

# DAIRY PIPELINE

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**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)

## PROTECT YOUR CALVES' HEALTH WITH BIOSECURITY PROTOCOLS



On any farm, biosecurity protocols are important in reducing the risk of disease transfer to livestock. The immune system of the neonatal calf is naïve, meaning she is highly vulnerable to disease. Because of this,

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biosecurity practices are especially important to prevent disease transfer to calves. Pathogens can be spread to calves from sources within the operation or from the outside-in. From within an operation, calves may be exposed to pathogens from other calves by physical contact or unclean equipment used for feeding and treating. Employees that work with older animals also may spread disease to the young calves on their clothing or hands. People outside of the operation, such as veterinarians, salespeople, and other visitors may carry pathogens on their clothes or hands that can spread to calves.

To boost the integrity of your biosecurity practices, remember that cleanliness is critical. Identify all things calves come in contact with, and keep them clean! Maintain a well-bedded maternity pen to ensure that calves are exposed to the lowest pathogen load possible in the first hours of life. Calves should enter clean hutches or group pens bedded using clean equipment. If possible, clean hutches or pens with a disinfectant after weaned calves leave, and keep them empty for a few days before new calves enter. It is also important to feed and treat calves with clean equipment and washed hands. Always wash bottles, nipples, buckets, and tube feeders after feeding. Rinse with lukewarm water, then wash in hot water detergent and bleach, and rinse with an acid sanitizer and drain. If using the same equipment

for multiple calves during feeding, nipples or buckets should be disinfected between calves with chlorhexidine. When treating calves, use sterile needles and washed and disinfected balling guns, esophageal feeders, etc. Cleaning protocols should be posted where liquid feed and treatments are prepared to remind employees of these procedures.

Another way to protect your calves is to limit the number of people that come in contact with calves. Other livestock industries have practiced this for quite some time. Most commercial poultry or swine operations limit access to a very small number of people who wear clean boots and coveralls. Now think of all the people that have access to animals on a dairy: employees, veterinarians, salespeople, visitors, etc. Do they all practice proper biosecurity protocols? Posting restricted access signs at the farm entrance or by the calves may help. However, it is also important to discuss calf biosecurity with your visitors. If visitors need access to the calves, make sure that they visit the calves before older animals, and that they have clean boots and hands.

The key to designing sound biosecurity protocols is to limit calf contact with potential pathogen carriers. Any thing or person that must contact the calf should be free of contaminants to reduce the risk of disease transfer to calves.

“The key to designing sound biosecurity protocols is to limit calf contact with potential pathogen carriers.”



—Alyssa Dietrich,  
Master's student with R. E. James,  
Extension Dairy Scientist, Dairy Nutrition  
(540) 231-4770 | [jamesre@vt.edu](mailto:jamesre@vt.edu)

## Upcoming Activities

See [VTDairy](#) for details.

**Mar. 7, 2015**

State Dairy Bowl Contest

**Mar. 9-13, 2015**

Area Dairy Conferences

--March 9 - Amelia

--March 10 - Harrisonburg

--March 11 - Culpeper

--March 12 - Rocky Mount

--March 13 - Marion

**Apr. 4, 2015**

VA Spring Holstein Show

**Apr. 24-25, 2015**

VA Dairy Calf Summit,

Blacksburg, VA

**Apr. 25-26, 2015**

Atlantic Coast Calf College

Blacksburg, VA

**May 2, 2015**

Little All-American

**May 18, 2015**

Hokie Cow Classic Golf

Tournament

*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

## SHOULD WINTER CROPS BE CONSIDERED COVER CROPS IN DAIRY FARMING SYSTEMS?



Cover crops are crops planted to increase the health and fertility of soils where they are planted and to benefit the surrounding environment. This environment-friendly system emerged as an alternative to the bare fallow cropping system which leaves land susceptible to reductions in soil organic matter accumulation leading to soil degradation.

The benefits of cover crops are multiple and diverse. By covering the soil surface, cover crops reduce soil erosion caused by rain, water runoff, and wind. The mulch-like cover also limits the access of light, thereby inhibiting or retarding growth of weeds. The root system of cover crops increases pore formation, which increases water infiltration and soil aeration. Reduced soil compaction is another benefit of pore formation. Additionally, cover crops are a means to reduce environmental pollution. For instance, winter annual grasses can capture residual nitrogen left after harvesting preceding crops in the fall. Alternatively, winter annual legumes can capture nitrogen from the atmosphere and increase nitrogen supply in the soil.

In dairy farming systems, winter annual crops are harvested as a forage source for feeding cattle. When planted, winter crops serve as a complementary forage source to summer annuals (e.g., corn and sorghum for silage). Because cover crops are typically incorporated into the soil or

left as mulch in the soil surface, one potential misconception within the dairy industry is that cover crops are not beneficial to soil health in dairy farming systems. In response to this misconception, dairy farmers should know that cover crops destined for harvesting still control weed growth, soil erosion, and nutrient leakage. Cover crops also benefit soil health through belowground biomass development (i.e., root growth). Last—but not least—cover crops can serve as nutrient scavengers, complementing nutrient (i.e., manure) management plans in dairy farming systems.

The use of winter cover crops in dairy farming systems is typically oriented to winter annual grasses. The reason for this is not clear. Though, one likely explanation is the lack of information about the yield potential and the nutritional quality of different cover crops destined for forages. The Virginia Tech Department of Dairy Science is collaborating with the Natural Resources Conservation Service (NRCS) to address this gap in data. Fifteen cover crops were planted in three of Virginia Tech's experimental stations during Fall 2014. Cover crops include five grasses (i.e., barley, rye, ryegrass, triticale, and wheat) alone, or in combination with two legumes (i.e., crimson clover and hairy vetch). We look forward to harvesting time in Spring...and the data it will bring!

“...cover crops destined for harvesting still control weed growth, soil erosion and nutrient leakage.”



—Gonzalo Ferreira  
Extension Dairy Scientist, Management  
540-231-1965 | [gof@vt.edu](mailto:gof@vt.edu)