

CONSERVATION TECHNOLOGY INFORMATION CENTER

CONSERVATION IN ACTION TOUR

AUG. 8-9
2011

Great Farms



Great Lake



The Fertilizer Institute
Nourish, Replenish, Grow





Conservation Technology Information Center

3495 Kent Avenue, Suite J100, West Lafayette, IN 47906

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www.ctic.org

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August 8

4:30 - 6:00 p.m. Cocktail Social at Crowne Plaza



Dr. Jeffrey M. Reutter

Jeff has worked in the Great Lakes and Lake Erie since 1971 and directed four programs at The Ohio State University since 1987: F.T. Stone Laboratory (Ohio's Lake Erie Laboratory since 1895 and the oldest freshwater biological field station in the country), the Ohio Sea Grant College Program, the Center for Lake Erie Area Research (CLEAR) and the Great Lakes Aquatic Ecosystem Research Consortium (GLAERC). An aquatic biologist and limnologist, Jeff authored more than 150 technical reports and journal articles.

He is a frequent lecturer on issues related to the changing Lake Erie ecosystem, the top challenges facing Lake Erie, Great Lakes research needs and priorities, the importance of science education and research and the importance of scientists communicating with the public. He received his bachelor and master degrees from Ohio State in fisheries management and his doctorate from Ohio State in environmental biology.

6:00 - 8:00 p.m. Board the Jet Express boat for a river/harbor tour



Lieutenant Colonel Stephen H. Bales

Stephen is the district commander for the U.S. Army Corps of Engineers, Buffalo District. His previous assignment was with the Louisville District where he served as deputy commander. Stephen's awards and decorations include the Bronze Star, Meritorious Service Medal; the Army Commendation Medal; the Army Achievement Medal, the Joint Meritorious Unit Citation, the National Defense Service Medal (with bronze star), the Iraqi Campaign Medal (with two campaign stars), the Global War on Terrorism Service Medal, the Korean Defense Service Medal, the Humanitarian Service Medal, the Army Service Ribbon; the

Overseas Service Ribbon, the Parachutist Badge, and the Bronze Order of the deFleury Medal. Stephen graduated from the United States Military at West Point, New York, where he received a degree in civil engineering.



Dr. Thomas Bridgeman

As assistant professor of ecology at the University of Toledo's Lake Erie Center and Department of Environmental Sciences, Tom specializes in western Lake Erie's environmental issues. He has 10 years experience studying the reoccurrence of harmful microcystis algal blooms in the area and their links to watershed processes, tracking a new harmful algal species, *Lyngbya wollei*, and working to enhance methods of monitoring lake water quality through improvements in instrumentation and remote sensing.

His other projects include the development and effects of intermittent lake hypoxia on fish, and the use of Lake Erie algae as a potential feedstock for renewable biofuels. He teaches courses in aquatic ecology, marine biology, and general biology at the University of Toledo. Tom received his doctorate degree in ecology and evolutionary biology from the University of Michigan.



Joseph W. Cappel

Joe is the director of cargo development for the Toledo - Lucas County Port Authority. He works to increase and diversify cargo development domestically and internationally. This includes leveraging the Port's expansion and modernization efforts, providing educational outreach and facilitating communications between key terminal management and the business community. Joe earned a bachelor degree in business administration from The Ohio State University.

Social sponsored by:



JOHN DEERE

August 9

- 7:00 a.m. Load buses at Crowne Plaza
- 7:25 a.m. Depart Crowne Plaza
- 7:55 a.m. The Andersons, Lucas County
- 9:50 a.m. Bridgewater Dairy, Williams County
- 11:40 a.m. Mavis Farm, Defiance County
- 11:45 a.m. Lunch
- 1:45 p.m. Dean Farm, Williams County
- 3:20 p.m. Hesterman Farm, Henry County
- 4:55 p.m. Blue Creek Conservation Area, Lucas County
- 5:10 p.m. Conservation Technology Expo
- 6:15 p.m. Dinner
- 8:00 p.m. Return to Crowne Plaza

Thank you!

CTIC extends sincere and heartfelt thanks to our team of local partners who contributed their ideas, time and energy to make this tour a success.

- Jeff Ankney, Defiance County Soil and Water Conservation District
- Larry Clemens, The Nature Conservancy
- Steve Davis, Western Lake Erie Basin Partnership
- Joe Nester, Nester Ag
- Clint Nester, Nester Ag
- Cheryl Rice, USDA Natural Resources Conservation Service



THE ANDERSONS, INC.



The Andersons' Plant Nutrient Group works to sustain agricultural systems that provide food and fiber to a growing and hungry world. Efficient nutrient management is key to maintaining agricultural systems that provide quality products in quantities that fulfill growing needs.

The Andersons' Retail Farm Centers deliver high quality crop nutrients and technical expertise based on sound soil science and crop production management. Through continuing education and advanced training, dedicated ag advisors provide the latest agronomic and crop production technical expertise to growers. Their goal is to best assist each customer through highly knowledgeable staff.

The Andersons' strive to help growers implement efficient, profitable and environmentally sound practices.

The Andersons' Retail Farm Centers continue to invest in equipment purchases, facility improvements to support crop nutrient utilization and training for their agronomy staff. The Andersons subscribe to the principles of the 4Rs of nutrient management – apply the Right Source at the Right Rate, at the Right Time and in the Right Place.

The Andersons' statement of principles affirms the company's commitment to sustainability – “As responsible members of our community, we take appropriate steps to safeguard the health and safety of our employees, customers and neighbors and to protect the quality of the environment in which we work and live.”



Dennis Addis

Denny, president of The Andersons' Plant Nutrient Group, graduated from the University of Toledo in 1975 with a degree in business administration. Dennis began his career with The Andersons in 1971. He serves on the board of directors and the executive committee of The Fertilizer Institute, the board of the University of Toledo Business Advisory Council and chairs The Foundation for Agronomic Research board of directors.



Alan Bensch

Alan serves as vice president of northern operations for The Andersons Plant Nutrient Group, which consists of 27 locations in the eastern Corn Belt and Florida. Some are wholesale fertilizer terminal facilities and some are farm centers. Alan has worked for The Andersons for 31 years, wholly within the Plant Nutrient Group. Alan earned his master degree in business administration from the University of Toledo in 1981.



Douglas Busdecker

Doug has worked more than 35 years in the retail fertilizer industry. After graduating from Clark Technical Institute, he began his career with American Cyanamid in Fremont, Ohio. In 1973 during American Cyanamid's divestiture of the retail fertilizer business, Crop & Soil Service, Inc. was formed. Doug held positions in operations, sales and management there until 1998 when The Andersons acquired the facilities. Following the acquisition, Doug held positions as area operations manager and most recently as area general manager.



Mel Hahn

Mel serves as The Andersons' vice president of sales and marketing within the Plant Nutrient Group. Mel has worked for The Andersons for 39 years in a variety of positions related to the fertilizer industry. He joined The Andersons after earning his degree in agriculture economics from the University of Illinois.

4R NUTRIENT STEWARDSHIP

4R nutrient stewardship provides a framework to achieve cropping system goals – increased production, increased farmer profitability, and enhanced environmental protection. To achieve those goals the 4Rs utilize fertilizer best management practices that address the Right Nutrient Source, at the Right Rate, the Right Time, and in the Right Place. The four “rights” are necessary for sustainable plant nutrition management. The assessment of any planned nutrient management practice must consider the economic, social, and environmental effects to determine whether or not it is a “right” practice for that system.

4R Universal Scientific Principles

The 4R nutrient stewardship principles are the same globally, but how they are used locally varies depending on field and site specific characteristics such as soil, cropping system, management techniques and climate.

RIGHT SOURCE

Ensure a balanced supply of essential nutrients, considering both naturally available sources and the characteristics of specific products in plant available forms. Specifically – consider nutrient supply in plant available forms, ensure nutrient suits soil properties, and recognize the synergisms among elements.

RIGHT RATE

Assess and make decisions based on soil nutrient supply and plant demand. Specifically – appropriately assess soil nutrient supply (including those from organic sources and existing soil levels), assess plant demand, and predict fertilizer use efficiency.

RIGHT TIME

Assess and make decisions based on the dynamics of crop uptake, soil supply, nutrient loss risks, and field operation logistics. Specifically – assess the timing of crop uptake, assess the dynamics of the soil’s nutrient supply, recognize weather factors, and consider logistics.

RIGHT PLACE

Address root-soil dynamics and nutrient movement, and manage spatial variability within the field to meet site-specific crop needs and limit potential losses from the field. Specifically – recognize root – soil dynamics, manage spatial variability issues, consider the tillage system, and limit potential off-field transport.

To help identify opportunities to improve fertilizer efficiency and prevent nutrient movement from each field, ask:

Was the RIGHT FERTILIZER SOURCE given to the crop at the RIGHT RATE, RIGHT TIME, and in the RIGHT PLACE?



The new www.nutrientstewardship.com website promotes the 4R philosophy, an innovative and science-based approach that offers enhanced environmental protection, increased production, increased farmer profitability, and improved sustainability.

Learn more about 4R nutrient stewardship at www.nutrientstewardship.com.

The United States Department of Agriculture Natural Resource Conservation Service (USDA NRCS) has been undertaking Conservation Effectiveness Assessment Program (CEAP) studies in major watersheds throughout the United States. Key findings indicate **that suites of best management practices work better than single practices**, and that there is a need to **increase the complete and consistent use of nutrient management**, defined as using strategies that address proper **rate, form, timing, and placement**.

Williams County

Major Crops Grown:

- Corn: 51,300 acres
- Soybean: 77,200 acres
- Wheat: 24,500 acres
- Hay: 2,870 acres

Average Farm Size: 189 acres

Number of Farms: 1,120

Total Number of Conservation Reserve Program Acres: 28,697.90

Livestock (estimated):

- Dairy: 8,000
- Cattle: 17,300
- Hogs: 16,900
- Sheep: 1,100

Major Waterways: St. Joseph River and Tiffin River

Active Watershed Group: St. Joseph River Watershed Initiative

Williams County Soil and Water Conservation District

1120 West High Street, Bryan, OH 43506

419.636.9395

419.636.8645 (f)

www.williamsswcd.org

BRIDGEWATER DAIRY



Photo courtesy of Bridgewater Dairy

Bridgewater Dairy, a family owned business, includes three separate entities: Bridgewater Dairy, LLC, Bridgewater Farming, LLC and Oakshade Dairy, LLC. Together the operations milk 4,200 Holstein dairy cows and farm more than 4,000 acres in northwest Ohio.

Nothing is wasted on the Weaver farms. Everything is recycled or used to produce electricity, fertilizer, feed and cow bedding.

