



New Insights on MUN from Dairy One

By John Tausel, Director of Business Development

- Many herds testing at Dairy One have more than 50% of their cows outside of the normal MUN range
- This suggests that feed management could be improved on many farms
- Looking at segments of the herd (not just bulk tank MUN results) allows for more targeted management intervention
- Dairy One has developed a new report to deliver insights around segments of the herd and irregular MUN values

Last fall Dairy One launched a project to screen DHIA cow samples for Milk Urea Nitrogen (MUN). We then alerted farms that had over 50% of the cows in the herd outside of the normal recommended range (8-14mg/dl). We identified over 1,100 farms that had more than 50% of the herd outside of the recommended range. This was a surprisingly large number of farms. Based on the project results and additional conversations with farmers and nutritionists, we believe using MUN to improve feeding management is an opportunity on many Northeast farms. Dairy One has now developed a new tool to help farms better utilize MUN results in their herd management.

What is MUN?

MUN is another component (like protein and butter fat) that can be measured in milk. It is an important measurement because it indicates how effectively the cow is using the protein in her diet. Since protein is often a purchased part of the ration, it is most economical for the farm to make sure protein is being used effectively. The recommended range for MUN is 8-14mg/dl. Holsteins tend to be on the lower end of the range, while protein breeds tend to be on the higher end of the range.

MUN values that are higher than the recommend range generally mean the cows have too much protein in the diet or that there is an imbalance between the protein and energy. This means the cows are not using their feed as effectively as possible. MUN values below the recommended range suggest the animals are not getting enough protein in the diet and could be sacrificing production. When looking at groups of cows that have both high and low MUN values, it often means there are feed management issues such as overcrowding, running out of feed, or that the cows are excessively sorting the ration.

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What about bulk tank MUN values?

Many cooperatives or milk companies report MUN values to farms from bulk tank samples. These are adequate for monitoring the overall status of the herd. For example, if the bulk tank MUN is in the normal range, it likely means the feed program is good for the overall herd. However, bulk tank MUNs do not help farms identify groups of cows in the herd where feed management could be better.

New Dairy One MUN report

In August, Dairy One will launch a new MUN report. This new report uses DHI cow test results and incorporates our learnings over the last year on how to help farms utilize MUN results.

Most importantly, the new report allows farms to see subsets or groups of cows within the herd and the average MUN values for each of these groups. This will

allow the farm to really target their management energy. For example, farms can now see if their fresh cows are having issues (for example MUN values that are too high) or if their older cows are having issues and take corrective action. The new report also alerts producers if one group or pen has many cows outside of the normal range. For example, perhaps a farm is overfeeding protein to the pre-dry group. The new report will highlight that the pre-dry cows have MUN values that are too high and the farm and nutritionist can then target a solution for this issue (for example, a different ration).

Trying out the new report:

Farms that are currently testing for MUN as part of their monthly DHI service will automatically receive the Standard MUN package (see chart). This includes the new MUN report and additional analysis to aid in feeding management. Dairy One will also be providing the new report to all of our DHI herds free of charge for a few months (Herds using PCDART are currently not eligible but we're working on developing the report for them as well). Farms will then have the option of continuing to receive the new MUN report and feed management information by signing up for the Standard MUN package. They could also choose a Basic or Alert package which provide fewer insights and less information to solve MUN issues but has a different price point.

Please contact Dairy One for more information on this exciting new report.

	Standard MUN	Basic MUN	Alert MUN
MUN Report	✓	✓	✓ if issues detected
Enhanced Feeding Management Information	✓		
Paper Report	✓		
Email Report	✓	✓	✓ if issues detected
Individual Cow MUN Values Loaded to Software	✓		

Dairy One is now offering a new report to help use MUN data for on farm management. Farms will get the Standard MUN as a starting trial and then will be able to choose the best program for their needs depending on value of information and program pricing. Farms already getting MUN will automatically receive the Standard MUN package.

MUN by Lactation Group and Phase of Lactation						
Lactation	Head	Fresh	Peak	Preg	PreDry	Stale
First	50	11	14.5!	13	12	11
Second	30	13	17.6!	16!	14	13
Mature	20	11	13	16!	13	12

In this example of Dairy One's new MUN report, the First and Second lactation Peak cows and Second and Mature lactation Pregnant cows have high average MUNs. The new report color codes each group and signifies attention is needed with a "!" This provides clear insights to which group of cows have MUN values outside of the normal range, allowing farms to work with nutritionists to target solutions.

Improving herd management with MUN

Dairy One's new MUN report is designed to help you be a more efficient manager by:

	Easily viewing average MUN values for subsets of the herd and individual pens of cows.
	Quickly seeing trouble spots highlighted in the report, allowing you to focus your management energy on the cows that need it.
	Receiving the report via email so you can quickly act after test-day.