

Gutter Talk

Using Gutters On Your Barns Has Several Advantages

BY RITA BRHEL
P&D Correspondent

Farmers may welcome rain on one hand, but those with livestock are almost always faced with an inevitable soupy mess afterwards. Especially for area feedlots, dairies and other concentrated animal-feeding operations, but even for some small herds depending on the condition of the lot, gutters and downspouts can go a long way in improving the situation.

"A pretty sloppy mess could've been prevented if we had kept roof runoff out of the equation," said Bill Reck, environmental engineer for the U.S. Department of Agriculture's Natural Resources Conservation Service's national center in Greensboro, N.C. "[Gutters] can really impact the amount of water we have to deal with."

The major reason for using a gutter system is to improve animal-waste handling. Reck explains that adding more water via rainwater simply increases the amount of water in a facility's waste-handling system, a volume for which it may not be adequately constructed, and therefore increasing the potential for water quality problems.

"You don't have to treat that!" Reck said, referring to rainwater kept from mixing in with a facility's waste-handling system. By diverting rainwater away from the facility grounds, producers can reduce their pumping time by up to 12 hours per year and increase their waste storage by up to 30 days. This can save a lot of money, and the cost of gutters is cheap — just \$6 per linear foot.

Another reason for using a gutter system is to harvest rainwater for farm use. Rainwater harvesting dates back to 4000 B.C. in China and continues to be very common in less-developed nations, such as Afghanistan, for both farm use and human consumption. It is relatively new here in the United States, where collecting and storing roof runoff for other uses has been done in poultry operations, livestock watering tanks and vegetable irrigation. Rainwater harvesting is more popular in water-poor regions of the nation but could be used as a water conservation tool anywhere.

"Rainwater harvesting treats rainwater as a resource to be collected rather than a waste product to be conveyed away as quickly as possible," said Kelly Feehan, a University of Nebraska-Lincoln Extension educator at Columbus, Neb. During most summers, rainwater harvesting could come in handy, especially as climate change continues to pull on available water resources.

"Harvesting rainwater has been going on for a long time. You can get a fairly significant amount of water," Reck said. On a hot day, 1 milliliter of rain on 1 square meter of roof can yield .8 liters of water. On cooler days, that entire 1 liter of rain may be saved.

A rainwater diverting or harvesting system is a little more complicated in



PHOTO: RITA BRHEL

design than a residential gutter system. The gutter and downspout capacity is built to withstand heavier rain events. There are typically more downspouts for the size of the roof, and the downspout doesn't end at the ground but is connected to a piping system that transports the water away from the area.

"To prevent mosquitoes, your gutter system must not hold rainwater," Reck said.

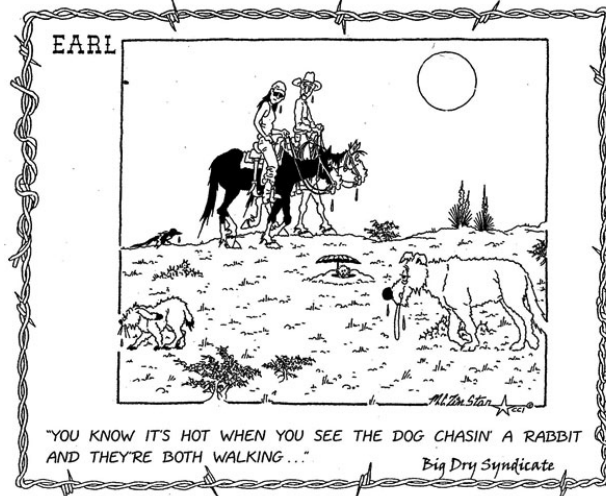
A diverting system, when the goal is to not add extra water to a waste-handling process, pipes the water to a pit away from the animal production area. This may be done above ground or through an underground channel.

A water-harvesting system pipes the rain to a storage tank. It's important to keep the system clean and to control algae

growth within the tank.

"Rainwater in and of itself is one of the cleanest sources of water in nature," Reck said. "However, once that rainwater has contact with the roof and gutter, it's no longer clean. One way of getting around this is by diverting the first flush of rainwater and really it only takes a few milliliters to wash off the dirt from the roof and gutter. Research has found that they actually had more contamination from algae growing in the tank than from dirt or bacteria on the roof."