Bridgewater is the second largest user of electricity in the five county area, but it also produces more electricity than it can use.

Three times a day, large vacuums collect manure produced by the cows. The manure is pumped into an anaerobic digester, a huge concrete underground vault. Methane rises to the top and is piped out to fuel two 1,000-horsepower engines. Those engines supply enough power for Bridgewater's needs and produce surplus electricity that the farm sells to the local power company.

The Weavers adhere to Ohio Department of Agriculture's manure management requirements and conduct pre-sidedress nitrogen testing before precision application. Other conservation measures include land enrolled in USDA's Conservation Reserve Program and cropland conservation systems that build soil quality and protect water quality.

Their commitment to environmental standards earned the Weavers the 2007 Environmental Stewardship Award from the Ohio Livestock Coalition and the Ohio Dairy Producers Association. At Bridgewater they continue "producing quality, tasty dairy products on a farm consumers can take pride in." Conservation is integral to the operation because, "It is profitable, sustainable and the right thing to do."



Dr. Leon Weaver

Leon graduated from Goshen College in 1968 and the University of Pennsylvania School of Veterinary Medicine in 1971. He earned advanced clinical veterinary training at Cornell University and is certified as a specialist in veterinary reproduction. Dr. Weaver practiced dairy veterinary medicine for 11 years in California and later served for 15 years on the clinical and research faculty of the University of California's School of Veterinary Medicine.



Chris Weaver

Chris heads up all farm and dairy personnel, equipment and operations at Bridgewater. His education at the University of California Davis focused on dairy science and agricultural economics. After graduation he worked for dairies in California, New Mexico and Michigan.



Greg Dietsch

Greg serves as Bridgewater's farm operations manager. He joined the dairy in fall 2008. Greg participated in the operation of his family farm in the Edgerton, Ohio, area where he gained experience in project and business management. At the dairy's beginning, Greg and his team successfully planned how to meet Bridgewater's equipment, tillage and personnel needs.



Joe Nester

Joe, an independent crop consultant in northwest Ohio, spent the last 35 years working with regional farmers, 16 of those years as manager of a retail fertilizer operation. His business, Nester Ag, LLC, serves farm operations in northwest Ohio, northeast Indiana and south central Michigan, providing independent soil consulting and nutrient management planning. Nester Ag's services include agricultural technology consulting for trials and evaluation of farming methods and improving efficiency and profitability of production methods. Joe received the 2009 Ohio Top Agri-Business Award from the Ohio No-Till Council.

Defiance County

Major Crops Grown:

- Corn: 43,200 acres
- Soybeans: 100,300 acres
- Wheat: 26,800 acres

Land in Farms: 233,313

Average Farm Size: 204 acres

Number of Farms: 1,150

Total Number of Conservation Reserve Program Acres: 18,356

Livestock:

- Dairy: 13 operations, 5,100 animals
- Beef: 56 operations, 11,200 animals
- Hogs: 37 operations, 10,800 animals

Major Waterways: Defiance County is the heart of the Maumee River Watershed. It has four rivers that drain through the county on the way to Lake Erie:

- Tiffin River drains 500,553 acres
- St. Josephs River drains 687,066 acres from Michigan and Indiana
- Auglaize River drains 1,568,939 acres from the southeast
- Upper Maumee River drains 771,924 acres from Indiana

Active Watershed Groups: Upper Maumee Watershed Partnership

Opportunities:

1. Partner with other county and state agencies and non-profit organizations.
2. Implement state-of-the-art technology to improve office workflow.
3. Support farmers using the latest variable rate technologies.

Challenges:

1. Maintain staffing levels despite budget shortfalls.
2. Maintain conservation incentives to compete with grain prices.
3. Stay informed about changes in engineering and survey technology.

Defiance County Soil and Water Conservation District

6879 Evansport Road, Suite C, Defiance, OH 43512

419.782.8751

419.769.5372 (f)

www.defiance-county.com/swcd

BUS SPEAKERS

Defiance County Soil and Water Conservation District



Jeff Ankney

In 2004, Defiance County Soil and Water Conservation District (Defiance County SWCD) hired Jeff as district administrator. Jeff serves on the Defiance County Planning Committee, Local Emergency Planning Committee and Township Trustees Association. Jeff's personal mission matches that of the Defiance County SWCD: to protect the land and water of Defiance County as an innovative leader and to assist and educate the public to make the best conservation choices. Jeff graduated from Bowling Green State University in 1991 with a bachelor degree in environmental design technology.



Jason Roehrig

As Defiance County SWCDs district technician, Jason administers the geographic information and information technology systems and spearheads the Upper Maumee Watershed Partnership. In 2000, Jason graduated from The Ohio State University with a bachelor degree in natural resources. With extensive training in environmental science, he served as an aquatic biologist for an Ohio lake management firm and performed laboratory water quality testing in Virginia.



Louis Shininger

Louis and his wife, Charette, are the third generation to live on Louis' family farm east of Ney, Ohio. Louis has farmed full time for more than 40 years. The operation consists of over 1,000 acres of corn, soybeans and wheat as well as a 2,400 head contract pig nursery managed by his son, Todd. Louis has served as a soil and water conservation district board member for more than 23 years.



Photo courtesy of Defiance County SWCD

Lunch Speakers



Dale Minyo

Dale, the most widely recognized farm broadcaster in Ohio, continually promotes Ohio agriculture. After graduating from The Ohio State University with a degree in agricultural economics, Dale began his career with Agri Communicators. He received the 2000 Golden Feather Award from the Ohio Poultry Association and the 2000 Meritorious Service Award from the American Soybean Association. Dale makes good use of the public speaking skills he learned as president of Ohio FFA Association in 1983-84.



Dr. Samuel W. Speck

For the past three years Sam has served as one of three U.S. members on the International Joint Commission, which addresses boundary water issues between the United States and Canada. He previously served eight years as Ohio's director of Natural Resources. During that time, he chaired the Council of Great Lakes Governors and Premiers Water Management Working Group, which developed the Great Lakes-St. Lawrence River Basin Water Resources Compact and parallel 10-party agreement. He also served as FEMA's Associate Director for State and Local Programs and Support in the Reagan Administration, President of Muskingum College and as a member of the Ohio House and Senate where he specialized in natural resources issues. In 2004, he was one of three state officials in the United States to receive the National Governors Association's annual award for Distinguished Service in State Government. Dr. Speck earned master and doctoral degrees in government from Harvard University.

Lunch sponsored by: 

The Mosaic Express



Photo courtesy of The Mosaic Company

The Mosaic Express is an interactive phosphate industry experience on wheels. This custom 43-foot motor coach provides children and adults an educational journey through the history, operations and benefits of Florida phosphate and its importance to global farming and food production.

Check out the display of prehistoric fossils, watch corn dance before your very eyes and experience how Florida phosphate plays a part in the watershed and in everyday life.

MAVIS FARM



Photo courtesy of Defiance County SWCD

Owned by Gary and Pat Mavis and Scott and Jenny Mavis, this fourth generation farm near Edgerton, Ohio, generally follows a corn and soybean rotation on its 2,900 acres. Gary and Scott use no-till on all soybeans and most of the corn acres.

Gary and Scott divide each field into different yield zones based on previous years' yield maps and soil types. They test the soil in each zone separately and evaluate results. They then apply lime, fertilizer, nitrogen and seed based on the results and yield potential of each zone.

Other conservation practices include waterways, drainage control structures, riparian filter strips and cover crops. Tillage is minimized to leave as much surface residue as possible and limit erosion.

The Mavis family employs conservation measures because "the land provides for us, and in turn, we feel responsible to take care of the land to the best of our ability."



Scott and Gary Mavis

The Mavis' own and farm land in Defiance and Williams counties. They deliver a majority of soybeans to The Andersons and supply corn to local ethanol plants. The family also operates Mavis MeterMax, a business that works on corn planters, and has a dealership for Precision Planting and Martin Industries equipment.



John McGuire

John acquired design, operation, data analysis and results presentation skills while working for a number of companies. In each role, John honed specialized skills in data management, computer programming, sensor technologies, personnel management and sales. Before he started his own company, Simplified Technology Services, he worked for Brookside Laboratories, Spatial Ag Systems, Monsanto and Terra Industries. John holds an undergraduate degree in chemistry from Michigan State University and a graduate degree in geography from Southern Illinois University.

DEAN FARM



Allen and Shelly Dean farm in Williams County, Ohio. They strive to practice and promote environmental stewardship and work to protect and preserve water, soil and air.

Dean Farms grows wheat and non-genetically modified soybeans, employing no-till on 1,900 acres. They also plant cover crops, conduct tissue sampling and maintain structural conservation practices. They analyze soybean and wheat yield maps to determine zones for soil testing. Test results indicate nutrient levels, which guide precise lime and fertilizer application rates.

Dean Farms recently launched cover crop seed sales and services to area farmers. The Deans recognize agriculture's challenges today, including land development pressures, demand for crop production and rising equipment costs. However, they welcome opportunities such as precision agriculture technology and

grain markets developing within the United States and abroad. They look forward to helping grow food for an expanding world population.



Allen Dean

Allen comes from a non-farm family background. He graduated from The Ohio State University's Leadership Education and Development program, a two-year program consisting of studies in and outside of the United States. Allen also serves as farm manager for a foreign land investment group. He graduated from Northwest Technical College with a degree in ag management and finance.



Frank Gibbs

Frank, a USDA resource soil scientist, serves northwest Ohio. He has worked 34 years for USDA in various positions. Frank is a certified professional soil scientist, certified professional soil classifier, certified cop consultant, certified interagency wetland delineator, national interagency hydric soil instructor and past president of the Association of Ohio Pedologists. He chairs the Ohio Soil Scientist Certification Bard for the Soil Science Society of America.

Henry County

Major Crops Grown:

- Corn: 76,500 acres
- Soybeans: 102,000 acres
- Wheat: 34,800 acres
- Vegetables: 3,445 acres

Average Farm Size: 250 acres

Number of Farms: 884

Total Number of Conservation Reserve Program Acres: 3,226.3

Livestock:

- Dairy: 10 operations
- Cattle: 84 operations
- Hogs: 23 operations

Major Waterways: The major waterways in Henry County are the Maumee River Lower Basin and North & South Turkeyfoot Creek (2 large tributaries).

Opportunities:

1. Continue working with Farm Bill conservation projects.
2. Pursue grant and government dollars for drainage practices.
3. Improve public relations to advertise available programs.

