

# Partners



Featuring  
Bob Wade Jr.

**CHAMPION**  
of  
Conservation

**Alternative  
Enterprise  
Series**

(Pages 6-7)

**Planting  
No-till  
Vegetables**

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## ON THE COVER

**Bob Wade Jr.**

**Champion of Conservation**

Bob Wade Jr. is *Partners'* first Champion of Conservation. His conservation ethic, his outspoken advocacy for conservation agriculture and his economic success earn Wade the title of Champion.

Cover and inset photos are courtesy of USDA NRCS.



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# New and Improved

Dear *Partners* Readers,

Welcome to a brand new *Partners*.

As we start a new year, *Partners* has implemented several style and content changes that I'm sure you'll enjoy. You've already noticed our new look. We've modernized our style and increased readability while maintaining a consistent magazine design. The table of contents and board of directors list has moved from the back cover to the inside front cover. I'm still providing my perspective through this column, but it's got a new location on page 3. All of this is to keep you, our reader, coming back for more.



John Hassell, CTIC  
executive director

We've focused our news coverage and feature stories to reflect the new focus of CTIC – providing technology and information for improving soil quality. Through all *Partners* articles — feature stories, research and technology articles, news about CTIC, partner contributions and alliance updates – we strive to convey credible, reliable information that you can use to improve soil health where you live and work.

The Champions of Conservation series on pages 8-9 features farmers who meet the highest conservation standards, realize economic goals and, by example, encourage other producers to meet those same standards of conservation performance on their operations.

Our series on value-added conservation (pages 6-7) will feature producers who are turning to alternative enterprises to expand the scope of their operations and reaping further benefits from conservation. This issue's article introduces the concept of alternative enterprises and offers a look at some of the many resources available to help producers find their niches.

Another addition to *Partners* is a result of and tribute to our strong public/private partnerships. In each issue of *Partners* magazine, our partners will publish news about conservation issues, policies, research and programs. Our agency advisors and nonprofit partners will discuss ongoing projects or research relevant to agricultural conservation, local, regional or national policy or program changes that impact agriculture and/or conservation, or technology innovations that improve conservation efforts.

The national circulation of *Partners* is 22,000. Our readership includes farmers and the local providers of conservation technical assistance; agribusiness leaders, field offices and sales staff; university researchers, extension educators and technology development; federal, state, regional and local government representatives working in conservation and agriculture; ag media reporters, editors and publishers; associations, commodity groups and other conservation organizations.

And, there's more to the story...the *Partners* readership is multiplied two to three times when you consider how many times our bi-monthly issues are passed around the office, forwarded in emails to colleagues, and distributed at conferences, trade shows and other local, regional and national meetings hosted or attended by CTIC.

Let us know how you and your colleagues enjoy the new and improved *Partners* magazine. Tell us how we're doing, and we'll do our best to meet your needs and satisfy your reading requests.

Enjoy,  
John Hassell, executive director

## 2004 Core 4 Conservation Grant Award Winners

CTIC is pleased to announce the recipients of the 2004 Core 4 Conservation Alliance Grants

- **Agriculture for a Clean Environment** in the Stillwater River Watershed, Ohio

Awarded \$1,200 to host a field day and continue test plots that highlight side-by-side comparisons of conventional and no-tillage areas.

- **Athens County Grazing Council** in Southeastern Ohio

Awarded \$2,500 to support the Advanced Grazing school, including two evening meetings and a Saturday farm tour.

- **Ohio No-Till Council**

Awarded \$2,500 to support the Aggregating and Trading Carbon Credits from Ohio Farm Fields project.

- **Sandusky River Watershed Coalition** in the Sandusky River Watershed, Ohio

Awarded \$2,500 to develop and implement a recognition program for farmers who excel in the application of Core 4 Conservation principals.

- **Upper Suwannee Conservation Tillage Alliance** in Ben Hill, Irwin, Tift and Turner counties in Georgia

Awarded \$2,400 to purchase educational conservation tillage publications and to establish a variety of cover crops for demonstration areas in conservation tillage systems.

- **Utah Grazingland Network**

Awarded \$2,500 to support activities at the Thanksgiving Point Demonstration Project, which promotes proper grazing practices and portrays the benefits of grazing and Core 4 Conservation principals.

# To Till or Not to Till... That is the question

By Angie Fletcher

USDA NRCS



**N**o-till farming is defined as leaving the soil basically undisturbed from harvest to planting except for narrow tillage strips used to either inject nutrients or for vertical tillage. Planting or drilling is usually done with disc openers creating a narrow seedbed while a combination of coulters, residue managers, seed firmers or modified closing wheels ensure adequate seed-to-soil contact. In a no-till system, pest (weeds, disease and insect) control is accomplished primarily with practices such as crop rotation, crop sanitation and competition. But no-till is more than a yearly practice. The field may need preparation, and soil properties may take several years to change.

Dan DeSutter is a grain farmer in Attica, Ind., with more than 3,400 continuous no-till acres of corn, soybeans and wheat. DeSutter is a strong advocate for continuous no-till operations.

Introduced to conservation tillage in 1983, DeSutter soon discovered the benefits of leaving the residue on the soil. "Over the years the improvements in soil tilth and organic matter were incredible," says DeSutter.

## Continuous No-till Benefits

In 1989, DeSutter switched to a continuous no-till system and has not used a disc or other full-width tillage tools since. "Most of the soil benefits of no-till are washed away with one trip across the soil," explains DeSutter. These benefits include increased earthworm populations, higher yields and organic matter, improved water infiltration and soil tilth, and reduced soil erosion.

"Another benefit of no-till is the reduced expenses," says DeSutter, who manages all 3,400 acres with two tractors, two planters, one sprayer, one combine and one full-time

employee. He has seen consistent yields, especially in dry years, when neighbors haven't.

