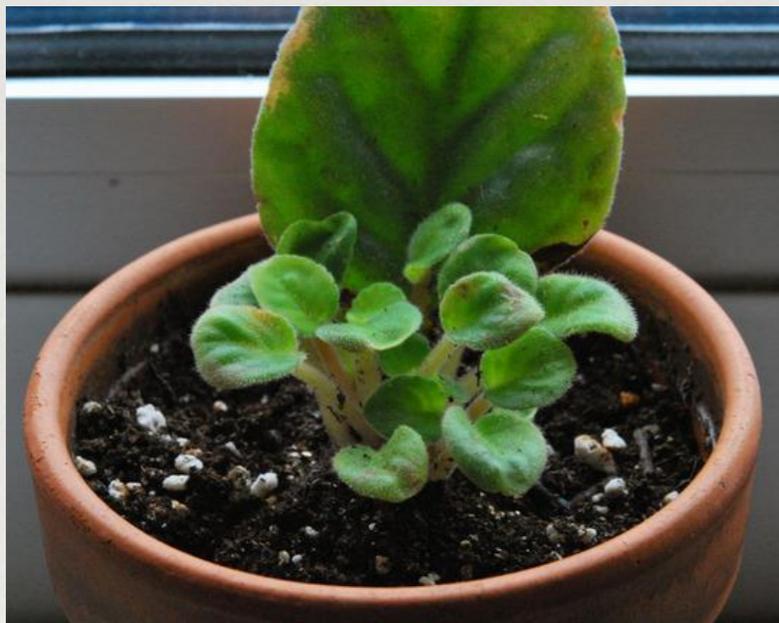


## *Leaf cuttings*



*Pieces of leaf are placed on moist soil to develop new stems and new roots*

*Typically used for:*  
*Tropical and subtropical plants (i.e., houseplants)*  
*Succulents*  
*Some broad-leaved evergreens*





*African violet*



*Sedums*

## *Stem Cuttings*

*A piece of stem is partly buried in soil, including at least one leaf node.*



# Growing plants from stem cuttings

**Softwood cuttings** are made from fresh, new growth, usually taken in spring and early summer.

**Semi-ripe cuttings** have stopped growing longer are tougher and more mature; they are normally taken in late summer to mid-autumn.

**Hardwood cuttings** are taken from woody stems that have gone dormant in late fall or winter.



*Mint*



*Penstemon*



*Salvia*





*Transplant to individual pots;  
water and fertilize as needed*





*Rosemary*





*Tomato plants  
from cuttings*



# Hardwood cuttings<sup>s</sup>

*Hardwood cuttings are taken from woody plants once the stems have fully ripened at the end of the growing season.*

- *Evergreen shrubs*
- *Deciduous shrubs*
  - *Roses*
  - *Clematis*
- *Other climbers*
  - *Trees*
- *Fruit trees and bushes*
  - *Grapes*





[mikesbackyardnursery.com](http://mikesbackyardnursery.com)



# Propagating Plants by Division



*The primary purpose of division is to rejuvenate the plant so it can again perform at its best.*

## *What can be divided?*

*Plants that form large clumps with multiple growing points.*

*Each division needs a growth point and a few roots*

*--then it should be able to survive as an individual plant.*



# When to divide? Plants will give you clues



*Fewer and smaller flowers*  
*Growth in plant's center dies out*  
*Plant loses vigor*  
*Plant starts to flop or open up*  
*Maybe it's just outgrown its bounds*

# Rosettes

*Plants that form rosettes of leaves are the easiest to divide.  
They break up neatly and all have leaves and roots.  
They can usually be divided at any time of year.*



*anniesannuals.com*

*Saxifrages*



*whiteflowerfarm.com*

*Ajuga*

## Plants with Rhizomes or Stolons



*Chocolate mint*



*Physalis*  
*(Chinese lanterns)*

# Clump-forming Herbaceous Perennials



*Wikipedia*

*Hosta*



*finegardening.com*

*Nepeta*

## Bulbs, corms, and tubers



## General Tips

*Divide before the plant starts looking bad*

*Start digging at the drip line*

*Divide in cool weather*

*Keep roots cool and moist*

*Add some compost to the soil*

*Divisions should be no more than 25% of the original clump*

*If plant is in bloom, give it extra water and shade*

*Keep only the healthiest pieces*

## ***Plants in Shade***

*Alchemilla*

*Astilbe*

*Bergenia*

*Brunnera*

*Epimedium*

*Ferns*

*Gunnera*

*Heuchera*

*Hosta*

*Ligularia*

*Pulmonaria*

*Polygonatum*  
*(Solomon's Seal)*

*Rodgersia*

*Saxifrage*



*Bergenia*

*Divide after bloom; or  
take cuttings of rhizome  
sections*





## *Pulmonaria*

*jury.co.nz*

*Divide in spring*



## *Corydalis lutea*

*Don't divide it--just pot up the many volunteers*



# *Hellebores*



*Division is challenging and  
best done in early fall,  
if at all.*



*There are usually  
plenty of seedlings*

*macgardens.org*



*walterreeves.com*

## *Hosta*

*In spring, the best time to divide is when eyes are popping up but not yet unfurling*



