

AGNOTES

Virtual Coffee Shop Offers Info For Producers

BROOKINGS—Wet conditions in many parts of South Dakota may complicate spring work on farms and ranches, but a new South Dakota Cooperative Extension Service "Virtual Coffee Shop" conference series can offer insight and help.

That's according to Extension Pesticide Education Coordinator Jim Wilson, who is organizing the online conferences and inviting producers to take part.

"It's basically an online version of the meetings small-town cafés are known for," Wilson said. "We can gather around a coffee pot at numerous locations across the state and hear and ask questions of Extension specialists on specific topics."

To take part, producers with Internet access can visit this link: http://sdces.sdstate.edu/ces_websites/conferences/coffeeshop/. The Web page includes information on the Coffee Shop sessions, as well as an agenda on upcoming topics. The sessions are recorded so producers who miss one can view it later.

Call your county Extension office to get more information on signing up and taking part in the discussions.

Well Owners Reminded To Check For Contamination

Flooding in eastern South Dakota could impact the water in privately owned wells.

That's according to South Dakota Cooperative Extension Water Management Engineer Christopher Hay, who said owners should be aware of the risks of water contamination that flooding poses.

"Floodwaters often carry hazardous or toxic materials, including bacteria, viruses, other pathogens, petroleum products, pesticides, and other chemicals," said Hay. "Wells that have been partially or fully submerged by flood waters can become contaminated with these materials, and drinking or washing with water from a private well that has flooded exposes people to risk of disease."

Hay said that if your well has been flooded, the well should be disinfected to remove bacteria once the floodwaters recede.

"It should then be tested to ensure it is safe, and if testing is delayed, the water should be boiled for at least 1 minute at a full rolling boil to temporarily treat it until testing and disinfecting are completed," Hay said. "Household water treatment systems will not provide enough protection and will also need to be disinfected." The South Dakota Cooperative Extension Service flooding Web site also has the information. That site is available at this link: <http://sdces.sdstate.edu/flood/>.

The South Dakota Water Resources Institute can answer questions about other possible contaminants. To reach the office, call 605-688-4910.

Additional information on collecting and submitting water samples can be found at the Water Resources Institute's Web site: http://wri.sdstate.edu/collecting_submitting.cfm.

Extension Explores The Value Of Cover Crops

BY STEVE SUTERA
Extension Educator

How much can you reduce your Nitrogen fertilizer recommendation by growing a cover crop? This question came up at our Field Education Unit Extension Advisory Board meeting a couple of weeks ago. We ask this board to give us program ideas and direction. They gave us some very good topics to consider and expand on. The advantages of uses of cover crops are many. Fixing nitrogen from a legume is one of them. Unfortunately we do not have a lot of research from S.D. and other studies show variable results.

Last year I worked with the Bon Homme FFA Chapter on a research project that looks at cover crops for grazing alternatives. We received a SARE Education grant to carry out the project. We looked at total production of forage from several cover crops.

We know how much dry matter forage was produced by each cover crop on an acre basis. If we did not remove any of the cover crop, what would be the benefit in terms of available nitrogen produced for the next crop?

BY MAUREEN O'HAGAN
McClatchy NewsService

Thirst For Raw Milk Grows, Despite Warnings

SEATTLE—Unpasteurized milk is a curious thing. It costs up to \$13 a gallon. It says right on the carton: "WARNING: This product ... may contain harmful bacteria."

Yet people are passionate about it. Almost evangelistic.

So in early December, when Washington state announced that raw milk from Dungeness Valley Creamery in Sequim was linked with three E. coli cases, the reaction was, well ... emotional.

"Lies," more than one raw-milk drinker posted on the Dungeness dairy's Web site, in response to the state's announcement.

"Trickery," another supporter wrote.

"Despicable," wrote a third.

Never mind that health authorities like the Centers for Disease Control and Prevention and the Mayo Clinic say you shouldn't drink the stuff. To some, the bad news is evidence of a conspiracy. It involves Big Ag trying to stamp out the little guy, Big Government pushing its way into our kitchens, sleazy lawyers trying to make a buck, and scientists who malign a key to good health.

Now, Whole Foods Markets has become a target. The company recently halted raw-milk sales nationwide, saying it needed a "rigorous companywide standard." It was another sign, one pro-raw-milk blogger wrote, of the "ever more sinister campaign against food rights." There are calls for a boycott of the company.