According to DeSutter, his crop insurance representative stated that he has the best Actual Production High (APH) he has experienced.

When asked about rotational tillage (no-till one year followed by full width tillage the next year), Dan answered, "I don't know why there is even such a term. Either you no-till or you don't. Once you till the land, you lose most of the benefits you have built: tilth, organic matter and retained soil moisture."

DeSutter goes on to explain, "The only time I till the soil is when the earth is too rough and the field needs leveled." An example, DeSutter explains, is when he purchases new property or after tile installation creates depression in the land. "Otherwise," DeSutter says, "It's just not worth a trip across the field."

## No Recreational Tillage

Alan Kemper, corn, soybean and wheat producer in Southern Tippecanoe County (Indiana), runs a similar operation, with only one difference -- he occasionally tills the soil.

"We run an environmentally friendly farm, where soil losses are at or below 'T'" says Kemper. "We no-till 100 percent of the soybeans into corn stalks." The corn, however, is planted after one pass in the soybean residue with a disc - two if there is a weed problem.

Kemper says, "A lot of farmers think recreational tillage is a part of their operation, and we don't see that here. One pass ahead of planting corn helps dry the soil out and improves our corn stands, which leads to better yields."

Economics drives Kemper to look at the bottom line. "We are using less pounds of crop protection product than we did a few years back and getting the same results."

Kemper cites soil compaction as the reason for his one-pass corn planting operation. He uses a soil probe to test compaction, and for several years the compaction in the end zones was in the green. Green, according to Kemper, means there is no need for tilling.

Both of these conservation-minded producers are doing a good job on soil management, reducing soil erosion and producing high yields. However, they have different philosophies and expectations regarding soil quality on their farm.

Improved soil quality leads to economical and environmental benefits, but it takes time.

For more information, visit CTIC's website: [www.ctic.purdue.edu](http://www.ctic.purdue.edu) or Soil Quality Institute's website: <http://soils.usda.gov/sqi>.

## Bobwhite Quail Habitat Initiative Underway

Quail are a valued traditional symbol of farmed landscapes and an indicator of early successional habitat. Julie Hawkins, acting national biologist with Natural Resources Conservation Service (NRCS), says, "The economic significance of hunting this species manifests itself in trips, equipment, licenses and other items to support local and regional economies as well as valuable income to landowners."

Bobwhite populations have declined 4 percent a year over the past three decades. "The spring call of the male bobwhite used to be heard everywhere," says Dr. Wes Burger, an ecologist with Mississippi State University and quail expert. "Today it is not as prevalent, and the people want it back."

A loss of nesting and brood-rearing habitat is the suspected primary cause for the decrease in population. Because of this, wildlife researchers, NRCS, Mississippi State University, Quail Unlimited and the Southeastern Association of Fish and Wildlife Agencies signed an agreement aimed at reversing the decline of bobwhite quail populations by improving habitat for bobwhite quail in the Southeastern U.S.

U.S. Department of Agriculture is funding a \$500,000 study that calls for state-level evaluations of quail restoration technology and NRCS conservation practices used on farm, forest and pasturelands. Many NRCS conservation practices used on the agricultural landscape are important to quail. For example field borders, filter strips, conservation tillage, grassed waterways, strip discing, prescribed burning, prescribed grazing, timber management, pasture management and crop field management. "Everything producers do affects wildlife, and much of it impacts quail," says Burger.

For more information, contact Dr. Wes Burger, Mississippi State University, Tel: (662) 325-8782 or Pete Heard, NRCS Wildlife Habitat Management Institute, Tel: (601) 607-3131, E-mail: [pete.heard@ms.usda.gov](mailto:pete.heard@ms.usda.gov).



USDA/NRCS

Changes on both public and private lands have caused a significant decline in bobwhite quail populations. U.S. Department of Agriculture funds a project aimed at reversing the population decline.

### Letter to the Editor

*As an advocate of clean water, I very much appreciate your work to keep soil where it belongs. Every bit of soil, and the attached nutrients, that stays out of our waterways means less work for me and other advocates to ensure clean streams and safe drinking water.*

*Thanks,  
Judy Bond,*

*GrassRoots GIS and co-chair of Lake Champlain Committee in Underhill, Vermont*

## Partners Survey

*Partners* Magazine just keeps getting better. *Partners* is now available in two forms: printed or electronic.

Which do you prefer? Printed  Electronic (print current e-mail address)

In order to continue to provide useful information **to** you, we request information **about** you.

1. What is your name and organization? \_\_\_\_\_
2. What is your primary job function? \_\_\_\_\_
3. Have you visited the CTIC website ([www.ctic.purdue.edu](http://www.ctic.purdue.edu))? \_\_\_\_\_
4. Which topics covered in *Partners* interest you most? \_\_\_\_\_
5. What topics would you like to see addressed in the future? \_\_\_\_\_
6. Is the information you read useful? \_\_\_\_\_
7. Do you share *Partners* with other people? If so, how many? who? \_\_\_\_\_
8. Do you know someone who should be a member of CTIC? Please tell us how to contact them. \_\_\_\_\_

Submit the completed questionnaire to Karen Scanlon, communications director, Fax: (765) 494-5969; or E-mail: [scanlon@ctic.purdue.edu](mailto:scanlon@ctic.purdue.edu) or visit [www.ctic.purdue.edu/survey](http://www.ctic.purdue.edu/survey) to complete the survey.





Farm stand sales help many farmers capture the retail value of their crops. They also offer opportunities to profit from value-added products, crafts, candies and other moneymakers.

USDA NRCS



Seasonal enterprises such as Christmas trees (or pumpkins, cut flowers, and other crops) can yield high returns and may fit nicely into an operation's downtime.

