

Evaluation of Salt Tolerance of Garden Roses

Dr. Genhua Niu and Dr. Youping Sun, Texas A&M AgriLife Research & Extension Center at El Paso

Supported by: Rio Grande Basin Initiative, USDA

BACKGROUND

Roses are the most economically important ornamental plant in the world and have been cultivated for more than two thousand years. Rose is traditionally categorized as salt sensitive. However, our recent research has revealed that some cultivars may be more tolerant than others. As fresh water supply becomes limited, reclaimed water is being or will be used for irrigating landscapes and agricultural and horticultural crops in the future. Information on how garden roses respond to low quality water irrigation is increasingly important. This project evaluated the relative salt tolerance of the following rose cultivars.

OBJECTIVE

- To evaluate salt tolerance of selected garden rose cultivars including Earth-Kind® roses.

FINDINGS

The following grouping is based on our greenhouse research results. It is possible that some cultivars may fall into other groups under different conditions. Avoid planting salt sensitive or moderately salt sensitive rose cultivars in areas where poor water may be used for irrigation or in areas with poor drainage. Moderately and intermediate salt tolerant cultivars may be irrigated with recycled water without foliar damage.

- **Moderately salt tolerant cultivars:** Belinda's Dream, Little Buckaroo, Rise N Shine, Sea Foam, Reve d'Or, and New Dawn.
- **Intermediate salt tolerant cultivars:** Caldwell Pink, Quietness, Basye's Blueberry, Iceberg, Marie Pavie, Climbing Pinkie, Mrs. Dudley Cross, Knock Out, and The Fairy.
- **Moderately salt sensitive cultivars:** Carefree Beauty, Folksinger, Winter Sunset, Ducher, Duchesse de Brabant, Georgetown Tea, La Marne, Mutabilis, Marie Daly, Monsieur Tillier.
- **Salt sensitive cultivars:** Cecile Brunner, Else Poulsen, Madame Antoine Mari, Perle d'Or, Spice, and Souvenir de St. Anne's.

