

## THE MANAGER

## FORAGE MANAGEMENT

By Tom Overton and Larry Chase

A checklist of forage and nutrition program strategies to optimize forage use and profitability in 2012

# Feeding strategies for 2012

2012 is stacking up to be one of the most challenging years to set nutritional programs for cows and herds that we have had in a long time. When this article was written, corn and soybean prices had decreased from where they were a few months ago, and projected milk prices appear somewhat lower than 2011, but relatively stable. Of course, we all know that any of these can change very quickly, and often do. Finally, although some regions in the Northeast and other parts of the eastern U.S. had crop years that would be considered average, in many regions forage yield, both haylage and corn silage, were down significantly as a result of late planting, drought at critical times, or other factors related to growing conditions. In addition, quality appears to be highly variable among regions and farms, with some issues with fiber digestibilities, abnormal fermentation, or mold and mycotoxin contamination – all of which can impact cow performance and potentially health and reproduction.

Now is the time to check (or recheck) and potentially make adjustments to optimize forage use and profitability in 2012. The seven steps below will help to ensure the right areas are examined:

1) Check forage inventories and make adjustments – This one is critical, as running short on forage will invariably force adjustments that might not optimize production or forage use. Even if your inventories were checked after corn silage harvest, now is a good time to check again. A number of feed inventory related worksheets are located at the PRO-DAIRY website: <http://www.ansci.cornell.edu/prodairy/>.

If forage inventories are inadequate, reduce the percent forage in lactating cow rations, look at limit-feeding heifers, or potentially adjust herd size.

2) Don't forget about income over feed cost – Although it's easy to focus on feed cost, the name of the game is milk income over feed cost. If we assume that milk is \$19.00/cwt and feed cost is 13 to 14 cents per pound of dry matter (normal feed cost runs about 11 cents per pound of dry matter) and 1 lb of dry matter will support 2 to 2.5 lbs of milk, the margin associated with 1 lb of ration dry matter ranges from 24 to 35 cents per cow per day. A good

way to track this metric within your farm or compare with other farms is to enroll in the Dairy Profit Monitor online at [www.dairyprofit.cornell.edu](http://www.dairyprofit.cornell.edu).

3) Strategically allocate forages – In a variable forage year, obviously some cuttings of silage are better than others. The best forages should be reserved, if possible, for early and peak lactation cows. Although not ideal, heifers and far-off dry cows usually can tolerate lower quality forages better than cows in other classes.

4) Consider limit feeding heifers – Penn State workers conducted several studies that looked at limit feeding a low forage, high concentrate diet to heifers, and have determined that this strategy can work well in certain management situations to save forage and promote heifer growth. The primary concern with this strategy is in overcrowded pens where heifers have unequal access to feed because of competition. Feeding more frequently can help. Close monitoring of heifer growth will help to ensure that this strategy is well-implemented.

5) Check your forage digestibilities – In many parts of the Northeast and eastern US, forage digestibilities were lower this year, which is most apparent in herds that experienced decreased milk yield following the change to a 2011 crop year silage. Unfortunately, not much can be done except to decrease the amount of forage fed and to feed a source of nonforage fiber (for example, soy hulls, citrus pulp, beet pulp, wheat midds), all of which have relatively high fiber digestibility and can help compensate for low digestibility forage.

6) Watch for molds, mycotoxins, spoilage yeasts, and abnormally fermented silages – Part of the variation this year that was associated with flooded crops, but also occurred in many areas that were not affected by flooding, were quality issues related to mold

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## FYI

■ Tom Overton is Associate Professor of Animal Science and Director, PRO-DAIRY at Cornell. Larry Chase is Professor of Animal Science at Cornell. Tom and Larry can be reached at [tro2@cornell.edu](mailto:tro2@cornell.edu) and [lec7@cornell.edu](mailto:lec7@cornell.edu), respectively.