# Alternative Enterprises help producers cash in on conservation

By Steve Werblow

## Editor's Note

This year, *Partners* will feature another angle on the profit potential of conservation. Instead of employing conservation tillage systems and other soil-and-water-protecting tactics to produce soybeans, corn, cotton, cattle or other commodities more efficiently, some producers are turning to alternative enterprises to expand the scope of their operations and the payoff from conservation. This issue's article introduces the concept of alternative enterprises and offers a look at some of the many resources available to help producers find their niches.

**B**eyond the basic economic calculations that make conservation farming a valuable tool – beyond the savings of labor, fuel, inputs and equipment – is another realm of profit potential. The phrase “alternative enterprises” is almost a catch-all, a reference to nearly any effort to add value to the output of a farm or ranch. But its lack of specificity opens an array of doors for innovative producers. With the public's growing interest in conservation and sustainably produced food and fiber, along with the government's resources to encourage conservation measures on the ground, alternative enterprises could make conservation more profitable than ever.

“In an alternative enterprise, you're either marketing something differently that you already produce, or producing a new product for market,” explains Jim Maetzold, National Alternative Enterprises and Agritourism leader for the USDA Natural Resources Conservation Service (NRCS) at the agency's headquarters in Washington, D.C. Sometimes, the product is really a service – an experience, a chance to fish or hunt or bird watch or pet calves on your property.

In fact, the possibilities are as varied as the nation's farm operations, and many lead to each other in a natural progression that encourages steady, controlled growth.

## Time Is Ripe

The time is ripe for conservation-based alternative enterprises, Maetzold emphasizes. Farmers' markets, eco-labels and grassroots organizations such as Slow Food clamor for food produced sustainably and locally. Harried city-dwellers are eager for a day or more of countryside visiting to calm their nerves. Today's travelers want experiences, whether it's riding horses on the range, sipping wine overlooking a vineyard, hunting ducks at dawn or chasing their kids through a corn maze.

Even better, alternative enterprises – especially agritourism – derive great value from unfarmable land. The wetlands, woodlands, ponds and conservation reserve grasslands that yield no crops could be a big draw for birders, hunters or even just visitors to a farm stand looking for a bit of pastoral scenery to admire. And better still, many of those acres are eligible for federal, state or even private funding to enhance their conservation or habitat value, adding even greater value with minimal investment by the landowner.

Environmental Quality Incentives Program can pay for cattle crossings and riparian fencing that improve creekside vistas and fishing opportunities, points out Maetzold. The Wetlands Reserve Program (WRP) or Wildlife Habitat Incentives Program (WHIP) can help pay for wetland areas that attract birds for birdwatchers. NRCS technicians can provide free technical help on designing a pond that could serve as a fishing hole for fee-paying anglers, and farmland easements and trusts can offer capital and allow the family to focus on the enterprise. And there is a wide variety of state and local programs, too.

## Market Research

Diane Kuehn, Syracuse, N.Y.-based coastal tourism specialist with the New York Sea Grant and chair of the National Extension Tourism Design Team, makes no bones about the importance of careful research and planning when considering an alternative farm enterprise.

“Do your homework,” she advises. “Know your competition and make your business unique. This will help reduce competition with other businesses in the area and attract visitors.” The first step is driving around and seeing what alternative enterprises already exist and stopping by the farmers' market to see what is laid out on the tables. Check with your local extension agent to see what farm enterprises he or she is aware of in the area and what planning resources are available. Maetzold's office and web site ([www.nrcs.usda.gov/technical/RESS/altenterprise](http://www.nrcs.usda.gov/technical/RESS/altenterprise)) offer hundreds of articles, case studies and web sites; Kuehn's web site ([www.nysgtourism.org](http://www.nysgtourism.org)) features success stories and a peek at her extensive survey of New York State farm-based tourism businesses.

“Know what your potential visitor markets are,” Kuehn says. “Some agritourism businesses -- like bed-and-breakfast inns and wineries -- cater to people from farther distances. But most businesses serve people from much closer, like their own county or neighboring counties.”

## Business Plan: A Must

A thoroughly researched, carefully considered business plan is vital to the success of an alternative enterprise, says Maetzold. “Spend the time up front,” he advises. “Research shows that an entrepreneur who has a credible business plan will have an 85-percent chance of succeeding. If you don't have it written down, it's almost the flip side – you have about a 16-percent chance of succeeding.”

The first make-or-break point is at the local bank, Maetzold points out. “Rural lenders who are accustomed to lending to traditional farm operations can have a very difficult time if you come in looking for \$12,000 for a corn maze,” he says. “But they understand business plans.”

## Soul Searching

In addition to careful contemplation of business goals, alternative enterprises demand an honest assessment of your desire to deal with people day in and day out. “There has to be someone in your family who loves working with people,” says Maetzold. “If you don't have that, this isn't a viable activity for you.”

That applies to tending the table at a farmers' market, or hitting the phones to talk to buyers of jams and jellies. But it's especially true for agritourism enterprises, which center around people coming to your home (sometimes in droves). “I don't think people give enough thought to their personal lives,” says Kuehn. “A lot of people try it and say, ‘it really is an invasion of my privacy.’ You also have to think about how you treat people. The number-one thing people expect of an agritourism experience is that farm employees will be friendly and treat them courteously.”

That courtesy can do more for your bottom line than a big boost in corn yields. It can also benefit the agriculture industry as a whole, notes Maetzold. “I don't have data to support this,” he says, “but you can quote me on it: the farmers and ranchers involved in bringing the public on their property, through the food they produce or the entertainment they provide, reach more people and have a greater impact on explaining what agriculture, conservation and the environment are about than all the USDA outreach efforts combined.”