*Hosta plants improve with age.  
If you just want some starts to share, try removing some  
outermost shoots*

## Plants in Sun

<i>Achillea</i>	<i>Delphinium</i>	<i>Humulus (hops)</i>
<i>Aster</i>	<i>Digitalis</i>	<i>Lupine</i>
<i>Astrantia</i>	<i>Eupatorium</i>	<i>Mint</i>
<i>Baptisia</i>	<i>Gaillardia</i>	<i>Monarda</i>
<i>Bellis</i>	<i>Geranium</i>	<i>Mondo grass</i>
<i>Campanula</i>	<i>Geum</i>	<i>Oregano</i>
<i>Cerastium</i>	<i>Helenium</i>	<i>Peony</i>
<i>Crocasmia</i>	<i>Hemerocallis</i>	

*Phlox (hardy)*  
*Phygelius*  
*Salvia*  
*Scabiosa*  
*Sedum*  
*Sempervivum*  
*Stachys*

*Verbascum*  
*Veronica*  
*Yucca*

# *Crocosmia*



*1. Select plant to divide,  
normally a congested clump in need of rejuvenating.*

*2. Decide where best to divide.*



*3. If in a pot use hands to break fair sized clumps.  
If in ground use fork to dig up small sections.*



*4. Keep dividing clump until happy with  
the clumps produced.*

*5. Tidy, removing any damaged corms or pests.*



*6. Repot the clumps in correct sized pots, or replant in ground using  
compost.*



*Asters*



*Daylilies can be divided  
almost anytime*



*Bearded iris are best divided in late summer*



[gardenbite.com](http://gardenbite.com)



[adeneearthworks.tumblr.com](http://adeneearthworks.tumblr.com)

## *Fall is the best time to divide peonies*



*viette.com*

*Wash the soil from the roots,;cut the stalks off within 1 inch of the tip buds.  
Separate the clump into several divisions containing 3 to 5 buds each.The growth buds are the dark red “eyes” at the top of the roots*

*Transplant, with buds no more than 1 to 2 inches below the soil surface.*

*Planting too deeply can result in plants with abnormal growth, reduced vigor and little or no flowering.*

## ***Tips for food crops***

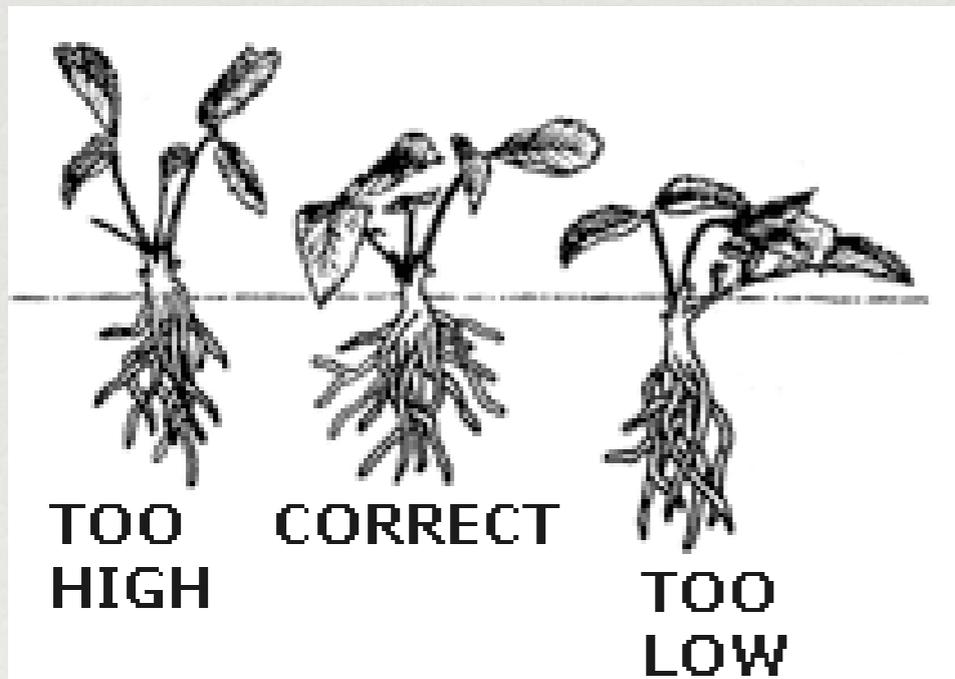
*Rhubarb: Divide about every 5 years.*

*Plant divisions with crown  
about 1-1/2 inches below ground.*

*Divide in fall or early spring.*



# *Strawberries*



# Thank You!

For more information or Questions, Please contact us at:

WSU Master Gardeners  
WSU Lewis county extension office  
351 NW North Street  
Chehalis WA 98532



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