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## **Selection for Salt Tolerance in Tidal Freshwater Swamp Species: Advances Using Bald cypress as a Model for Restoration\* Chapter 14**

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### **14.1. Introduction**

Worldwide, the intrusion of salinity into irrigated and natural landscapes has major economic and cultural impacts and has resulted in large reductions in crop yields (Epstein et al. 1980; Flowers 2003). Losses have prompted wide-scale programs to improve the salt tolerance of many agronomic species or to identify crop species that can tolerate lands affected by low levels of salinity. Few historic research efforts have considered forest tree species in the United States, especially in nonurban areas.

Newer programs have focused on identifying salt tolerance in forest tree species but have mainly limited these efforts to compiling lists of salt tolerant species to be used in afforestation projects (Gogate et al. 1984; Shrivastava et al. 1988; Beckmann 1991; Bell 1999). Gogate et al. (1984), for instance, listed 26 potential species from Australia with silvicultural application to salt affected lands in India. More comprehensive efforts have considered species lists along with specific site requirements (Bell 1999); species tolerant to saline irrigation waters on dry land, for example, will not often be tolerant of salinity increases in wetland settings.

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