Raw milk's supporters are at once modern-day rebels and throwbacks to an older, simpler time. They are health-food aficionados who dismiss the health authorities.

There's long been a libertarian streak running through the raw-milk crowd. A Christian one, too. Now it's attracting another demographic entirely: advocates of local food.

"It is an emblem of noncorporate food," best-selling author Michael Pollan, godfather of the local-food movement, wrote in an e-mail to *The Seattle Times*.

Dairymen are seizing that opportunity. Five years ago, there were six licensed raw-milk dairies in Washington; today there are 28.

And though Pollan thinks people should be able to eat what they want, he notes there is a disconnect.

"I think people turn a blind eye to some of the food safety concerns," he wrote.

Indeed, along with the growth in raw milk's popularity has come a rise in dairy-related food-borne-illness outbreaks, according to the Center for Science in the Public Interest, a consumer research, advocacy and education organization.

Which brings us back to the Dungeness creamery and its owner, Jeff Brown. During a long morning spent milking, soothing and coaxing cows, Brown blasted the government overseers whose actions temporarily disrupted his business. He spoke about freedom. And he said the truth is simple:

"Everything God designed is good for you."

People don't get into the dairy business because of the hours, or the glamour.

"My claim to fame is: I'm the world's slowest milker," Brown announced proudly. A sturdy man of 58, he loves to talk.

He remembers when he was 14, "praying the dairy industry would stay good so I could milk cows."

He started his own farm in 1971 and began contracting with Darigold, which pasteurized and distributed his milk. But Brown, like dairymen all over the country, worried about declining wholesale prices.

"In order to make it, you have to milk a lot of cows and your cow numbers have to constantly be getting bigger," Brown explained. Otherwise, "your profit margin will continue to shrink."

In order to stick with about 60 cows, Brown saw just one option: sell a "value-added" product.

For years, people had asked Brown if he'd sell his milk straight from the cow, unpasteurized. The heating process kills most disease-producing organisms, but it also changes the taste.

With the surge of interest in local food, Brown and his family saw opportunity. They got their raw-milk license in 2006.

"Five years earlier, I don't think the market was there," he said.

Today, the Dungeness creamery is one of the larger raw-milk

producers, bottling more than 200 gallons a day.

It used to be, you'd have to go directly to the farm or a cooperative "drop site" to buy raw milk. Now it's increasingly in grocery stores — and it flies out the door.

Warning labels don't hurt sales, Brown said. They're "a badge of honor."

People who like raw milk really like raw milk.

They say it fights everything from allergies to asthma, digestive problems to learning disabilities. It eases arthritis pain and improves cholesterol, boosts immunity and clears cataracts.

When you pasteurize milk, they say, it kills key nutrients and leads to things like heart disease.

The FDA says none of this is scientifically proven. After finding "raw milk, no matter how carefully produced, may be unsafe," the agency banned its interstate sale in 1987.

Washington is one of seven states that allows its retail sale. Most states permit limited sales, such as on the farm. It's illegal in 10 states.

In states with limited availability, people drive hundreds of miles to get their raw-milk fix. They break laws and stage protests. They have long maintained they're being picked on.

"Never in the annals of health and nutrition has there been a food so maligned, lied about and conspired against as raw milk," a national group pushing universal access posted on its Web sites.

When Dungeness customers learned *The Seattle Times* was working on this story, they flooded the paper with eager calls and e-mails.

Mary Solberg, of Sequim, was one of them. She was drawn to raw milk's flavor, but she heard there could be risks, so she did some reading and visited Dungeness. After that, she was satisfied.

"They're here in the community," she said. "I just felt safe."

Public health authorities say raw milk is risky. They cite two main reasons. The first is, it's consumed uncooked. The second has to do with the guts of cows.

All cows — actually, all warm-blooded animals — have E. coli in their guts. Some strains of it are harmless.

Others are not. They're called Shiga toxin-producing E. coli, and "cows are the main source where these organisms live," said J. Kathryn MacDonald, a state epidemiologist.

The Shiga toxin doesn't hurt the cows, but it can make humans very, very sick — as in kidney failure, coma, stroke, prolonged hospitalization. Even death.

We get E. coli illness by swallowing the bug.

