

Resource Management Tool for Container Nurseries

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Ornamental plant production is the largest agricultural industry in Florida with container-grown plants accounting for 74% of gross sales. To help nursery growers use resources such as water and fertilizer wisely, a web-based, decision-support tool has been developed which estimates production outcomes based upon inputs of weather and critical management practices such as plant type, planting date, substrate properties, container size, spacing, irrigation scheduling, and fertilization. Production outcomes estimated by the tool include time to marketable size, nutrient uptake and fertilizer release patterns, irrigation requirements, and volume and nutrient content of runoff water. By running ‘what-if’ scenarios based on local historical weather data, growers can use the tool to help choose best management practices which optimize resource use efficiency while producing profitable crops. The tool can also be used for real-time irrigation scheduling that is based on daily changes in plant evaporative demand and container substrate water availability. The management tool is being currently targeted for use by growers who produce plants in small containers with overhead sprinkler irrigation. Other potential users of the management tool include extension agents, private industry, educators, and policy-makers.

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