

Stewardship Leaders in Agriculture

Land Conservation and Air Quality

Giacomazzi Dairy

Dino Giacomazzi is a fourth-generation dairy farmer whose 900-acre farm has been in operation southeast of Hanford since 1893. He and his family live on the dairy property and oversee all aspects of its operations. Mr. Giacomazzi has been on the forefront of land conservation; his use of conservation tillage that has reduced air pollution combined with his outreach efforts through field days on the farm, an informative blog, and social media websites earned him the 2012 Leopold Conservation Award.

Leading the Way on Sustainability

Although conservation tillage (CT) has gained traction in much of the country, farmers in California's high value crops have been slower to make the transition. Mr. Giacomazzi first used CT in the spring of 2005 as part of an Environmental Quality Incentives Program contract received through the USDA Natural Resources Conservation Service. The following year Mr. Giacomazzi was using CT for all of his corn production and was actively experimenting with different implements, corn varieties, and planting configurations to maximize yield and minimize pollution. Since 2005, Mr. Giacomazzi's implementation of the land ethic has gone beyond CT and now includes water, nutrient, and pest management, along with twin row cropping in a holistic management practice termed "biological farming."

"[Biological farming is] to work with the systems of nature to develop a farm which is environmentally sound and which leaves the land, water, plants and animals in a healthy, productive state for all future generations."

- Dino Giacomazzi Dairy Farmer



ACHIEVEMENTS

- Recipient of the 2012 Leopold Conservation Award for actively living a land ethic
- Reduced pollution from decreased use of diesel tractors and reduction of airborne dust particulate matter from soil tillage
- Creation of a public outreach and education campaign to encourage conservation tillage farming
- Development of a handbook titled: A Systems Approach to Conservation Tillage of Forage Crops





“One of the greatest benefits of being a dairy farmer is the relationship you have with the land and that, at the end of the day, you can go home knowing that you produced something of value”
- Dino Giacomazzi Dairy Farmer

PROJECT PARTNERS

California Farm Bureau Federation

Sand County Foundation

Service National Soil Tilth Lab

Sustainable Conservation

University of California, Agriculture and Natural Resources Conservation Agricultural System Innovation Program

USDA Agricultural Research

USDA Natural Resources Conservation Service

California Farmers Land Conservation Programs

The USDA Natural Resources Conservation Service (NRCS) provides financial and technical assistance to farmers and ranchers that help to manage natural resources with sustainable practices that help save energy, improve soil, water, plant, air, animal and related resources. The NRCS offers five voluntary financial assistance programs: Agricultural Management Assistance (AMA), Agricultural Water Enhancement Program (AWEP), Conservation Innovation Grants (CIG), Environmental Quality Incentives Program (EQIP), and the Wildlife Habitat Incentive Program (WHIP). Mr. Giacomazzi's use of EQIP program jumpstarted his use of CT and began his journey to his current land management practice coined "biological farming." These federal financial programs are available to California growers who are looking to implement sustainable conservation practices that will ensure the long term success of the land and of their farms.

The University of California, Agriculture and Natural Resources Conservation Agricultural System Innovation (CASI) Program and Mr. Mitchell provided technical support and assistance to Mr. Giacomazzi, who is now a member CASI conservation tillage workgroup, and are a valuable resource for future conservation projects.

PROJECT DETAILS

MEASURING SUCCESS

Mr. Giacomazzi has performed extensive experimentation with on-farm studies to measure the effects of his "biological farming" practices. Since 2008, Mr. Giacomazzi has partnered with scientists from the USDA Agricultural Research Service National Soil Tilth Lab on a large-scale quantification of particulate matter emissions from traditional 13-pass tillage compared with 3-pass conservation tillage. This effort resulted in the *California Spring 2008 Tillage Campaign: Data Analysis, A project performed for the San Joaquin Valleywide Air Pollution Study Agency, Contract 07-1 AG* that found there to be a ~90% reduction in particulate emission (PM_{2.5}, PM₁₀, and total suspended particles) and a ~85% reduction in tractor operation time under Giacomazzi's strip-till land management practice compared to his former standard tillage approach.

FOSTERING SUCCESS

Mr. Giacomazzi has taken the lead on education and outreach efforts. His combination of traditional methods, farm field days and working with farm magazines, combined with more modern approaches, a blog and social media sites, have made him a successful advocate for implementing land conservation practices. The University of California, Agriculture and Natural Resources Conservation Agricultural System Innovation (CASI) Program considers Mr. Giacomazzi's 2006 public field day to be "the most successful and impacting extension education event that [their] workgroup has been involved with during the past decade." Mr. Giacomazzi has created a handbook titled, *A Systems Approach to Conservation Tillage of Forage Crops*, which serves as a practical guide for other farmers. Giacomazzi Dairy has shown what successful land management and has quantified their efforts to serve as inspiration to other California farms and ranches.

For more information please contact: