

THE MANAGER

FORAGE MANAGEMENT

By John Conway

Management strategies for forage shortage

Forage Supply Management is Becoming Dicey

It took something like the 2011 crop season to consolidate the many cow and crop factors that affect on-farm forage supplies. Cool, wet spring for all, mid-summer droughty conditions for many, and a couple of extensively damaging tropical storms for a wide swath of eastern and central New York, and points east. That shifted some intended grain acres back to forage on some farms, and left others simply short, without options to make up the shortfall. For many Northeast dairies, the tight forage supply may be as much from cow side factors, see Figure 1, as from growing season weather effects. Virtually everyone has experienced increased animal demand for forage. Some farmers have seen forage needs go through the roof due to management positively affecting most or all of the cow side factors. Generally that's a good problem, but a problem indeed, when neighborhood rental ground disappears or is bid into stratospheric values.

“Acute” Forage Shortfall Options

In response to tropical storms Irene and Lee, Figure 2 was developed to contrast options with

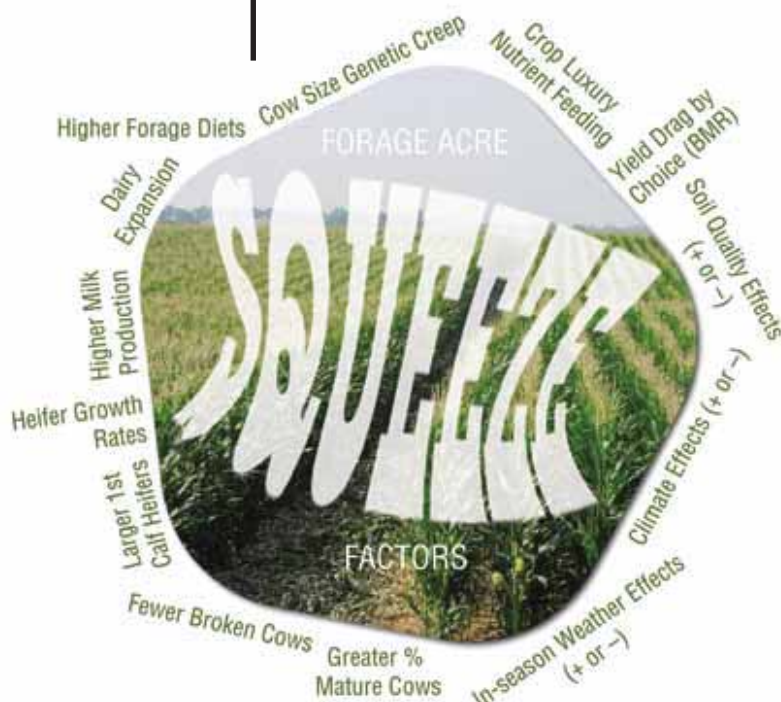
respective positives, negatives and uncertainties. While selling off some animals was viewed as a “nuclear option” in the past, forage available for sale was scant and prices rose dramatically, so saying goodbye to heifers out of the “bottom half” of cows got a second look.

Short-term “Tight” Forage Supply Options – Working with a skilled nutritionist

Your nutritionist can use dynamic modeling software to safely spare forage in diets by using low starch, highly digestible NDF by-product feeds such as soy hulls, citrus pulp, beet pulp, wheat midds and others. Whole cottonseed may also either spare forage or grain, depending on relative pricing, and which category your on-farm supply is short. Most by-product suppliers peg prices to corn and soybean meal, but when replacement forages are priced, production may be sustained at the same or lower ration costs. Even if the ration cost per hundredweight milk is slightly higher, the income over feed cost (IOFC) margin may still be favorable.

Short-Term “Tight” Forage Supply Options – Using Your “Cow Knowledge”

Imagine each cow with a sign that shows “today’s income over feed cost,” “percent of genetic potential after cumulative insults are accounted for,” “pregnancy status,” “age” and “days in milk.” The open or short-bred cow that has had three bouts of mastitis, a slug of post-fresh metabolic disorders, chronic lameness, is mid-lactation or later, is no longer a spring chicken and is returning less than \$1.50 IOFC, is easy to say goodbye to. Other cows can remove pressure from the forage supply without affecting net operating income by leaving an open stall. Many of the current years non-feed operating costs are already accrued, so the added daily charge to a cow



FYI

■ John Conway is a Senior Extension Associate with PRO-DAIRY. Reach him at 607-547-2536 ext. 237. Email: jfc6@cornell.edu

is inconsequential. Other non-feed operating costs do contribute to a daily per cow “overhead” expense, including her share of that day’s machinery and equipment run, fuel burnt, bedding soiled or labor. Best estimate I can find is about \$1.00 to \$1.25 per cow per day. Cows with routinely less than \$2.50 IOFC per day are candidates for culling, particularly if pregnancy status and accrued insults are also against her. Your nutritionist can help estimate ration costs per unit intake, and expected level of intake per incremental range in production, to identify cows with slim IOFC margins. Add what else you know about individuals on the list and significant forage may be spared. The “low IOFC margin” cow list is often longer than you imagine.

Minimizing Risk with Next Year’s Crops

In addition to employing Agronomic “Best Management Practices” with 2012 crops, there may still be time to minimize exposure to weather risk for corn silage acreage. While not a perfect match, savvy dairy producers in land-competitive neighborhoods use corn crop insurance to cover potential losses. NYSDAM’s crop insurance page is online at: <http://www.agriculture.ny.gov/AP/CropInsuranceSpecialty.html>. Under “Field Crops (Corn and Soybeans),” click on the link for “Video Interview: Dairy Field

Crops – David Wood.”

Adapting to Longer Term “Tight” Forage Supply Situations

If the term “whole farm budget” has you mentally running for the exit, you might be surprised at how much data you do have to “populate the spreadsheet.”

Farms with excellent cow comfort, top-notch management of at-risk close-up and transition cows, and well-grown first calf heifers, have time periods with no obvious broken cows to cull and springing heifers and cows that need a stall. If management practices and facilities are under control and if you expanded to the practical extent of your land-base, it may be time to hit the “rebalance” button. The whole-farm budget approach may be the only way to reconcile the most profitable mouths to feed from a limited acreage base. Different configurations of cow and heifer populations can get you to the same financial sweet spot. The same “what if” questions can also prepare you for what makes the most sense if you have back-to-back bumper crops and have inventory to mine. Lenders, independent financial consultants, FarmNet financial consultants and others have access to and experience with whole-farm budgeting software. They will also be able to tell you what kinds and quality of data you need for optimal solutions. □

Forage shortage and what to do about it
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Most of the corn last season yielded 12 to 20 tons/acre. The short season corn planted at high populations yielded 19.6 mean ton/acre and the sorghum yielded 19.3 tons/acre. Adding an additional 8 tons of silage/acre from the winter triticale gave us 27 total tons off of the same acreage in one year. Repeating it each year spreads the risk of one crop getting decimated, spreads the work load, and protects the soil on highly erodible land (HEL) land by providing a profitable forage cover crop. It also opened additional windows to spread manure from storage.

August Oats: When we reach the beginning of August after early short season corn or after failed hay stands, there is still an opportunity to grab some high yields of very high quality forage. Planting grain type oats at 4 to 5 bushels/acre at the beginning of August will yield 2 to 4 tons of dry matter at the end of September. This forage has tested at over 4,000 lbs of milk/ton – a very highly digestible energy and protein source. In our research, the yield and protein levels justified 12,000 gallons of manure/acre, immediately incorporated, to meet the nitrogen needs (low phosphorus soil test). Because of the lateness of the season and the very high yields, it will need to be tedded to drop the moisture to proper ensiling levels.

August Oats Plus: In the above research, we simultaneous planted 80 to 100 lbs of winter triticale with the oats. By harvesting the oats at greater than 3 inch cutting height, the winter triticale was able to re-grow before winter, and thus give us another early very high quality forage harvest the next spring.

Each of these crops can give a forage boost. They take some planning and effort but the reward of increased profitability from high (>60%) forage diets is well known. □

Cover Crops that Pay

For years, conservationists and agronomists have recommended cover crops to reduce soil erosion; conserve expensive fertilizer nutrients; significantly inhibit quackgrass, dandelions, and winter annuals; and more recently to improve soil structure for higher stable yields. They cajoled, pleaded, and outright paid farmers to grow cover crops. Many were thrown in so late that they had very little beneficial impact. With Winter Grain Forages that produce high yields of the highest forage quality possible in the Northeast, the paradigm has shifted dramatically. Many farmers found in the last wet spring that the winter forage ground was the only place they could go without getting stuck. Winter grain forage has 60% less available water than under bare soil. Any forage with a digestion rate of over 3.5% kd/hr is considered very good forage. Winter grain forages harvested at flag leaf stage, routinely have kd/hr digestion rates of 6 to 8+ after fermentation.

The three main winter grain forages are wheat, rye, and the newer triticale. For high quality forage, Dr. Cherney of Cornell University found the stage of harvest (flag leaf stage) is more important for forage quality than the species used. That said, most farmers prefer to use winter triticale. Wheat produces the least amount of forage but may be used simply because of seed availability. Rye is the traditional but application of any nitrogen over 50 lbs tends to make the crop go flat on the ground. Triticale is the only winter grain that has sustained breeding for high forage digestibility and yield in the Northeast. It is shorter than rye by at least a foot, but the higher tillering density produces yield that are 25 to 35% higher than rye without the lodging.