Developing High-Efficiency Agriculture for Farmers, Rural Communities and the State of Minnesota

Why Forever Green?

Pennycress

Throughout the Midwest, large portions of the landscape do not have a living cover from the time of annual crop harvest in late summer or fall until annual crops establish a cover crop soon in the following year. This lack of plant cover leaves soil vulnerable to erosion and leads to runoff into ground and surface water. Efforts to address these problems, but most cover crop options currently available are too difficult to establish, or too easy to terminate, can increase risk of soil loss and do not directly contribute income to the farm.

The Pennycress (Thlaspi arvense) is a winter annual species that can be planted in the fall to help break the dormancy in the soil. This species is ideal for interseeding short rotation crops because it produces a cover crop that is easily terminated, with 60% of annual sunflower and biomass production without displacing a food or feed crop.

Spring 2014: Funded at $1 Million by the Minnesota Legislature

Fall 2014: Forever Green Projects Funded

From article by University of Minnesota College of Food, Agricultural and Natural Resource Sciences (CFANS):

High-density Genetic Mapping of Intermediate Wheatgrass

QTLs Associated with Disease and Agronomic Traits

James Anderson, Professor, Department of Agronomy and Plant Genetics

Propagating of Hybrid Hazelnut for Minnesota

Jerry Cohen, Professor, Department of Horticultural Science

Assessing Nitrogen Contribution and Soil Biological Effects

Cultivating perennial plants will allow farmers to extend the growing season and provide a diverse range of ecosystem services. These plants can contribute to soil health, water quality, and wildlife habitat. They also have the potential to sequester carbon and provide additional economic benefits.

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