Growers should consider their options, challenges when installing soil sensors

By TIM HEARDEN Capital Press

ORLAND, Calif. — Advances in water-saving sensor technology are happening quickly, but growers should take certain steps before deciding which equipment to purchase, experts say.

Sensors that can show a grower the level of soil moisture, plant water use and weather impact in different areas of the farm can make an operation more efficient, they say.

But growers first must "address fundamentals," making sure their basic hardware such as drip lines are working correctly, and consider any challenges they might face, said Bob Coates, a University of California-Davis engineer.

"A big point to make is that there's no perfect technology solution," said Coates, an associate development engineer in the university's Biological and Agricultural Engineering Division. "Each growing situation is unique.

"With any technology, the overall goal is to use water, nutrients and labor more efficiently," he said.

Available technology to determine the water needs of crops has evolved from simple pressure bombs, which are sort of like blood pressure meters for leaves, to newer sensors that can provide information on an index of plant stresses in



Jack Coots, left, of Farm Data Systems Inc., discusses soil moisture sensors while Bob Coates of the University of California-Davis listens during a Nov. 16 presentation at the North State Precision Ag Expo and Farm Business Forum in Orland, Calif. Soil moisture and weather sensing technology for farms is becoming more advanced.

real time, Coates said.

Soil and plant sensing technology can make it easier for the grower to divide the farm into segments for scheduling irrigation, fertilization and other tasks. That's a key benefit for farms that have varying types of soil, Coates said.

Growers should first determine the kind of data they need, advises Jack Coots, regional director of Farm Data Systems Inc. Equipment can range from single-point sensors to soil moisture probes that include more than one sensor on a rod, to a system of sensors that use radio signals to provide real-time information on soil moisture, plant water use, weather and other factors.

"All of this stuff is really great, but none of it will work if it isn't installed properly," said Coots, adding that grow-

ers should consult an expert. "Installation is the most important point."

In new orchards, producers should have the ability to change the depth and location of probes as tree roots grow, he said.

Coates' and Coots' advice came during a presentation on soil moisture sensors and ag technology Nov. 16 at the inaugural North State Precision Ag Expo and Farm Business Forum. The workshop sought to teach growers how to prepare for technology adoption and how to use the data to make informed management decisions.

The information from sensors and telemetry won't take the place of human intuition, the two experts noted. For one thing, the technology has limitations, including obstructions such as hills or trees that can interfere with radio signals.

Study: Barriers between producers, buyers hinder local food movement

By TIM HEARDEN Capital Press

California

CHICO, Calif. — The local food movement may be growing in popularity, but barriers exist between buyers and producers that make locally grown food harder to find, a pair of experts says.

Producers have difficulty finding local buyers to purchase a large portion of their crops, while buyers such as schools, restaurants, catering companies and stores complain they can't get sufficient volume locally to meet their needs.

Those were the findings of a survey by California State University-Chico professor Jake Brimlow and Golden State Farm Credit marketing and outreach director Noelle Ferdon, who are married.

They have set up a food hub at Chico State, where they operate a cold storage unit and act as the middle agent between local buyers and grow-

"We've seen a lot of studies done ... (showing) consumers' willingness to pay more for source-identified food," Brimlow said during a recent workshop. "I think that represents an opportunity for growers."

The Chico hub is one of more than 300 regional food hubs across the nation that handle the aggregation, distribution and marketing of source-identified food prod-



Noelle Ferdon, left, of Golden State Farm Credit and Jake Brimloe of California State University-Chico, have developed a food hub to help local growers sell their products to local stores, restaurants and other retailers. A survey showed that barriers exist for both producers and retailers in the local food movement.

ucts, according to the National Good Food Network.

The network's website lists 18 food hubs in California, 11 in Oregon, 13 in Washington and two in Idaho.

The food hubs' emergence comes as a study by University of California-Davis researcher Shermaine Hardesty found that 73 percent of Sacramento-area farms surveyed market both directly and through wholesalers.

Hardesty's team found that farms that market directly to consumers in Sacramento and surrounding counties generated nearly 32 local jobs for every \$1 million worth of output, while non-direct marketers created only 10.5 local jobs for each \$1 million in output.

However, a "huge gap" remains between the amount of food grown in agricultural areas and how much of it is consumed locally, Brimlow said.

"Our best guess as to how much we currently eat that's local is about 2 or 3 percent" of average diets, he said.

Among 200 farmers contacted in Butte, Glenn and Tehama counties in the Sacramento Valley, 72 percent were selling out of the area to wholesale brokers and packers, although "a significant percentage" was also selling to local stores and restaurants, Brimlow said.



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DAIRY LEASING PROGRAM SWELLS RANKS OF 4-H MEMBERS

By Mary Stewart, OSU Extension Service

Toni and Rod Veeman wanted to educate more youth about dairy farming, so they organized a 4-H Club on their 500-head Newberg, Ore., dairy and invited community youth to participate though a leasing program. The St. Paul Green Grazers club has grown quickly from 12 to 19 youth members who manage and show cows from the Holstein herd.

"With the addition of the Dairy Leasing Program the participation in the Dairy 4-H Program has more than doubled," says Melanie McCabe, 4-H Extension faculty for Marion County. "Youth who would not otherwise get to experience working with dairy cattle have that opportunity. It is also an opportunity for them to learn about the dairy industry in Oregon."

"We've been on this dairy for 33 years," says 4-H volunteer Rod Veeman. "I grew up showing dairy cattle in California as a youngster. When my kids got involved in showing, I became the 4-H dairy superintendent at the Marion County Fair, and that's how it

started." The 19 youth meet regularly on the



Olivia Veeman of Newberg, Ore., grooms her 4-H project cow. Olivia is a member of the St. Paul Green Grazers 4-H Club.



Rod Veeman is both parent and 4-H volunteer leader for his children. Taysha, Olivia and Peter. 4-H helps youth learn about animal husbandry and successful business practices while it helps them build friendships and life skills.

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Veeman Dairy to care for and train their project cows. They learn about animal care, nutrition and feeding, animal parts, preventative medicine, teamwork,

community service and how to safely maneuver a half-ton animal, according to co-volunteer leader Toni Veeman.

Peter Veeman, 11, recalls a challenging day of cow training: "I was working in the pen with my cow. I was trying to get her up in the leash and it was really tricky!" Peter likes 4-H because it is helping him learn how to manage a dairy.

"4-H has given me learning tools and speaking skills I will use throughout my entire life," says Taysha Veeman, 15. Her sister Olivia, 13, recommends 4-H to other youth because "it gives you a better perspective of how other animals live and

it gives you better money management and skills for life."

"The kids gain so much," says Toni. "They should grow up with appreciation of the dairy industry and support us in the future. If they don't have the exposure they aren't going to know about it."



Stockland Livestock Auction wants to thank and congratulate all the dedicated 4H groups making a difference.

Your passion for agriculture is the future of our industry.



Cougar Friesen of Amity, Ore., receives cattle-showing tips

training meeting of the St. Paul Green Grazers 4-H Club.

from 4-H volunteer Rod Veeman of Newberg during a

"We'll work hard for your business and harder to keep it."

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