

Groff Receives Clean Water Award At Field Day, Conservation Expo

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— One of the nation's strongest no-till advocates and a staunch conservation farmer opened the doors Wednesday to his farm here, inviting about 240 producers and agri-industry representatives to the county's annual conservation expo that featured the healthful soil benefits of no-till.

Steve Groff, along with father Elias and family, demonstrated why no-till is essential to keeping farming viable and profitable in the state and the country.

In addition, the Groff family was honored with the Pennsylvania Chesapeake Bay Foundation Clean Water Farm Award for "protecting water on the farm itself, for southeastern Pennsylvania, and for the state," said Chris Herr, deputy agriculture secretary, who presented the award to the Groffs.

The award, according to Herr, recognizes Pennsylvanians who "excel in water quality protection."

Steve Groff and father Elias farm 175 acres of corn, alfalfa, tomatoes, pumpkins, soybeans, small grains, and a few other vegetables on hilly land in southern Lancaster County.

Steve is the third generation to manage the rolling acres, which have been contoured for at least 40 years.

(Groff's family were profiled in numerous issues of *Lancaster Farming* through the years for their innovative no-till vegetable farming and conservation work. They were honored in March with the Lancaster County Conservation District's Outstanding Cooperator Award and featured in the March 21 issue of this newspaper.)

In a statement prepared and distributed at the field day, Groff noted that he started using no-till in the early 1980s on about 15 corn acres. Groff began using cover crops at Cedar Meadow Farm in 1991 as another soil conservation measure.

"I started using rye for winter erosion control on fields that would have been bare," he indicated. "But now I plant cover crops based on the succeeding crop that I want to plant into it the next year."

He has experimented with various types of cover crops. At the field day and Lancaster County Conservation Expo on his farm Wednesday, he noted how important it is to keep the soil covered at all times.

His favorite combination for transplanting tomatoes is a three-way mix of hairy vetch, crimson clover, and rye. For pumpkins, he uses vetch and spring oats. For soybeans he spins rye on top of cornstalks, then he rolls the stalks to shake the rye seeds down into the soil.

To roll the cover crops, Groff uses a rolling stalk chopper with parallel linkages. It flattens and crimps cornstalks or other material. The machine has two rows of rollers, four in front and four in back, with eight 23-inch wide blades per roller. The turning rollers crimp up the cover and push it right down.

On Wednesday Groff demonstrated how quickly the crop can be rolled down. He chopped through a large stand of sorghum-sudangrass, rolling one side of the

field at about 15 miles per hour.

He has used the versatile machine on 350 acres in two years.

Groff said that the combination of cover crops and no-tilling does more than cut erosion. He noted it "improves soil tilth, increases organic matter levels, enhances water infiltration, and reduces pest problems."

Legume covers such as vetch or crimson clover also add nitrogen to the fields. Use of manure from the steer finishing operation and importing hog and poultry manure help with nutrient needs.

After the stalk chopper, tomato, broccoli, and other transplant material are planted into the vetch using a no-till subsurface tiller/transplanter developed by Dr. Ron Morse, Virginia Tech. The transplanter has a spring-loaded 20-inch, straight-bladed coulter, followed by a subsurface tiller that gently opens a slot to place the transplant.

At the field day, Groff demonstrated broccoli transplants using the equipment. The package leaves virtually no soil showing after the crop is planted, giving good full-coverage mulch for mid- to late-season tomatoes.

The no-till system stems early blight, controls erosion, and helps in terms of total savings. Total savings using the no-till transplanting system for tomatoes amounts to about \$550 per acre.

Nearly \$500 of the cost reduction is from material, labor, and time savings when eliminating the use of plastic mulch.

Groff also has had success in no-tilling pumpkins, sweet corn, and peppers, as well as fall broccoli. Groff has also transplanted pumpkins this way. It has worked with eggplant, melons, and even snap beans.

All 175 acres are in no-till. According to Groff, herbicides have been reduced to near 1/2 normal rates.

During the day, demonstrations were given on soil quality by Dr. Ray Weil and Joel Gruver, soil quality researchers from the University of Maryland.

Dr. Joel Myers, state agronomist with NRCS, spoke about the use of no-till in farming systems.

"The primary no-till crop is no-till soybeans," he said. "There are 21 million acres of no-till soybeans in the U.S."

Myers noted that 35 percent of soybeans in Pennsylvania are planted no-till.

No-till can be used in conjunction with cover crop to protect the soil.

"To protect the soil, keep it covered," he said. "That's the first line in getting it protected. Keep the soil covered year-round."

At the field day, equipment demonstrations included zone and slit tillage, a no-till drill, a deep tiller and fertilizer injector, corn planter, and subsoiler.

Also, other farms were honored along with Groff's with the Pennsylvania Association of Conservation Districts (PACD) Clean Water Award Wednesday. They included:

- Lee and Sharon Durandetta, Knox Township, Clearfield County.
- Gerald and Linda Smith, Martinsburg, Blair County.

Both farms were honored at a PACD meeting in Monroeville.



The Groff family was honored with the Pennsylvania Chesapeake Bay Foundation Clean Water Farm Award by Chris Herr, deputy agriculture secretary, far left, who presented the award to the Groffs Wednesday. The award, according to Herr, recognizes Pennsylvanians who excel in water quality protection. Next to Herr, from left, are Cheri and Steve Groff, with Steve holding son David, 22 months, and Marlan and Elias, Steve's parents. In front are Steve and Cheri Groff's children, Lauren, 4 and Dana, 6. Photo by Andy Andrews



At the field day, Groff, standing with his hand on equipment, demonstrated his no-till transplanter, placing in broccoli. The package leaves virtually no soil showing after the crop is planted, giving good full-coverage mulch.



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