



TR-287

Diagnosis and Management of Salinity Problems In Irrigated Pecan Productions

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Pecans, along with Almonds and Walnuts, are among the salt sensitive tree crops currently grown under irrigation. Yet, many growers are not convinced that salts are affecting yields, probably because symptoms of salt-affected trees are difficult to differentiate from those of water-stressed trees.

Salt problems usually appear when salinity of water used for irrigation exceeds about 500 mg L⁻¹, and the orchard consists of clayey soils or has a shallow water table. Pecans are especially sensitive to sodium (Na) and chloride (Cl) ions (Miyamoto, et. al., 1985). In other words, salt damage tends to be greater when irrigated with Na-dominated water than with gypsum or Ca-rich water. Salt problems are not wide-spread, but are common in areas irrigated with salty ground water or salty irrigation return flow.

Recent drought in the Southwest and northern Mexico has also accentuated salt problems as the supply of the fresh project water has dwindled. The shortfall is usually supplemented with ground water which may have elevated salinity. Salt problems also appear when soil and irrigation management practices are out of order.

This short article outlines ways to diagnose and manage salt problems. Readers who are interested in technical details should refer to separate publications listed at the end of this article.

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