

GNC09-103

Producer education of nitrate reduction strategies and evaluation of acceptance

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Duration: 12 mo Request: \$9953

Abstract

Decreased water quality due primarily to nitrate loadings in agricultural drainage has plagued the US Midwest for the past several decades. There are a variety of on-farm nitrate reduction technologies that can be employed to reduce this problem, but implementation may be limited by education of the available options. The outcomes of this proposed work are (1) providing producers increased understanding of nitrate reduction technologies and (2) providing researchers increased knowledge of levels of acceptance of various nitrate reduction approaches so as to better focus educational approaches. This work will comprise a comparison of economic and ecosystem services provided by nitrate reduction methods (wetlands, controlled drainage, cover crops, crop rotation, nutrient management, and denitrification bioreactors) followed by development of an educational program which will include a survey evaluation of the producer acceptance of these six nitrate reduction methods. The educational program and producer survey will be executed at approximately half of ten Extension Field Days and Drainage Workshops in Iowa during 2010. The other half of the Field Days/Workshops will serve as a control where producers will complete the evaluation without the educational program. The outcomes are expected to increase knowledge of nitrate reduction options among farmers.