

2272 Developing Salt Tolerant Upland Cotton

Ms. Natalia Castillo , Texas Agricultural Experiment Station, Lubbock, TX
Dr. John Gannaway , Texas Agricultural Experiment Station, Lubbock, TX

The state of Texas grows about 15% of the cotton fiber produced in the United States. At the present water from the Ogallala Aquifer formation is one of the major water bearing units that covers the state of Texas. Water levels have declined, and higher sediment depositions have created draining channels by subterranean erosion. The increasing deposits of saline residue deposited overtime in soil by using irrigation water from the Ogallala interferes with seed germination, plant developmental growth, fruiting capabilities, fiber yield and maturity. Salt causes oxidative damage, and deteriorates membrane composition of leaves, and has a long term effect on the soil surface. This accumulation of salt in the soil, coupled with a decreasing water supply will be a problem in the future and necessitates the need for development of salt tolerant crops.