POSTER SESSION

Practical Ideas and Solutions to Common Problems

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Resourcefulness and innovation are two sides to the same coin.

- One grower in the southern part of the U. S. uses plastic soft drink crates as deep flats for the rooting of cuttings.
- The wounding of cuttings can be troublesome. One solution is a hacksaw blade mounted with the teeth upright so that a cutting can be drawn across it , thereby inducing a wound.
- An elevated box with a gap along the bottom perimeter mounted onto a farm wagon can easily be converted into an effective mobile potting operation.
- Stratifying seeds can be a problem. The media, usually, peat or sand, is either too wet or too dry or too sticky and not enough air can get to the seeds. Moist perlite does a lot to eliminate these problems and the seeds come out cleaner and easier to handle. Also it is easy to see if they have germinated in the bag.
- Lights should be an integral part of mist propagation. Low-wattage incandescent lights mounted 3 ft above the rooting area and set to come on from 10 PM to 2 AM are very effective at extending photoperiod of many plants. An alternative set up is to have the lights flash during the 4 h interval at about 10 sec every 10 min.
- PVC pipe is a very versatile component of most greenhouse and propagation operations. It can be made even more useful by modifying a toaster oven so that a length of pipe can be inserted into the oven through the sides and heated till soft, the softened pipe can be withdrawn and bent into any curve or angle needed.
- Getting more cuttings from a rare or unusual one of a kind plant can be frustrating. Try planting the stock plant at a 45° angle so it is forced to break apical dominance and grow sideways. Many lateral buds will break into growth and become usable cuttings.
- Fuel costs are escalating daily and the winter heat bills can be substantial . A mini-greenhouse within a larger house will do much to contain heat where it is needed the most (around the cuttings or seedlings) and it will cut down on the overall heat bill.
- Fertilizer injectors are becoming more and more common. It is always prudent to check the reliability of the injector each time it is used. One convenient method is to use nitrogen test strips that give a clear color indication of the level of nitrogen in a diluted sample. It is quick and easy and allows for instant verification of the amount of fertilizer present in the water.
- Pesticide dusts and vapors can be most troubling when quantities are being measured out. One solution is to mount a fan to blow out

of the area so that dust particles and vapors can be drawn out and away from the user much like the fume hoods found in many laboratories.

- Slugs are especially fond of small seedlings and many chemicals and treatments harsh enough to eliminate the slugs might be enough to eliminate the seedlings as well. Granulated garlic powder offers a quick slug proof barrier and can be applied directly onto the seedlings. Slugs can not stand the smell of garlic and will quickly leave the area. Caution, do not use garlic salt, that is not a good product to apply to seedlings.
- Cleaning seed is an arduous task that can be speeded up by using a cement mixer with appropriate abrasive such as lava rock or golf balls. The recipe is simple, 1 bucket of fruit to be cleaned, two or more buckets of water and four to five stones or golf balls. Turn machine on and let it run until the pulp is macerated, usually 1/2 to 1 h. Drain, flush with clear water several times . The clean seed should be in the bottom of your container with the pulp and pieces floating off. This works best if the pulp has been allowed to ferment and breakdown prior to being put into the machine.

Winter Propagation of *Ulmus* 'Regal'

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Though elms can be propagated from softwood in the summer time or from shoot cuttings taken from pieces of roots stuck in flats in the winter months, we have found that taking "micro cuttings" from canned stock plants forced in a heated plastic house in the middle of the winter to be more reliable and economical.

Preparation of the Stock Plants. The canned stock plants are put in a plastic house in early December. On 1 Jan. the furnace is turned on and the temperature set at about 50 to 60F. On 15 Jan. the stock plants are trimmed on top lightly and re-canned if necessary. These are elms that are 1 to 5 years old. Then they are topdressed with 3-4 month Nutricote 14N-14P_2O_5-14K_2O at medium rate. On 30 Jan. each can is given Sequestrene 138 Fe at 1 tsp gal^{-1} and the temperature is raised to 65F.

Preparation and Treatment of the Cuttings. February 15th, the first cuttings are about ready to be harvested. We take the tips from the slower-growing side shoots; they are the best. We remove the lower leaves being careful not to tear the base of the cuttings to reduce rotting. If possible we leave a node at the base. The cuttings are then dipped in a solution of Dip 'n Grow for 5 sec. They are stuck in flats in Fafard #2 and drenched with 1 1/2 tsp of Banrot and 1 tsp of Sequestrene gal^{-1}. The flats are covered with a sheet of glass and put on a light shelf unit. We used cool white tubes with a light intensity between 500 and 750 fc. The temperature of the medium is about 70F.