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WDATCP Sustainable Agricultural Demonstration Project #8810

## DEMONSTRATION OF LOW INPUT STRATEGIES FOR POTATO/VEGETABLE PRODUCTION ON IRRIGATED SANDS

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### Introduction

Wisconsin leads the nation in the production of processing vegetables and is sixth, nationally in potato production. Over 50% of the state's potato and processing snap bean production is located in Wisconsin's Central Sands Area. Such production results in a significant economic base for that area. The Central Sands has the climate and soils that favor potato and processing vegetable production. However, these same light, sandy soils coupled with shallow depths to groundwater, make the area sensitive to groundwater contamination with nitrates and pesticides commonly used in the production of these crops, particularly potatoes.

During the past decade, UW-CALS and CES faculty have conducted research to develop production practices which would protect groundwater resources while maintaining crop productivity and profitability. Much of this research has focused on techniques which reduce nitrogen, pesticide and irrigation inputs. Lowering such inputs can significantly reduce energy use and costs, reduce groundwater contamination and improve net returns (profits) while maintaining crop productivity. It was this research that provided the basis for developing a program of "best management practices" (BMPs) for potato and processing vegetable production on irrigated sands.

To demonstrate these BMPs, a team of CES extension specialists developed an "on farm" demonstration project. This two-year project was supported with WDATCP Sustainable Ag Program, WDNR and research gift funds. The CES team included UW-Madison extension specialists from Horticulture, Entomology, Plant Pathology and Soil Science. Staff from the Central Wisconsin Groundwater Center, College of Natural Resources - UW Stevens Point also cooperated in this demonstration effort.

### Site Characteristics

Three potato/vegetable growers participated in this BMP demonstration project. Growers A and B were located in the Central

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