For more information, contact Jim Maetzold, National Alternative Enterprises and Agritourism leader, USDA NRCS, P.O. Box 2890, Washington, DC 20013; Tel: (202) 720-0132; E-mail: [jim.maetzold@usda.gov](mailto:jim.maetzold@usda.gov); Web: [www.nrcs.usda.gov/technical/RESS/altenterprise](http://www.nrcs.usda.gov/technical/RESS/altenterprise); or Diane Kuehn, assistant professor/Coastal Tourism specialist, New York State College of Environmental Science and Forestry, 205 Marshall Hall, 1 Forestry Drive, Syracuse, NY 13210; Tel: (315) 470-6561; E-mail: [dmkuehn@esf.edu](mailto:dmkuehn@esf.edu); Web: [www.nysgtourism.org](http://www.nysgtourism.org).

## On the Web

For a start at exploring the abundant resources on alternative enterprises and agritourism on the internet, visit these sites:

- [www.nrcs.usda.gov/technical/RESS/altenterprise](http://www.nrcs.usda.gov/technical/RESS/altenterprise)
- [www.nysgtourism.org](http://www.nysgtourism.org)
- [www.nafdma.com](http://www.nafdma.com)

# Champion of Conservation

By Angie Fletcher



USDA NRCS

Bob Wade Jr., Kentucky producer, practices and promotes conservation every chance he gets.

## Editor's Note

Champions of Conservation are exceptional farmers who:

- implement a comprehensive system of conservation practices that focus on improving soil quality (continuous no-till, crop rotation which may include cover crops, nutrient management, pest management, conservation buffers, areas for wildlife, proper grazing land management),
- follow a “manage for C (carbon)” philosophy, rather than “manage for T (tolerable soil loss),” and perform soil tests to monitor the results,
- address resource concerns in his/her area, such as water quality, wetlands degradation, wildlife habitat management, air quality, etc.,
- manage the operation for both environmental and economic benefits (raise value-added crops, employ marketing scheme, etc.), and
- are innovative and share knowledge - both the hard-earned lessons and the tricks of the trade - with neighbors, colleagues and others.

If you know a Champion of Conservation, visit the CTIC web site at [www.ctic.purdue.edu/ConservationChampion](http://www.ctic.purdue.edu/ConservationChampion) to send us the Champion's name and contact information. We'll take it from there.

**A** champion shows marked superiority or is an advocate or defender. Bob Wade Jr., *Partners'* first Champion of Conservation, is just that. He demonstrates conservation superiority and is an outspoken advocate for conservation.

With nearly 3,800 acres of continuously no-tilled land and a value system that begins and ends with conservation, Bob Wade Jr. of Sonora, Ky., is a true Champion of Conservation.

“When I began farming in 1986, I bought a 273-acre farm and operated as a steward of the land. I didn't know any other way,” says Wade. “My dad was always conservation minded and he passed his values on to me.”

## Comprehensive System of Conservation Practices

Wade's operation is 100 percent continuous no-till – corn and soybeans are planted directly into residue from the past year's crop. At harvest, Wade uses a yield monitor, equipped with Global Positioning System (GPS) to determine yield variations across each field and help better manage inputs for the next season. “My goal is to put back what we take out at harvest,” Wade explains.

Because the productivity across each field varies, Wade adjusts his seed and fertilizer application accordingly. He also splits his fertilizer application and side dresses nitrogen for corn, making it less susceptible to leaching. “It's a part of a conservation theme,” says Wade, “using resources where it makes sense and not over applying.”



To prevent shallow root growth, Wade tests the soil for compaction, and when necessary, uses a narrow straight shank ripper, breaking soil compaction with minimal soil disturbance. "We target horizontal compacted layers without losing the benefits of continuous no-till," says Wade.

Among his pest management practices, Wade uses seed treatment to protect the seed. "We need to use products to protect the beneficial insects and earthworms in the soil," Wade explains.

David Stipes, Kentucky NRCS state agronomist, says "Wade studies and maintains good records of his fields – both owned and leased, adjusting inputs according to crop needs and soil types."

## Manage for Soil Quality

Wade's initial land purchase, he admits, was an abused piece of land that had been plowed for years. Implementing his conservation philosophy from the first day forward, Wade never used a disc on the land. "It's satisfying to see the land improve because of continuous no-till," says Wade. As a result, soil tilth is better, yields increased, water holding capacity improved, organic matter increased and the earthworm population grew.

"One of the big benefits of no-till is the macropores created by earthworms," says Wade. Earthworm macropores help improve soil tilth, organic matter and water holding capacity.

Knowing the value of earthworms and working to increase earthworm populations on his land are two more ways that Wade is a champion.

Larry Crews, NRCS district conservationist for Hardin County, describes Wade as an outstanding farmer with a very strong conservation ethic. "He manages for soil quality and the related economic and yield effects," says Crews. "He is an example for other farmers."

According to Stipes and Crews, water quality is a resource concern in the area. "Bob Wade Jr. employs numerous conservation practices including setbacks, filter strips and grassed waterways to prevent water quality problems," says Stipes.

Crews asserts, "There is a big sinkhole (more like a creek) on the land Wade farms and he installed permanent vegetation as a border to prevent polluted runoff."

"The Conservation Reserve Program (CRP) is one of the best investments the public has ever made in addressing environmental concerns of runoff, as well as being beneficial to farmers," says Wade. "Setting aside targeted areas for buffers next to streams makes more sense than taking vast land areas out of production."

Improving wildlife habitat is not a major concern in the area, but Wade says, "The wildlife habitat continues to increase, especially in the CRP areas."

"There are people who think we should let the land grow wild," says Wade. He doesn't believe these people have bad intentions, "just lack an understanding of farming and conservation."

Wade enrolled some of his marginal land in the CRP, taking it out of production for 10 years, and experienced

a one percent increase in organic matter. Four years ago, Wade no-tilled corn into this land and it yielded a 20-bushel per acre increase over a neighboring field. "It makes it hard for me to do anything to the soil that would disturb what we have built up," says Wade.

## Economic and Environment Management

Stipes says, "Wade knows his land and keeps excellent records. He manages his inputs and adjusts them to maximize his economic return through a higher level of management."