Regardless of the goals for managing roof runoff, gutter and downspout systems need to be carefully designed to contain heavy rain events, to ensure water movement and guard against stagnant water and for easy cleaning. Contact a local NRCS office for assistance.



Beef Facilities Conference Set For SF

BROOKINGS — Several types of beef barns are becoming more common across the Upper Midwest. However, when it comes to deciding which one is right for their cattle operation many cattle producers still have questions regarding the cattle management, production impacts, manure management and air quality of each barn type.

SDSU Extension is hosting a one-day Beef Facilities Conference to help answer producers' questions. This conference will be held Nov. 21 at the Best Western Plus Ramkota Hotel and Conference Center in Sioux Falls. The conference runs from 9:45 a.m.-4 p.m. The conference is a cooperative effort of South Dakota State University, Iowa State University (ISU) Extension and Outreach, University of Nebraska-Lincoln (UNL) Extension, USDA Agricultural Research Service and the USDA National Institute of Food and Agriculture. The conference was developed for feedlot producers, beef consultants, building contractors, engineers and consultants, state and federal agency staff and extension and university professionals.

The morning session includes results of the two-year air emissions study in mono-slope barns, air quality regulations and how to capture, manage and use nutrients produced in beef barns.

The two-year air emissions study looked at the emissions of gases and dust and is one of the first studies looking at air quality in these barns.

Morning presenters include; Erin Cortus, Assistant Professor at SDSU and SDSU Extension Environmental Quality Engineer; Mindy Spiehs, Research Animal Scientist at USDA, ARS, U.S. Meat Animal Research Center; Rick Stowell, Associate Professor at UNL; Kris Kohl, ISU Extension and Outreach Ag Engineering Program Specialist and Angie Rieck-Hinz, Extension Program Specialist at ISU.

Afternoon sessions involve two panels: a producer panel discussing building management in different style barns and a university panel discussing cattle performance.

Four styles of facilities will be featured - mono-slopes, hoops, slatted floor deep-pit barns and open lots. The university panel includes; Robbi Pritchard, Distinguished Professor at SDSU; Dan Loy, Director of the Iowa Beef Center at ISU and Shawn Shouse, ISU Extension and Outreach Ag Engineering Program Specialist; and Russ Euken, ISU Extension and Outreach Livestock Program Specialist.

Conference information, registration materials and potential sponsorship are available on-line at www.aep.iastate.edu/facility/. For more information, contact Cortus at 605-688-5144 or erin.cortus@sdstate.edu.

Resource Conservation Funds Offered

LINCOLN, Neb. — Farmers and ranchers interested in soil, water and wildlife conservation are encouraged to sign up now for the Environmental Quality Incentives Program (EQIP). EQIP is available from the USDA Natural Resources Conservation Service. Those interested in applying are encouraged to sign up before Nov. 15, 2013.

EQIP is a voluntary conservation program available to private landowners and operators. Through EQIP, farmers and ranchers may receive financial and technical help to install conservation practices on agricultural land.

According to Craig Derickson, NRCS State Conservationist, there are several options available to producers through EQIP. "EQIP is one of our most versatile programs. It offers cost share and technical assistance to apply conservation measures on cropland and rangeland, as well as for animal feeding operations and establishing or enhancing wildlife habitat. There are special initiatives to help conserve water in the Ogallala Aquifer, conserve energy on the farm or ranch, and provide assistance to convert to organic agriculture. There are many opportunities available, and NRCS staff can help landowners and operators sort out their EQIP options," Derickson said.

EQIP has become one of the most widely applied conservation programs in Nebraska; enrolling over 600,000 acres last year with more than 8 million acres currently under contract statewide. The goal of EQIP is to provide a financial incentive to encourage landowners to install conservation practices that protect natural resources, resulting in cleaner air, water and more wildlife habitat.

Individuals interested in entering into an EQIP agreement may file an application at any time, but the ranking of applications on hand to receive funding will begin Nov. 15, 2013, with a second round application ranking cutoff date of Jan. 17, 2014. Producers will be required to attain a minimum ranking score to be accepted for the first round of funding. The more conservation work a producer agrees to install, the higher the ranking score, and the greater the probability of being approved for funding.

The first step is to visit your local NRCS field office and complete an application. Producers are encouraged to sign up soon since all funding for EQIP in Nebraska could potentially be obligated by early 2014.

