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Is That Cow Calving?

The Challenges Of Dealing With A Pregnant Cow

BY JAKE GEIS, DVM
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During calving season, trying to determine when a specific cow will go into labor is quite challenging. It seems a lot like waiting for water to boil. There are certain signs it is coming and we know it will happen at some point soon, but the more we watch it the antsier we get.

So if a cow has been lying down with her tail elevated, straining every so often, is she about to calve? These are the first signs that we commonly look for to help us answer this question, such as a full udder and dilation of the vulva. However, if she has been straining for four hours and we've seen nothing, the only way to know for sure is to go inside her and check the situation out.

In order to understand what we are looking for when reaching inside a cow, we need to know the normal order of calving. Calving is broken down into three stages. In stage one, the cow tries to separate herself from the herd. She can have a thick mucus discharge, signs of colic, and be restless. This stage lasts 2 to 10 hours. During this time, the cow's cervix will start to dilate, which means it begins to open to allow the calf to come through.

Stage two begins with the rupture of the water sac. Abdominal contractions start. They begin occurring every 3 to 5 minutes, and increase in frequency to every 1 1/2 minutes. The fetus should be expelled within 2 to 4 hours from the start of this stage. The third stage is the expulsion of the placenta, which should take place 8 hours after the expulsion of the fetus. The lower end of the given time ranges for each stage is normal in cows, while the upper end of each time



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range is normal for heifers.

Armed with this knowledge, when we stick our arm in a cow we can determine where she is at in the calving process. Because cows can have a false labor where they show signs of calving, but are not actually calving, it is critical to check the

cervix before we call the neighbor or the vet to help us get this calf out. To do this, clean your arms and the cow's vulva with antiseptic, such as iodine or Nolvasan, diluted in water. This is critical to keep the cow clean and prevent infections. Then stick your clean, lubricated arm into the cow's vagina.

In the farthest portion of the vagina away from you, closest to the head of the cow, is the cervix. In a gestating cow, this feels like a small opening only large enough for a man's thumb to fit inside. If this is what you feel, the cow is not dilated and she is not close enough to stage two of labor for human intervention. If she is calving, she needs to push the calf against this cervix to allow it to dilate. Leave her alone for four hours before checking her again. This gives her time to focus on having her calf without interruptions.

Sometimes a cow will only be partially dilated when you check her. A partially dilated cervix feels like a narrow passage large enough for a hand or several fingers to enter, with firm rings that run down the length of the passage like the ridges on a bendable straw. Often the calf can be felt through the

partially dilated cervix. Two reasons why this could occur are that she is still in the first stage of labor and hasn't had time to fully dilate, or that the calf is in an abnormal position and is not stimulating her cervix appropriately. If you encounter a partially dilated cervix, it can often be manually dilated by placing your hands in the praying position inside the cervix, then opening them as to place pressure against the walls of the cervix. This pressure stimulates the cervix to open, although it may take 20 minutes or more to have the desired effect.

If the cervix is fully dilated, the calf can be felt unimpeded. This is a guarantee the cow is in labor. Remember a cow should make observable progress every 30 minutes, which means if the cow is dilated, but you decide to not intervene at your first check, in 30 minutes the cow should have moved the calf noticeably closer to being born.

Although it is our nature to help our cows as quickly as possible during calving, we have to acknowledge there is a natural process to it that takes time. Cows separate themselves from the herd to calve for a reason. Frequent interruptions disturb their focus on calving and lead to making the situation more difficult. That is why it is critical that we check to see if she is dilated to make sure she is ready to calve before we get antsy. Once she is dilated, then time is of the essence and waiting too long can have poor results. Metaphorically put, a watched pot never boils, but a forgotten pot boils over.

Jake Geis, DVM, works out of the Tyndall Veterinary Clinic.

I-29 Dairy Outreach Consortium Slated

ARLINGTON — Dairy Beef Producers and agricultural industry partners still have time to participate and sign-up for the I-29 Dairy Outreach Consortium — "Moo University," Dairy Beef Short Course, being offered as part of the Central Plains Dairy Expo pre-conference educational events.

This event is being co-sponsored by the I-29 Dairy Outreach Consortium (SDSU, U of M, ISU, NDSU & NE Extension Services, ISDA, SDDP, & SW MN Dairy Profit Group) and Hubbard Feeds. This event is scheduled for Tuesday, March 24, starting at 11 am and concluding around 3 p.m. in rooms 6 & 7 of the Sioux Falls Convention Center in Sioux Falls.

This event is free and lunch will be provided to attendees. Attendees are encouraged to pre-register for the event, due to limited seating capacity.

You may pre-register by contacting Tracey Erickson, SDSU Extension Dairy Specialist at 605-882-5140 or by emailing at tracey.erickson@sdsstate.edu.