Wade says, "They go hand-in-hand." He cites several examples of managing for both economical and environmental impact: taking land out of production to earn money from the CRP, receiving a \$.50 per bushel premium for growing non-genetically modified soybeans, using yield monitors to track variations and varying inputs and side dressing nitrogen. "All of these improve my bottom line and detract from the possibility of polluting the environment," says Wade. "And, no-tilling sequesters carbon."

## Innovator Shares Knowledge

"What stands out about Bob Wade Jr. is he not only does a good job on his farm, but he stays very active with other farmers," says Stipes. "He's not afraid to share his successes and his failures with other producers."

According to Crews, Wade takes part in research and demonstration studies conducted by the University of Kentucky Cooperative Extension Service. "He is willing to stand in front of groups and discuss conservation and production issues," says Crews.

Stipes adds that Wade is actively involved in leadership roles with groups that promote improved technology, such as the local Farm Bureau and the local conservation district.

Wade believes it is his duty to help educate. To that end, he has been a supervisor on the Hardin County Soil and Water Conservation District since 1993. He served on the Kentucky Corn Growers Board for nine years, was president for two years and is now on the Kentucky Soybean Board. He represented agriculture, at the governor's request, on the Ag Water Quality Authority, a statewide group that required every farm with more than 10 acres to have a conservation plan developed by October 2001.

Wade continuously improves his operation, and the results validate his claim that he is a steward of the land. He takes this job seriously, "As stewards of the land, we have a responsibility to take care of it for the next generation."

For more information, contact David Stipes, NRCS, Tel: (859) 224-7392 or E-mail: david.stipes@ky.usda.gov.

USDA/NRCS



Bob Wade Jr. and Dan Towery, Conservation Technology Information Center, test for soil compaction in a field that has been no-tilled continuously for over 17 years.

*"It's a part of a conservation theme... using resources where it makes sense and not over applying."*  
Bob Wade Jr.



SEPA RC&D

on several years of experimenting, Steve worked with RJ Equipment, Inc. to create a new style of no-till vegetable transplanters. Steve has received an USDA Sustainable Agriculture Research and Education (SARE) grant to continue experimenting and share his experiences with others. In 1998 he received the 1998 National No-Till Innovator Award.

Groff says, "The combination of cover crops and no-tilling does more than cut erosion, it improves soil tilth, increases organic matter levels, enhances water infiltration and lessens pest problems." Groff touts that he typically incurs a total savings of \$675 per acre when he no-till transplants tomatoes.

To encourage other vegetable farmers to try no-till, SEPA RC&D purchased two no-till vegetable transplanters and makes them available for free to farmers. This project was started with some seed money from USDA NRCS and was matched by a grant from Pennsylvania Department of Environmental Protection Growing Greener Program.

No-till vegetable planting has proven successful in Pennsylvania with increased yields, improved harvesting conditions and reduced soil erosion.

# No-Till Vegetables A Growing Idea

By John Metrick

**F**or years conservation experts have focused on planting field crops using no-till. In Pennsylvania, there are now efforts to promote the use of no-till for transplanting vegetable plants.

Traditional methods of plowing and cultivating often leave vegetable fields bare during most of the growing season and throughout the winter months. Because of this continuous soil disturbance, soil erosion rates on vegetable fields are often higher than on fields used to grow field corn, soybeans or small grains.

By no-tilling, Pennsylvania vegetable farmers are able to maintain a protective ground cover all year long. Benefits of this layer of mulch include conserving soil moisture, improving soil quality, better field conditions for harvesting and cleaner vegetables at harvest time.

"No-till is one of the best ways to protect vegetable fields from the summer cloudbursts," said John Rohr, chairman of the Southeastern Pennsylvania Resource Conservation and Development Council (SEPA RC&D).

## Early Promoters

Ron Morse of Virginia Tech began promoting the idea of no-tilling vegetables in the early 1990s. Pocono-Northeast Resource Conservation and Development Council, Lackawanna County Cooperative Extension and Lackawanna County Conservation District worked with a few tomato growers in northeastern Pennsylvania to demonstrate no-till vegetable farming.

Steve Groff, a Lancaster County farmer, took the concept of no-till vegetable farming to the next level. Based

## How it Works

The no-till transplanter works similarly to other pieces of no-till equipment. A coulter slices through the cover, a planter shoe spreads open the slit, the vegetable plant is placed into one of the openings in the carousel, the carousel trap doors open and the plant drops down into the kicker tube where it is pushed out into the opened trench. The press wheels pack the ground firmly around the plant. If desired, water or liquid fertilizer can be added to the trench.

The No-till Vegetable Transplanter is used primarily for late season (late May – early June) plantings. It can be used for transplanting pumpkins, tomatoes, peppers, cabbage, etc. The plant spacing can be easily adjusted for different crops by either changing the sprockets or skipping every other carousel tube. The no-till transplanter works well in cover crops, such as rye or hairy vetch. It has also been used successfully on sod fields and on fields protected with prior year's corn stalks. Experience has shown that no-tilling can be used in vegetable farming without sacrificing yield, size, or quality.

NRCS District Conservationists Sam High, David Schaffer and Marcia Farbotnik actively promote the no-till vegetable transplanter and encourage farmers in their counties to use the machine. Penn State University Professor Michael D. Orzolek and County Extension Agents Cheryl Bjornson, Andrew Frankenfield and Scott Guiser have supported the project by organizing meetings, answering questions regarding proper chemical applications and assisting farmers with the use of the equipment. Chester County vegetable farmer Pete Flynn donated the use of some of his fields for demonstrations and provides storage space for the equipment. He also has hosted several twilight meetings for the community.

NRCS Agronomist Joel Myers expects to see no-till vegetable production expand across the nation. Based on the increasing requests SEPA RC&D receives, Pennsylvania will meet those expectations.