Actually, by swallowing tiny bits of manure containing the bacteria. "This happens more often than we would like to think," the CDC said on its Web site. Experts say hamburger is a big culprit. The good news is, heat kills E. coli and other pathogens. That's why food-safety experts say to cook hamburger thoroughly. It's called a "kill step."

For milk, pasteurization is the kill step. Without it, there's nothing between you and any bugs that might be swimming around. The chance there's a deadly pathogen in a particular glass of milk may be small, but it's a risk no one has to take.

James E. McWilliams, author of a book questioning the locavore movement, puts it bluntly:

"To me, it's Russian roulette," he wrote in an e-mail. "The whole of human history is about humans being taken down by diseases transferred from animals to people. Pasteurization was perhaps the most significant advance ever made in reducing the transmission."

Indeed, despite cleanliness rules and inspections, pathogens still get in. Every year since 2005, the Washington State Department of Agriculture (WSDA) has identified food-borne pathogens in retail raw milk.

Just last month, the WSDA found E. coli in raw milk from Jackie's Jersey Milk, a Bellingham company. It was linked with several cases of illness, according to state officials.

The agency has never found pathogens in its tests of pasteurized milk, nor has it linked cases of human illness to pasteurized milk.

In all, between 2005 and 2009, 395 Washingtonians with lab-confirmed cases of food-borne pathogens reported consuming raw-milk products shortly before getting sick, the state Department of Health says.

Nationally, food-borne-illness outbreaks associated with dairy have "increased dramatically" since 2004, "in large part due to a rise in outbreaks from unpasteurized dairy products," according to Center for Science in the Public Interest. Raw milk is one of a few products for which the nonprofit says "Do Not Eat."

Using data from the CDC, the group found that raw milk accounts for 80 percent of milk-related food-borne-illness outbreaks nationally, yet it's only a fraction of total milk sales. The CDC said there have been at least two deaths nationally connected with raw milk between 1993 and 2006.

Proponents like to point out there are E. coli outbreaks associated with vegetables and fruits, too. So why focus on milk? It's because E. coli isn't inherent to vegetables like it is to cows. The bug has to be introduced somehow, like through irrigation water. The key point: When you hear about food-borne illness, think manure.

Cows create a lot of waste. They do it in the barn and in the fields. They do it while they're being milked. It's liquid and it splatters. It's on their legs and tails and udders. Preventing waste from getting in the milk is all-important.

Last spring, problems arose at Dungeness, according to state records. Each month, the state tests milk for certain indicators, like coliform bacteria, that may suggest issues with cleanliness or animal health. In May, one indicator at Dungeness was 10 times the legal limit. In June, another indicator was 15 times the legal limit. The farm exceeded counts in July, September, November, December and January, too.

The amounts weren't enough to be harmful to humans, but the state sees high counts as signs of trouble and it requires producers to bring them down. Asked repeatedly about the numbers, Brown kept changing the subject.

"If they really thought there was a problem," he said of the state agriculture department, "they would say: don't sell the milk. They ... never did that."

"God designed raw milk; man messed with it," he said. "You draw your own conclusions."

Mud May Cause Lameness In Cows

According to South Dakota Cooperative Extension Dairy Specialist Alvaro Garcia, early spring's muddy, wet conditions produce lameness in dairy herds that can lead to production losses, lower fertility, and greater culling rates. Garcia reminds dairy producers that cow deaths due to lameness or injury increased 60 percent between 1996 and 2007.

"Lameness continues to be the second highest reason to cull in the U.S., right at 16 percent, according to a 2007 National Animal Health Monitoring System report," Garcia said. "Furthermore, a 1997 report from the Farm Animal Welfare Council considers lameness among the best welfare indicators for dairy cattle."

Garcia said producers should be aware of muddy conditions, since mud is among the predisposing causes for cattle lameness.

"Wetness decreases hoof hardness and increases the incidence of claw lesions, and research by Borderas and others has shown that nearly one-third of the total water absorbed by the hoof was

during the first hour of exposure to high moisture conditions," said Garcia. "This results in heavier and softer hooves."

Garcia said that when veterinarians and dairy producers try to determine the cause of lameness, they look for the presence of infectious agents such as *Fusobacterium necrophorum* and *Bacteroides melaninogenicus*.

