



System transition

By LYRA HALPRIN

GROWERS have been part of the Sustainable Agriculture Farming System team since the project's inception at University of California Davis in 1988. The project combines the best of both on-farm and experiment station research. At least three growers representing organic and conventional farming and two farm advisers participate in project decisions.

SAFS ideas once considered impractical or radical are gaining in popularity. As consumer demand for organic food increases, more growers are considering the transition to organic farming systems. Others are simply interested in reducing costs or improving soil quality, especially as energy costs soar.

At an SAFS field day in 2004, growers representing diverse farm sizes and growing practices discussed the importance of crop and system diversity in their operations. (See an account of the day's discussion at www.safs.ucdavis.edu/newsletter/v05n2/page3.htm.)

Three of the growers who have worked with SAFS discuss their current system practices:

Utilizing cover crops

Jeff and Annie Main have farmed 20 acres in the Capay Valley organically since 1984. They plant a variety of cover crops and grow 60 to 80 different trees and annual crops. Cover crops can provide much more than weed suppression and nitrogen, Jeff says.

"Farmers have just scratched the

Key Points

- Sustainable Agriculture Farming System team consists of growers, farm advisers.
- More growers are transitioning to organic or sustainable farming systems.
- Low-input systems attract those wanting to cut cost and energy.



CHANGE ON THE FARM: Charlie Rominger is a partner in a 2,700-acre farm that is moving toward an organic, more no-till and less conventional farming system.

cover crops surface," he says. "There are lots of varieties. We don't want to limit ourselves to what we traditionally consider to be cover crops, i.e. legumes and grasses."

Jeff adds he hasn't made major changes in his farming systems, which include the use of deep-rooted cover crops instead of deep tillage.

Conservation tillage works

Yolo County farmer Frank Muller uses winter cover crops and conservation tillage on both organic and conventional crops in his family operation, Joe Muller and Sons.

"We do include winter cover crops on some target crops," he says. "We use

them ahead of late-planted tomatoes and do not fight putting them in when the ground is too wet. But we avoid practices that compromise our yield goal.

"We want to incorporate these more sustainable practices and hopefully increase yields," he continues. "Once our yield bar has been set, we will not lower our expectations."

Conservation tillage has been successful in some crops for Muller.

"We raise a lot of sunflower seeds," he says. "We have our tillage program down to one pass with a stalk chopper after the sunflower harvest before we plant wheat. Without a doubt, we are successful using conservation tillage there."

Muller notes that at the other end of the spectrum, he uses more conventional tillage in high-value crops such as tomatoes or peppers.

"With tomatoes we can't have a lot of residue on top of the bed because trashy conditions make harvest difficult," he says. "We're numbers people here. If it's less cost-effective in the big picture, it doesn't make sense."

Muller says his number of field passes has been reduced 60%, but standard implements are still used.

"People see that some farmers are having success using cover crops and reduced tillage, and they see diesel prices rising so they want to adopt these practices," he says. "But we also have to see that they provide short-term profitability.

"I'd like to see a project that focuses

on maximizing return. Researchers should identify the model of best management practices, including conservation tillage and winter cover crops," he says. "The goal would be to create an economic model that is superior to conventional models. Lower costs, higher yields and greater environmental benefits will draw a crowd."

More organic and no-till

Charlie Rominger is a partner in a 2,700-acre family farm in Yolo County that is moving toward an organic, more no-till and less conventionally farmed land. In 2005, the operation enrolled in the government's Conservation Security Program through the Natural Resources Conservation Service, which pays farmers for implementing conservation practices rather than producing commodity crops. Some fields qualified for incentive payments, but others did not.

"Even though on one field we had hedgerows, a tail-water pond and a windbreak, we did not qualify for incentive payments because we used conventional tillage at that site," Rominger says. "To expand our conservation tillage, we bought a conservation-tillage bed implement, which chews up the residue but leaves most of it on the surface."

Rominger says he would like to see research on a "true no-till farming system" for irrigated row crops in the Sacramento Valley, including a more diverse crop rotation and livestock.

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