

**WETLANDS IN AGRICULTURAL SYSTEMS**

T.A. Machacek and D.H. Rickerl  
South Dakota State University, Brookings SD 57007

Wetlands have generally been discounted as a valuable natural resource by agriculture. The Prairie Pothole Region of eastern South Dakota retains many of its original wetlands plus many that were modified - other parts of the nation are not so fortunate. A comprehensive study evaluating the inter-relationships between wetlands and three different agricultural systems (organic, transitional no-till, and conventional) has begun in South Dakota with a multidisciplinary team and close cooperation from farmers. This study will attempt to uncover relationships among groundwater, wetland and upland water using detailed water budgets. It will also look at nitrate and pesticide movement using environmentally safe tracers. These data will be correlated to agronomic parameters such as yield. Best management practices established from analyzing differences in wetland/agricultural systems will be developed. This study should provide valuable information regarding a sustainable resource for farmers.

Presented August 9-13, 1993 at the Symposium: Prairie Ecosystems: Wetland Ecology, Management and Restoration held in Jamestown, North Dakota.