Collection and Care of Cuttings
Types of Herbaceous cuttings

Proper collection, preparation, and storage of cuttings is vital to propagation success. In Module 3, you will be introduced to proper techniques for preparing cuttings and both temporary handling and short-term storage of cuttings to ensure cutting survival It is important to keep in mind the following points when taking and preparing cuttings:

First, always take cuttings from healthy stock plants. Avoid plant material which has flower buds or from branches touching or growing near the soil surface. It is best to work with cuttings from the current season's or past season's growth.
Second, length of cuttings should be 4-6" in length, but this varies somewhat depending on the species.
Third, if cuttings have leaves, strip the leaves from the lower one-third to one-half of the cuttings. Fourth, if the cuttings are not taken directly before sticking in substrate, make a fresh cut at the basal end. The sooner cuttings are stuck after cutting, the greater will be the rooting response. Fresh cuts before sticking also ensures cuttings are of equal length.

If cuttings are taken from the field or garden, they should be placed in a bucket or container lined with wet paper towels. This will prevent cuttings from suffering any injury from desiccation. If storing cuttings for any length of time, a good way to prevent desiccation is to wrap cuttings in a moist paper towel and place in a plastic bag. Poke a few holes in the plastic bag to allow proper ventilation and avoid mildew or fungal development on the cutting. Care must be taken to avoid placing bags in a situation where heat can build up in the bags and injure cuttings. When taking cuttings during periods of warm weather, take cuttings in the morning and immediately place them in coolers containing ice. Mark bags with the date the cutting was taken and the species from which the cutting was taken. If cuttings cannot be stuck right away, they can be stored in a refrigerator or cooler until needed. Generally, cuttings should not be stored for more than a few days.

Cuttings are classified on the basis of the part of the plant the cutting is taken from and/or the maturity of the plant part. Cuttings are generally classified as either stem cuttings, leaf cuttings, leaf-bud cuttings, and root cuttings. In this introduction to classification of cuttings, the differences among the various types of cuttings, their pros and cons, and proper procedure for taking each type of cutting will be described.

Cutting Types
Stem cuttings are the most common type of cutting. Stem cuttings are used to propagate plants that do not develop secondary growth. Tissues are soft, lack fibers, and form roots readily. Cuttings should generally be 3 to 5 inches in length and have 2-3 nodes. Some species, such as sage, can be propagated with single-node cuttings. Cuttings should be uniform in length and size.

Polarity of cuttings refers to the inherent qualities or condition of a cutting that exhibits different properties in opposite parts. Stem cuttings form shoots at the distal end nearest the shoot tips and roots at the proximal end nearest the crown. Changing the position of a cutting with respect to gravity does not alter this tendency. The strength at which plant parts exhibit polarity differs. Stems are very polar, roots are somewhat polar, and leaves are not polar. When sticking cuttings, it is important to stick the proximal, or rooting, end in the substrate.

Leaf cuttings are prepared from the leaf blade or leaf blade and petiole. Some species, such as Sansevieria, cuttings are propagated from sections of the leaf blade. A small notch may be cut at the proximal end of the cutting to help maintain polarity. Plants such as Begonias can be propagated from Leaf blade cuttings with an intact petiole by inserting the petiole into the propagation substrate or they may be propagated from sections of leaf blade, each with a major vein.

There are plants such as Kalanchoe which reproduce by smaller plantlets, or EMBRYIODS, that form at the leaf margin.

Leaf-bud cuttings consist of a leaf blade and a petiole, and a short section of the stem with the attached axillary bud. Leaves of some species such as the jade plant and India rubber plant can be rooted but no new shoots will ever develop unless an axillary bud is included as found in a leaf-bud cutting. This method allows you to take many cuttings from a limited supply of cutting material. Shown here is peperomia which is frequently propagated from leaf-bud cuttings.

Propagating by root cuttings is simple and a wide range of species can be propagated by this method. Factors to consider include the proper time of year to take the cuttings and maintenance of correct polarity. The best time to take root cuttings of woody and herbaceous species is late winter or early spring when the roots are well-supplied with stored food and before active and new growth has begun. When making roots cuttings, a slanted cut should be made at the distal end to aid in identification.