

DAIRY PIPELINE

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Monitoring Your Debt Status

—Gonzalo Ferreira, Extension Dairy Scientist, Management; gconf@vt.edu

“The higher your debt level, the higher the percentage of your milk check that is already committed to pay debt.”

Farm debt needs to be monitored closely so that it does not become an unmanageable snow ball. There are different ways for monitoring debt status. One of them is the debt to asset percentage. To calculate your debt to asset percentage, simply get your last *balance sheet* and divide your total debt (or total liabilities) by the total assets and multiply by 100. A debt to asset ratio of 35% implies that for every \$100 of assets the farm owns, the farm still needs to pay \$35 to a lending source. In general terms, a good debt status implies a debt to asset percentage below 30%, whereas a poor debt status implies a debt to asset percentage above 70%.

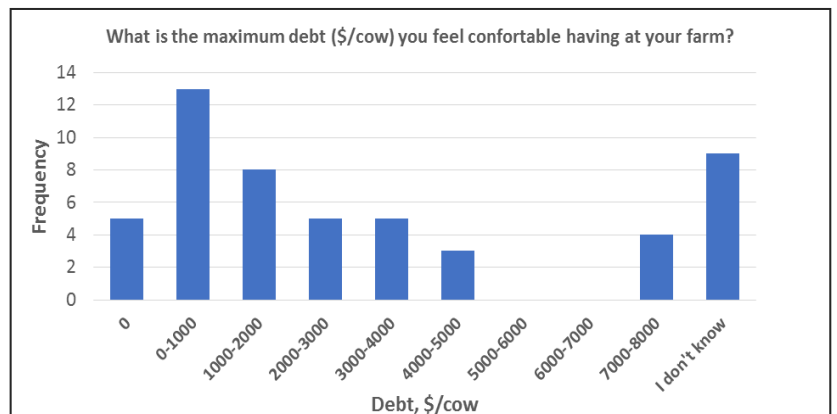
In addition to the debt to asset percentage, it is not unusual to hear other indicators in more lay conversations. One of these indicators is the debt per cow. In a recent conference organized by Virginia Cooperative Extension farmers were asked to respond anonymously *what was the maximum debt per cow they feel comfortable to have at their farm*. The responses were quite variable (see figure), ranging from absolutely no debt for some conservative farmers to as high as \$8,000/cow for some others.

Many flaws exist about using debt per cow as a key financial indicator. First of all, it does not reflect the debt position relative to the assets of the farm. Also, the debt per cow being high or low can depend on the scenario of analysis. Very likely a newly expanded farm might have much higher debt per cow than a well-established one. Finally, the comfort zone in regards to debt per cow can also depend on the age of the farm manager, as mature managers might be more conservative than young managers when taking debt.

A good way of classifying debt per cow as low or high, or as risky and non-risky, is putting some perspective to

whatever the number implies. Assuming that the rolling herd average of a cow is 28,000 lb/cow and that milk price is \$19/cwt, then the yearly revenue is \$5,320/cow. Considering an operating cost of production equal to \$15/cwt, then the earnings before interests, taxes, depreciation and amortization (EBITDA) are \$1,120/cow. After paying \$335/cow for income taxes the farm has \$785/cow of earnings available for debt payments, capital replacement (depreciation & amortization), and family living. Assuming an interest rate of 4.5% APR on loans, the remaining cash to pay depreciation, amortization, family withdrawals, and principal payments can be \$650/cow when debt is \$3,000/cow or as low as \$425/cow when debt is \$8,000/cow. Assuming the unrealistic scenario in which all remaining cash is used to pay just principal, in the former case it would take 4.6 years to pay in full a debt of \$3,000/cow, whereas in the latter case it would take at least 19 years to pay in full a debt of \$8,000/cow. It is worth mentioning these estimates assume no more debt is taken.

In conclusion, monitor your debt frequently and carefully. The higher your debt level, the higher the percentage of your milk check that is already committed to pay debt. Monitor your debt to asset percentage, among other key financial indicators. Finally, be aware that debt per cow is not the best indicator to monitor your debt as there are many variables masking its usefulness.



Upcoming Events

See [VTDairy](#) for details.

