Strengthening Agriculture's Role in Protecting Water Quality in the Owasco Lake Watershed

American Farmland Trust

Project Goals

- Data gathering of existing research
- Identify relevant practices & activities
- Develop a Conservation Blueprint

Agriculture's Significant Economic Impact

- Estimated value of ag products sold from farms in the watershed is more than $36 million
- Farms create jobs in the community
- Every dollar earned in agriculture turns over four times before it leaves local community
- Other benefits (tourism, open space, locally available fresh food)

Why is Agriculture well positioned in Owasco Lake?

- Soils are deep, well drained and high in calcium
- Over 55% of the watershed is in agriculture creating a critical mass
- Readily accessible markets
- Excellent support services

Results from Farm Interviews: Common Themes

- Personal Interviews with 10 farmers range in size and type of operation
- All had adopted some type of conservation practices
- Wanted to have a positive impact on keeping water clean because their operation depended on clean water and want to be a good neighbor and steward

Results from Farm Interviews: Conservation Practices Adopted

- Conservation Tillage and Strip Cropping
- Tile Drainage and Ponds
- Nutrient Management Plans
- Changed from row crops to grazing
- Fencing cattle from streams
- Barnyard Runoff Improvements
- Laneways for animal movements
- Buffers along streams
- Conservation Reserve Program (CRP)

Strip Cropping

Strip Tillage with Pond

Cows on Rotationally Grazed Pasture from Row Crops

Beef on Pasture over Buffered Stream

Results from Non-Farm Interviews: Common Themes:

- Personal Interviews with 8 people associated with ag but not active farmers
- All recognized farming as important land use
- Generally felt that the farmers were responsible but there are concerns about some practices

Results from Non-Farm Interviews: Suggested Wish List

- Stream bank restoration
- Buffering critical areas
- Keep nutrients (fertilizer & manure) 500’ from tributaries
- Restore wetlands to act as a buffer
- Tile drains and road side ditching
- Watershed plan is to large, develop consensus based priorities

Agriculture Under the Microscope

- 1986 low to intermediate nutrient content*
  - contributes to growth of algae
  - considered to be oligo-mesotrophic (alkaine base)
  - Where do the nutrients come from?^

    Numerous sources from human activity

* State of the Owasco Lake report dated Jan. 2000

^ Owasco Lake Watershed Management Plan July 2001

Agriculture Under the Microscope, Continued

Summer Blue- Green Algae on Owasco Lake

EPA Webinar on Blue-Green Algae

www.epa.gov/watershedwebcasts

Lake Waco, Texas

Sources of Phosphorus contribution to Lake Waco?

Agriculture Under the Microscope, Continued

Sources of Total P contribution to Lake Waco:

~ 30% Forest and Rangeland

~ 25% Dairy

~ 20% Crop and Pastureland

~ 15% Urban Runoff

Agriculture Under the Microscope, Continued

Lake Waco Observation:

- Dairy occupied 5% of the watershed, second largest contributor of P
- Wet weather drove the loading of P

Management Practices put into place:

- Nutrient Management Plans on all dairy farms
- ~ ½ collectable manure removed from watershed
- P binding capacity; limiting manure application

Agricultural Environmental Management Cayuga County Summary

- Voluntary, incentive-based program that helps farmers operate environmentally sound and economically viable businesses using a 5 tiered assessment approach to develop and implement comprehensive, site-specific farm plans.
- 89 farms totaling 31,765 acres have participated in AEM in Cayuga Co's section of the watershed.
- 24 at Implementation Stage:11 are at Tier 4 with 13 in Tier 5 (11at 5A & 2 at 5B)

Owasco Lake Ag Forum
March 2, 2011

- Attendance: ~ 50 registered; 15 farms w/ 8,200 ac.
- What are the issues/barriers to adopting conservation practices?

➢ **Regulatory compliance**

➢ **Lack of information**

➢ **Finances**

➢ **Additional Labor issues & M/O of practices**

➢ **Stream Bank Stabilization**

Owasco Lake Conclusions to Date (Preliminary Findings)

- Farmers interviewed want to "do the right thing" to protect water and the environment; yet they need to balance this with being profitable in a often volatile economic climate.
- There is a communications disconnect between the farm community and non-farm community.
- Continue to brainstorm ways to overcome barriers to either the adoption of conservation practices or implementing the practices they want to.

Owasco Lake Conclusions to Date (Preliminary Findings, cont.)

- Those closely related to Owasco Lake, support well managed farms and want to work with the farm community to help them implement conservation practices to further protect water quality in Owasco Lake.