

PLANT TISSUE CULTURE AND LAND RECLAMATION. A GOOD FIT?¹

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Abstract: Plant tissue culture may be useful for land reclamation. Some advantages of plant tissue culture are: 1. production of unlimited numbers of plants from limited starting materials, 2. production in a disease and virus free environment, 3. plants produced can be site-specific, site-adapted, with “local” genomes, 4. faster maturation to reproductive stage, and 5. successful propagation of “difficult to propagate” plants. Tissue cultured plants can be used to multiply field-collected plants destined for seed production. Tissue culture is a necessary part of developing bio-engineered plants useful for bio-remediation.

We will detail the tissue culture process, describe work that we have done to date on various native plants, and discuss some of the possible drawbacks to using tissue cultured plants. We will discuss ways to provide genetic diversity even though individual lines of tissue cultured plants are genetically identical.

Additional Key Words: Bio-diversity, micro-propagation, in-vitro culture, legumes, perennials, restoration, re-vegetation

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