

Sustainable Agriculture Practices

Indicator #7028

This indicator report was last updated in 2005.

Overall Assessment

Status: Not Assessed
Trend: Not Assessed

Lake-by-Lake Assessment

<i>Separate lake assessments were not included in the last update of this report.</i>

Purpose

- To assess the number of environmental and conservation farm plans and environmentally friendly practices in place such as: integrated pest management to reduce the potential adverse impacts of pesticides; conservation tillage and other soil preservation practices to reduce energy consumption and sustain natural resources and to prevent ground and surface water contamination

Ecosystem Objective

The goal is to create a healthy and productive land base that sustains food and fiber, maintains functioning watersheds and natural systems, enhances the environment and improves the rural landscape. The sound use and management of soil, water, air, plant, and animal resources is needed to prevent degradation of agricultural resources. The process integrates natural resource, economic, and social considerations to meet private and public needs. This indicator supports Annex 2, 3, 12 and 13 of the Great Lakes Water Quality Agreement.

State of the Ecosystem

Background

Agriculture accounts for approximately 35% of the land area of the Great Lakes basin and dominates the southern portion of the basin. In years past, excessive tillage and intensive crop rotations led to soil erosion and the resulting sedimentation of major tributaries. Inadequate land management practices contributed to approximately 57 metric tons of soil eroded annually by the 1980s. Ontario estimated its costs of soil erosion and nutrient/pesticide losses at \$68 million (CA) annually. In the United States, agriculture is a major user of pesticides, with an annual use of 24,000 metric tons. These practices lead to a decline of soil organic matter. Since the late 1980s, there has been increasing participation by Great Lakes basin farmers in various soil and water quality management programs. Today's conservation systems have reduced the rates of U.S. soil erosion by 38% in the last few decades. The adoption of more environmentally responsible practices has helped to replenish carbon in the soils back to 60% of turn-of-the-century levels.

Both the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) provide conservation planning advice, technical assistance and incentives to farm clients and rural landowners. Clients develop and implement conservation plans to protect, conserve, and enhance natural resources that harmonize productivity, business objectives and the environment. Successful implementation of conservation planning depends largely upon the voluntary participation of clients. Figure 1 shows the number of acres of cropland in the U.S. portion of the Great Lakes basin that are covered under a conservation plan.

The Ontario Environmental Farm Plan (EFP) encourages farmers to develop action plans and adopt environmentally responsible management practices and technologies. Since 1993, the Ontario Farm Environmental Coalition (OFEC), OMAFRA, and the Ontario Soil and Crop Improvement Association (OSCIA) have cooperated to deliver EFP workshops. The Canadian federal government, through various programs over the years, has provided funding for EFP. As can be seen from Figure 2, the number of EFP incentive claims rose dramatically from 1997 through 2004, particularly for the categories of soil management, water wells, and storage of agricultural wastes. As part of Ontario's Clean Water Strategy, the Nutrient Management Act (June 2002) is setting province-wide standards to address the effects of agricultural practices on the environment, particularly as they relate to land-applied materials containing nutrients. USDA's voluntary Environmental Quality Incentives Program provides technical, educational, and financial

assistance to landowners that install conservation systems. The Conservation Reserve Program allows landowners to convert environmentally sensitive acreage to vegetative cover. States may add funds to target critical areas under the Conservation Reserve Enhancement Program. The Wetlands Reserve Program is a voluntary program to restore wetlands.

Pressures

The trend towards increasing farm size and concentration of livestock will change the face of agriculture in the basin. Development pressure from the urban areas may increase the conflict between rural and urban landowners. This can include pressures of higher taxes, traffic congestion, flooding, nuisance complaints (odors) and pollution. By urbanizing farmland, we may limit future options to deal with social, economic, food security and environmental problems.

Management Implications

In June of 2002, the Canadian government announced a multibillion dollar Agricultural Policy Framework (APF). It is a national plan to strengthen Canada's agricultural sector, with a goal for Canada to be a world leader in food safety and quality, and in environmentally responsible production and innovation, while improving business risk management and fostering renewal. As part of the APF, the Canadian government is making a \$100 million commitment over a 5-year period to help Canadian farmers increase implementation of EFPs. The estimated commitment to Ontario for the environment is \$67.66 million while the province is committing \$42.72 million. These funds are available to Ontario's farmers since the federal government has signed a contribution agreement with the OFEC in the spring of 2005. This is expected in the fall of 2004. Currently Ontario's Environmental Farm Plan workbook has been revised for new APF farm planning initiatives launched in the spring of 2005. Ontario Farm Plan workshops are being delivered starting in the spring of 2005 under the new APF initiative.