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Health and Nutrition Conference on April 3 in Syracuse, NY and on April 5 in West Lebanon, NH. Speakers and topics include Dr. Nina Von Keyserlingk from the University of British Columbia on “Cow Comfort Assessment”, Dr. Heather Dann from Miner Institute

on “Fresh Cow Nutrition and Management”, Dr. Bill Weiss from The Ohio State University on “New Research in Macro- and Micro-mineral Nutrition”, and Dr. Trevor Devries from the University of Guelph on “New Concepts in Feeding Dairy Heifers”. Visit the PRO-DAIRY website at [www.ansci.cornell.edu/prodairy](http://www.ansci.cornell.edu/prodairy) or the NEAFA website at [www.northeastalliance.org](http://www.northeastalliance.org) for more information and registration information. □

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development, mycotoxins both in silages and grains, and abnormally fermented silages. As described in a separate article in this section, these can impact cow performance and health. We also anticipate that spoilage yeasts may also become an issue when silos start to warm up in the spring, which can contribute to milk fat issues.

7) Look for value buys in the ingredient marketplace – Much can be gained (and lost) through feed purchasing/contracting decisions. Software tools are now available to help identify which feeds are relatively better (or poorer) buys based upon their nutrient content and the value of these nutrients in the feed marketplace. These tools are not ration balancers, but they can help steer the discussion of which feeds to incorporate or to bring to the farm as separate commodities. One such tool is called Sesame, which was developed by Dr. Normand St. Pierre from The Ohio State University, and is available at [www.sesamesoft.com](http://www.sesamesoft.com). This program uses all available feeds in a given marketplace to calculate the value of energy

and nutrients (e.g., rumen degradable protein and digestible rumen undegradable protein) and then calculates predicted values of feeds for users to compare to actual market prices. If the predicted value is higher than the actual price, then the feed is a comparatively good buy. If the predicted value is lower than the actual price, then the feed is a relatively poor buy. Although the software program is available for purchase at the website above, we recommend that those interested in looking further at this consider subscribing, for a nominal fee, to a report of feed values by region that is compiled by Dr. Joanne Knapp from Fox Hollow Consulting. More information on this report is available at: [http://www.foxhollowllc.com/FHC/Feed\\_Prices.html](http://www.foxhollowllc.com/FHC/Feed_Prices.html)

In summary, 2012 is going to be a challenge for forage and nutrition programs for many herds, but there are strategies to work through them. Make sure to work with a nutritionist who can help sort through options and who also sees what is/is not working on other farms. Finally, be ready to go when it comes time to get the 2012 crops into the ground! □

Identifying and dealing with molds and mycotoxins in feeds  
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**How do molds and mycotoxins cause these problems?** There are 4 primary methods in ruminant animals. These are:

- Changes in nutrient content, absorption and metabolism of nutrients.
- Alteration of rumen microbial activity.
- Changes in endocrine/neuroendocrine function.
- Suppression of the immune system.

**What strategies can be used to lower the impact of molds and mycotoxins in dairy herds?** The following section assumes that other factors were checked and that molds and/or mycotoxins are still a suspected problem. Strategies include:

- Consider feeding less of the suspect feed. In some cases, it may be advisable to stop using this feed.
- Physically remove and discard any feeds with visible mold growth.
- If possible, don't use any of the suspect feed in rations for close-up dry cows or early lactation cows.
- Consider adding a mold inhibitor to the TMR (total mixed ration). These are usually acid-based preservatives. They will not decrease the molds or mycotoxins already present in the feed. However, they can slow or inhibit any additional mold growth from the time the feed is mixed until it is consumed.

■ Consider adding one of the commercial flow agents or feed additives that are marketed to help with mycotoxin problems.

- Data on their effectiveness is limited.
  - Many of these have only been tested against aflatoxin.
  - FDA does not approve the addition of these for mycotoxin control.
  - A large number of products are on the market.
  - It is difficult to predict which product will work in a specific situation – most, if not all, of them seem to work in at least some situations
  - You may need to try more than one product.
- If you do add a flow agent or other feed additive, feed it for 2 to 3 weeks. Changes in feed intake or manure consistency may be the first index that it is working.

**How to determine if I have mycotoxin contamination of feeds?**

- Most commercial forage testing laboratories have the capability to screen feeds for mycotoxins.
- Remember, hundreds of mycotoxins occur in nature, but most labs only screen for the most common ones.
- Be sure to follow the specific guidelines for sample collection and handling during shipping as improper handling of samples may give false results.
- For more information on sample collection and handling, consult your forage lab. General guidelines are available online at the PRO-DAIRY website: [www.ansci.cornell.edu/prodairy](http://www.ansci.cornell.edu/prodairy). Select “Feed Fact Sheets and Worksheets.” □