

Grinder could help soil quality in almond orchards

By **TIM HEARDEN**
Capital Press

CHOWCHILLA, Calif. — University of California researcher Brent Holtz believes a test plot here could hold the answer to the San Joaquin Valley's worsening soil quality problems.

On a recent morning, Holtz and others demonstrated a device called an Iron Wolf, which uprooted and ground up whole almond trees and incorporated the woody biomass into the soil.

Holtz, a UC Cooperative Extension farm adviser based in Stockton, Calif., said studies he's been doing since 2003 have shown that whole-orchard chip incorporation treatments increased organic matter, soil carbon, nutrients and microbial diversity — all to the benefit of new plantings.

"Growers in the southern part of the valley have been seeing sodium levels increasing ... especially in the drought years when we have less leaching," Holtz told growers during the gathering, which was videotaped by the Almond Board of California. "A good point to this orchard grinding is it's helping alleviate our sodium levels."

In a new study, Holtz hopes to compare the effects of using the Iron Wolf to recy-



Courtesy of Almond Board of Calif.

An Iron Wolf is showcased at a recent University of California Cooperative Extension field day in Chowchilla, Calif. The machine grinds up whole almond trees and puts the woody biomass back into the soil.

cle an almond orchard to using a large tub grinder, which leaves much finer particles of wood, UC officials said.

The research comes as some cogeneration plants have shut down in recent years, forcing growers to look for alternative ways to deal with tree biomass when they remove old orchards. In addition, growers in recent years have reported an increase in problems with salinity of groundwater, with many saying they expect it to affect the quantity or quality of their harvests.

Holtz began testing woody biomass' impacts on soil quality with an Almond Board-funded study in 2003, incorporating shredded prunings 1 to 2 inches into the soil. Over time, researchers found higher soil nutrient levels, lower pH and more organic matter in the soil, and the organic matter bound up sodium to the extent that leaves had about half the amount of sodium of other orchards, the board reported.

Holtz also tried planting

trees in containers with one-third wood chips and two-thirds soil. Within a couple years, nutrient levels were higher, water infiltration occurred faster and trees were showing less water stress because the wood chips were holding water in the soil, according to the Almond Board.

In 2008, Holtz used the Iron Wolf — a 50-ton rototiller capable of grinding whole trees and incorporating their chips into the soil — to grind

up whole stone fruit trees and bury the organic matter in the soil. By the third year, the nutrients were significantly greater where trees had been ground and incorporated.

The machine does have its drawbacks, Holtz said in an interview. For one thing, it left some larger-than-anticipated chunks on the orchard floor, while the tub grinder could be an alternative for growers who could disc the materials into their soil.

Also, the Iron Wolf is expensive, costing about \$52,000 a month to rent or \$1.2 million to buy, he said. Researchers will also have to make sure they're not putting tree diseases back into the soil, said Gabriele Ludwig, the Almond Board's director of sustainability and environmental affairs.

"The flipside of it could be that by having increased organic matter in the soil, we can change the microbial system ... and work against the bad things," said Ludwig, adding that more trials in multiple locations are needed.

Holtz agrees. "With all this talk about cogen plants closing down and growers won't have any alternatives for biomass," Holtz said, "my point is I think there's a great alternative for that biomass and that's putting it back into the ground."

Crunch Pak seeks better employee relations

By **DAN WHEAT**
Capital Press

ELLENSBURG, Wash. — Crunch Pak, the nation's leader in selling sliced apples, has been taking better care of its employees since a federal audit cost the company half of its workforce two years ago, the human resource director says.

Crunch Pak is headquartered in Cashmere, Wash., and operates plants there and in Reading, Pa. It has been tight-lipped about a U.S. Immigration and Customs Enforcement I-9 audit of its plant in Cashmere that became news in May of 2014.

I-9 forms include Social Security numbers or other proof of employment eligibility. The ICE audit began in August 2013 and revealed a number of mismatches, the company said. In May 2014, it sent letters to an undisclosed number of employees asking them to correct their I-9s or lose their jobs.

Speaking on a panel about "Professionalizing the Seasonal Workforce," at a Feb. 18 WAF-LA (formerly Washington Farm Labor Association) conference in Ellensburg, Melissa Grimm said she became Crunch Pak HR director in January 2014 and that before that the company had none. There were 800 to 850 employees, no HR staff and employees "were hired, given a badge and went to work," she said. "If they made 90 days they got trained."

Turnover was high because workers didn't like working in temperatures in the 30s, a lack of communication and the 12-mile drive from Wenatchee, where many live, she said.

