

DAIRY PIPELINE

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Department of Dairy Science

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"...mud not only looks bad, but can also be expensive."

"Once the clinical signs of hair loss are seen the numbers of lice on the cattle have exploded and the number of eggs present have risen significantly making it more difficult to break the life cycle."

Photo courtesy of flicker.com

HOW MUD CAN AFFECT ANIMAL PERFORMANCE

While mired tractors and sucked-off boots are annoying reminders of the inconveniences of mud, its effect on animal performance is often overlooked. Animal performance, whether that is making milk or lbs. of growth, is determined by the nutrients the animal is consuming, one of which is energy.

As the environmental temperature decreases below the thermo-neutral zone the maintenance energy requirement increases. The thermo-neutral zone is between 23°-77°F, depending on cattle age and size. The maintenance energy requirement is the amount of energy required to maintain an animal, not including growing, producing milk, or maintaining pregnancy. Exposure to mud affects the energy requirement of cattle in two ways. First, the animal has to exert more energy to move from point A to point B. Second, mud caked to the animal decreases their insulating capabilities. The caked mud acts as a "wick" that draws energy out of the animal in cold temperatures. Table 1 shows the negative effect different depths of mud, relative to the animal, has on weight gain.

As seen in the table housing cattle in mud not only looks bad, but can also be expensive. Loss of potential gain affects the overall feed efficiency of the animal, translating into a higher cost per lb. of gain. Another consideration when reviewing Table 1, it takes less mud to reach the hock on younger

cattle. This cost is further compounded by current high feed cost. As you look at your operation this winter consider the following:

- ▶ If using movable hay feeders and/or troughs, move feeders often to minimize manure/mud accumulation
- ▶ Consider rolling round bales of hay out
- ▶ Rotate feeding areas
- ▶ Restrict cattle access to poorly drained areas
- ▶ Scrape feeding pads more often

Table 1. Loss of gain caused by mud, 21 to 39°F^a

Mud depth on the animal	Potential Loss of Gain
No Mud	0%
Dewclaw deep	7%
Shin deep	14%
Below hock	21%
Hock deep	28%
Belly deep	35%

^aBeef Feeder, University of Nebraska, August 1991

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Reference:

Beef Feeder. 1991. A sure cure to sure footing. University of Nebraska Institute of Agriculture. August.

LICE IN DAIRY CATTLE

Lice are the most important winter parasites of cattle. The two clinical signs of lice are hair loss and scratching. Lice have been considered by many to be more of a nuisance parasite than an important health problem in cattle. While not a lot of study has gone into the milk production and body condition loss issues associated with lice in dairy cattle I believe that severe lice infestations do cause some milk production and BCS loss in dairy cattle.

There are two types of lice: biting and sucking lice. The only importance in knowing this fact is that ivermectin, Dectomax®,

and Cydectin® **injectable** are only effective against sucking lice.

Lice spend their entire life cycle on cattle. Lice have 3 stages of their life cycle. These 3 stages are egg (nymph), larvae, and adult. It takes about 3 weeks for an egg to hatch and develop into an egg laying adult. No lice treatment products are effective against eggs. Winter weather has a significant impact on the severity of lice problems in cattle. The longer the winter and the more winter moisture the more severe the winter weather conditions.

Lice treatment is best applied to cows around the first of the year before lice numbers

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Upcoming Activities

Feb 5: Carbon Trading Update – Toms Brook, VA
9 AM – 3 PM

Feb 8: Winter Dairy Conference, Select Sires, Rocky Mt.
Contact Beverly Cox for details (540) 483-5161

Shenandoah Valley Dairy Genetics Updates

Feb 12: 10 AM Lexington

Feb 12: 7 PM Weyers Cave

Feb 13: 10 AM Timberville

Feb 13: 7 PM Montezuma
Contact John Welsh for details (540) 564-3080

Feb 14: Dairy Management Institute Workshop
Contact Beverly Cox for details (540) 483-5161

Feb 15: Dairymen Convention

Feb 20: Dairy Management Institute – Initial Meeting
Traditions – Harrisonburg, VA
Contact John Welsh for details (540) 564-3080

Feb 20–22: 62nd Annual Convention—VA State Feed Association and Nutritional Management “Cow” College—The Inn at VA Tech
Contact Bob James for details (540) 231-4770

Feb 25: Winter Dairy Conference, Keysville, VA. Contact Beverly Cox for details (540) 483-5161

If you are a person with a disability and require any auxiliary aids, services or other accommodations for any Extension event, please discuss your accommodation needs with the Extension staff at your local Extension office at least 1 week prior to the event.

For more information on Dairy Extension or to learn about current programs, visit us at VT Dairy—Home of the Dairy Extension Program on the web at: www.vtdairy.dasc.vt.edu.

Bennet Cassell

Bennet G. Cassell
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Lice control products available in the US

Trade name	Chemical	Persistent Activity	Effective against Biting Lice	Effective against Sucking Lice	Labeled for lactating Cows
Various generics	permethrin	no	yes	yes	most
Cylence	cyfluthrin	no	yes	yes	yes
Saber	lambdacyhalothrin	no	yes	yes	no
Various generic injectables	ivermectin	yes	no	yes	no
Various generic Pour-ons	ivermectin	yes	yes	yes	no
Dectomax injectable	doramectin	yes	no	yes	no
Dectomax Pour-on	doramectin	yes	yes	yes	no
Eprinex Pour-on	eprinomectin	yes	yes	yes	yes
Cydectin Pour-on	moxidectin	yes	yes	yes	yes
Cydectin Injectable	moxidectin	yes	no	yes	no
Elector	spinosad	no	yes	yes	yes

have started to explode on cattle. Once the clinical signs of hair loss are seen the numbers of lice on the cattle have exploded and the number of eggs present have risen significantly making it more difficult to break the life cycle. Macrocyclic lactones (ivermectins, Dectomax, Eprinex, and Cydectin) have persistent activity. These compounds stay in the body long enough to kill the larvae as they hatch out and thus break the lice life cycle with one application. All other products only kill the larvae and adults on the cattle at the time of application. They must be reapplied in 2-3 weeks to kill off the larvae that have

hatched out since the first application. Lice treatment is often applied in the fall when cattle are traditionally worked. If the winter weather is not too severe then application in the fall with macrocyclic lactones should provide winter long lice control. Cydectin®, Eprinex®, and most pyrethrins are labeled for lactating dairy cows with no milk withdrawal. Be sure and check the label on the product before using on lactating dairy cows. The table above details the products available for lice control and their important facts.

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WINTER TEAT CARE

With the onset of colder weather comes the risk of chapped and frozen teats. When wind chill

► Provide windbreaks in outside areas for cows.
► Monitor fresh cows with swollen udders and teats since they are more susceptible to chapped and frozen teats.

values reach 0 to -25 degrees F, cold damage to teats becomes likely.

Following are suggestions from the National Mastitis Council for extreme winter teat care.

► Teats should be dry before turning cows out into cold weather.

► When teats are disinfected after milking, allow 30 seconds contact time, and blot off any excess disinfectant with a single service towel.

► Warm teat disinfectants during cold conditions to reduce drying time.

“Providing a dry place for cows to lay down during cold weather is critical...”

Research cited in the Journal of Dairy Science found that using teat dips with skin conditioners did more to lessen the occurrence of chapped teats than any other practice employed. It also suggests that farmers should not stop post dipping during cold weather as bacterial colonization of teat ends was higher on undipped teats than chapped teats that were post dipped regularly.

Providing a dry place for cows to lay down during cold weather is critical in controlling frost bite and chapped teats during extreme cold weather.

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