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## **STRAWBERRY CLOVER AND ITS USE IN THE AMELIORATION OF CADMIUM CONTAMINATED SITES**

Peter Jauert and R. Neil Reese  
Department of Biology/Microbiology  
South Dakota State University  
Brookings, SD 57007

### **ABSTRACT**

Cadmium is found naturally in soils throughout the Midwest as well as in old mining sites of South Dakota. Two proposed methods for cleaning up these sites involve the use of cover crops to ameliorate the soil. These crops may be used to change the soil's characteristics to make the Cadmium unavailable to plants. In smaller sites, cover crops which would take up high levels of Cadmium could be harvested, physically removing the Cadmium from the soil. Strawberry clover is a legume found throughout the world and is related to the red clover and the white clover, common to this area. It is a very hardy plant with the ability to tolerate saline and alkaline soils as well as flooding. This makes it a good prospect for reclamation purposes.

An ongoing research project has been set up to look at 98 accessions of strawberry clover received from the Western Regional Plant Introduction Station in Pullman, Washington. These seeds were planted in the greenhouse for comparisons of morphological variations between accessions. Different traits will be selected for based on the type of soil remediation for which the plants will be used. Strawberry clover was also grown hydroponically to examine differences in Cadmium uptake. Comparisons of changes in rhizosphere pH by roots between accessions were made using colorimetric agar plates. Future research will look for a correlation between differences in Cadmium uptake and the ability of plants to change rhizosphere pH.