Challenges:

1. Find funds for large watershed drainage problems and projects.
2. Simplify Farm Bill programs to reduce paperwork.

Henry County Soil and Water Conservation District

2260 N. Scott Street, Napoleon, OH 43545

419.592.2926 ext.3

419.599.0300 (f)

BUS SPEAKERS

Conservation Action Project (CAP)



Edward Crawford

Ed serves as a program specialist for the Ohio Department of Natural Resources' Division of Soil and Water Resources. He facilitates communication between local soil and water conservation districts and state and federal agencies to develop and implement conservation programs. In 2006, the Ohio Federation of Soil and Water Conservation Districts recognized Ed with its Presidential Award. He received the Ohio Lake Erie Award for the Conservation Action Project in 2001. Ed holds a degree in agriculture from The Ohio State University.



Jim Carter

Jim is the district program administrator for the Wood County Soil and Water Conservation District in Bowling Green, Ohio. He assists private landowners with drainage concerns including private group ditch bottom cleanouts, ditch reconstruction and surface and subsurface drainage issues. He is an active member in locally led conservation groups such as Conservation Action Project and Portage River Basin Council.



Todd Hesterman

Todd works as an independent crop consultant and certified crop advisor. As a board member of the Ohio Soybean Association and coordinator of the Conservation Action Project, he supports the adoption of conservation practices on commercial farms in the Maumee River Basin. Todd served as an agricultural representative for the Ohio Environmental Protection Agency's Lake Erie Phosphorous Task Force, which studies the health of Lake Erie. He holds a degree in agronomy from The Ohio State University.



DISSOLVED PHOSPHORUS

Impacts to Lake Erie and What Agriculture Can Do

Phosphorus, a nutrient required by all organisms including growing crops, exists in particulate or dissolved forms. Particulate phosphorus is attached to suspended sediment particles. Dissolved phosphorus is found in water solution.

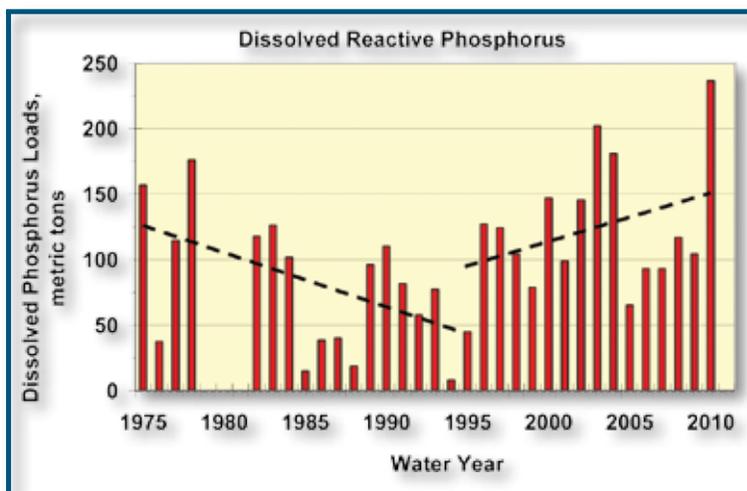
Dissolved phosphorus is 3.5 times more effective in stimulating algal growth than particulate phosphorus, making it a nutrient of increasing significance and growing importance in the Lake Erie basin.

Heidelberg University researchers have measured export and concentration of dissolved phosphorus in the Maumee River near Waterville, Ohio since 1975. In 2010, scientists found 261 tons of phosphorus, the largest amount since 1975. This was measured during the spring months (April-June) which experienced multiple high rainfall. The data also points to the direct effect of major storms as significant events in transporting dissolved phosphorus. Although that three-month period was a record, the 2010 water year, as a whole, was not a record year for amounts of dissolved phosphorus.

Dissolved phosphorus exports have increased significantly since 1995, according to Heidelberg monitoring data. The graph below shows dissolved phosphorus loads recorded at the Waterville sampling station from 1975 to 2010.



Photo courtesy of Steve Davis



Graph courtesy of Heidelberg University

The Maumee River is the largest tributary to Lake Erie and also the single largest source of phosphorus loading to the lake. Researchers studying this issue conclude that agriculture is the dominant source of dissolved phosphorus in the Maumee River watershed. Increased adoption of conservation practices, such as no-till, grass waterways, filter strips and other conservation practices have reduced erosion and sediment in the watersheds and have contributed to reduced concentrations of particulate phosphorus and suspended sediment. Up to 1995, dissolved phosphorus decreased, but recent increases indicate more needs to be done to properly manage soil nutrients.

Research Continues

Researchers strive to more clearly understand how dissolved phosphorus affects Lake Erie and its tributaries. But knowledge gaps remain and more research is needed. Documented water quality monitoring trends and the health of Lake Erie require agricultural producers, agricultural advisors, researchers and policy makers to collaboratively find new solutions to reduce dissolved phosphorus runoff.

What does this mean for Lake Erie?

- Excessive dissolved phosphorus, along with extreme climate conditions and other environmental factors, leads to nuisance algal blooms.
- As algae decomposes, bacteria consumes oxygen in the water.
- As a result, lower oxygen levels may lead to fish kills, odor problems and diminished recreational opportunities, among other issues.



Photo courtesy of Ohio Sea Grant

What can agriculture do?

- Contribute to ongoing research.
- Participate in discussions and work groups addressing this issue.
- Continue to apply conservation practices that improve fertilizer/manure management to minimize enrichment of phosphorus in the surface layer of the soil.
- Use no-till agriculture systems, which reduce soil erosion by keeping crop and plant residues on the surface longer.
- Use cover crops to tie up nutrients and protect the soil.
- Effectively manage liquid manures from concentrated animal operations.
- Reduce fall fertilization and manure spreading in fall and winter, especially in the absence of cover crops.
- Follow soil test recommendations and incorporate fertilizer/manure into soil.

RESOURCES

NATIONAL CENTER FOR WATER QUALITY RESEARCH AT HEIDELBERG UNIVERSITY - WWW.HEIDELBERG.EDU/WQL

The NCWQR research team uses the wealth of water quality data generated concerning Lake Erie and numerous streams and groundwater wells across the nation to formulate new ideas about the status of water quality, the effects of water quality on aquatic living systems and future implications for the availability of healthy, usable water.

NUTRIENT EFFICIENCY - WWW.NUTRIENTSTEWARDSHIP.COM/

4R Nutrient Stewardship emphasizes four central components: applying the right fertilizer source at the right rate, at the right time, and in the right place

HESTERMAN FARM



Todd Hesterman owns Hesterman Farms, a 450-acre corn, soybean and wheat operation in Napoleon, Ohio. He has employed continuous no-till for 22 years and used yield mapping for more than 14 years.

Todd incorporates filter strips, quail buffers, georeference soil sampling and controlled drainage in his management system. He has been blessed, he says, with a good base operation and wants to nurture it for future generations.

His nutrient management regimen consists of soil samples taken from every acre every other year. Soil type, yield potential and management zones (elevation, drainage, etc.) determine the kind of soil sample needed.

Todd finds the greatest challenges facing agriculture to be overcoming the public

perception of nutrients in lakes and other environmental issues. However, he also sees opportunities such as providing food and fiber for a growing population, ensuring a good food supply and reminding the public that agriculture is a worthwhile business and way of life.

Dr. Libby Dayton, research scientist with The Ohio State University, will demonstrate how soil type and management modify soil-phosphorus interactions in her presentation titled "Utility of a Phosphorus Risk Index Framework."



Dr. Elizabeth (Libby) Dayton

Libby is a soil and environmental chemistry research scientist in the School of Environment and Natural Resources at The Ohio State University. As part of the Soil Chemistry Research Group, Libby researches mitigation of nonpoint source agricultural pollution. She holds an undergraduate degree in environmental science from the University of Massachusetts and a graduate degree and doctorate in soil science from Oklahoma State University.



Todd Hesterman

Todd works as an independent crop consultant and certified crop advisor. As a board member of the Ohio Soybean Association and coordinator of the Conservation Action Project, he supports the adoption of conservation practices on commercial farms in the Maumee River Basin. Todd served as an agricultural representative for the Ohio Environmental Protection Agency Lake Erie Phosphorous Task Force, which studies the health of Lake Erie. He holds a degree in agronomy from The Ohio State University.



Neal Horrom

For more than 12 years with Crop Production Services, Neal has developed and implemented custom technology solutions for agricultural operations. As precision ag services manager, he focuses on solutions that allow service providers and growers to achieve better results.

BUS SPEAKERS

Western Lake Erie Basin Partnership (WLEBP)



Steve Davis

Steve works part-time as a watershed specialist and is active in the Western Lake Erie Basin Partnership. He was instrumental in encouraging the first farmers in the watershed to adopt no-till. Steve worked for 37 years in the Maumee watershed for Natural Resources Conservation Service. His positions included district conservationist, area agronomist, area resource conservationist, team leader and state watershed programs coordinator. He retired from NRCS in 2009.



Jim Lake

Jim serves as team leader of District Support Specialists for the Indiana State Department of Agriculture (ISDA). He represents ISDA on the Operations Committee of the Western Lake Erie Basin Partnership. For 40 years, Jim has been an integral member of the Indiana Conservation Partnership in a variety of positions. Jim holds a degree from Purdue University in agricultural education with a minor in soils.



Cheryl Rice

In 2008, Cheryl began her work as an urban conservationist for the USDA Natural Resources Conservation Service (NRCS) serving northwest Ohio. She supports the leadership of the Western Lake Erie Basin Partnership in implementing projects to protect and improve the water quality of Lake Erie. These efforts include community gardening, urban canopy replacement, storm water best management practices and NRCS conservation program support. Cheryl studied botany, geology and environmental science at Miami University. Her experience includes graduate work in The Ohio State University's Horticulture and Crop Sciences program where she monitored urban trees and their stress response.



Photo courtesy of Steve Davis

Lucas County

Average Farm Size: 160 acres

Number of Farms: 365

Total Number of Conservation Reserve Program Acres: 578

Livestock:

- Cattle: 2 operations
- Hogs: 1 operation

Major Waterways: Lucas County includes the lower reach of the Maumee River and tributaries, as well as a portion of the River Raisin watershed. As the Maumee River enters Lucas County it passes through a largely agricultural area, comprised mainly of row crop production. As the river approaches Maumee Bay land use shifts to suburban, urban and industrial.

Active Watershed Groups: Partners for Clean Streams, Maumee Remedial Action Plan, Duck and Otter Creek Partnership

Conservation Reserve Program Acres Practices:

- Oak savanna restoration
- Wetlands
- Filter strips
- Windbreaks

Environmental Quality Incentive Program: 18 Contracts: \$305,400.00

Opportunities:

1. Elevated interest and enthusiasm
2. Technical assistance available
3. Great Lakes Restoration Initiative /Farm Bill program dollars

Challenges:

1. Nutrient pollution
2. Sediment
3. Farmland and habitat loss

Lucas County Soil and Water Conservation District

130 A West Dudley Street, Maumee, OH 43537

419.893.1966

419.893.3131

www.co.lucas.oh.us/LSWCD

BLUE CREEK CONSERVATION AREA



The Blue Creek Conservation Area's (BCCA) known history dates back to the late 1700s when Ottawa, Chippewa, Wyandot and Potawatomi people lived, hunted and farmed the area. The property was mined for limestone during the mid-to late-1800s. In 1917, the city of Toledo bought the land to build a prison farm, which operated from 1918 until early 1991.