For more information on no-till vegetable farming, visit Steve Groff's website, [www.cedarmeadowfarm.com](http://www.cedarmeadowfarm.com) and the SEPA RC&D website, [www.separcd.org](http://www.separcd.org)



# 2003 No-TILL INNOVATOR AWARDS

No-till farming continues to grow, thanks to the efforts of dedicated growers, researchers, educators and consultants. Syngenta Crop Protection, Inc. and No-till Farmer Magazine honored these individuals and groups as the 2003 No-till Innovator Award winners at the 2004 National No-Tillage Conference in Des Moines, Iowa, Jan. 7-10. The winners received complimentary conference registration, lodging and meals for the 2004 National No-Tillage Conference and a limited-edition print with an engraved plaque to commemorate the honor. For more information, contact No-till Farmer Magazine, Tel: (262) 782-4480 or Fax: (262) 782-1252.

Congratulations to all the winners.

## Crop Production - The Martin Family

In 1983, Tom, Jeff and Doug Martin, of Mt. Pulaski, Ill., became early adopters of no-till in Logan County, and within five years expanded their 1,800 acres of corn and soybeans to 100 percent no-till. The Martins actively promote no-till by serving on local soil boards, assisting with numerous articles and interviews, and by being active in organizations such as the Illinois Farm Marketing Board, Illinois Corn Growers Association, Chicago Farmers Organization and the Illinois Agricultural Leadership Foundation.

In addition to farming, the Martins enrolled cropland into conservation programs creating wildlife habitat on ground less suited to farming, and are considering adding a commercial hunting preserve to their cash crop operations.

The Martin's have received awards for their conservation efforts, including Logan County Conservation Farm Family of the Year and the Illinois Department of Natural Resources Wildlife Landowner of the Year.

## Organization - Pacific Northwest Direct Seed Association

The Pacific Northwest Direct Seed Association (PNDSA), a multi-state, grower-based organization, promotes the adoption of economically and environmentally sound no-till systems and generates funding for direct seed research. The PNDSA assumes a leadership role on many issues impacting the Pacific Northwest farmers, including carbon sequestration and trading, as well as numerous governmental policy efforts. Its mission is to help transition the region into direct seeding, which will help communities-at-large benefit from clean water and clean air. The organization has initiated strong educational programs encompassing a wide range of issues and topics related to direct seeding.

Along with education, research is an important aspect of the association's mission. The late Roger Veseth significantly aided no-till research and acceptance in the Pacific Northwest, in part through his work on the Solutions to Environmental and Economic Problems (STEEP). An extension scientist for the University of Idaho and Washington State University, Veseth led the STEEP research for the past 15 years, creating a research web site for easy access to data, which helped develop innovative solutions to soil erosion for the Pacific Northwest regions. Veseth was instrumental in increasing regional adoption of no-till practices to more than 25 percent.

## Research - Norman Widman

Norman Widman, a state agronomist with Natural Resources Conservation Service in Columbus, Ohio, develops practice standards and trains individuals about the state's agronomic practices, including residue management (such as no-till, mulch-till and ridge-till), erosion control practices, erosion prediction technology, nutrient management, pest management and conservation planning. He provides on-site assistance to growers when needed, speaks up to 70 times a year at local and national no-till conferences and hosts numerous field days and plot tours.

Widman was instrumental in starting in the Ohio No-till Council and remains active in the Soil and Water Conservation Society. He is a past recipient of the Ohio No-till Council's No-till Promoter Award.

## Consulting - David Moeller

David Moeller, president of Moeller Ag Service, Inc., a farm machinery repair shop, helps farmers convert to no-till by fine-tuning planting and harvesting equipment. He developed fertilizer mounts for planters not originally designed to carry liquid fertilizer, designed a knife system for the single disc fertilizer opener that works better in adverse conditions, and created a seed tube innovation to prevent the sidewall from collapsing in no-till soils.

Moeller is an active speaker at conferences, seminars and farm shows throughout Iowa, Illinois and Ohio. Through his work, Moeller helps farmers overcome "no-till, no-yield" fears and become practicing believers.



# Feature Member

John Deere, one of the oldest industrial companies in the U.S. and guided by its original values of quality, innovation, integrity and commitment, has been a member of CTIC since its inception in 1982. Chris Foster currently represents John Deere as the secretary of CTIC's board of directors.

## How long has John Deere been a member of CTIC?

John Deere is proud to be a supporting member of CTIC. We have been actively involved since the inception of CTIC and have gained many benefits through the years.

## What past trends have you seen in the agricultural industry?

The biggest trend is the adoption of conservation cropping systems. It has grown tremendously. The information that CTIC provides has helped member companies better understand the implication of this trend and assisted producers to get conservation on the ground.

## What future trends do you see in ag conservation?

In grower cropping systems, I see a continued evolution toward conservation tillage systems, including a one-pass operation. As producers grow closer to this goal, information technology will have a larger impact than it has in the past - not that openers and crop protection products and genetics won't play a large part. For Deere, the challenge is to stay up with that change and fulfill producers' requirements as their cropping system programs evolve.

## How can CTIC best fit into the picture?

Technology continues to have an impact in the ag conservation arena and, as stated above, will have an even larger impact in the future. CTIC's role is to help producers and member companies better understand the trends and changes and how they are happening, not only in the U.S. markets, but worldwide. John Deere is looking forward to working with CTIC in the future as we all work to meet the challenges in a changing agricultural environment.

## Great Loss for the Conservation Community

**Dr. George W. Langdale**  
**September 14, 1930- December 23, 2003**

Dr. Langdale, a 40-year U.S. Department of Agriculture (USDA) Agricultural Research Service employee, began his conservation career with the USDA Soil Conservation Service. Langdale received both his Bachelor and Master of Science degrees in Agronomy and Soils from Clemson University and a Ph.D. degree in Soils from University of Georgia.

