

Farmers can reduce dust pollution up to 86 percent and reduce fuel costs up to 74 percent.

Sustainable Agriculture

When third-generation Fresno-area dairy farmer Mark Ahlem accepted Sustainable Conservation's challenge to try a more environmentally-friendly approach to planting feed corn, he was focused on a different kind of "green." Ahlem was looking for ways to reduce costs and increase crop yields.

Sustainable Conservation was looking for a way to reduce particulate air pollution in California's San Joaquin Valley, where air quality is a serious public health concern. One in six Fresno children suffers from asthma, and dust from soil tillage is a major contributor to particulate matter in the air.

Sustainable Conservation partnered with Ahlem to demonstrate "conservation tillage," an innovative farming technique that requires fewer tractor passes to prepare soil for planting. This cuts air pollution by reducing dust (up to 86 percent) and diesel emissions. It helps the farmers by reducing fuel expenses (up to 74 percent) and reducing labor expenses.

Although widely used in the Midwest and elsewhere, conservation tillage is used on less than two percent of cropland in California's Central Valley. So Sustainable Conservation set out to demonstrate to California dairy producers the advantages of using conservation tillage for cultivating dairy forage crops. Ahlem committed 16 acres to the trial, and dairyman Andy Zylstra committed 20 acres. Jeff Mitchell, Cropping Systems Specialist at UC Davis and leading expert in conservation tillage, also joined the project.

The trial started with spring planting in 2004 and is continuing this year. Last year's results showed that because the streamlined process required less time between plantings, dairy farmers will likely be able to grow three crops per year instead of the usual two. Ahlem is pleased with the results and intends to continue the experiment for at least two more years.

In addition to lower expenses, reduced air pollution, and a potential increase in yields, new state regulations designed to keep manure and other agricultural waste out of groundwater will give farmers another compelling reason to try the technique. Dairy producers need to dispose of an average of 120 pounds of manure per day per cow – without harming water quality. By planting three crops per year instead of two, Ahlem believes dairy farmers will be able to apply more nutrient-rich manure to their fields as fertilizer without fouling ground water – or running afoul of the new regulations.

Already Sustainable Conservation has begun recruiting farmers for 12 new sites throughout the San Joaquin Valley to demonstrate the value of conservation tillage. Our goal is to make conservation tillage the predominate system of tillage in the California's Central Valley.

SUSTAINABLE AGRICULTURE

We promote the adoption of innovative farming practices so that farmers can protect the environment, boost their bottom line, and keep their land.

PROJECTS:

Conservation Tillage is a farming technique that can save farmers money, improve water quality, and reduce dust and diesel emissions that contribute to the severe problem of air pollution in California's Central Valley.

Dairies Project facilitates the widespread adoption of innovative agricultural technology. We find solutions that benefit both farm economics and the environment.

Wastewater to Wetlands encourages food processors to create constructed wetlands as a unique solution that treats water, provides habitat, and offers outdoor recreation opportunities for their communities.