Located on the edge of the Oak Openings region, Blue Creek features glacial grooves, a pond, a wetland and oak savanna.

Lucas County Soil and Water Conservation District (SWCD) manages the area's agricultural land and conducts educational programs at BCCA.

The SWCD partners with the Metroparks and Nature's Nursery to host children's field trips to the area. Young visitors to BCCA gain a better understanding of conservation practices, wildlife rehabilitation and co-habitation and the source of their food. The Children's Garden produces fruits and vegetables for donation to local food banks.

BCCA provides land for the SWCD to work with researchers from local universities and other organizations to study water quality, soil erosion, plant science, sustainable agriculture and more. The SWCD's interest lies in helping farmers' operations remain productive, efficient, and economically viable with innovative and cutting edge conservation agriculture technology. BCCA's compost facility allows for needed disposal of horse manure from the many horse owners in the area. This disposal method protects water quality and produces usable compost for fertilization. It also provides a composting demonstration site for tours and workshops.



Richard Bryan

Rick represents Lucas County Soil and Water Conservation District on the Swan Creek Watershed Pilot Project, Toledo Metropolitan Area Council of Governments Environmental Council and Western Lake Erie Basin Partnership operating group. Rick received his undergraduate and graduate degrees in business from the University of Toledo. His career includes experience working at Owens Corning as well as part-owner of Portage Valley Plant Company, a wholesale nursery/greenhouse. He spent three years on active duty in the U.S. Army.



Terry Cosby

Terry was hired as Ohio State Conservationist for the Natural Resources Conservation Service (NRCS) in 2005. He graduated in 1982 from Alcorn State University in Lorman, Miss., with a bachelor degree in agriculture education. Terry began his career with NRCS (then known as the Soil Conservation Service) in 1979. He held several positions in the agency, including student trainee, soil conservationist, district conservationist, area resource conservationist, assistant state conservationist for field operations, assistant state conservationist for programs and operations and deputy state conservationist.



Marcy Kaptur

Fifteen-term Congresswoman Marcy Kaptur has served the U.S. House of Representatives longer than any woman. The first Democratic woman in history to join the defense appropriations subcommittee, she also holds positions on the agriculture and transportation/HUD subcommittees. Congresswoman Kaptur tirelessly advocates for her district, adjacent to the Lake Erie coastline. It includes most of Lucas County, all of Ottawa and Erie counties and western Lorain County, Ohio. Kaptur graduated from St. Ursula Academy in Toledo. She earned a bachelor degree from the University of Wisconsin and a master degree in urban planning from the University of Michigan. She pursued her doctoral studies at Massachusetts Institute of Technology. Kaptur authored the book *Women of Congress* published by Congressional Quarterly.

Dinner sponsored by: 

CONSERVATION TECHNOLOGY EXPO

AGROTAIN International

Steve Parrish, Vice President Regulatory Affairs
961 Deer Run Trail • Lebanon, OH 45036
513.932.8978
sparrish@agrotain.com • www.agrotain.com



AGROTAIN stabilizes nitrogen so farmers can be more productive while helping protect the environment. As much as 30 percent of nitrogen can be lost within days of application unless urea is stabilized. AGROTAIN, the only urease inhibitor approved by the Association of American Plant Food Control Officials (APFCO), allows the crop to access the nitrogen it needs immediately, but losses are controlled for the first critical weeks after application. Also, AGROTAIN protects water quality by preventing leaching of nitrogen into local water bodies. The result is more productive plants, better yields and improved water quality.



Tim Healey

As vice president of Regulatory Affairs, AGROTAIN International's Tim Healey oversees domestic and international product registrations, product safety, distribution and supply agreements, patents and trademarks. He chairs the company's Science Technology, Innovation and Research Committee. As CTIC's immediate past chair, Tim participates in planning and committee work. Tim serves as a member of The Fertilizer Institute's Nutrient Use Committee, Missouri's State Technical Committee and the Missouri Certified Crop Advisors State Board.



Jimmy Johnson

Jimmy has served AGROTAIN International since 2001, working mainly in the southern United States. As U.S. sales director he works to bring new products to market. Prior to joining AGROTAIN International, Johnson held several positions, including regional manager with Rohm and Haas Company. He received an honorable discharge from the U.S. Army Reserve in 1994 and received his undergraduate degree from the University of Tennessee at Martin and his graduate degree from Mississippi State University.



Steve Parrish

AGROTAIN International Regional Manager Steve Parrish is a certified crop adviser and a certified professional agronomist. He has advocated the benefits of stabilized nitrogen for the last 11 years. For more than 20 years, Steve has gained experience making recommendations on the use of crop protection products and developing conservation plans.

CONSERVATION TECHNOLOGY EXPO

John Deere

Jamie Bultemeier, Solutions Specialist
10726 Minnich Road • Fort Wayne, IN 46816
260-442-6887
bultemeierjamiej@johndeere.com • www.johndeere.com



JOHN DEERE

Tour visitors will see John Deere's core values — integrity, quality, commitment, innovation — in the equipment and technology exhibited at the Conservation Technology Expo. The John Deere 8R and 8RT series tractors are the most intelligent tractors in the world. The all-new 7R tractors rise above their predecessors with greater power levels, hydraulic output and on-board technology that optimize operating efficiency.

Deere's 2510 line of nutrient applicators, available in several configurations, includes the 2510H, a subsurface fertilizer injector that places nitrogen, phosphorus and potassium while maintaining surface residue.

The 4630 Sprayer offers big sprayer features and technology packed in a maneuverable, flexible package. This sprayer is ideal for producers looking for a high performance, 600-gallon class sprayer with many of the features found in Deere's 4730, 4830 and 4940 sprayers.

With these technologies, John Deere helps agricultural producers to produce more, improve profitability, mitigate risk and reduce environmental impact.



Pauley Bradley

Pauley, a product manager for John Deere, coordinates the company's nutrient application initiative. He works with internal and external stakeholders to develop and market application technology that enables custom applicators and producers to profitably employ the 4Rs of nutrient stewardship. He also leads the company's efforts in several water quality initiatives in the United States. Pauley previously worked through the John Deere Seeding Group to promote technologies for seeding and nutrient application in small grain and oil seed production areas of the United States, Canada, Russia and Kazakhstan. Prior to that, he served as a cropping systems specialist for John Deere in the Great Plains region. Pauley received a bachelor degree in agronomy from Iowa State University in 1996 and a master degree in agronomy from the University of Missouri at Columbia in 1999.



Jamie Bultemeier

As a solutions specialist for John Deere, Jamie helps producers match John Deere products to their cropping systems. He spent the past nine years as a John Deere agronomist assisting producers to find profitable and environmentally sound cropping solutions. Jamie serves as research coordinator for the John Deere Solutions Specialist group, which funds, reviews and supports applied land-grant university agronomy research. In addition, Jamie farms with his brother and father in Allen County, Indiana.



Kim Fletcher

Kim works in Indiana and southwestern Ohio as a John Deere Solutions Specialist. She focuses on the development of dealers and customers as new products and technologies are introduced. Prior to her current role, Kim worked in the John Deere Tillage Group to promote secondary tillage products and gather product marketing input and customer requirements for future products. Kim holds a degree in agribusiness and agronomy from Illinois State University and a graduate degree in agriculture.

CONSERVATION TECHNOLOGY EXPO

Specialty Fertilizer Products (SFP)

Tony Donoho, Northeast Regional Account Manager
Lafayette, IN
765.437.1316
tdonoho@sfp.com • www.sfp.com



Founded in 1998 by Larry Sanders, Ph.D., SFP is a research and development company devoted to solving agriculture's long-standing fertilizer challenges. SFP is committed to agricultural education and crop nutrient improvement through continuous field soil studies and ongoing research. SFP strives to create products that help today's grower maximize fertilizer investments while preserving the environment.

SFP's AVAIL® Phosphorus Fertilizer Enhancer and NutriSphere-N® Nitrogen Fertilizer Manager were developed for growers to increase the efficiency of their phosphorus and nitrogen fertilizers.



Tony Donoho

As northeast regional account manager for Specialty Fertilizer Products (SFP), Tony oversees product sales, distributor relations and technical support in the northern United States. For more than a decade, Tony has held a variety of product and sales positions. Prior to joining SFP, he served in a product-marketing role for Cargill. Tony graduated from St. Xavier University where he earned a bachelor degree in business finance. He is pursuing a master degree in agribusiness at Purdue University.



Tom Kupke

Tom serves as manure product manager for Specialty Fertilizer Products (SFP). Tom is responsible for sales, product training and technical support in Iowa and eastern Nebraska and manages SFP's manure fertilizer enhancer throughout the United States. Throughout his 30-year career, Kupke represented several leading agricultural companies including Cargill, DuPont-Agriculture, Dow AgroSciences and Pioneer Hi-Bred International. Tom earned a bachelor degree from the University of Nebraska-Lincoln and master degree in business administration from Drake University. He also is a certified cop adviser.



John Meece

John, the SFP Illinois regional account manager, joined SFP with more than 30 years experience in agronomy sales. John is responsible for sales and product education and building relationships with customers, distributors and retail partners. John formerly served Nationwide AgriBusiness and spent time at Pioneer Hi-Bred, Gateway Seed Company and United Agri Products. In these positions his responsibilities included agronomy research and sales. John earned bachelor and master degrees in agronomy from the University of Illinois.

CONSERVATION TECHNOLOGY EXPO

The Andersons

Julie Payeff, Community Commitment Manager
480 West Dussel Drive • Maumee, Ohio 43537
419.304.6786
julie_payeff@andersonsinc.com • www.andersonsinc.com



The Andersons, Incorporated stresses the 4R Nutrient Program: applying the Right source of fertilizer at the Right rate, Right time and in the Right place. The 4Rs benefit nutrient use efficiency and environmental stewardship.

The Andersons continuously improve and grow with the latest technology and proven science.

AgRobotics

Jeffrey Burton, AgRobotics, LLC
401 N. Main Street • Suite 203, N.
Little Rock, AR 72114
501.551.7999 mobile • 501.244.9070 office
jeff@agrobotics.com • www.agrobotics.com



AGROBOTICS
FARMING INNOVATIONS

To bring advanced soil sampling technologies to the precision agriculture industry, Jeff and Jim Burton founded AgRobotics, LLC in 2006. They are in the process of introducing NutriScription HD with Crop Production Services (CPS). NutriScription HD integrates precision agriculture technology with customized nutrient recommendations and allows CPS sales representatives and their customers to take advantage of latest technologies. These include satellite imagery, ground-based remote sensing, yield maps and soil sampling needed to determine sub-field nutritional needs.

Jeff Burton

Jeff learned and used the concepts of precision agriculture on his family farm in northeast Arkansas. He and Jim Burton developed and introduced the AutoProbe, the world's first on-the-go soil sampler that uses data and analysis to increase yields and profitability. The Burtons work to commercialize the product in the Mississippi Delta, Ohio, Indiana and Texas.



CONSERVATION TECHNOLOGY EXPO

The Mosaic Company

Ron Olson, Research and Development Manager
13830 Circa Crossing Drive • Lithia, FL 33547
813.500.6470
ron.olson@mosaicco.com • www.mosaicco.com



The Mosaic Company's MicroEssentials provides needed phosphorous along with essential micronutrients, including sulfur and zinc, in a unique and patented fertilizer granule.

Blended fertilizer, no matter how well applied, can separate, making some nutrients more readily available for one plant and less for another. MicroEssentials solves this problem with a patented process that packs all four essential nutrients into a single granule. When applied correctly, it provides even, balanced nutrition across the field. MicroEssentials products provide more efficient, uniform distribution of nutrients in a ratio best suited to plant health and productivity.

Mosaic focuses on providing essential nutrients to maximize yields of the major commercial crops across the globe. The MicroEssentials product line offers growers a phosphate-based product that elevates their yield goals. Producers using MicroEssentials will not only maximize nutrient efficiency but also protect nearby water quality because nutrients actively used by plants are less likely to leave the field through run-off or erosion.



Jim Boswell

Jim serves as The Mosaic Company's technical sales manager for Ohio, Indiana, Kentucky and Tennessee. Jim supports four account managers in his territory. He oversees all marketing and promotional activities for Mosaic's Premium Products, including MicroEssentials and K-Mag. Jim joined Mosaic in 2008 after spending 18 years in the crop protection industry for companies including Syngenta, Bayer and BASF in Ohio, Indiana and Kentucky. He received a bachelor degree in agriculture economics from the University of Kentucky.



Scott Clark

Scott serves as The Mosaic Company's technical sales manager for the southeastern region of the United States and account manager for a select group of customers. In his sales management role, Scott develops, plans and supports all the marketing activities for Mosaic Premium Products, including MicroEssentials and K-Mag in his region. Scott supports the sales account managers as they sell and promote Mosaic products in the southeast. Most of his 20-year career he has spent with Mosaic and legacy companies, with the exception of 3 years with SQM North America.



Ron Olson

Ron lives in Tampa, Fla., and is currently The Mosaic Company's East Region Senior Agronomist. In this role, Ron supports the sales account managers and technical sales managers as they sell and promote Mosaic products east of the Mississippi River. From 2000-2010, he served as Mosaic's research and development manager where he guided the development of Mosaic's MicroEssentials suite of products. Prior to that, he was director of ag relations for IMC AgriBusiness from 1996-1999. From 1974 to 1996, Ron owned Top-Soil Testing Service, an independent agronomic consulting company based in Illinois.



Matt Wiebers

Matt works as an agronomist based in The Mosaic Company's Plymouth, Minn., office. His role focuses on managing on-farm research trials and the technical aspects of agronomy. He provides agronomic input and expertise to Mosaic's foundation-related efforts in Africa, Guatemala and India. He has served Mosaic since its creation in 2004. Prior to that, Matt worked for Cargill in Minnesota, Manitoba and Illinois. Matt graduated from Iowa State University with a bachelor degree in agricultural systems technology.

ABOUT CTIC

The Conservation Technology Information Center (CTIC) is a not-for-profit 501(c)(3) membership organization that provides technical, educational and practical support to America's agricultural and conservation communities. We were formed in 1982 by representatives of agribusiness, government and associations. We thrive today with guidance and support from partners and members from the public, private and academic sectors.

America's producers face complex decisions about how to integrate and maintain conservation systems within their farming operations. Given the best information, producers will make good decisions for their land. And, we believe that producers deserve to get trustworthy information, in a timely manner, from a dependable source.

Mission

CTIC champions, promotes and provides information on technologies and sustainable agricultural systems that conserve and enhance soil, water, air and wildlife resources and are productive and profitable.

To address our mission, we:

Lead Initiatives

CTIC and its partners lead initiatives to address conservation agriculture's pressing needs. Our initiatives build partnerships, provide information and promote agricultural systems that are both economically viable and environmentally beneficial

Provide Information

One of our goals at CTIC is to serve as an information clearinghouse -- reviewing and communicating new research, technologies and innovative approaches. Visit our web site to see the many resources available to members and audience.

CTIC also promotes the good news about conservation in agriculture, through our web site, quarterly e-magazine and regular news releases. Through national information campaigns, we recognize conservation farmers for the sound management they employ on their farms to efficiently manage inputs and protect resources.

Build Coalitions

CTIC links private businesses, non-profit organizations, associations, and local, state, regional, and federal government agencies to address common conservation agriculture issues. With strength, wisdom and knowledge in numbers, CTIC's coalitions work to disseminate information on new technologies and tools, to ensure conservation agriculture works on the ground.

CTIC BOARD OF DIRECTORS

| | |
|----------------------------------|--|
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CTIC STAFF

Karen Scanlon, Executive Director

scanlon@ctic.org
 Karen directs staff and consultants; develops policies, procedures and budgets; oversees programs and operations; supports the board of directors; builds and maintains member relations and evaluates programs and services.
 She earned a master degree in natural resources management from The Ohio State University and a bachelor degree in journalism from the University of Florida.

Christa Martin Jones, Project Director

jones@ctic.org
 Christa leads CTIC projects on nutrient management and water quality credit trading and works with partners to plan, execute strategies and meet project goals.
 She holds a bachelor degree in public affairs, with concentration in environmental science from Indiana University. She completed master level courses in alternative agriculture at Slippery Rock University (PA).

Angie Williams, Project Director

williams@ctic.org
 Angie leads several CTIC projects and is currently focused on cover crops and conservation tillage. She provides in-house technical expertise and helps to answer questions from members and partners.
 She holds a bachelor degree in biology from Purdue University.

Amber Gritter, Administrative Assistant

gritter@ctic.org
 Amber assists with accounting functions. She processes product orders, maintains the membership database and fulfills other administrative duties. She assists the entire staff with project work and event preparation.

Tammy Taylor, Director of Operations

taylor@ctic.org
 Tammy assists the executive director with financial and human resource functions and membership development. She oversees accounts receivable and payable and maintains the web site. Tammy also leads event planning activities and oversees national conference projects.

CTIC OUTREACH

CTIC is a national not-for-profit organization adept at conveying technical subject matter to broad audiences and communicating the importance of conservation practices to those same audiences. In its 28 years, CTIC has built a solid reputation as a reliable source for information about environmentally sound, economically beneficial decision making in agriculture. Public and private partners seek out CTIC for information on the latest technology and research for improving conservation in agriculture. CTIC provides that information through its web site, its quarterly magazine, regular publication of educational materials, regional, national and international conferences and tailored presentations and workshops. In addition, CTIC receives frequent inquiries, for conservation-related information and responds to each request in a timely manner.

CTIC web site

At www.ctic.org, visitors access CTIC resources, update membership, register for events, learn about CTIC projects, download free publications and subscribe to CTIC's Partner's magazine, Member Mail and more. With a few clicks, visitors find details on all CTIC projects, search our database of resources or take a poll on the latest conservation issues. CTIC's web site also houses the National Crop Residue Management Survey, the CTIC strategic plan and more details about the history and mission of CTIC.



Partners magazine

CTIC's online magazine Partners reaches more than 5,000 readers every quarter. Each issue features success stories, news coverage and updates on technology and research important for conservation agriculture. Each issue's member column highlights a contributed article.



Member Mail

All CTIC members and partners receive Member Mail, an electronic newsletter containing news briefs pertinent to our membership, in those months when Partners isn't published.

OFFICE LOCATION:

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ctic@ctic.org

INDIAN CREEK WATERSHED PROJECT

Partners:

Illinois Environmental Protection Agency, Livingston County Soil and Water Conservation District, USDA Natural Resources Conservation Service (NRCS), agribusiness

Project Description:

CTIC, with partners, will demonstrate and implement water quality conservation practices in the Indian Creek watershed. Project partners plan to determine what water quality improvements result when 50% or more of the watershed's agricultural producers adopt comprehensive agricultural conservation systems. Progress will be measured over a six-year period.



Activities:

The Indian Creek Watershed Project provides educational, technical, financial and social support for producers to develop, implement and maintain comprehensive conservation systems on their operations. Several producers have volunteered sections of their cropland for use as project demonstration areas to exhibit a variety of nutrient management products, technologies and practices. Plus, the project includes several nutrient use efficiency studies to measure the effectiveness of conservation systems.

Illinois EPA will conduct water quality monitoring in the watershed to document and determine if conservation practices are making a difference. CTIC will install tile outlet monitors to measure nitrogen content of runoff where different conservation practices are applied.

The project offers media opportunities and distributes regular news releases. Partners will conduct field days and producer meetings throughout the life of the project.

For More Information:

Visit www.ctic.org/IndianCreek/ or Contact Christa Jones, CTIC project director, at Tel: 317-508-2450 or Email: jones@ctic.org

Get Involved:

Get involved as a project sponsor. Help develop and implement demonstration areas in Indian Creek watershed. Contact Christa Jones at 317-508-2450 or jones@ctic.org.

GREAT LAKES COVER CROPS INITIATIVE

Partners:

Midwest Cover Crops Council, Ohio No-Till Council, The Ohio State University, Purdue University, Michigan State University, Indiana Conservation Systems Initiative, U.S. Environmental Protection Agency (EPA).

Project Description:

Funded by EPA's Great Lakes Restoration Initiative (GLRI), this project will demonstrate the effectiveness of cover crops within conservation tillage systems. To decrease agricultural pollution and inform producers about the economic benefits of these systems, CTIC and partners will assist agricultural producers in the Lake Michigan, Lake Erie and Lake Huron basins to implement 15,000 acres of cover crops and conservation tillage systems.

CTIC will provide producers technical, educational and social support so they may fully understand the benefits of this system, how to incorporate the practices into their operation, how to evaluate the changes and adapt management to optimize yield and resource protection. By providing this support, we build producers' capability to effectively manage, adapt and commit to long-term implementation of this system.



Activities:

- CTIC will host 18 workshops promoting the use of cover crops with continuous no-till.
- Crop consultants will contact each producer who attends workshops to help them write a plan and work with them to successfully incorporate these practices.
- CTIC will facilitate social support networks through an email list serve. Regular posts will address cover crop and conservation tillage topics, provide seasonal tips, answer questions and facilitate dialogue.
- Fifteen participating producers will attend the National No-Till Conference in 2013 to network with and learn from other producers using cover crops.
- The CTIC web site will share producers' experiences with cover crops and conservation tillage and we will publish articles to encourage producers contemplating system adoption.

For More Information:

Contact Angie Williams, CTIC project director, at Tel: 765-376-4504 or Email: williams@ctic.org.

Get Involved:

Promote the project to generate participation among farmers and recognition of the benefits of cover crops and conservation tillage. Provide financial support for the workshops and for cover crop seed to demonstrate your commitment to conservation.

USING COVER CROPS TO FACILITATE THE TRANSITION TO CONTINUOUS NO-TILL

Partners:

USDA Natural Resources Conservation Service, Midwest Cover Crops Council, Ohio No-Till Council, Owen County Soil and Water Conservation District (SWCD), The Ohio State University, Purdue University and Michigan State University

Project Description:

Funded by a 2008 Conservation Innovation Grant, this project promotes the use of cover crops to ease farmers' transition to continuous no-till systems.

Despite the proven economic and environmental benefits, some farmers remain hesitant to fully adopt no-till. In 2004, the National Crop Residue Management Survey showed 22.6 percent of farmers no-tilled.

Incorporating cover crops into a continuous no-till (CNT) rotation can multiply the environmental and economic benefits. Cover crops provide the same benefits as a CNT system, but by pairing the two practices benefits materialize more quickly and transition years yield more per acre than no-till alone.

This project addresses obstacles and provides support for Indiana and Ohio farmers transitioning to CNT.



Activities:

- Develop an online and printed cover crop matrix for the Midwest to aid farmers in choosing the correct cover crop for their location and operation
- Assist six farmers in Indiana and Ohio to transition to continuous no-till with personalized technical support
- Host an additional workshop (the first was held in August 2009) featuring the experiences of the six farmers to promote the use of CNT-cover crops systems.
- Partner with SWCDs, farmers, NRCS, university extension services and the Ohio No-Till Council to host more than five workshops on using cover crops and CNT.
- Through winter farmer networking meetings, form social support networks for farmers transitioning to continuous no-till
- Conduct extensive soil quality testing to show the benefits of cover crops in a CNT system

For More Information:

Contact Angie Williams, CTIC project director, at Tel: 765-494-1814 or Email: williams@ctic.org.

Get Involved:

Provide financial support for the workshops to demonstrate commitment to conservation and support of cover crops within a CNT system. Provide support to continue this project beyond October 2011.

AQUATIC RESOURCE MONITORING TECHNICAL TRAINING WORKSHOPS

Partner:

U.S. Environmental Protection Agency (EPA)

Project Description:

In 2010 the U.S. Environmental Protection Agency (EPA) granted CTIC funds to plan and facilitate aquatic resource monitoring training workshops for states, tribes and other stakeholders. CTIC will provide leadership and technical support to organize and produce seven aquatic resource-specific workshops and two national conferences covering all aquatics resource types (wetlands, lakes, coastal, rivers and streams).

The objective is to improve collaboration and technology transfer among states, tribes, federal agencies and others for more effective monitoring of the Nation's waters.

The information and technology shared at these workshops will better equip EPA, states, tribes and others to accomplish top-priority tasks such as:

- maintain long-term cooperative surveys of all water body types,
- implement water-monitoring strategies on established schedules and
- improve water quality databases.



Activities:

CTIC formed an advisory committee consisting of National Aquatic Resource Survey experts and individuals from university, research, nonprofit organizations and EPA headquarters and regional offices. The advisory committee is assisting in developing the agenda for the first national conference that will be held October 12-14, 2011 in New Orleans, LA. In 2010, CTIC conducted a wetlands training workshop in December and a lakes workshop in November. CTIC will also deliver the following:

- a database including contacts from states, tribes, assessment and wetland programs, National Aquatic Resource Survey (NARS) experts and individuals from university, research, nonprofit organizations and EPA,
- dialogue on improving the effectiveness of state, regional and national monitoring and assessment of the nation's water resources and
- a resource-rich web site containing abstracts, papers and presentations.

For More Information:

Contact Tammy Taylor at Tel: 765-494-1814 or Email: taylor@ctic.org

Get Involved:

Host a meeting for leaders of state and tribal programs for wetlands, lakes, coastal, rivers and streams at a research center or other facility in your area.

GULF OF MEXICO PROJECT

Partners:

Environmental Protection Agency (EPA) Gulf of Mexico Program, public and private partners in Indiana, Minnesota, Missouri and Ohio

Project Description:

In 2006, CTIC received a grant from the U.S. Environmental Protection Agency Gulf of Mexico Program to fund "Building Innovative Industry-Producer Partnerships to Reduce Hypoxia in the Gulf of Mexico."



Results:

By forming new partnerships between industry and ag producers, CTIC facilitated local level approaches to addressing complex nutrient management challenges. Focus areas included southeastern Minnesota, the Upper Wabash River Basin, and the Bootheel region of Missouri.

This three-phase project coordinated local identification of nutrient reduction strategies, formation of local ag coalitions and the development of nutrient reduction action plans, using the best-available practices transferable to other watersheds.

CTIC documented three approaches for Mississippi River sub-basins to develop to implement locally led non-point source nutrient management solutions.

The Southeastern Minnesota, Upper Wabash, and Missouri Bootheel Nutrient Management Coalitions all developed action plans and subcommittees to plan and perform the work. Each group developed one or more successful, transferable, repeatable programs as a result.

CTIC provided coordination, facilitation, and financial support for each coalition project.

Lessons Learned:

Group diversity can attract funding, participation and expertise from agribusiness, and give the group an advantage when applying for private and government grants.

Grassroots initiatives such as these ultimately bring success because they are championed by local people who choose to make a change where they live and work.

Some may see a downside to these types of projects because they take a long time to establish and often even a longer time to show results. The advantage—a slow, strong and steady start will allow these grassroots initiatives to thrive.

Two of the three groups took a substantial piece of the grant time line just to plan. These are the Southern Minnesota and Upper Wabash groups, and both have evolved at a careful pace. This will serve them well as they work toward achieving their goals, we hope for many years to come.

Read CTIC's final report including specific information on each group's activities at [www.ctic.org/Upstream Heroes](http://www.ctic.org/UpstreamHeroes).

For More Information:

Contact Christa Jones, CTIC project director, at Tel: 317-508-2450 or Email: jones@ctic.org

CONSERVATION AGRICULTURE SYSTEMS ALLIANCE (CASA)

Project Description:

CASA is a North American alliance of producer organizations united with a common goal to advance conservation agriculture systems. CASA strengthens the individual efforts of each member organization and also helps the collective group move toward the shared purpose of increasing conservation in agriculture in North America. CTIC hosts monthly conference calls, maintains a web site and distributes resource material for CASA. CASA's primary purposes are to:

- Facilitate communication among CASA members and partners
- Promote consistent messages about conservation agriculture
- Share information about conservation agriculture
- Endorse adoption of "the ideal" conservation agriculture system
- Facilitate removal of barriers and support member organizations
- Influence policy on a broad level



Current CASA Members:

Conservation Tillage Workgroup (California) • Georgia Conservation Tillage Alliance • Innovative Cropping Systems (Virginia) • Manitoba-North Dakota Zero Tillage Farmers Association • Mexican Conservation Tillage Association • No-Till on the Plains • Ohio No-Till Council • Pacific Northwest Direct Seed Association • Pennsylvania No-Till Alliance • Saskatchewan Soil Conservation Association • Soil Conservation Council of Canada • Southern Plains Agricultural Resources Coalition (Oklahoma) • Vantage

Activities:

This year, CASA submitted a proposal to host the 6th World Congress of Conservation Agriculture in 2014. In addition, CTIC facilitated monthly teleconferences for CASA, maintained the CASA web page and distributed information to the network partners.

For More Information:

Visit the CASA web page --[www.ctic.org/Conservation Agriculture Systems Alliance/](http://www.ctic.org/ConservationAgricultureSystemsAlliance/), or contact Karen Scanlon, CTIC executive director, at Tel: 765-494-2238 or Email: Scanlon@ctic.org.

Get Involved:

Sponsor the development of this nationwide farmer-to-farmer network. Or become a CASA member.

UPSTREAM HEROES:

Nutrient Management Success Stories from America's Farms

Partners:

Mosaic, Terra Industries and The Nature Conservancy

Project Description:

The efficient use of nutrients within farming operations is receiving a great deal of attention for several reasons. Today, producers look more carefully at what, when and how they apply fertilizer, primarily because of the increased cost of fertilizer and other inputs as well as the general economic downturn. Additionally, agriculture is the focus of much attention – nationally as well as locally – because farming activities have been linked to the Gulf of Mexico Hypoxic Zone. Not many people understand the complex problem of the hypoxic zone, and individual farmers, especially those in the upper Midwest, feel little connection to the distant Gulf of Mexico.

Solutions to both of these challenges can be realized through proper nutrient management on farming operations. With sound management practices, producers use the right fertilizer product, apply it at the right rate, at the right time and in the right place. CTIC, a trusted source of information for agriculture for more than 27 years, is uniquely qualified to launch an information campaign about nutrient management targeted to agricultural producers. The campaign will explain the hypoxia issue and need for nutrient management in terms and messages that appeal to agricultural audiences and deliver those messages at the right time and place to capture the attention and interest of producers and their advisors. CTIC's campaign will reach our national network of members and public and private partners, as well as readers of ag media and general/consumer media.



Activities:

CTIC is connecting with partners to support and advance the Upstream Heroes Campaign. Terra Industries and Mosaic are Guardian partners and The Nature Conservancy is an Advocate of Upstream Heroes. Farm Journal is the exclusive ag media partner for the campaign. Additional partners are being sought as well. See more at the Upstream Heroes web site, www.upstreamheroes.org.

For More Information:

Visit [www.ctic.org/Upstream Heroes/](http://www.ctic.org/UpstreamHeroes/) or contact Karen Scanlon, CTIC executive director, at Tel: 765-494-2238 or Email: scanlon@ctic.org

Get Involved:

Become a partner in the Upstream Heroes campaign. Nominate a producer as an Upstream Hero. Help spread the word about our Heroes in agriculture.

