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THE OUTSIDER

Illinois Extension Horticulture serving Henry, Mercer, Rock Island, and Stark

PLANT PROPAGATION- EXCITING AND REWARDING

Plant propagation is the process of making more plants. There are two methods through which plants are able to reproduce, sexual and asexual reproduction. Sexual reproduction, in most cases, involves the exchange of genetic information resulting in offspring genetically different form each contributing parent. In some plants, flowers mostly self-pollinating in which case most of the offspring will be genetically similar and exhibit uniform characteristics.

Asexual reproduction, also known as vegetative reproduction, is the ability of a plant to form an entirely new plant from a portion of an existing plant. The newly formed plant is genetically identical to the parent plant. This type of reproduction can occur naturally or can be done with artificial intervention. Examples of naturally occurring asexual reproduction include spider plants that produce daughter plants on stolons, potato tubers produce axillary buds or ‘eyes’ that can be a source of new plants, rhizome producing species such as ginger demonstrate natural vegetative reproduction, and bulb such as the daffodil produce lateral buds from a mother bulb as a form of vegetative reproduction.

People can use vegetative reproduction to multiply plant populations. Cuttings, grafting, budding, and tissue culture are methods of artificial vegetative reproduction. Cuttings are arguably the easiest method for home gardeners to do and an be done on popular house plants. Cuttings can be taken from stems, leaves, or roots and when cultivated in a favorable environment, can develop roots and shoots, resulting in an new plant.

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LEAF CUTTINGS

New plants develop from a portion of the leaf blade or the blade and petiole using the leaf cutting technique. Plant species will influence how cuttings are taken.

-Plants with long leaves such as Sansevieria (Snake Plant) can be cut into three to four in long sections and placed bottom down in a moist medium. It is important to orient the plant cutting in the same direction it was harvested from the plant, if reversed, seedlings will not be successful. An easy way to differentiate the bottom from the top of the cutting it to put a notch in the bottom of the cutting.

-Plants with thick, waxy leaves or large leaves may be propagated by taking a cutting of the leaf across a large vein. These cuttings can be laid flat on a rooting medium with the vein side down. Humid conditions should be maintained for successful root development at the vein cut point.

-African violets are propagated by leaf cuttings including the entire leaf blade and petiole. They can also be propagated using the traditional leaf cutting method outlined above.

-Cacti and succulent can be propagated with through leaf cutting but require time for cuts to develop a callus prior to being introduced to a rooting medium.

ROOTING MEDIUM

A good medium should have enough structure to support the cutting during the rooting process. It should be able to retain moisture while providing adequate drainage to allow for aeration within the medium. And the medium should be free from pest and disease organisms. Common mediums that are easily found in local garden centers include coarse sand, vermiculite, perlite, peat moss, soil, and water. These materials can be combined to achieve a rooting medium that is custom and meets the unique needs of various leaf cuttings.

Rooting hormone is a compound available to help aid root development vegetative propagation methods. It can be used to encourage faster root development, to increase the number of roots produced, and rooting uniformity across large quantities of cuttings. Depending on the species being propagated, rooting hormone may or may not be necessary. Rooting hormone is available in various forms, a powder form is easy to source at local garden centers. Within plants, auxin in the plant hormone that activates the development of adventitious roots form laten cells. Commercially available products are synthetic compounds that activate the production of auxin within plants leading to root development.

TOOLS AND SANITATION

Vegetative cuttings can be obtained using a shape knife or pruners. Sanitation of tools and containers will help reduce pest and disease occurrence and improve success. A mild solution of bleach water mixed at a rate of 1:9 parts bleach to water is recommended. Sanitize tools between each cutting to minimize the transfer of disease from cutting to cutting.

CARING FOR CUTTINGS

Once cuttings have been taken, success hinges on cutting care while roots are developing. The lack of roots mean the plant is incapable of taking up water therefore maintaining high humidity is essential. Indirect light is recommended, direct light is too intense for cuttings. Clear plastic bags can be an accessible, effective way to create a microclimate for cuttings.

Once roots have developed and are at lease an inch long, it is appropriate to transplant the plant into a soil medium and separate container. New transplants may experience shock in the early weeks after repotting, monitory for adequate soil moisture and keep in indirect sunlight while adjusting.

GIVE IT A TRY

Some common house plants that can be propagated through leaf cuttings include African Violets, Begonia, Jade Plant, Kalanchoe, Peperomia, Snake Plant, and Spider Plant. Propagating plants in an exciting, rewarding, and productive process. New plants can be grown as a way to expand an existing collection, traded with fellow plant enthusiasts, or give as thoughtful gifts to loved ones. Plant propagation is also a great way to involve kids in gardening and is an exciting way to learn the science of plants.

OUTSIDER ACTION

Try these activities to be more of an Outsider:

- Try to propagate a houseplant of your own.
- Watch Horticulture Educator Emily Swihart demonstrate propagation techniques on Paula Sands Live

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Emily Swihart, Horticulture Educator
Tracy Jo Mulliken, Program Coordinator

321 West 2nd Avenue, Milan, IL 61264
(309) 756-9978
Email: ESwihart@illinois.edu