Langdale's research on controlling erosion and improving soil productivity through the use of conservation tillage and sustainable cropping systems earned him recognition as an international authority in this research area. He wrote over 20 papers relating to soil erosion and conservation tillage. In addition, Dr. Langdale cooperated with many other scientists in nitrogen and water management of crops, atmospheric transport of nitrogen compounds and pesticide contamination of runoff and subsoil water movement.

After retiring in 1997, Langdale stayed active in conservation efforts, notably serving as a mentor for the Georgia Conservation Tillage Alliance.

Dr. Langdale will be sorely missed.

## Thank You

With gratitude, CTIC recognizes the following partners for their generous contributions in 2003 and 2004:

- Bill Richards, Monsanto and Syngenta Crop Protection for hosting board meetings
- Monsanto for donating a gift of \$24,000 to support CTIC's alliance building efforts
- National Conservation Buffer Council for handing over to CTIC its national promotion of buffers
- Pioneer Hi-Bred, A Dupont Company, for sponsoring production of new hats that promote CTIC and the Power of Partnerships
- Yetter Manufacturing Co. for providing the coulter used in the recognition gift for Past Chair Bruno Alesii



# The "Gold Standard" in Conservation Seeding



90 Series Opener - Helping to Seed the Success of Conservation Tillage



More than a decade ago, John Deere jump started the no-till seeding revolution with the introduction of the legendary 750 No-Till Drill. Thanks to conservation-minded growers from all over North America, more than 1 million John Deere No-Till Openers have been put to work in nearly every soil condition and every crop imaginable.

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# ALLIANCE HIGHLIGHTS

Utah Grazingland Network



**U**tah Grazingland Network (UGN), organized in the mid-1980s as part of the Grazing Land Conservation Initiative (GLCI), became an active

Core 4 Conservation alliance in 2002. The Core 4 Conservation principles of *Better Soil, Cleaner Water, Greater Profits* and *Brighter Future* are similar to UGN's mission: Protect and improve grazing lands, water quality, wildlife habitat, forage production, and enhance grazing management and conservation ethics across Utah's landscape.

Public land grazing in Utah, as in many areas of the West, recently has come under attack. In response, the UGN alliance has teamed with CTIC to help spread the message of Core 4 Conservation, connect with the business and marketing sector, accomplish its mission and improve or correct the public's image of grazing.

Alliance membership includes representatives from federal and state agencies, universities, Soil and Water Conservation Districts, non-government agencies, commodity groups, businesses and ranchers. The alliance is led by Chair Darrell Johnson, Shambip Soil Conservation District and rancher; Vice-Chair Bill Hopkin, Deseret Land and Livestock and rancher; Field Director Gary Gerth, UGN; Treasurer Jake Jacobson, Utah Department of Agriculture & Food; Secretary Ken Mills, Utah

Utah Grazingland Network sponsored a tour of Deseret Ranch in northeastern Utah, where tour participants, including Utah Division of Wildlife Resources and Utah State University Extension personnel, discuss the use of a Lawson aerator to improve both forage and wildlife habitat.

Association of Conservation Districts.

Alliance activities include rangeland tours, workshops, demonstration sites and the Utah Range Management School, which provides resource managers common-sense, science-based skills concerning grass growth, grazing management strategies, timing of grazing, animal behavior, riparian management, range monitoring, animal nutrition and economics.

The alliance is also involved in developing exhibits that showcase grazing at Thanksgiving Point, a large multipurpose discovery, educational and recreational complex located between Salt Lake City and Provo.

For more information, contact Ken Mills, E-mail: [kenmills@ut.nacdnet.org](mailto:kenmills@ut.nacdnet.org).

## BLACKLANDS CONSERVATION TILLAGE ASSOCIATION

The BCTA elected 2004 officers: Leslie Marek, chairman; John Perryman, vice-chairman; and Jim Lloyd, secretary-treasurer. Charles Wade will remain as BCTA coordinator. Bobby Henson, Gene Klein and Archie Abrameit are members.

Spring tours are being planned as well as the production of a conservation tillage and planting equipment video for the Texas Blacklands. For more information, contact Charles Wade, NRCS, Tel: (254) 697-3692; or E-mail: [charles.wade@tx.usda.gov](mailto:charles.wade@tx.usda.gov).

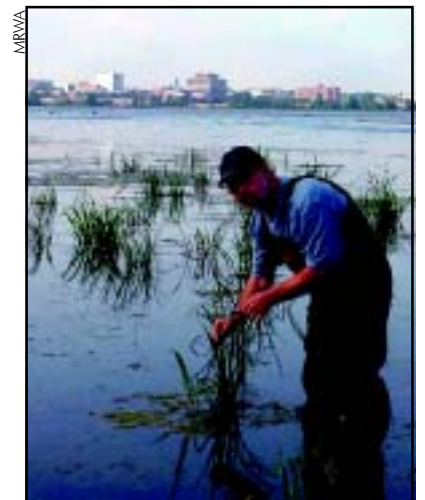
In 2003, SAPPI Fine Paper awarded the MRWA with a \$750 grant for the planting efforts. The Wege Foundation has also committed a dollar-for-dollar match for any monies raised in 2003 and 2004.

For more information or to be added to the MRWA mailing list, contact the MRWA, Tel: (231) 591-2324 or E-mail: [mrwa@ferris.edu](mailto:mrwa@ferris.edu).

## MUSKEGON RIVER WATERSHED ASSEMBLY

The Muskegon River Watershed Assembly (MRWA) secured a three-year grant from the U.S. Fish & Wildlife Service's Great Lakes Coastal Program to reverse the effects of post settlement development, lumbering and industry on the wild rice production in Muskegon Lake in Michigan.

The MRWA began by planting the first of three crops in November 2002. In the spring of 2005, the MRWA will record and report the findings.



Gale Nobes, Muskegon River Watershed Assembly chair, checks the wild rice growing in Muskegon Lake.



