

Farming Less Pollution

Conservation Tillage Catching on in Tulare County

*By Rick Elkins/Valley Voice
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Tulare County - A relatively new farming practice in Tulare County is cutting down on dust and diesel pollution, while at the same time shaving fuel costs for farmers.

Conservation tillage, a method of cultivating crops to reduce soil erosion, is being practiced more and more as the price of fuel goes up and dust control grows more important.

In conservation tillage, crops are grown with minimal cultivation of the soil. When the amount of tillage is reduced, the stubble or plant residues remain on top of the soil rather than being plowed or disked into the soil. The new crop is planted into the stubble or small strips of tilled soil. Weeds are controlled with cover crops or herbicides rather than by cultivation.

Sustainable Conservation, a non-profit organization working with the private sector to promote clean air and water projects, is working with UC Davis on efforts to utilize conservation tillage. The practice reduces soil loss through water erosion because more crop residue is left on the soil surface and soil drainage, organic matter and moisture content are improved. Conservation tillage also reduces air pollution (dust and diesel emissions), sequesters carbon (inhibiting global warming), improves water quality and creates wildlife habitat.

“Tulare County is one of the leading counties picking up on conservation tillage. It's got some extra boost because of the cost of diesel,” said Ladi Asgill, a conservation tillage project manager with Sustainable Conservation.

Ben Curti, a Waukena-area farmer and dairyman, said it greatly reduces the number of times a tractor has to be used to plant a new crop.

“Basically, you're going over it twice instead of six or seven times,” said Curti. “That's four times you don't have a tractor out there.”

Tony Souza, a Tulare area dairyman, said that not disking the old field greatly reduces dust. Curti said a tractor very often may go over a field more than five times before the next crop is planted.

Souza and Curti both said that when the practice was first introduced in the area a few years ago it was not as effective as it is today. That method, call no-till, did not disk the soil at all. “It was like planting in concrete,” said Souza.

Today, they use a practice call split-till that tills a strip – about six inches wide – then the seed is planted in that tilled area. “You work a strip and plant in that strip,” said Souza, adding the strip-

till machinery does six or seven functions at one time, including the planting. More and more, you will see fields that are not plowed with rows of corn emerging. That is a strip-till field.

Most farmers are using strip-till to plant silage after a wheat crop. The wheat crop is harvested and the stalks cut down, then the farmer irrigates, then follows that up with the split-till planting. Approved herbicides are then used to control weeds as the new crop grows.

“We use Roundup-resistant plants. It's the only way you can use no-till,” said Souza.

“Conservation tillage uses half as many tractors to cultivate a field as conventional tillage, translating to lower fuel consumption and labor costs, decreased material inputs and less maintenance spending. In total, savings have been estimated between \$40 and \$75 per acre per year, a large savings compared to input cost and crop value,” reports Sustainable Conservation, which is studying the practice in the Valley in conjunction with UC Davis and the U.S. Department of Agriculture.

Reduced tillage practices in crops such as corn, soybeans, cotton, sorghum and cereal grains were introduced over 50 years ago to conserve soil and water. While conservation tillage is widely used throughout the Midwest, comprising more than half of the crop acreage in the U.S., less than 1% of California row crops use this method.

“I think it is catching on (in the Valley). It's really gotten a big boost with the high cost of fuel. They (farmers) realize you can maintain your yields and reduce the amount of dust. It approves the relationship with the residents,” said Asgill. He said yields are about the same and some growers are finding they have to rip (deep disk) every few years. But improvement in equipment has enabled more growers to begin the practice.

Souza said so far he has not been able to use less water. Asgill said that is still being studied, but they have found “the longer you have conservation tillage, the more organic material builds and the better it holds water. People doing it over four years start to see a difference.”

Pollution Credits

Curti said farmers should get pollution credits for using the strip-till method. He said they are cutting down on PM10 in the air, as well as PM25, both big environmental issues.

“If you are doing anything like this, why shouldn't you get credit? These are things to mitigate air pollution,” said Curti, adding they are penalized for practices that do cause pollution, so why not get credit for reducing pollution?

“It's one of those green practices – you're saving fuel and it's good for air quality,” said Tulare County Agricultural Commissioner Gary Kunkel.

Asgill said there is both a payment available to farmers who practice conservation tillage and pollution credits available from the Air Board for the practice.

“NRCS (Natural Resources Conservation Service) has a program that provides payments to farmers who are willing to try conservation tillage. They get paid per acre,” he said. “There is a pollution credit program. It does exist, but it is not utilized too much,” he added.