NATIONAL CROP RESIDUE MANAGEMENT SURVEY

Partners:

National Association of Conservation Districts (NACD) Natural Resources Conservation Service (NRCS) state offices, local NRCS field offices, soil and water conservation districts and university extension offices

Project Description:

The National Crop Residue Management Survey is the only survey in the U.S. that tracks adoption of no-till, ridge-till, mulch-till, reduced-till and intensive/conventional tillage. The Survey can be used to measure adoption rate of soil-saving practices, track erosion reduction, demonstrate energy cost savings, model environmental performance of practices and more. CTIC has compiled and tracked the survey since 1982.

The nationwide survey of conservation tillage practices began as a partnership effort between CTIC and the USDA Natural Resources Conservation Service (NRCS), soil and conservation districts and university extension. After 2004, NRCS no longer required its field staff to support data collection. Since then, CTIC has encouraged local partners to collect the data.

For more than two decades, agencies, academic researchers, policy makers, industry, journalists, agriculture groups, conservation groups and many others have relied on tillage adoption trends. Because we have this information, we know that no-till in 2004 was implemented on 45.5 million acres more than in 1990, a 269 percent increase.



Activities:

CTIC is working with NACD to enable soil and water conservation districts to collect data for a 2012 survey. Funding is needed to develop new software that will simplify the collection process, allow data upload to our web site and tie collection points to global positioning system (GPS) coordinates. With partners, we are exploring the use of remote sensing technology to estimate residue cover and, ideally, increase efficiency and accuracy of data collection.

For More Information:

Visit the CRM Survey web page at www.ctic.org/CRM/, or contact Angie Williams, CTIC project director at Tel: 765-376-4504 or Email: williams@ctic.org.

Get Involved:

Help us keep data current. Support CTIC's efforts by contributing funds to develop software, collect data and explore the use of innovative technology. Endorse and support collection of data at the county level. Recruit volunteers to collect data in your area.

2004 Summary for Defiance County, Ohio

| — Annual Crop — | Total Acres | Conservation Tillage (greater than 30% residue) | | | Total Conservation Tillage | Other Tillage Practices (15-30% residue) (0-15% residue) | |
|-------------------------------------|----------------|--|------------|--------------|----------------------------|---|-----------------------------|
| | | No-Till | Ridge-Till | Mulch-Till | | Reduced-Till ¹ | Intensive-Till ² |
| Corn ³ | 46,800 | 24,336 | 100 | 3,644 | 28,080 | 2,340 | 16,380 |
| Small Grain (Spring-Seeded) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Grain (Fall Seeded) | 22,800 | 18,525 | 0 | 0 | 18,525 | 0 | 4,275 |
| Soybeans (Full Season) | 97,317 | 55,048 | 100 | 1,866 | 57,014 | 5,898 | 34,405 |
| Soybeans (Double-Cropped) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotton | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grain Sorghu ³ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forage Crops ⁴ | 100 | 80 | n/a | 0 | 80 | 0 | 20 |
| Other Crops ⁵ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Planted Acres | 167,017 | 97,989 | 200 | 5,510 | 103,699 | 8,238 | 55,080 |
| Newly Established Permanent Pasture | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Fallow | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Conservation Reserve Program | 15,499 | | | | | | |
| Highly Erodible Land | 0 | | | | | | |
| Treated Highly Erodible Land | 0 | | | | | | |

| — Annual Crop — | Total Acres | Conservation Tillage (greater than 30% residue) | | | Total Conservation Tillage | Other Tillage Practices (15-30% residue) (0-15% residue) | |
|-------------------------------------|----------------|--|-------------|-------------|----------------------------|---|-----------------------------|
| | | No-Till | Ridge-Till | Mulch-Till | | Reduced-Till ¹ | Intensive-Till ² |
| Corn ³ | 46,800 | 52.0% | 0.2% | 7.8% | 60.0% | 5.0% | 35.0% |
| Small Grain (Spring-Seeded) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Small Grain (Fall Seeded) | 22,800 | 81.3% | 0.0% | 0.0% | 81.3% | 0.0% | 18.8% |
| Soybeans (Full Season) | 97,317 | 56.6% | 0.1% | 1.9% | 58.6% | 6.1% | 35.4% |
| Soybeans (Double-Cropped) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Cotton | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Grain Sorghum ³ | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Forage Crops ⁴ | 100 | 80.0% | n/a | 0.0% | 80.0% | 0.0% | 20.0% |
| Other Crops ⁵ | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total Planted Acres | 167,017 | 58.7% | 0.1% | 3.3% | 62.1% | 4.9% | 33.0% |
| Newly Established Permanent Pasture | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |
| Fallow | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |

¹ Reduced-Till = 500-1000 lbs. Small Grain Equivalent (SGE)

² Intensive-Till < 500 lbs. Small Grain Equivalent (SGE)

³ Includes Full Season and Double Cropped.

⁴ Forage Crops reported in seeding year only.

⁵ Other Crops include other vegetable crops, truck crops, peanuts, tobacco, sugar beets, etc.

n/a means Not Applicable

Conservation Technology Information Center

2004 Summary for Henry County, Ohio

| — Annual Crop — | Total Acres | Conservation Tillage <i>(greater than 30% residue)</i> | | | Total Conservation Tillage | Other Tillage Practices <i>(15-30% residue)</i> <i>(0-15% residue)</i> | |
|-------------------------------------|----------------|---|------------|--------------|----------------------------|---|-----------------------------|
| | | No-Till | Ridge-Till | Mulch-Till | | Reduced-Till ¹ | Intensive-Till ² |
| Corn ³ | 75,442 | 5,833 | 0 | 2,333 | 8,166 | 16,333 | 50,943 |
| Small Grain (Spring-Seeded) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Grain (Fall Seeded) | 40,445 | 35,778 | 0 | 0 | 35,778 | 0 | 4,667 |
| Soybeans (Full Season) | 105,000 | 73,500 | 0 | 1,944 | 75,444 | 7,389 | 22,167 |
| Soybeans (Double-Cropped) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotton | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grain Sorghu ³ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forage Crops ⁴ | 3,000 | 0 | n/a | 750 | 750 | 750 | 1,500 |
| Other Crops ⁵ | 3,000 | 0 | 0 | 429 | 429 | 0 | 2,571 |
| Total Planted Acres | 226,887 | 115,111 | 0 | 5,456 | 120,567 | 24,472 | 81,848 |
| Newly Established Permanent Pasture | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Fallow | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Conservation Reserve Program | 2,269 | | | | | | |
| Highly Erodible Land | 0 | | | | | | |
| Treated Highly Erodible Land | 0 | | | | | | |

| — Annual Crop — | Total Acres | Conservation Tillage <i>(greater than 30% residue)</i> | | | Total Conservation Tillage | Other Tillage Practices <i>(15-30% residue)</i> <i>(0-15% residue)</i> | |
|-------------------------------------|----------------|---|-------------|-------------|----------------------------|---|-----------------------------|
| | | No-Till | Ridge-Till | Mulch-Till | | Reduced-Till ¹ | Intensive-Till ² |
| Corn ³ | 75,442 | 7.7% | 0.0% | 3.1% | 10.8% | 21.6% | 67.5% |
| Small Grain (Spring-Seeded) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Small Grain (Fall Seeded) | 40,445 | 88.5% | 0.0% | 0.0% | 88.5% | 0.0% | 11.5% |
| Soybeans (Full Season) | 105,000 | 70.0% | 0.0% | 1.9% | 71.9% | 7.0% | 21.1% |
| Soybeans (Double-Cropped) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Cotton | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Grain Sorghum ³ | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Forage Crops ⁴ | 3,000 | 0.0% | n/a | 25.0% | 25.0% | 25.0% | 50.0% |
| Other Crops ⁵ | 3,000 | 0.0% | 0.0% | 14.3% | 14.3% | 0.0% | 85.7% |
| Total Planted Acres | 226,887 | 50.7% | 0.0% | 2.4% | 53.1% | 10.8% | 36.1% |
| Newly Established Permanent Pasture | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |
| Fallow | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |

Conservation Technology Information Center

1 Reduced-Till = 500-1000 lbs. Small Grain Equivalent (SGE)

2 Intensive-Till < 500 lbs. Small Grain Equivalent (SGE)

3 Includes Full Season and Double Cropped.

4 Forage Crops reported in seeding year only.

5 Other Crops include other vegetable crops, truck crops, peanuts, tobacco, sugar beets, etc.

n/a means Not Applicable

2004 Summary for Lucas County, Ohio

| — Annual Crop — | Total Acres | Conservation Tillage (greater than 30% residue) | | | Total Conservation Tillage | Other Tillage Practices | |
|-------------------------------------|---------------|--|------------|---------------|----------------------------|---|--|
| | | No-Till | Ridge-Till | Mulch-Till | | (15-30% residue) Reduced-Till ¹ | (0-15% residue) Intensive-Till ² |
| Corn ³ | 25,000 | 8,500 | 0 | 6,000 | 14,500 | 4,500 | 6,000 |
| Small Grain (Spring-Seeded) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Grain (Fall Seeded) | 7,900 | 4,000 | 0 | 2,000 | 6,000 | 1,900 | 0 |
| Soybeans (Full Season) | 30,300 | 18,000 | 0 | 5,000 | 23,000 | 5,000 | 2,300 |
| Soybeans (Double-Cropped) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotton | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grain Sorghu ³ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forage Crops ⁴ | 300 | 0 | n/a | 0 | 0 | 100 | 200 |
| Other Crops ⁵ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Planted Acres | 63,500 | 30,500 | 0 | 13,000 | 43,500 | 11,500 | 8,500 |
| Newly Established Permanent Pasture | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Fallow | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Conservation Reserve Program | 317 | | | | | | |
| Highly Erodible Land | 0 | | | | | | |
| Treated Highly Erodible Land | 0 | | | | | | |

| — Annual Crop — | Total Acres | Conservation Tillage (greater than 30% residue) | | | Total Conservation Tillage | Other Tillage Practices | |
|-------------------------------------|---------------|--|-------------|--------------|----------------------------|---|--|
| | | No-Till | Ridge-Till | Mulch-Till | | (15-30% residue) Reduced-Till ¹ | (0-15% residue) Intensive-Till ² |
| Corn ³ | 25,000 | 34.0% | 0.0% | 24.0% | 58.0% | 18.0% | 24.0% |
| Small Grain (Spring-Seeded) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Small Grain (Fall Seeded) | 7,900 | 50.6% | 0.0% | 25.3% | 75.9% | 24.1% | 0.0% |
| Soybeans (Full Season) | 30,300 | 59.4% | 0.0% | 16.5% | 75.9% | 16.5% | 7.6% |
| Soybeans (Double-Cropped) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Cotton | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Grain Sorghum ³ | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Forage Crops ⁴ | 300 | 0.0% | n/a | 0.0% | 0.0% | 33.3% | 66.7% |
| Other Crops ⁵ | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total Planted Acres | 63,500 | 48.0% | 0.0% | 20.5% | 68.5% | 18.1% | 13.4% |
| Newly Established Permanent Pasture | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |
| Fallow | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |

¹ Reduced-Till = 500-1000 lbs. Small Grain Equivalent (SGE)

² Intensive-Till < 500 lbs. Small Grain Equivalent (SGE)

³ Includes Full Season and Double Cropped.