Topics to be covered during the short Course include the following:

- "Is There Profit in Dairy Steers" — Economics (Budgets, Break-events & Marketing) of Dairy Beef Production — Robert Tigner, NB Extension Educator — Agriculture
- Nutritional and Management Strategies for Dairy Beef Producers — Reid McDaniels, SDSU Beef Feedlot Specialist
- The impact of the Veterinary Feed Directive on Dairy Beef Production — Russ Daly, SDSU Extension Veterinarian
- Specialized Management for Dairy Beef: High energy feeding, implants, marketing dairy beef — Hubbard Feed's representative

Upon completion of the seminar attendees are encouraged to partake in the evening activities at the Welcome Reception for the Central Plains Dairy Expo, featuring Thompson Square as entertainment. The event is free to dairy producers, dairy beef feeders and others in the dairy industry. It is being held in the Sanford Premier Center, which is adjacent to Convention Center. See www.centralplainsdairyexpo.com for more details.

Retirement Celebration For Deneke Set

BROOKINGS — SDSU Extension is hosting a retirement celebration March 31 for Darrell Deneke, SDSU Extension Integrated Pest Management Coordinator. Deneke has served South Dakotans for more than 24 years through his work in SDSU Extension and will retire this month.

"Darrell has been an integral part of the work we do in SDSU Extension to serve South Dakotans by providing them with applicable and research-based information they can use. Darrell will be missed greatly," said Alvaro Garcia, SDSU Extension Agriculture and Natural Resources Program Director and SDSU Professor.

The reception is open to the public and will be held from 3:45-6 p.m. at the McCrory Gardens Education and Visitor Center (631 22nd Avenue, Brookings). A short program will begin at 4:30 p.m.

Organic Producer Surveys Due April 3

BROOKINGS — National Agriculture Statistics Service (NASS) mailed its 2014 Organic Producer Survey to organic producers nationwide. Participation is mandatory.

"I urge all South Dakota organic producers to fill out the survey as the data collected is crucial to developing agriculture-related programs that directly affect the life and communities of growers," said Alvaro Garcia, SDSU Extension Agriculture and Natural Resources Program Director and SDSU Professor.

Online responses are by April 3, 2015. The online survey can be found at http://www.agcensus.usda.gov/Publications/Organic_Survey/.

Specialty Crop Project Funds Available

PIERRE — The South Dakota Department of Agriculture (SDDA) announces federal funds are available for specialty crop projects.

Organizations involved in the South Dakota specialty crop industry can now apply for select federal funding of projects that enhance the competitiveness of fruits, dried fruits, vegetables, tree nuts, nursery crops and horticulture.

The funds can be used for marketing, promotion, research, food safety, nutrition, distribution and best management practices to advance the specialty crop industry. Projects must benefit more than one product or organization and must solely enhance the competitiveness of specialty crops in South Dakota. Projects that solely benefit one grower, individual or product will not be funded.

"Production of specialty crops in the state continues to be on the rise," said Secretary of Agriculture Lucas Lentsch.

"These funds allow us to support this growing market in South Dakota agriculture."

These federal funds are part of the Specialty Crop Block Grant, a program funded through the Farm Bill.

Applications may be submitted for projects outside of the priority areas. All applications are due to SDDA by April 4.

For program guidelines, application forms or other Specialty Crop Block Grant Program information, call 605.626.3272 or visit <http://sdda.sd.gov/grants/specialty-crop-block-grant/>.

Components Can Guard Soil From Contamination

BROOKINGS — Using natural soil components to trap pollutants will allow producers to control soil contaminants and reuse draining water while protecting their agricultural crops, according to Mohamed Elsayed, a Fulbright Postdoctoral Scholar at South Dakota State University's chemistry and biochemistry department.

Elsayed, a researcher from the Soil Water and Environmental Research Institute at the Agricultural Research Center in Egypt, will present his work at the American Chemical Society National Meeting March 22-26 in Denver.

"I am honored that Mohamed chose my group as the place to spend his fellowship," said Jim Rice, head of SDSU's Department of Chemistry and Biochemistry. "It's another sign of the strong international recognition that our research program is building."

If crops are sown in polluted soil, the plants absorb the contaminants, Elsayed explained. These are then transferred to humans when they consume the vegetables or grains.

Because of water shortages in Egypt, Elsayed said, "we need to use water again and again, but before we reuse it, we need to clean it."

His research seeks to increase the ability of humic acid to adsorb or trap pollutants in combination with either of two clay minerals — kaolinite or montmorillonite. Humic acid is one of the major organic components in soil and is also used as fertilizer.

"The idea is to use natural materials to reduce the pollutants," he explained.

"Natural components are cheaper, more easily available." Plus, artificial ingredients run the risk of adding to the pollution problems — natural ingredients don't.

By breaking humic acid into smaller molecules, a process called fractionation, Elsayed hopes to improve the interaction between humic acid and clay minerals and, therefore, their ability

to trap pollutants, particularly heavy metals. This project is a continuation of his doctoral research.

If fractionation produces good results, the next step will be to determine the optimum humic acid fractionation combination for each clay mineral to enhance the trapping process, Elsayed explained.

The long-range vision is

for producers to apply humic acid, either in solid or liquid form, to enhance soil properties.

"These compounds would capture the heavy metals and organic pollutants so the plant won't take it up," he said. The resulting crop would be contaminant-free.

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