

Production of Epimediums by Division

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As of 1997 we have seven *Epimedium* cultivars in production as well as several new cultivars in the process of increasing quantities of stock plants.

Deb McCowen of Knight Hollow Nursery asked me if there were any unique plants I would like to suggest for short presentations on propagation for this meeting.

Since I had been working on epimediums and wanting to believe that someone had a better technique than mine, I suggested epimediums. She proceeded to ask me to speak about epimediums and my technique seeing as I was doing them already!! So, here we go.

Species such as *E. xrubrum*, *E. grandiflorum*, *E. xversicolor* 'Sulphureum', and the cultivar 'Frohnleiten' are simply divided by brute force pulling the rhizomes apart. The unique ability of the rhizomes to break free of the parent is akin to the loosening felt as you work *Hemerocallis* apart in your hands to separate fans of that plant. We grow the stock plants in 1-gal containers and upon removing the container and with a light shaking of the bark mix the location of the rhizomes is apparent. The rhizomes can be seen radiating out from the center crown of the mature plant.

The divisions can be as short as 1 inch and as long as 3 inches dependant on the age, species and cultivar of the species you are working with. The divisions will resemble cigarette butts to small whole cigarettes in this form. We do not remove any roots remaining since we find the plant hard enough to grow on without a further challenge.

The main body of the original plant will have several very short "nubs" of rhizomes containing buds similar to those that appear on the divided segments. If sufficient quantities of buds exist a Felco-type pruner is used to snip the basal crown in 2 to 3 half-moon to pie-shaped pieces.

We replant all of these segments one to a 1-gal container. These divisions will yield a four- to eight-leaf plant that same season and will be dividable again in 1½ to 2 seasons of growth after potting.

We have never removed any live leaves or existing foliage when we are dividing. We have in the past done all divisions as soon as or prior to resumption of the spring bud break. As we produce more stock plants (10,000+) we have begun dividing "in leaf" epimediums. We have found that the plants do fine if kept from excessive drying conditions. We repot all fresh divided plants within 48 h and have begun placing late divisions in a fog house which is shaded with 50% white poly vented at 88F. Although I must say the initial idea of this "in leaf" potting occurred out of the duress of a 4-day Chicago spring season before the onset of 85F temperatures, the results have been quite good. We have potted plants in nearly full new foliage and these plants have done as well as dormant potted divisions. We make every effort to keep the young plants moist without creating a wet soil medium. We use aged pine bark mix as well as a polymer water retention agent to accomplish this somewhat daunting task.

I have recently learned that other propagators find "in leaf" divisions as their choice for epimedium cultivation.

The species that form somewhat "woody crowns", such as *E. ×youngianum* 'Niveum' and 'Roseum', are divided in a manner similar to that described for the center body of the above types. A Felco-type pruner is used to cut sections of the mother plant about the size of a large thumb leaving all roots on the division attached.

This form of division can be expected to yield 6 to 13 divisions from a 1-gal plant of the rhizomatous types and 3 to 5 divisions of the *E. ×youngianum* types. I cannot stress enough the need for fresh divisions that are not allowed to dry excessively as is often the case in plants imported and or stored in a cooler for extended periods, as well as, a polymer water retention agent to accomplish this somewhat daunting task.

Native Herbaceous Wetland Plants Used for Wetland Mitigation

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INTRODUCTION

A growing awareness of the value and sensitivity of our wetlands prompted requests for low-cost, native, herbaceous plants for the mitigation, restoration, and enhancement of impacted wetlands. As the demand became apparent we looked at the potential for growing particular plants in areas that were unsuitable for conventional nursery production.

What follows is a look at the ongoing process of keeping production cost low and meeting the constantly changing demands in the market for this narrow group of plant materials.

METHODS

Our intent was to market bareroot, herbaceous wetland plants to the growing mitigation market. We identified and harvested existing plant materials on the site to be developed. This enabled us to keep the startup cost of plant material low. The first site used for production was a runoff ditch from an existing container facility with overhead irrigation. This required no additional application of water, and helped deal with runoff and nutrient issues.

At the end of 1 year we reviewed the results of our first attempt and modified the size of the swale to a width of 8 to 10 ft with length limited only by the individual site. Native loam was used in the base of the swale as a planting medium.

In an area where there was no irrigation runoff, a spring was tiled and allowed to run continuously into an enlarged roadside ditch. A silt growing medium was used in place of the native soil to ease the harvesting process. It did not limit growth of most taxa.

After grading the bottom of a swale and seeding any disturbed areas the base is planted with one or more taxa of plant material conducive to the hydrology of that specific site. The swale would remain for one growing season and could be harvested