"We began issuing cold weather gear and deducting that from their wages if they stayed. We bought them (public transit) bus passes and bought a bus to take people home at the 1 a.m. shift ending," Grimm said.

Some workers typically quit during cherry harvest in June to make more money picking cherries, she said.

The I-9 audit resulted in a 50 percent loss of workers, she said. Since then there's been a management shift and leadership change, she said. Top managers now meet with new employees at the end of their first week to review benefits and information shared on the first day, she said. Pay is \$10.25 an hour, supervisors are trained to communicate and the company continues to look for perks it can give employees, she said.

Manufacturer offers tips on seed cutter maintenance

By **JOHN O'CONNELL**
Capital Press

BLACKFOOT, Idaho — Shane Mitchell finds most potato farmers do a good job of addressing obvious signs of wear in their potato cutters, such as failing belts, bearings and sprockets.

But Mitchell, marketing director with locally based Milestone Equipment, the largest manufacturer of seed cutters, said growers often miss problems that are less visible, and are usually relatively simple to fix.

During a Feb. 17 seed-cutter maintenance demonstration for growers and farmworkers, Mitchell explained quick adjustments and simple steps such as sharpening blades can have a significant impact on the uniformity of seed pieces, resulting in more even planting and better yields.

"What we talked about today was everything underneath the surface that really makes a difference in the quality of the seed piece the



John O'Connell/Capital Press

Shane Mitchell, marketing director with Milestone Equipment in Blackfoot, Idaho, makes an adjustment to a seed cutter, demonstrating how proper maintenance can improve consistency. Milestone hosted a Feb. 18 demonstration to give growers tips on maintaining their seed-cutting equipment.

(cutter) will produce," Mitchell said.

Mitchell said the first consideration for growers should be sharpening their cutter blades. Dinged or dull blades, he explained, crush seed potatoes, forcing them to spend time healing rather than growing.

Second, he recommends evaluating a cutter's sponge drums — a pair of cylinders

covered in foam and rubber skin that pull potatoes through the cutters. The skin can harden or begin to separate from the drums, resulting in lost control of positioning as seed pieces enter the cutter and in inconsistent sizing.

Another problem growers often overlook is the condition of fingers on their sizing rollers. Broken fingers and rollers that fail to turn properly result

in lost ability to place potatoes where they need to be as they pass through the knives, Mitchell said.

Mitchell also advises growers to make sure rollers on their alignment table, which presents spuds at the proper angle for cutting, run in time, and that knife blades are also properly synced.

During the next couple of months, Mitchell said Milestone will send representatives to farms to help customers make such adjustments. When cutters are operating, Mitchell said growers should be careful not to apply so much disinfectant on blades that the sponge drums become slick, interfering with their ability to pick up potatoes in the proper position.

He said to apply disinfectant intermittently, with just enough chemical to keep blades constantly moist.

Danny Mitchell, an owner with the company, advises growers to use seed profile mats, which contain a grid of seed piece shapes, sizes and weights, enabling growers to place their cut seed on the grid

and assess how effectively their cutters are performing.

Paul, Idaho, potato farmer Blake Hansen has estimated his farm has lost up to 50 hundred-weight per acre in the past due to planting skips resulting from unevenly sized seed. Hansen was impressed by Milestone's demonstration showing how seed can shatter when it's too cold heading into the cutter. Mitchell said seed temperature should be at least in the mid 40s prior to cutting, which can be difficult for growers who pre-cut seed during colder months.

"We weren't doing a regular tracking on (temperature)," Hansen said. "We were just cutting whatever came in on the semi."

Montana seed grower John Venhuizen said he'll try to use the seed profile mat more often, will pay closer attention to making adjustments to his cutter and will keep a closer eye on the condition of sizing rollers.

"You're planter can only work as well as the seed that gets put into it," Venhuizen said.

Washington's beef checkoff stays put

Bill dies without Senate vote

By **DON JENKINS**
Capital Press

OLYMPIA — The Washington Beef Commission's top administrator described for a Senate committee Feb. 18 what the state agency does for cattlemen — one day after a bill to approximately double its budget died.

A bill to increase the beef checkoff to \$2.50 from \$1.50 failed to pass before Wednesday's deadline for legislation to clear at least one chamber.

The beef industry wasn't united behind raising the per-head fee paid by cattle sellers to support the commission.

Several producer groups backed upping the assessment to swell the commission's annual budget to about \$2 million, bolstering its promotion and defense of the beef industry.

The Cattle Producers of Washington, however, vigorously opposed raising the fee, questioning whether the expense was worth it.

