

Corn Growers – Jerry and Pearl Wirbel

Hope, Michigan



Case Study

Agricultural pollution prevention is defined as source reduction, reuse, or environmentally sound recycling and other prevention activities, including nonpoint source approaches.

Making an Example to Follow

The National Corn Growers Association (NCGA) has sponsored stewardship programs devoted to conservation of soil and water resources. This program, which began in 1997, is important in that it marks the first cooperative agreement between the United States Department of Agriculture (USDA) and a national commodity group designed to reach grassroots growers. The Conservation Buffer Initiative, for example, promotes buffer strips to conserve soil and water resources while providing crop protection, less wind erosion, and benefits for wildlife. NCGA also encourages stewardship through various watershed programs, promotion of best management practices, and research into making the corn plant itself more environmentally friendly. **Jerry and Pearl Wirbel** were chosen this year as the Environmental Stewardship recipients by the Michigan Corn Growers Association.

Pearl and Jerry Wirbel are cash-crop farmers in Midland County, raising corn, sugar beets, and soybeans on their 800-acre farm. Beginning their marriage at age 18 with 120 acres, they raised corn, sugar beets, and dry beans. Now approaching retirement, they are proud to say, "We truly are an environmentally friendly farm couple."



Jerry and Pearl Wirbel



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United States Corn Production

- Continues to increase.
- Currently generates over \$22.2 billion annually.
- Michigan's corn production contributes more than \$500 million a year.
- As yields rise, more of the crop is being used for value-added products.
- New uses such as fuels, plastics, and food additives are ensuring corn will continue to remain a viable cash crop for Michigan's farmers.

The Wirbels considered themselves “traditional farmers,” moldboard plowing their land, until the early 1990's when they changed their method of farming and dedicated themselves to environmentally conscious farming.

Along with topsoil blowing off, soil compaction was a problem with using the moldboard plow. With the encouragement of Pearl, Jerry attended several meetings at the local Soil and Water Conservation District on farm conservation tillage practices; and after much discussion and many sleepless nights, he did the unthinkable – he sold the plow! The Wirbels knew they could make it work by taking one step at a time. To improve soil structure, the first step was switching from traditional planting to minimum-till and, ultimately, no-till at planting time.

In addition to no-till planting, Jerry uses a 6-row corn head on his combine. As the combine harvests corn, it stores the shelled corn in a bin on the combine. When the bin gets full, it must be emptied into a truck or wagon. The 6-row head allows Jerry to coordinate his trips across the field to the point when he can leave a truck in one small area at the open end of the field. This coordination has reduced soil compacting by eliminating driving trucks from one end of the field to the other to receive the harvested corn .

Dramatic Decrease in Fuel Consumption Due To:

- no-till practices,
- minimum-till of corn and other crops, and
- a significant decrease in the number of trips across the fields with tractors and trucks.

One of Jerry Wirbel's special attributes is his ability to construct and upgrade farm equipment to meet various farm needs. One example stems from switching to minimum-till corn planting. When making this switch, the common thought was that 28% liquid nitrogen must be applied to the soil. Jerry was not in favor of this because of the high price of liquid nitrogen versus the cheaper anhydrous-ammonia. Jerry rigged his planter with anhydrous teeth, which applies the anhydrous into the soil, and a hitch to pull the anhydrous tank behind the planter. Wirbel also installed trash wheels that remove residue from in front of the seed disk openers. His system of trash wheels, hitch, and anhydrous teeth have an extra benefit – the combination of the anhydrous teeth and trash wheels work the soil to the extent that it is no longer necessary to apply as many herbicides to the soil.

Jerry's Improvements to Sugar Beet Harvester

- Original harvester had many moving parts, mostly chain and sprocket systems.
- Revamped system to include a few pulleys and one moving belt, eliminating the chains and sprockets which wore out quickly.
- New belt and pulley system is huge improvement and requires very little maintenance.

Dedication to Water Quality and Habitat

Midland County's rolling terrain and some sandy soil present erosion problems for many of the area farmers. Jerry and Pearl Wirbel's farm rests in the heart of the Saginaw Bay Watershed, an area where soil erosion is a public issue. Jerry has taken it upon himself to install various erosion control structures on his land.

Jerry and Pearl are active participants in the Conservation Reserve Program (CRP). The CRP program pays farmers rent to leave their land in its natural state by not cropping specific areas. Jerry has placed some of his field's edges in the CRP program. As part of the CRP areas, Jerry planted clover filter strips. These filter strips serve a dual purpose: they reduce soil erosion into the ditches surrounding the edge of the field and also serve as wildlife feed areas. In the past, Jerry had a problem with deer eating his crops. He has eliminated this problem by planting filter strips of clover, giving the deer something to eat other than his profits.

According to Jerry, "I guess when I was younger, I didn't think much about conservation. I wanted to make money." His new philosophy centers around a concern with loss of farmland

and wildlife to development. In answer, Jerry and Pearl have constructed and installed four wildlife ponds throughout their farm. The ponds serve as habitat for fish, beavers, deer, and other species of wildlife.

Erosion Control Techniques

- Installed 20 geo-textile shoots (felt blankets that are placed on ditch banks) to help capture soil particles from runoff.
- Installed 4 dams in low areas of fields that trap water runoff and funnel it into the ditch via plastic tubing, decreasing the soil erosion in the low lying areas and eliminating water ponding.

As Jerry and Pearl get ready to retire from day-to-day farming practices, their efforts over the past ten years have left them with a sense of accomplishment. Pearl says of her husband, "I am proud of what Jerry has accomplished and where he has gone with us in agriculture, conservation, and the environment. Several local farmers have watched him and are now doing similar projects." Jerry has also spent time helping his local Soil and Water Conservation District streamline its equipment rental so more farmers can practice no-till planting.

Jerry and Pearl both feel that –

"As farmers continue to be leaders of environmental stewardship, the rest of the community will follow."



This publication was developed in partnership with the Michigan Corn Growers Association and the Michigan Department of Environmental Quality (MDEQ) to promote the Pollution Prevention Strategy and Implementation Plan for Michigan Agriculture.



For further information on these farms, contact the Michigan Corn Growers Association at 517-323-6600.

For further information on the Pollution Prevention Strategy and Implementation Plan, contact the Environmental Assistance Division at 800-662-9278.

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