⁴ Forage Crops reported in seeding year only.

⁵ Other Crops include other vegetable crops, truck crops, peanuts, tobacco, sugar beets, etc.

n/a means Not Applicable

Conservation Technology Information Center

2004 Summary for Williams County, Ohio

| — Annual Crop — | Total Acres | Conservation Tillage (greater than 30% residue) | | | Total Conservation Tillage | Other Tillage Practices | |
|-------------------------------------|----------------|--|------------|---------------|----------------------------|---|--|
| | | No-Till | Ridge-Till | Mulch-Till | | (15-30% residue) Reduced-Till ¹ | (0-15% residue) Intensive-Till ² |
| Corn ³ | 51,000 | 17,000 | 0 | 20,000 | 37,000 | 10,000 | 4,000 |
| Small Grain (Spring-Seeded) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Grain (Fall Seeded) | 26,000 | 6,000 | 0 | 5,000 | 11,000 | 4,000 | 11,000 |
| Soybeans (Full Season) | 71,600 | 51,000 | 0 | 10,000 | 61,000 | 10,000 | 600 |
| Soybeans (Double-Cropped) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotton | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grain Sorghu ³ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forage Crops ⁴ | 3,500 | 100 | n/a | 0 | 100 | 400 | 3,000 |
| Other Crops ⁵ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Planted Acres | 152,100 | 74,100 | 0 | 35,000 | 109,100 | 24,400 | 18,600 |
| Newly Established Permanent Pasture | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Fallow | 0 | 0 | n/a | 0 | 0 | 0 | 0 |
| Conservation Reserve Program | 26,484 | | | | | | |
| Highly Erodible Land | 0 | | | | | | |
| Treated Highly Erodible Land | 0 | | | | | | |

| — Annual Crop — | Total Acres | Conservation Tillage (greater than 30% residue) | | | Total Conservation Tillage | Other Tillage Practices | |
|-------------------------------------|----------------|--|-------------|--------------|----------------------------|---|--|
| | | No-Till | Ridge-Till | Mulch-Till | | (15-30% residue) Reduced-Till ¹ | (0-15% residue) Intensive-Till ² |
| Corn ³ | 51,000 | 33.3% | 0.0% | 39.2% | 72.5% | 19.6% | 7.8% |
| Small Grain (Spring-Seeded) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Small Grain (Fall Seeded) | 26,000 | 23.1% | 0.0% | 19.2% | 42.3% | 15.4% | 42.3% |
| Soybeans (Full Season) | 71,600 | 71.2% | 0.0% | 14.0% | 85.2% | 14.0% | 0.8% |
| Soybeans (Double-Cropped) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Cotton | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Grain Sorghum ³ | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Forage Crops ⁴ | 3,500 | 2.9% | n/a | 0.0% | 2.9% | 11.4% | 85.7% |
| Other Crops ⁵ | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total Planted Acres | 152,100 | 48.7% | 0.0% | 23.0% | 71.7% | 16.0% | 12.2% |
| Newly Established Permanent Pasture | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |
| Fallow | 0 | 0.0% | n/a | 0.0% | 0.0% | 0.0% | 0.0% |

¹ Reduced-Till = 500-1000 lbs. Small Grain Equivalent (SGE)

² Intensive-Till < 500 lbs. Small Grain Equivalent (SGE)

³ Includes Full Season and Double Cropped.

⁴ Forage Crops reported in seeding year only.

⁵ Other Crops include other vegetable crops, truck crops, peanuts, tobacco, sugar beets, etc.

n/a means Not Applicable

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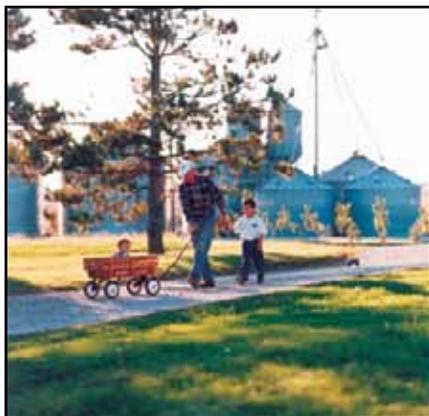


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Make a difference.*

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options



CTIC Members have options. Join our national public/private partnership at the basic membership level that fits you best – **Individual, Institutional** or **Corporate**. For additional benefits and recognition, increase your contribution to support the important work of CTIC. Each membership category includes additional giving levels of Gold, Silver and Bronze.

benefits

All CTIC members benefit from

- **access** to research and information on conservation agriculture,
- national **recognition** for support of agricultural conservation,
- **networking** opportunities with agricultural and conservation advocates,
- **customized** projects and materials promoting conservation agriculture,
- **interaction** with technical experts and policy makers at state and national levels.



individual membership

Gold \$500 +

You get the basic benefits below, plus:

- Recognition in two issues of *Partners* magazine
- Free conservation agriculture book or other product from CTIC's online store

Silver \$250 - \$499

You get the basic benefits below, plus:

- Recognition in two issues of *Partners* magazine

Bronze \$100 - \$249

You get the basic benefits below, plus:

- Recognition in one special issue of *Partners* magazine

Basic \$50

- Recognition on CTIC's Web site
- One-year subscription to *Partners* magazine and Member Mail e-newsletter



our mission

CTIC champions, promotes and provides information on technologies and sustainable agricultural systems that conserve and enhance soil, water, air and wildlife resources and are productive and profitable.



what we do

- Collect, compile, interpret and disseminate information about agricultural conservation
- Distribute national messages
- Facilitate workshops, conferences and trainings
- Lead local, regional and national projects to advance conservation in agriculture

institutional membership

Gold \$1,000 +

You get the basic benefits below, plus:

- Recognition in two issues of *Partners* magazine
- 10% discount on CTIC products during your annual membership term
- Special recognition at a CTIC Board of Directors meeting
- Ad space in one issue of *Partners* magazine valued at \$300

Silver \$750 - \$999

You get the basic benefits below, plus:

- Recognition in two issues of *Partners* magazine
- 10% discount on CTIC products during your annual membership term

Bronze \$500 - \$749

You get the basic benefits below, plus:

- Recognition in two issues of *Partners* magazine
- Free conservation agriculture book or other CTIC product

Basic \$250

- Recognition on CTIC's Web site
- One-year subscription to *Partners* magazine and Member Mail e-newsletter
- Access to Crop Residue Management Survey data from 1989 to 2004 through CTIC Web site

corporate membership



Gold Basic Corporate Membership plus \$8,500+

You get the basic benefits below, plus:

- Recognition in three issues of *Partners* magazine
- 10% discount on CTIC products during your annual membership term
- Special recognition at a CTIC Board of Directors meeting
- Two gift memberships at the Individual Silver level
- Ad space in two issues of *Partners* magazine (\$600 value)
- Recognition at two CTIC events during your annual membership term
- Two complimentary registrations to CTIC's Conservation In Action Tour

Silver Basic Corporate Membership plus \$3,500 - \$8,499

You get the basic benefits below, plus:

- Recognition in two issues of *Partners* magazine
- 10% discount on CTIC products during your annual membership term
- Special recognition at a CTIC Board of Directors meeting
- Two gift memberships at the Individual Silver level
- Ad space in one issue of *Partners* magazine (\$300 value)
- Recognition at one CTIC event during your annual membership term

Bronze Basic Corporate Membership plus \$1,000 - \$3,499

You get the basic benefits below, plus:

- Recognition in two issues of *Partners* magazine
- 10% discount on CTIC products during your annual membership term
- Special recognition at a CTIC Board of Directors meeting
- Two gift memberships at the Individual Silver level
- Ad space in one issue of *Partners* magazine (\$300 value)

Basic

| | |
|--|---------|
| <i>gross income greater than \$500 million</i> | \$6,500 |
| <i>gross income greater than \$100 million and less than \$500 million</i> | \$2,000 |
| <i>gross income less than \$100 million</i> | \$ 500 |

- Recognition on CTIC's Web site
- One-year subscription to *Partners* magazine and Member Mail e-newsletter
- Access to Crop Residue Management Survey data from 1989 to 2004 through CTIC Web site

CTIC
3495 Kent Avenue, Suite J100, West Lafayette, Indiana 47906
Tel: 765-494-9555 ctic@ctic.org
www.ctic.org



Conservation Technology Information Center

Membership Application Form

NAME: _____
 CORPORATION/ORGANIZATION: _____
 ADDRESS: _____
 ADDRESS: _____
 CITY: _____
 STATE: _____
 ZIP: _____

CORPORATE MEMBERSHIP

- Gold Corporate Member Basic* plus \$8,500+
- Silver Corporate Member Basic* plus \$3,500 - \$8,499
- Bronze Corporate Member Basic* plus \$1,000 - \$3,499
- Basic Corporate Member \$6,500 (gross income greater than \$500 mil)
- Basic Corporate Member \$2,000 (gross income greater than \$100 mil and less than \$500 mil)
- Basic Corporate Member \$ 500 (gross income less than \$100 mil)

*The Gold, Silver or Bronze Corporate Membership rate includes the basic membership of \$500, \$2,000 or \$6,500 plus the additional amount for the desired medal membership level.

INSTITUTIONAL MEMBERSHIP

- Gold Institutional Member \$1,000+
- Silver Institutional Member \$750 - \$999
- Bronze Institutional Member \$500 - \$749
- Basic Institutional Member \$250

INDIVIDUAL MEMBERSHIP

- Gold Individual Member \$500+
- Silver Individual Member \$250 - \$499
- Bronze Individual Member \$100 - \$249
- Basic Individual Member \$50

Method of Payment

Please check one of the following:

- A check is enclosed, payable to CTIC
- Credit Card Visa MC American Express

Card # _____ Exp. date _____

Please mail or fax (if paying by credit card) to:

Conservation Technology Information Center

Signature _____ 3495 Kent Avenue, Suite J100, West Lafayette, Indiana 47906
 T: (765)494-9555 F: (765)463-4106 E-mail: ctic@ctic.org

THANK YOU

CTIC thanks all sponsors of the Conservation In Action Tour. We appreciate your support and value your contributions to make this event a valuable and enjoyable experience.

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