## TRI-STATE STRIP-TILL ALLIANCE

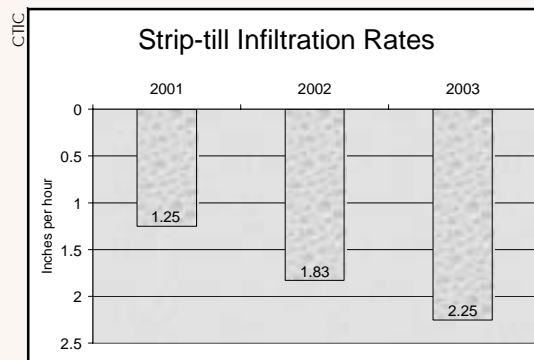
Researchers at the Irrigation Research Foundation (IRF) continue to see improvements in water infiltration rates on strip-tilled plots.

Strip-till allows existing root channels and earthworm burrows to remain intact from surface to subsoil in 22 inches of a 30-inch row system. The researchers conducted worm population studies in the spring of 2003 and observed 16-32 worms per square foot in the strip-till plots, which is more than 4 times the earthworm activity found in the conventionally-tilled plots where there were 4 to 8 worms per square foot.

Strip-till improves soil quality, reduces runoff during intense summer thundershowers and allows less water to be pumped, which saves labor and fuel.

A grower in the High Plains of Texas planted half a center-pivot field of corn with strip-till and the other half conventional. Late last summer (2003), as he shut off the sprinkler in the pouring rain, he observed muddy water streaming from the conventionally-tilled portion of the plot. Curious, he drove to the strip-tilled plot, saw no runoff and decided to walk the field. To his delight, water was soaking in and damming behind last year's stalks and stubble — staying put.

For more information about the Tri-State Strip-Till Alliance or the Irrigation Research Foundation, contact Mike Petersen, USDA NRCS, Colorado. Tel: (970) 330-0380 or E-mail: michael.petersen@co.usda.gov.



Infiltration rates continue to climb in strip-till plots at the Irrigation Research Foundation. In 2001, fluid infiltrated the soil at a rate of 1.25 inches per hour. In 2002, that figure increased to 1.83 inches per hour and, in 2003, to 2.25 inches per hour.

## OKLAHOMA ALLIANCE

More than 80 people, including producers and representatives from the Natural Resources Conservation Service, Agriculture Research Service, Oklahoma Department of Agriculture, Oklahoma Department of Commerce, Oklahoma Farmers Union, and others, attended an Economic and Business Development workshop presented by an Oklahoma Alliance on Jan. 16, at the Southwestern Oklahoma State University Conference Center.

Jim Hettenhaus, Chief Associates Inc.; Dr. Jim Stiegler, department head, Plant and Soil Sciences, Oklahoma State University; John Hassell, executive director of CTIC; and Larry Wright NRCS-RC&D Coordinator, Great Plains RC&D, gave informative presentations to the attendees.

Following the workshop, 15 volunteers formed a steering committee to build an alliance and seek a process for certifying sustainable agriculture cropping systems and the foods produced from those systems. The next step is to access markets with incentives for producers who grow food products with sustainable cropping systems. For more information, contact Larry Wright, Tel: (580) 832-3661 or E-mail:

Nearly 20 members of the Brewer Lake Watershed Alliance are joining forces to address the needs of Conway County and the city of Conway and to support sporting use of Brewer Lake. Some of the resource concerns in Brewer Lake are water quality and quantity, animal habitat, funding for watershed improvements, landowner cooperation and governmental legislation. The alliance plans to finalize its business plan and elect officers at a Jan. 29 meeting.

The Brewer Lake Watershed consists of the upper 23,127 acres of the Cypress Creek Watershed, located in the southeastern part of Conway County, Ark. Brewer Lake is the water supply for the Conway Corporation and the Conway Regional Water System.

For more information, contact the Conway County Conservation District, Tel: (501) 354-2000, Ext. 101.

## BREWER LAKE WATERSHED ALLIANCE

## INDIANA CORE 4 CONSERVATION ALLIANCE

The Owen County Soil and Water Conservation District (SWCD) received a 319-grant of \$182,000 to implement a new Core 4 Conservation Initiative cost-share and outreach project. The grant is a result of a written proposal by Gwen Dieter, Owen County SWCD coordinator. The funds will be used to hire a project coordinator to run the cost-share project in three watersheds and fund outreach in the surrounding area. Funds will also be used to install best management practices to improve water quality and farm management.

For more information about the Indiana Core 4 Conservation Alliance, contact Bruce Finkbiner, Tel: (812) 382-4472 or E-mail: bcf53@yahoo.com.



Bruce Finkbiner (left), Core 4 Conservation Project coordinator, and Gwen Dieter (right), Owen County SWCD coordinator, display Core 4 Conservation at the Indiana SWCD Conference.

# SUPPORT CTIC

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# DID YOU KNOW?

- 1 inch of topsoil may take 200 to 1,000 years to form under cropland conditions
- 1.8 billion tons of U.S. soil are lost from cropland annually
- 120 million acres of U.S. cropland are eroding at a rate greater than T (tolerable soil loss, or the maximum annual soil loss that can occur on a particular soil while sustaining long-term agricultural productivity)
- 850 million tons of soil would be saved from eroding each year if all cropland were managed to T
- 1,290 million tons of soil would be saved from eroding each year if all U.S. cropland were managed to maximize for carbon and organic matter
- \$8.2 billion worth of soil (valued at \$5.40/ton) could be saved annually through conservation efforts that manage for carbon and organic matter instead of managing for tolerable soil loss
- 46 million acres is the increase between 1982 and 1997 in the amount of cropland managed using methods that improve soil organic matter

Sources: D. Pimentel, et. al, Science, 1995; NRCS Soil Quality Institute

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