

Earth-Kind roses analyzed for salt tolerance

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Earth-Kind® roses are favorites with gardeners and landscapers. Chosen for their superior tolerance to heat, drought, and pests, as well as their outstanding performance in landscapes, Earth-Kind roses can thrive in most environments, even with limited care. A new study focused on determining the best Earth-Kind varieties for withstanding the challenges of salt stress.

As alternative water sources such as reclaimed water are becoming more commonly used as irrigation for urban landscapes and [agricultural crops](#), plants are being subjected to higher levels of soluble salts, which can ultimately cause salt stress in plants. In arid and semiarid regions, high [soil salinity](#) is the result of low rainfall and high evapotranspiration, while in northern regions it is caused by deicing salts. Increasing soil salinity negatively affects plant growth and development, so screening and identifying salt-tolerant plant species and cultivars is becoming increasingly important.

Looking to inform rose enthusiasts and growers, researchers at Texas A&M University evaluated 18 popular varieties of Earth-Kind roses for [salt tolerance](#). Their findings were published in *HortScience* (May 2014.) The rose cultivars were tested in greenhouses in College Station and El Paso, Texas, in response to two salinity levels at electrical conductivity: 1.2 and 10.0 dS·m⁻¹.

"The salt tolerance of Earth-Kind rose cultivars was consistent in the two locations with strong positive correlations of relative shoot dry weight, flower number, and visual quality score in the 10 same cultivars between

two locations," said corresponding author Genhua Niu. 'Belinda's Dream', 'Climbing Pinkie', 'Mrs. Dudley Cross', 'Reve d'Or', and 'Sea Foam' were the most salt-tolerant cultivars. 'Cecile Brunner', 'Else Poulsen', 'Madame Antoine Mari', 'Perle d'Or', 'Spice', and 'Souvenir de St. Anne's' were the least salt-tolerant among the 18 cultivars analyzed in the study.

"Identifying and using salt-tolerant garden roses is important in landscapes where soil salinity is high or irrigation water quality is poor," said the authors. They recommended 'Belinda's Dream', 'Climbing Pinkie', 'Mrs. Dudley Cross', 'Reve d'Or', and 'Sea Foam' as good selections for planting in landscapes with high soil salinity. 'Cecile Brunner' and 'Else Poulsen' were not recommended, as they had the lowest relative shoot dry weight and flower number of the cultivars tested.

More information: The complete study and abstract are available on the ASHS *HortScience* electronic journal web site:

[hortsci.ashspublications.org/c ... nt/49/5/544.abstract](https://hortsci.ashspublications.org/content/49/5/544.abstract)

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