



UNDERWOOD RANCHES

Stewardship Profiles in California Agriculture
Environmental Leadership with Pest Management, Soil Health, and Water Efficiency

The Underwoods trace their farming roots in Ventura County back to 1867. Craig Underwood's ancestors grew lima beans, walnuts and lemons, and initiated fresh produce. A quarter of a century ago, Underwood Ranches began growing jalapenos, its principal crop today. Currently farming 3,000 acres spanning Ventura and Kern counties, it is one of the largest producers of red jalapenos in the country. Underwood Ranches is the exclusive supplier of jalapenos for Sriracha maker Huy Fong Foods Inc. and, last year, they grew 17,000 tons of jalapenos to feed the Sriracha craze. In addition to jalapenos, Underwood Ranches produces Brussels sprouts, carrots, fennel, beets, artichokes, blueberries, celeriac, turnips, tomatillos and more. The Underwood's also have a retail arm called Underwood Family Farms.

PROBLEM

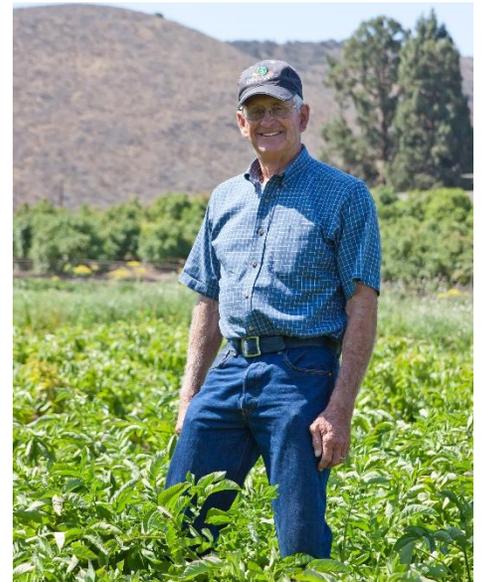
Underwood Ranches' cover-cropping program is a strategy to combat soil born blight, soil erosion and sediment runoff. Underwood Ranches owner Craig Underwood also emphasizes that regulatory and economic pressure – as well as the drive to instill good management practices – has led the farm to develop a rigorous budgeting schema for water and fertilizer that is spearheaded by chief operating officer Jim Roberts. Fertilizer budgeting is a requirement under the state Irrigated Lands Regulatory Program in Kern County, where Underwood Ranches farmed 600 acres last year.

SOLUTION IMPLEMENTATION AND MANAGEMENT

Roberts adopted Underwood Ranches' cover cropping program to combat outbreaks of blight caused by Phytophthora in the late Nineties. He noticed that fumigants to battle the Phytophthora became limited, more expensive and not very effective. At the same time, he found that planting cover crops between the jalapeno peppers was beneficial in suppressing the disease. Underwood Farms plants cover crops, primarily of barley, on around 1,500 acres. According to Roberts, cover crops are grown for six weeks to four months, depending on specific field conditions. In Kern County, wind erosion is a major issue that cover crops help address. Underwood Ranches also uses windbreaks combat wind erosion.

ACHIEVEMENTS

- Decreased pest damage
- Increased soil health



“We have to change and become more efficient.”

-Craig Underwood

About 90 percent of Underwood Ranches' crops are irrigated using drip systems. In 1994 and 1995, Underwood Ranches teamed up with Cal Poly San Luis Obispo researchers Stuart Styles and Charles Burt to analyze Underwood Ranches' implementation of drip irrigation for jalapeno peppers on 50 acres. The researchers found water use plummeted 19 percent on average with drip irrigation, while pepper yield surged 30 percent. The drip system also helped the farmers reduce Phytophthora because free moisture associated with sprinkler systems was diminished.

More recently, Underwood Ranches has begun completing weekly projections of the water needs of its crops based on weather data. Underwood Ranches began making the projections for select crops, but is now expanding them to its entire portfolio. "We haven't had water budgets for every crop. Now, we start out the crop with a water budget. A lot of our irrigation was [guided] by observation and history. It wasn't predictive. We are combining the two," said Roberts, adding, "We have soil moisture stations, and we have been doing that for ten years. They are less helpful than observation and using the predictive value."

CHALLENGES/OBSTACLES OVERCOME

Cost is a challenge with cover crops. According to Roberts, "You need to find a way to do it inexpensively. You can start off with a good idea, and it can become very expensive. Knowing your costs is critical. You need to be able to compare the costs to the costs of doing nothing at all."

MEASURING SUCCESS

"It's clear that our cover cropping program is helping the pepper program. That's our gauge," said Underwood. He continued, "We haven't had rain for a few years, so we will see how helpful it is this winter with sediment erosion."

The biggest accomplishment, according to Roberts, is that Phytophthora is much less of a problem than it was in the past. The cover crops have played a large role in suppressing it, but Roberts emphasized they are employed in conjunction with biological materials and improved fungicides. "We use everything. That program seems to really make good healthy soil, and the peppers grow well," he said. Data from soil sensors and on the weather inform Underwood Ranches' water allotments for its crops, and Underwood is open to other monitoring devices – he referenced drones – to enable him to get a clearer picture of what's going on at his farm.

For more information about the stewardship practices discussed in this profile, please contact the farmer directly. You can reach Craig Underwood by email to craig@underwoodranches.com or by phone at (805) 377-3892.

STEWARDSHIP PRACTICES



Pest Management



Soil Health



Water Efficiency



PROJECT PARTNERS

- California Polytechnic State University, San Luis Obispo
- Farm Credit

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