

Maximize Labor and Water Savings with Linear Irrigation

California Grower Says Adaptation is the Name of the Game



- LOCATION:** Ronald C. Leimgruber Farms
Near Holtville, CA
- SITUATION:**
 - 2,000 acres of forage crops, plus onions, carrots, wheat, durum and some hemp
 - Year-round growing season, but only ½ to ¾ of an inch of rain annually
- CHALLENGE:**
 - Dry conditions
 - Water efficiency
 - High labor cost with other irrigation methods
- DEPLOYMENT:**
 - Two linear irrigation machines from Valley[®]; a third this spring
- EFFECT:**
 - Labor savings
 - Uniform water application
 - Water savings improved by half
 - Better yields
 - Effective over all kinds of specialty crops



Backed by nearly 100 years of history, Ronald C. Leimgruber Farms, based near Holtville, CA, is perhaps best known for its quality hay and forage crops that are sold worldwide. Yet California's Imperial Valley is renowned for much more than alfalfa. Crops grown in the area literally run the gamut from A to Z, or as farm owner Ronnie Leimgruber puts it, "alfalfa to zucchini."

"We can grow 180 different crops in this area," he adds, noting that he grows around 20. "Right now, we have about 2,000 acres of forage crops that include alfalfa, alfalfa seed, Bermuda and Sudan grass. Plus, we're growing onions, carrots, wheat, durum and a little bit of hemp as a test."

Although most of the family history revolves around dairy farming and growing hay for other local dairies — dating back to when Ronnie's grandparents emigrated from Switzerland in the early 1920s — Leimgruber says most of his hay now goes overseas.

"Because we're so close to the ports in Los Angeles, it actually costs less to send a load of hay to the Pacific Rim countries than it does to ship it to Sacramento," he says. "It may cost \$4,000 to bring a container of televisions here from China, but it only costs around \$400 to fill it with hay and send it back, since the ships are going back anyway."

In the meantime, much of Leimgruber's premium horse hay goes to the Middle East, with the rest going to horse farms around the United States.

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Defeating Drought

Regardless of what crops he grows, though, it takes year-round irrigation. On average, the Imperial Valley only receives around one-half to three-fourths of an inch of rain annually. Yet the area boasts a 365-day growing season, which yields 10 cuttings of alfalfa.

"We're fortunate that all our water comes from the Colorado River; and that we have historical rights as the third-highest priority for irrigation," Leimgruber says. "We typically apply 70-90 inches of water per acre, per year. Yet we know that due to all the political pressure from the metro areas, sooner or later, they're going to be coming after our water."

That's just one of the reasons Leimgruber installed two Valley linear irrigation systems on his farm over the last four years and has plans to install a third unit this spring. He's already seen a water savings of an acre foot per acre compared to some of the other irrigation methods he uses, which include flood irrigation, furrows, drip systems and solid set units. Unfortunately, all of those methods require additional labor.

Superior to Other Methods

"It costs us about \$100 per acre each time we put out the solid set units and about \$50 per acre to pick them up," he says, noting that the linear units are gradually taking their place. "California recently adopted a minimum wage of \$15 per hour with time and half after eight hours, so labor costs add up quickly."

Another benefit of the linear units, he says, is more uniform water application, which results in better yields. Valley dealer Rick Grimes agrees. The owner of Southwest Irrigation notes that he has installed a number of linear units over specialty crops, potatoes and carrots around Bakersfield, CA.

"Linear units use half the amount of water as flood irrigation," he says.

Effective Over All Kinds of Crops

Leimgruber notes, however, that a final reason he prefers linear sprinklers is because they give him greater flexibility in his cropping program.

"Other than hay, I never know from year to year what I am going to plant," he admits. "It all depends on what the buyers want. As a rule, most of our vegetable acres are turned at least three times during the year. So we might have a crop of lettuce, followed by cantaloupes, followed by Sudan grass. So we have to be able to adapt."

"Unfortunately, drip irrigation works better with some crops than others," he says, "and flood and furrow irrigation limit you on the types of crops you can plant. However, I can plant *anything* under a linear unit. So in order of importance, I would say flexibility and increased yields are the number one reason for switching to linears. Labor savings would be second and water savings third."

Meanwhile, Leimgruber is quick to credit the reliability of Valley units and the service he receives from Grimes.

"The service from Southwest Irrigation and Valley is exceptional and prompt," he says. "Unlike a producer who grows one 120-day crop per year with supplemental rainfall, we often take a crop like baby spinach from seed to harvest in as little as 21 days. If we were to go just three days without water, we'd lose about 15 percent of our growing time, which can equate to several thousand dollars. So there's no room for failure."

Leimgruber says he still doesn't know what the future holds for water rights and availability. But at least for now, he's making the appropriate moves to adapt.