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Plant Propagation

Plant Propagation = the purposeful act of reproducing plants

Types of Plant Propagation

Reproductive (Seeds)

Vegetative (Division, Cuttings, Layering, Budding, Grafting)

Seed Propagation

- Advantages = economical, fewer diseases transmitted, can be stored for long periods of time
- Disadvantages = some seeds take a long time to germinate, greater variability among plants, may require special pre-treatment to overcome dormancy

<u>Seed Dormancy</u> – Seeds that fail to germinate under normal conditions (water, oxygen, temperature suitable for growth) are said to be dormant.

Overcoming Seed Dormancy:

- Coat-Imposed Dormancy (seed coat) Seeds will germinate readily once the seed coat has been removed or damaged
 - Soaking in water
 - Scarification (sand paper or knife)
 - Acid treatments (used by professionals)
- Environmental Dormancy Seeds overcome dormancy in response to environmental conditions
 - After-ripening (moisture content reduced by drying)
 - Chilling (period of cold temperatures)
 - Light (light required for germination)

Vegetative Propagation

<u>Division</u> – simplest technique; good for "bunching" plants (bulbs, daylilies, bunch grasses, aloe, etc.)



<u>Cuttings</u> – growing a new plant from a portion of the original using stems, leaves, or roots



Rooting Hormones - stimulate production of new roots (contain auxins, IBA & NAA)

Rooting Media:

- Water African violets, coleus, many other plants
- Vermiculite Annuals & perennials with soft, herbaceous stems
- Perlite Some woody-stemmed plants
- Sand Some woody-stemmed plants
- Potting Soil Succulents, cactus, begonias, coleus, many other plants
- Peat Many plants (can be difficult to wet; must stay moist)

Layering:



Landscape Plant Propagation Info: http://hort.ifas.ufl.edu/database/lppi/index.shtml

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