

# DAIRY PIPELINE

**Department of Dairy Science**

Blacksburg, VA 24061

540/231-6870 Fax: 540/231-5014

[www.vtdairy.dasc.vt.edu](http://www.vtdairy.dasc.vt.edu)

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“...wet rainy seasons with tons of mud have a cumulative effect that result in smaller and smaller milk checks.”

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## THE SKINNY ON MUD—WHY MUD AND DAIRY COWS DON'T MIX

—Cynthia Martel, Extension Agent, Rockingham County VCE; [cmartel@vt.edu](mailto:cmartel@vt.edu)

Virginia has seen an abnormal winter with heavier than normal rain, blizzards, and even tornadoes. While your children may be enjoying puddle jumping parties on the farm, your cows do not fancy mud. Excessive rain on the farm can have serious effects on your cows affecting their health, milk production, and reproduction. Dairy cows are not like pigs they do not love bathing in mud! While rain is important for growing crops and greening-up pastures, the side effects of too much rain can lead to costly problems on the farm, some of which may be initially over-looked.

As we progress into the spring season, farmers need to be prepared for mud and temperature swings. Research has shown animals that live in excessive mud require 30% more net energy for maintenance requirements than normally needed. During cold weather months this can cause animals to lose weight at a faster rate because they cannot eat enough to even meet maintenance requirements. When mud is allowed to cake on the body, the cow's hair cannot help regulate body temperature effectively—which can have a great impact in both cold and hot weather. Additionally, cows covered in mud usually have problems with increased insect pests.

Mud can also affect feed intake. According to the NRC, animals that must walk through deep mud to get to their food have a 5-30% decreased feed intake depending on the depth of the mud. In addition, feed that becomes contaminated by mud can cause a decrease in feed intake. Depending on the level of mud mixed with the feed, some cows may still eat it. However, that mud taking up space in the cow's feed provides no nutritional benefit to the microorganisms in the rumen.

Mud is a significant problem in quality milk production. As mud cakes on the udder and teats it becomes a challenge in the

parlor to effectively clean and sanitize the teat ends. Mud can harbor a good deal of bacteria which increases the likelihood of environmental mastitis.

Mud can create problems all over the farm. It causes equipment breakdowns and increased repair costs in the parlor. Veterinary bills will tend to increase with excessive mud as it affects all ages of cows and contributes to sickness and injury. Newborns and cows with health issues will be challenged more by a muddy environment. Mud can be tracked into the feed storage areas, feed bunks, and bunker silos which can create not only feeding quality challenges but can wear down machines and equipment faster. A buildup of mud in animal housing areas can cause animals to fall, to get stuck in the mud, or to even die! Furthermore, mud can increase employee accidents on the farm.

The key to dealing with mud on the farm is being prepared! Cows do not do well living knee deep in mud and manure. We cannot control the weather but we can control and reduce the effects weather has on the farm. Drainage is key! Making sure water has a place to go will prevent pooling and help reduce mud. Removal of mud from key areas on the farm and developing travel lanes to pasture which prevent mud accumulation are very important. Animal housing and feeding areas are top priority on the to-do list for mud and manure removal.

Animals should not be standing in inches—much less feet—of mud. When this happens you can kiss money in the bulk tank goodbye. You may not think of mud causing drastic problems on the farm, but wet, rainy seasons with tons of mud have a cumulative effect that results in smaller and smaller milk checks. For more information, contact your local Extension Agent.



## Upcoming Events

See [VTDairy](#) for details.

**April 2, 2016**

VA Spring [Holstein Show](#)

**April 9, 2016**

State Dairy Bowl Contest, Elkton, VA

**April 18, 2016**

Cover Crop Field Day, Dayton, VA

**April 23, 2016**

Virginia Tech Little All-American

**May 14, 2016**

Progressive Ag Safety Community Day – Franklin Co. Parks and Rec., Rocky Mt.

**May 23, 2016**

Hokie Cow Classic, Blacksburg Country Club

**June 10-11, 2016**

Franklin County Open Youth Livestock Show

**June 10-11, 2016**

Maryland [Show like a Pro Workshop](#)

**June 17, 2016**

State Youth Dairy Judging Workout, Shenandoah Co.

**July 15, 2016**

VA Dairy Expo, Berryville, VA

**August 1, 2016**

State 4H/FFA Dairy Youth Field Day, Clarke & Frederick Counties

*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 [VTDairy](#)—Home of the Dairy Extension Program at: [www.vtdairy.dasc.vt.edu](http://www.vtdairy.dasc.vt.edu).*



R.E. James,  
Dairy Extension Coordinator &  
Extension Dairy Scientist,  
Dairy Nutrition



## CORN FOR SILAGE: PLANTING DENSITY EFFECTS ON DRY MATTER YIELDS AND NUTRITIONAL COMPOSITION

—Gonzalo Ferreira, *Extension Dairy Scientist, Management*, [gconf@vt.edu](mailto:gconf@vt.edu) and Christy L. Teets, *Lab Specialist, Virginia Tech Dairy Science*, [cteets@vt.edu](mailto:cteets@vt.edu)

Milk prices have shrunk substantially in the last year. Because forages are much cheaper than concentrates, increasing the inclusion of forages in rations for dairy cows can help sustain margins and profitability. On the flip side, forage stocks could decrease faster as the inclusion of forages in dairy rations is increased. As a consequence of the limited forage stocks observed after drought seasons, increasing interest has emerged to replenish forage stocks of corn silage faster through greater corn planting population rates. Previous studies have shown that under non-extreme weather conditions forage biomass of corn for silage increases or does not change when planting population increases.

During the summer of 2015 we measured dry matter yields of corn for silage when planted at different populations in two different fields at a dairy farm in southern Virginia. Plant populations ranged from 22,000 to 40,000 plants/acre with 6,000-plant/acre intervals. As in previous studies, dry matter yields increased linearly when planting population increased (Figure 1). This increase was not seen during the summer of 2014 when corn plant population trials were performed in the same fields. We should remember that rainfalls were quite frequent in most regions of the Com-

monwealth during summer 2015, which would explain the beneficial effect of increasing planting population on dry matter yields.

One consistent observation during both years, which also agrees with previous published studies, is that increasing corn planting density has minimal (if any) effects on the nutritional composition of the corn plant. Even though it resulted in smaller plants with smaller ears, increasing planting population did not change the concentrations of ash (3.5%), crude protein (9.2%), neutral detergent fiber (40.1%), sugars (9.1%), and starch (36.1%) of the corn plants for silage. These results were also observed on several previous studies, therefore suggesting that corn planting population has no effect on the nutritional composition of corn for silage.

Corn planting season is around the corner, so we are in “planning mode” for our corn crops. Although still inconclusive for extreme weather conditions, increasing planting populations may increase dry matter yields of corn for silage.

This practice may also help to replenish forage stocks in farming systems feeding increasing proportions of silage in dairy rations. Fertilization strategies, as well as the potential benefits and risks associated with this practice, should be carefully discussed and evaluated with your agronomy consultant.

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