

LSU AgCenter Coastal Plants Program Large-scale Production



Large-scale Production Essential to Coastal Plant Restoration

Large-scale commercial production of coastal plants is essential to provide plant material for coastal restoration projects. Over the past 30 years, numerous coastal plant producers have improved plant production methods based on their individual operations. To provide the large numbers of plants needed to reduce coastal erosion, however, significant scientific research is needed.

It has taken almost 100 years of scientific research to develop plant production methods for crop, vegetable, fruit and ornamental plants that maximize yields, and those methods continue to be studied and modified. Production of coastal plants is still in its infancy when compared to the history of other systems.

The LSU AgCenter recognized the desperate need to develop production recommendations based on sound scientific evidence when it formed its Coastal Plants Program in 1998. The foundation for that program is LSU AgCenter scientists' extensive knowledge of the numerous production systems that can be used for developing the best management practices for maximizing yields of coastal plants.

Plant production research being conducted by the LSU AgCenter's Coastal Plants Program can be divided into two categories: vegetative plant production and seed production. To maximize yields of vegetative plant production, weeds must be managed to reduce competition, fertilization requirements must be identified and general maintenance of perennial production ponds, which minimize the potential of genetic impurities, must be developed.

Herbicides are being investigated both for weed management and the control of seedlings that could compromise the genetic integrity of vegetative production ponds. Weed management and seedling control trials have been completed for container-produced plants in a greenhouse. Weed management trials also have been initiated in large freshwater production ponds that have high weed pressure. Herbicides and rates have been identified that do not affect established plants but provide control of weeds and seedlings that have the potential to compromise the genetic purity of vegetative production ponds. Researchers are working with state agencies to get



these products labeled for use in coastal plant production systems. Fertilization requirements and other maintenance practices that will maximize the vegetative yields and age of production areas also are being investigated.

In addition, seed production research is under way to support seed-based cultivars. Seed-based cultivars will facilitate efficient plant propagation with the potential to support large-scale restoration efforts. To develop commercial seed production systems, scientists are investigating weed control, fertilization management and mechanical seed harvesting. Herbicides have been identified that control weeds without affecting seedlings used to establish large seed-production fields. Researchers also are working to get these herbicides labeled for use in coastal plant seed-production systems. Aerial application of fertilizer and herbicides, using a crop duster, are being evaluated to develop effective and economical cultural management practices for seed production. Mechanical harvesting also is essential for efficient and economical seed production. A successful method of mechanical harvesting, using a Flail-Vac seed stripper/harvester mounted on the front-end loader, has been developed to quickly harvest seed.

The combined results of these investigations should result in sound production methods that maximize yields, maintain the identity and integrity of plant varieties, reduce production costs of coastal plants and contribute to large-scale seed production that will fulfill future seed demands.

Anyone interested in potential partnerships, collaborative agreements or other participation in the LSU AgCenter Coastal Plants Program may contact Dr. Carrie Knott (cknott@agcenter.lsu.edu) or Dr. Herry Utomo (hutomo@agcenter.lsu.edu) in the LSU AgCenter's Coastal Plants Program.



For more information, visit our website: LSUAgCenter.com/CoastalPlants

Contact:
Dr. Carrie Knott
LSU AgCenter School of Plant, Environmental and Soil Sciences
225-578-1305
CKnott@agcenter.lsu.edu

Visit our website: www.LSUAgCenter.com
Louisiana State University Agricultural Center
William B. Richardson, Chancellor
Louisiana Agricultural Experiment Station
John S. Russin, Vice Chancellor and Director
Louisiana Cooperative Extension Service
Paul D. Coreil, Vice Chancellor and Director

The LSU AgCenter is a statewide campus of the LSU System and provides equal opportunities in programs and employment.

For the latest research-based information on just about anything, visit our website: LSUAgCenter.com