

Secrets of Plant Propagation

1. Sexual (male & female pollination produce SEEDS)
 - a. Sources
 - i. Seed packets (pay attention to expiration date & conditions of germination)
 - ii. Save seeds
 1. Hybrids won't be the same as their "parents"
 2. Save seeds at around 40°F, low humidity (fridge works great)
 - b. Starting Seeds
 - i. Use sterile pots and seed starting medium to avoid "damping off disease"
 - ii. Sterilize pots by soaking in 10% bleach solution. Sterilize potting soil by baking at 180°F for ½ hour.
 - iii. Use starting medium that doesn't have fertilizer. You can make your own by mixing peat moss, vermiculite & perlite (1/3 each).
 - iv. Use a heat mat to germinate seeds
 - c. Some native plant seeds may need scarification (breaking the hard seed coat with boiling water or file) or stratification (chilling in refrigerator). That mimics nature (eating by animals or overwintering).
 - d. Once seeds have germinated, start adding dilute fertilizer when they get their "true" leaves. Keep the lights just overhead to prevent seedlings from getting leggy.
 - e. "Harden off" before you put them in the garden (put outside for a few hours each day to start exposing them to sun and wind).
2. Asexual (vegetative parts produce a plant identical to the parent)
 - a. Cuttings
 - i. Softwood stem tip cuttings from soft, succulent new spring growth
 1. Dip into rooting medium
 2. Bottom heat, moist & low light
 - ii. Semi-Hardwood in summer, mature leaves, takes 4-6 weeks to root
 1. Dip into rooting medium, keep moist & warm
 2. Very hard to do
 - iii. Hardwood cuttings from deciduous plants that have lost their leaves (not tip)
 1. Cut stems 6-20", dip end into rooting medium, put in sawdust or peat moss in cool dark location
 2. Once roots appear, place in pot or plant outdoors
 - iv. Leaf cutting (begonia rex)
 - b. Runners (strawberries, spider plants) are above ground leaves with plantlets at end and stolons (mint) are above ground stems
 - c. Rhizomes (Iris) can be cut into sections with buds or "eyes"
 - d. Offsets (succulents) are new shoots at the base of rosetted stems.
 - e. Bulbs (tulip, daffodil, hyacinth, allium) should be periodically dug up, separated and replanted
 - f. Tubers (white potatoes, Jerusalem artichokes) cut into buds or "eyes".
 - g. Crown Division (daylilies, peony, Iris and some shrubs that sucker at the base)
 - i. Divide spring flowering plants in late summer & fall
 - ii. Divide summer flowering plants next spring before new growth begins
3. Grafting – more art than science ☺