"Finding ways to decrease the incidence of injury and infectious challenge to the hoof can be accomplished by footbaths and hoof trimming," said Garcia. "Footbaths are used to medicate the feet of cattle and aid in preventing lameness. Hoof trimming helps identify hoof disorders and maintain proper hoof health."

Garcia conclude that while 80 percent of the dairies in the U.S. hoof trim their cows' hooves, professional hoof-trimmers conducted most of the work. The frequency of professional service varies, depending on herd size.

For more information on hoof health and dairy herds, call Garcia at (605) 688-5488.

Conservation Groups Oppose Cutting CSPs To Fund Child Nutrition Bill

WASHINGTON—Fifteen conservation groups oppose cutting more than \$2 billion dollars from the largest of USDA's working lands conservation programs, the Environmental Quality Incentives Program (EQIP), to pay for a child nutrition reauthorization bill drafted by Senate Agriculture Committee Chairwoman Blanche Lincoln (D-AR).

"This current proposal would not only rob farmers, ranchers, and forest landowners of conservation and environmental stewardship assistance in the next decade, but would take away well over \$2 billion from the farm bill conservation baseline, or nearly half of the widely lauded conservation increase in the 2008 Farm Bill," said the groups in a letter addressed to Sen. Lincoln and the other Senate Agriculture Committee members. "This cut clearly violates the carefully negotiated compromise that you supported in the 2008 Farm Bill."

"We understand and appreciate the critical need to provide additional funding for the child nutrition school meal programs," the letter added. "There are

other sources for this funding outside of the Farm Bill conservation programs that could be tapped to pay for these needs without taking away from the programs that support farmers and forest landowners in their efforts to provide conservation benefits in addition to food, forest products, and fiber. However, if Farm Bill resources are determined to be the only resort, then fairness demands that the conservation title should not bear the full burden of providing the solution."

"Farmers, ranchers, and forest landowners are eager to share the cost of protecting the environment, but demand for participation in conservation programs routinely far outstrips available funding," the letter concluded. "This proposal will only exacerbate that problem, and will undermine conservation practice adoption on-the-ground. Applied conservation provides clean water, energy conservation, erosion reduction, carbon sinks, improved wildlife habitat, wetland protection, and other important public benefits that should not be lost."



Steve Sutera

SDSU has been doing nitrogen credit work with soybeans for over 70 years. They have come up with an average N credit value of 40 pounds of N per acre. However, variability is extreme. This is because nitrogen fixation and the cycling of that nitrogen back to the next crop is dependent on many factors including temperature and moisture.

There is much variation, even with the same legume. Some of the variation could be due to the amount of fall growth and therefore the amount of N fixation that occurred. Our fall growing season is different every year so it's hard to predict the N credit for the following crop year.

A recent review of nitrogen contributions from pulse crops to the following crop in the Northern Great Plains, found a fair to good correlation between residue N and the net N contribution to the soil for peas, lentil and desi chickpeas. The review found that only about 25 to 30 percent of the N in the

residue was recycled to the following crop.

The review estimated total N uptake (grain and residue) for the dryland pulse crops was 75 to 153 pounds per acre. With good growth, they assume that 50 percent of the N will be recycled to the following crop. The calculated N credit ranged from 26 to 53 pounds per acre.

The speed at which cover crops breakdown and cycle or recycle N depends on the carbon nitrogen ratio, tillage, and weather conditions (temperature and moisture).

Non-legume crops do not produce N, they just recycle the N that is already present.

So what is the bottom line on cover crop N credits? SDSU recommends that you be very conservative in taking an N credit. Take a zero credit if fall growth is poor to fair and legume stands are less than 75 percent. If you have good to excellent fall growth and good legume stand, you can expect an N credit of 50 to 60 pounds per acre.

I'm sure we will see more research in this area in the future. If you would like to see this entire report with charts and graphs, give me a call at 589-3531 or email me at steven.sutera@sdstate.edu.

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practices in the future, perhaps this or next year; currently, HSUS is collecting signatures of support for euthanization and crates, and a measure will be on the ballot in November. But the

success of Issue 2 gives confidence to Ohio's agriculture industry that consumers will choose what is right for producers.

"It comes back to listening," Fisher said. "There's something to be learned from every one of our consumers: Listen, do an attitude check, and do something (act to address their concerns)."

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