

Dry Matter Intakes

by Keith Sather

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The most important factor in properly balancing a ration is knowing the actual dry matter intake of the cows that the ration is being balanced for. Several equations have been developed which make an attempt at predicting the intake of an individual cow or group of cows based on age, milk production, stage of lactation and milk components. These equations fail when compared to a system that measures and reports actual intakes.

The main reason for the development of Feed Supervisor® Software was to provide a means of recording daily dry matter intakes. While the system has been enhanced with features such as operator performance and inventory control, the intake tracking feature remains the solid base of the system and the reason Feed Supervisor® was developed. We may see two different dairies with identical levels of milk production but very different dry matter intakes. This would present two very unique approaches to ration balancing.

The crucial reports that should be observed by you and your nutritionist are the Daily Tracking Report or Daily Clean-up Tracking Report. These reports offer daily dry matter intakes and milk production for a selected period of time. Some managers and nutritionists prefer to look at a report that gives you one average number over a period of time such as the Herd Summary Report or Herd Supervisor Report. While these two reports offer valuable information, they do not tell the entire story from a nutrition standpoint. An example is the case where average dry matter intakes for a week are 50 pounds in a lactating pen of cows. The nutritionist looks at the report and balances the ration for 50 pounds thinking all is well. What the tracking report reveals in this particular case is that while the average intake was 50 pounds, the daily intakes were jumping from 46 pounds to 54 pounds. Here the tracking report pointed to a severe problem taking place within this group of cows that could not be seen from a weekly average. A reason for these inconsistent intakes may be feed quality, particle size, or inconsistencies in the way the feed is being delivered. There is a high probability that these cows are experiencing acidosis.

If the tracking reports are monitored on a regular basis, problems can be identified and solved before they become a major issue or health problem. A guideline to follow is that a group of cows can have 3 pounds of movement in intake over a seven day period of time. This means that if the low intake through the week is 49 pounds, the highest intake should then be 52 pounds. The movement of intake should be gradual avoiding swings from the top

of the range all the way to the bottom. If you are seeing movements in intake greater than this you should contact your nutritionist. You should also be concerned if intakes are making abrupt changes on a daily basis.

An example of the benefits provided by the tracking report system came on a dairy here in Wisconsin last winter. Data analysis and a visual walk through of the herd and feeding program showed consistent intakes, high milk production and healthy cows. Two weeks later the dairy emailed us their Feed Supervisor® backup file. Now the tracking report showed that something was definitely wrong. Intakes were on a roller coaster ride and milk production was slipping. Another visit to the dairy showed that a problem had developed in forage particle size. On my previous visit, the lactating TMR had 10% of its particles on the top screen of the Penn State Box. Now particle size had deteriorated to a point where only 3% of the particles were on the top screen. The problem was that the haylage had hit an area in the silo where the owner's chopper had broken down the previous summer. He had borrowed the neighbor's chopper which was set to a much finer cut than his own. Some baled hay was added to the ration and intakes stabilized again. In this case a problem was solved before it became a major health issue.

These tracking reports are also available in the form of a graph for those of you who prefer to take a more visual approach to data analysis. The system allows you to graph daily dry matter intakes with milk production. You can also add percent clean up to the graph to monitor how it affects intakes and milk production.

Two important areas that you should consider to ensure that your intakes are as accurate as possible are clean up and time of feeding. Clean up should be weighed in the mixer and recorded into Feed Supervisor®. Those of you who used to estimate clean up by how many skid loader buckets of feed was left know the importance of actually weighing the feed. The accuracy of daily intakes will also be improved if feed times and the time each pen is cleaned up is relatively similar each day.

The actual dry matter intake for a group of cows should be the base that every ration begins with. An accurate measurement of dry matter intakes provides the essential information necessary to balance rations as cost effectively as possible while maximizing milk production. Feed Supervisor® Software offers a wealth of information on your herd's intakes and performance.

Good Report – Intakes are steady with no more than 3 pounds of variation over a 7 day period.

Bad Report – Intakes are choppy and vary more 3 pounds over a 7 day period.