Halophyte Bioaccumulation as a Means of Reclaiming Saline Soils. (S11-hallmark191811-Poster)

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Abstract:

Two halophyte species, Atriplex canescens and Suaeda moquinii, were grown at three soil salinity levels (none, 1.5 MPa and 2.5 MPa soil tensions). Biomass productions along with N, C and mineral contents were measured for each species and treatment. Soil samples, taken at the beginning of each growing season and after each clipping, were analyzed for salt content. Results showed a significantly higher Na accumulation and protein level in Sueada than in Atriplex. Sodium accumulation differed among salinity levels in both species but showed no difference among watering frequencies. Soil salinity levels were lower in plots of both species than in the control, but were much lower in plots with Suaeda. Both plant species have high nutritional value and potential for use as a livestock feed, suggesting that reclamation with these species may be economically feasible.

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