GROWTH OF RICE SEEDLINGS AT DIFFERENT MATRIC AND OSMOTIC POTENTIALS

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When soil moisture stress occur in saline condition, plant response to the combined stresses is of considerable interest.

The effects of shoot and root growth of rice were investigated in a pot experiment. Matric potentials of 0.0, 0.02 and 0.08MPa were induced by irrigating the soil at different intervals. Osmotic potentials were changed by using a saline soil and a normal soil.

Higher osmotic potentials and higher matric potential caused reduction in plant height, root length, root dry weight and shoot dry weight. Higher moisture level facilitated the plant growth in saline soil. Interaction effects of salinity and drought stresses could cause higher stress levels to the plant and shoot and root growth may be reduced.