The Agriculture Committee scheduled a presentation by the beef commission's executive director, Patti Brumbach, too late to influence the debate this year. Her talk, illustrated with loads of charts, signaled a more active campaign to rally support for increasing the fee.

"I'm confident if people have the chance to see and hear all the information, they'll be



Don Jenkins/Capital Press

Washington Beef Commission Executive Director Patti Brumbach poses in a hallway Feb. 18 on the Capitol Campus in Olympia after a presentation to the Senate Agriculture Committee. Legislation to raise the beef checkoff has died for this year.

impressed by what the checkoff is doing now and will want to see it increased," Washington Cattlemen's Association Executive Vice President Jack Field said. "I can't say enough good things about what the checkoff does."

Besides the Cattlemen's Association, the Washington Cattle Feeders Association and the Washington State Dairy Federation supported increasing the fee, which has been the same since 2001. The state commission keeps \$1, while the other 50 cents goes to the national Cattlemen's Beef Board.

The Cattle Producers' treasurer, Lincoln County rancher Nate Hair, said Friday that cattlemen should at least wait a year to see how much money the commission collects from dairy cow sales that previously

were unreported to the Washington State Department of Agriculture.

WSDA records transactions to trace livestock in case of a disease outbreak. Until recently, private sales involving fewer than 15 dairy cows were exempt from the reporting requirement. Dairy farmers account for about 20 percent of the beef commission's budget, according to Brumbach's presentation.

Hair also said the commission's advertising was too generic, not drawing a sharp enough distinction between Washington-grown beef and meat from Canada or other states.

The request for more money also comes as Eastern Washington ranchers have been battered by drought, wildfires, predators and tight-

ening environmental regulations, Hair said. "People say, 'It's just a dollar,' but all of this adds up," he said. "It gets overwhelming."

Raising the beef checkoff is an issue in other states, too. Missouri cattlemen are scheduled to vote in April on raising their assessment to \$2 from \$1. Iowa cattlemen are debating whether to add 50 cents to their \$1 checkoff.

In Washington, the push for raising the beef checkoff originated with producer groups. Brumbach said the Cattle Feeders group was the first to bring the proposal to her. Field said the Cattlemen's Association has been talking about the checkoff for several years and endorsed raising the fee at its November convention.

The \$1 national beef checkoff was set in 1985 and made mandatory in 1998. The Beef Board collected \$40.3 million in assessments in 2015. Some 43 states collect an additional amount for state commissions.

The Washington Beef Commission collected about \$1 million in 2015. Most of the money went for advertising, foreign marketing or burnishing the beef industry's image with consumers.

Inflation has eroded the commission's promotional reach, Brumbach said. The commission no longer buys TV time to air the iconic commercial "Beef: It's What's for Dinner," voiced by actor Sam Elliott. The commission also doesn't advertise in Eastern Washington anymore.

Comment sought on Icicle water plans

By **DAN WHEAT**
Capital Press

LEAVENWORTH, Wash. — A study group is seeking public comment on \$65 million to \$85 million in proposed improvements to the Icicle Creek watershed, near Leavenworth, to boost water supply for fish, farmers and residents.

The Icicle Creek Work Group — made up of local, state and federal agencies, tribes, and environmental, agricultural and residential interests — worked for three years to propose a strategy and projects to boost water supply. The watershed includes 212 square miles west of town and mostly in the Alpine Lakes Wilderness and Wenatchee National Forest.

Total projects would gain 26,800 acre-feet of water. The average base flow of the creek in a normal year is 63 cubic feet per second. That would increase by 77 cfs for habitat and instream flows, 4 cfs for agriculture and 5 cfs for domestic use. In drought years, 20 cfs is the base flow, 47 cfs would be added for habitat and instream flows, 4 cfs for agriculture and 5 cfs for domestic.

Projects include \$20 million to conserve and improve water quality with well improvements and recirculation tanks at Leavenworth National Fish Hatchery, automating and optimizing releases from



Dan Wheat/Capital Press

Icicle Creek flows southwest of Leavenworth, Wash., in October of 2014. Public comment is being accepted until May 11 on plans for several projects to enhance water supply from the watershed.

six alpine lakes, and restoring Eight-mile Lake reservoir from 1,375 acre-feet to its permitted 2,500 acre-feet.

Further work includes conserving water by piping and lining of Cascade Orchard Irrigation Co. and Icicle-Peshastin Irrigation District canals and pipe replacement and metering and technical assistance for domestic use.

An Icicle Water Bank would be created with an initial acquisition of 1,000 acre-feet at \$3,000 per acre-foot for interruptible ag users during times of shortage. Fish and wildlife habitat would be improved.