March 21, 2017

Hands-on Calf Workshop –
Culpeper

March 23, 2017

Hands-on Calf Workshop –
Walkup Holsteins

March 25, 2017

Little All-American Dairy Show
& Banquet, Blacksburg, VA

April 25-26, 2017

Grazing School
McCormick Farm

May 15, 2017

Hokie Cow Classic
Blacksburg Country Club

May 27, 2017

Breakfast on the Farm
Arbogast Farms

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.

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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.



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Management of Pathogens in manure—Is your liquid gold safe?

—Cynthia Martel, Extension Agent, Franklin County; cmartel@vt.edu

How can dairy producers protect their animals, businesses, and the surrounding community? By following best management practices (BMPs) for manure management! Animal waste can contain both pathogens and chemical contaminants that can cause sickness and even death. Not all pathogens are created equal. Survival is dependent on temperature, manure processing, and environmental conditions. How you handle and process the manure on your farm matters! Every day the average dairy cow produces approximately 120 lbs. of wet manure making manure management a critical aspect of dairy farming.

Producers must decide how to use everything their animals generate in a way that improves the farm, protects the environment, and keeps the public safe. The application of manure to crops or pasture and the composting of manure to sell requires an understanding of the risks involved. Manure from livestock can be loaded with disease-causing pathogens, harboring the potential for illness in animals and humans. It is important to understand what pathogens may be found in manure and how BMPs can be used to reduce risk.

Pathogen transmission can occur through direct and indirect contact. Direct transmission occurs with animal-to-animal or animal-to-human contact. Indirect transmission may occur through contaminated food or water.

Manure processing can drastically alter the pathogen load. Typically, farms store manure in lagoons or stacked piles. During dry stacking and composting it is critical to turn manure, ensuring all areas of the pile reach at least 145F° for several days, then leave undisturbed for at least a month to reduce or kill pathogens. Lagoon or slurry storage will reduce pathogen numbers from initial loading amounts, but still requires a storage for a period of one month before spreading on land. The FDA recommends a 120-day interval between application of raw manure for crops in contact with the soil and 90 days for crops not in contact with the soil. When applying manure to land, the type of equipment used and environmental conditions can play huge roles in transportation and movement of pathogens.

There are six common pathogens found in

dairy manure that can cause sickness to both farm animals and humans. *E. coli* and *Salmonella* are frequently in the news due to food-borne illness in humans. Cattle are the primary reservoir for *E. coli*, with the greatest prevalence found in heifers and calves under 24 months of age. Calves recently weaned from milk have the highest incidence and shedding of infection. Up to 75% of dairies will test positive for *Salmonella* and over 50% of the cattle on the farm are shedding the pathogen. *Listeria* is another common dairy manure pathogen with great health implications to humans. *Listeria* is naturally found living on plants and soil, and can be found on poorly fermented silage. *E. coli* has a higher incidence of infection compared to *Listeria* in manure but lower incidence of death. While some pathogens have the ability to live in warm temperatures *Listeria* can live in colder temperatures and cattle actually shed more in their feces during colder winter months. *Cryptosporidium parvum* and *Giardia lamblia* are two more pathogens found in calves as young as 7-21 days old. Water contaminated by manure is usually the main contact route for “Crypto” and *Giardia*, however humans become infected primarily during the handling of young calves. *Campylobacter jejuni* is a gram-negative pathogen that can cause infertility and abortions in cattle and enteritis or septicemia in humans. Another concerning pathogen for dairy producers—one that only takes two thimbles full of manure to cause drastic problems—is *Mycobacterium paratuberculosis* which causes Johne’s disease.

Managing manure by utilizing BMPs protects both the environment and the public by reducing contamination risk. Some BMPs to help reduce incidence of contamination are: 1) installing vegetative filter strips to help control runoff and erosion; 2) controlling runoff and leaching from stockpiled manure open lots and even silage piles; 3) installing clean-water diversions like berms and ditches to divert runoff to proper collection areas; and 4) eliminating or reducing livestock access to waterways and ponds. Programs exist to assist financially with many of the BMP practices related to reducing the risk and potential point source contamination. For more information, contact your local extension office.

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