For more than 75 years, the Natural Resources Conservation Service (NRCS) has helped agricultural producers with conservation plans. NRCS Conservationists will work with landowners on their farm or ranch to develop a conservation plan based on resource goals. Conservation planning assistance is free and does not require participation in financial programs.

For more information about EQIP and the other available conservation programs visit your local NRCS field office or www.nrcs.usda.gov/.

Opinion | Rita Brhel

Humane Animal Care: Does Size Matter?

BY RITA BRHEL
P&D Correspondent

Does it matter how big or small a farm is when determining how humane it is for the animals?

Certainly, a bigger farm is usually found to be more efficient and profitable than a smaller farm, though with economies of scale, there comes a point when a farm can outgrow itself. And for many years, potential profit was all that counted when it came to farm size. But now with the animal rights movement and a responding consumer base, how animals are treated on the farm is starting to impact markets.

Michael Jacobsen, executive director of the Center for Science in the Public Interest in Washington, D.C., took part in a panel at the U.S. Farmers and Ranchers Alliance's Food Dialogues in October in Boston, Mass., where he shared his opinion on farm size and humane animal treatment. Basically, he said that no matter how well a farmer thinks he treats his animals raised in confinement, that it's not good enough.

"Those pigs never see the light of day. They never get to roll around in the mud or walk on good earth," Jacobsen told Brownfield Ag News based out of Jefferson City, Mo. "Animal welfare experts do not consider that humane."

He contends that farmers that operate concentrated animal-feeding operations are driven solely on economics and that there is no room for humane animal treatment if it might mean that there are added costs or lost head going to the market.

Fortunately, Jacobsen said, marketplace opportunities are improving for farmers who grow animals more hu-

manely. As for him, he's hoping that this will lead to legislative changes regarding livestock treatment.

Bill Luckey, a pork producer from Columbus, Neb., who also took part in the panel took the high road in responding to this accusation that CAFO operators can't treat their animals well, saying that all sizes of livestock producers can survive and that the animal agricultural industry needs all sizes, even the hobby farms that only feed their families.

I see the industry changing. I see animal treatment becoming a larger consideration in agricultural management and the marketplace changing. I don't know if I necessarily see it changing laws, but I do see humane animal treatment taking up a larger share of interest among consumers and producers.

Do big farms inherently treat their animals poorly because there is no room for both profit and animal rights? I don't agree with this, though I do feel that profit can easily take such a position in agricultural businesses that it must be an intentional decision to have other elements that don't necessarily include

any profit generation, such as animal treatment, take as important of a position within a farm management plan. But I don't think it's limited to large operations. Small operations, even hobby farms, can have poor living conditions for animals.

Just as many corporations have taken on a role for social responsibility in their corporate vision, I think it's important for farms and ranches to include social responsibility in their vision. Many operations do this through valuing environmental conservation. Some operations go further and do this by pledging to raise their products following strict organic standards or only marketing through local

outlets, such as farmers markets. And this is how I see more operations incorporating animal rights into their farm management plans — deciding what is important regarding animal treatment, what cannot be compromised.

It's easy to be intentional about decision-making when it comes to business profitability; less so when it comes to matters not directly related to gleaming profit. But as the idea of sustainability takes hold, making intentional decisions regarding every element of farm management is going to become more important, regardless of how much money it makes.

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HOPE FOR CATTLEMEN

Riley & Jimmie Kammerer of Hereford, SD lost 80% of their cow herd and 90% of their calves in the October "Atlas Blizzard." Their favorite cow, Hope, survived the ordeal.

Would you consider a cash donation now or a pledge of livestock (cow/calf pairs, bred cows/heifers or heifer/calf pairs) for spring delivery to give a ranch family new hope? Cash donations will be used to purchase replacement livestock or can be designated to the rancher of your choice.

Cash donations may be dropped off at the following local banks: Menno State Bank, Menno, SD; any CorTrust Bank location; Community Bank, Avon, SD. Checks can be made payable to "Hope for Cattlemen Fund." **To pledge livestock for spring delivery contact Greg or Joan Andersen at 605-660-2801, Ken or Lynn Wintersteen at 605-999-0834 or 999-0832, or Kathy Coleman 605-661-4410.**



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