

solution. Leaching, or excess watering, will be an important part of every program to manage soluble salts. Research has shown that leaching is more effective if the container medium is fine-textured with small pores, as opposed to a coarse, porous mixture (Kerr and Hanan, 1985). In a medium with large pores, water runs through too quickly to adequately flush the salts. Thus, the higher the percolation rate of the soil, the less efficient is the leaching process.

A potting medium with a high water-holding capacity won't dry out as quickly, making it easier to keep the medium moist and prevent the concentration of soluble salts. Fortunately, high water-holding capacity and small pore size are compatible traits in a potting medium. (For information on determining water-holding capacity, see University of Florida Extension Circular 556, "Nursery Laboratory Development and Operation.")

**Leaching.** Leaching is probably the most important management tool for salinity control. Pots should be leached whenever soluble salts reach a critical level (dependent on the crop; see Table 4). Leaching requirements can be estimated by determining the electrical conductivity of the irrigation water and the leachate and using the following formula (U.S. Salinity Laboratory Staff, 1954):

$$LR = EC_w/EC_{dw} \times 100 = \text{percentage of water to be applied greater than crop requirements}$$

where  $EC_w$  is the electrical conductivity of irrigation water and  $EC_{dw}$  is the electrical conductivity of leachate.

Recent research has found that, as a general rule, pots should be leached with a quantity of water equal to two container-capacities of water (Kerr and Hanan, 1985). "Container-capacity" refers to the amount of water a container-full of potting medium will hold after it is thoroughly saturated and allowed to drain. Leaching with more than two container-capacities wastes water. In addition, leaching is more efficient when the leach water is distributed evenly across the soil surface. Leaching is another reason to use a liquid or slow-release fertilization program: regular leaching also washes out nutrients.

### **Salt-tolerant Plants**

A final way to handle a salinity problem is to grow salt-tolerant species. This is not as drastic as it may sound. Many ornamental plants have a degree of salt tolerance. Salt tolerance of a number of woody ornamentals is given in Tables 4 and 5. More information can be found in University of Florida fact sheets on salt tolerance of landscape plants and in "Salt Tolerant Plants for Florida Landscapes," by William Barrick (Report Number 28, Florida Sea Grant College, August, 1979). Unfortunately, most evaluations of salt tolerance in these publications and in Table 4 are