In the spring of 2004, OMAFRA released the Best Management Practices (BMP) book *Buffer Strips*. This

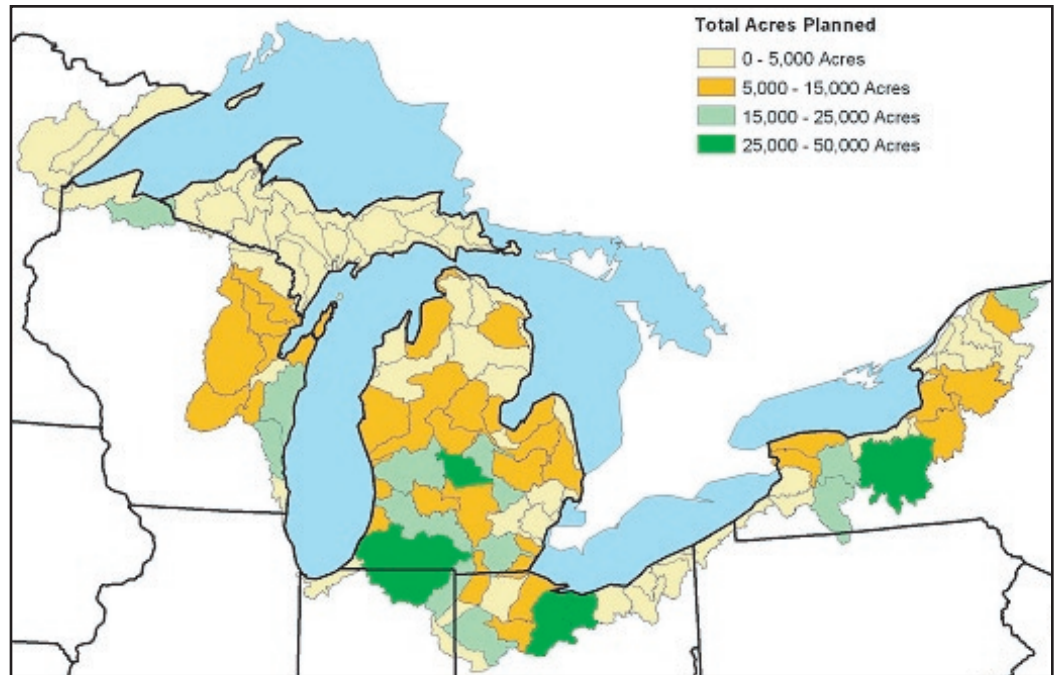


Figure 1. Acres of cropland in U.S. portion of the basin covered under a conservation plan, 2003.

Source: Natural Resource Conservation Service, U.S. Department of Agriculture

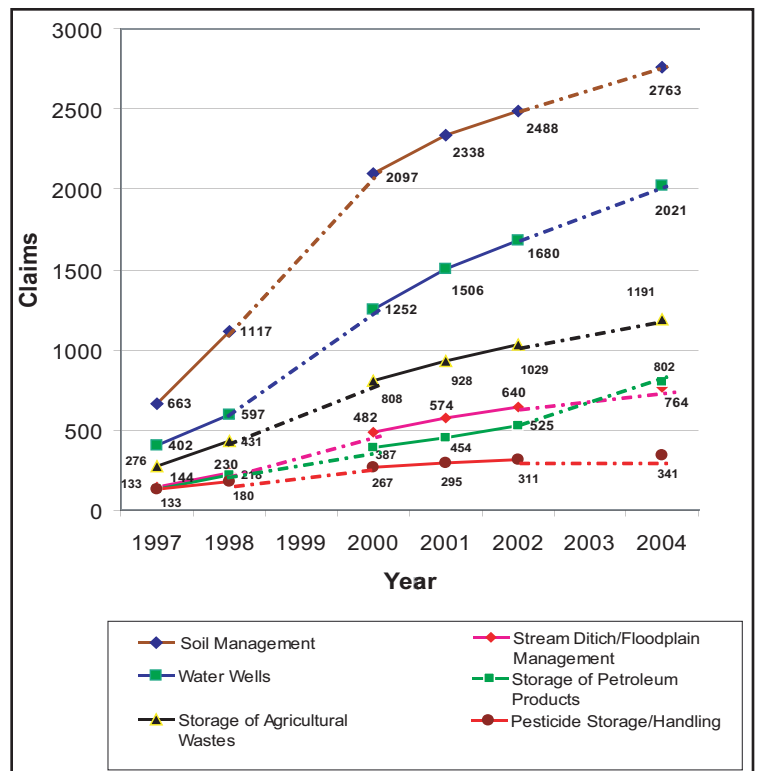


Figure 2. EFP: Cumulative Number of Incentive Claims by Worksheet (Issues).

Six of 23 worksheets/issues are represented here – these six worksheets represent 70% of all EFP incentive claims. Three worksheets (Soil, Water and Storage of Agricultural Wastes) represent significant environmental actions taken by farmers.

Source: Ontario Soil and Crop Improvement Association

book assists farmers to establish healthy riparian zones and address livestock grazing systems near water – two important areas for improvements in water quality and fish habitat. Pesticide use surveys, conducted every 5 years since 1983, were conducted in 2003. Results were released in June 2004.

The U.S. Clean Water Action Plan of 1998 calls for USDA and the U.S. Environmental Protection Agency (U.S. EPA) to cooperate further on soil erosion control, wetland restoration, and reduction of pollution from farm animal operations. National goals are to install 2 million miles of buffers along riparian corridors by 2002 and increase wetlands by 100,000 acres annually by 2005. Under the 1999 U.S. EPA/USDA Unified National Strategy for Animal Feeding Operation (AFO), all AFOs will have comprehensive nutrient management plans implemented by 2009. The Conservation Security Program was launched in 2004, and it provides financial incentives and rewards for producers who meet the highest standards of conservation and environmental management on their operations.

Acknowledgments

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Sources

Ontario Soil and Crop Improvement Association. 2004. Environmental Farm Plan Database.

Last Updated

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