

## Status of Eucalyptus Tree Improvement in Florida

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Nearly 60 years of concerted effort by many players have developed eucalypts of typically satisfactory growth, insect resistance, freeze resilience, and site tolerance in most of peninsular Florida. Recent testing for Florida conditions has involved *Eucalyptus benthamii*, hybrids of *E. grandis* × *E. urophylla* (EH), and ~60 other species. The collective accomplishments in terms of genetic resources and commercial planting are summarized. For example, fast-growing, bluegum chalcid-resistant, freeze-resilient *E. grandis* seedlings may be produced from 4<sup>th</sup>- and 5<sup>th</sup>-generation seed orchards, and *E. grandis* and EH cultivars are commercially available, as are *E. amplifolia* and *Corymbia torelliana* seeds from 1<sup>st</sup>-generation seed orchards. In southern and into central Florida, *E. grandis* and *C. torelliana* seedlings may be successfully deployed in most years, and the more freeze resilient *E. grandis* cultivars may even extend the *E. grandis* planting zone into northeast Florida. For northern and into central Florida, improved *E. amplifolia* and *E. benthamii* seed is available. Genetic improvement is ongoing to increase growth and particularly to address freeze resilience and pest resistance needs. These species may be used for multiple products; mulchwood is the current market for *E. grandis* and *E. amplifolia*, while *E. grandis* and particularly *C. torelliana* are used for windbreaks. Collaboration is essential for continued progress in realizing the potential of *Eucalyptus* under Florida conditions. Using SRWC systems, for example, productivity can be as high as 33.6 green tons/acre/year with associated land expectation values exceeding \$3,000/acre depending on management costs and stumpage prices.

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## **Bibliography for DL Rockwood, RW Bell, M Crawford, CS Speed, MW Cunningham**

Dr. Donald L. Rockwood, President of Florida FGT (<http://floridafgt.com/>), has over 35 years of experience in the development and use of Eucalyptus, cottonwood, pine, and cypress in Florida and elsewhere. Now Professor Emeritus at the School of Forest Resources and Conservation, University of Florida (<http://sfrc.ufl.edu/people/faculty/rockwood/>), he was responsible for the genetic improvement of several SRWC species, including the commercial release of five cultivars (<http://www.ffsp.net/varieties/eucalyptus/>) and the development of associated SRWC systems, and he continues to conduct research on SRWCs. Recent publications: Rockwood DL. 2012. History and status of Eucalyptus improvement in Florida. International Journal of Forest Research Volume 2012 (2012), Article ID 607879, 10 pages. <http://www.hindawi.com/journals/ijfr/2012/607879/>. Fabbro KW, and DL Rockwood. 2016. Optimal management and productivity of *Eucalyptus grandis* on former phosphate mined and citrus lands in central and southern Florida: Influence of genetics and spacing. In: Proceedings 18th. Biennial Southern Silvicultural Research Conference, March 2-5, 2015, Knoxville, TN. e-Gen. Tech. Rpt. SRS-212. p.510-517. [http://www.srs.fs.usda.gov/pubs/gtr/gtr\\_srs212.pdf](http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs212.pdf). Wayne Bell is chief operating officer of International Forest Company. Mark Crawford is owner, Loch Laurel Nursery. Stan Speed is manager of Lykes Bros Forestry Division. Mike Cunningham is director, Product Development, ArborGen Inc.