

SHRINK THE SHRINK

BY FELIX SORIANO

EVEN AS FEED PRICES DECLINE, THERE'S MONEY to be saved by managing on-farm inventories and limiting shrink losses.

Many dairy farmers try to cut feed costs without realizing how much money is wasted once the feed, protein mix or commodity shows up at the farm. Furthermore, lack of focus on proper silage management affects feed losses and adds even more to ration costs.

For example, current feed costs can run \$7-\$8 or more per cow per day. For a 1,000-cow herd, this represents about \$210,000/month for the lactating cows alone. Poor storage facilities and feeding management, and lack of feeding consistency, can create a 10%-15% feed shrink loss, representing more than \$31,000/month, or over \$380,000/year.

Determining the true cost of a feeding program starts with tracking feed inventories. If you're unable to measure

losses, you can't identify areas where the feeding program can be improved.

Although eliminating feed losses completely is not possible, both the farmer and feeder must focus on controlling and minimizing those losses. A well-planned feeding management system must be in place, and well-trained feeders must execute those plans.



Key control points

There are three main areas where the farmer, feeder and nutritionist should focus on to better manage feed inventories and minimize feed losses. They include:

1. Feed handling and storage
2. Mixing and feeding process
3. Feed bunk management

Feed handling and storage

Reducing feed losses by improving management practices during handling and storage can have a substantial economic impact.

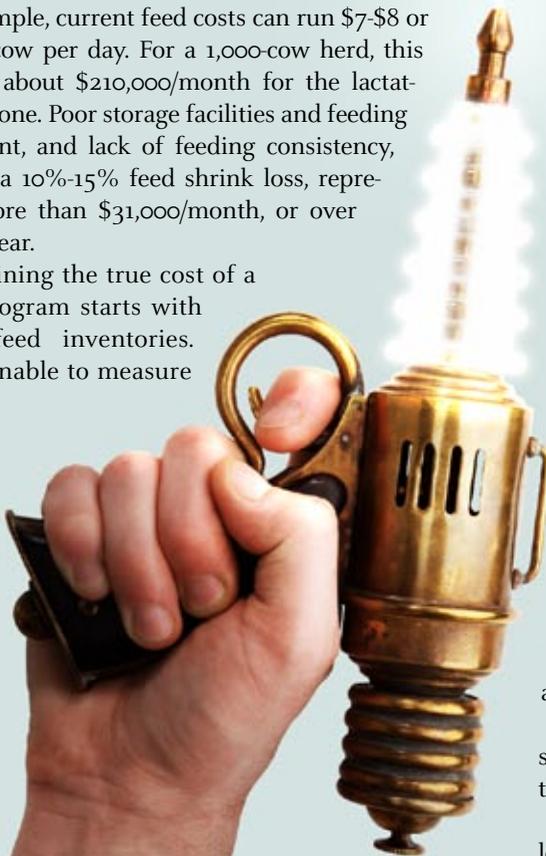
Proper handling begins by having a consistent routine when receiving forages and feed ingredients arrive at the dairy. I often see feed trucks making deliveries without anyone from the farm on site. Receiving includes not only overseeing feed placement and checking the invoice, but also verifying weights, and inspecting and sampling the feed. This will ensure both feed quality and safety, and give more accurate information on inventory control.

Collect samples of every load of feed or ingredient received, storing them for a reasonable period of time, depending on the ingredient and when it is used.

A scale to weigh all feed ingredients can be a valuable long-term investment, allowing you to verify receiving weights and address load discrepancies. It will also give you more accurate information to adjust inventory records and control shrink losses.

A similar process should be established for any silage and other forages grown and harvested at the farm.

Several factors related to storage facilities and feed and



ZACTRAN[®]

(gamithromycin)

150 mg/mL ANTIMICROBIAL

NADA 141-328, Approved by FDA

For subcutaneous injection in beef and non-lactating dairy cattle only. Not for use in female dairy cattle 20 months of age or older or in calves to be processed for veal.

Caution: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

READ ENTIRE BROCHURE CAREFULLY BEFORE USING THIS PRODUCT.

INDICATIONS

ZACTRAN is indicated for the treatment of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis* in beef and non-lactating dairy cattle. ZACTRAN is also indicated for the control of respiratory disease in beef and non-lactating dairy cattle at high risk of developing BRD associated with *Mannheimia haemolytica* and *Pasteurella multocida*.

CONTRAINDICATIONS

As with all drugs, the use of ZACTRAN is contraindicated in animals previously found to be hypersensitive to this drug.

WARNING: FOR USE IN CATTLE ONLY. NOT FOR USE IN HUMANS. KEEP THIS AND ALL DRUGS OUT OF REACH OF CHILDREN. NOT FOR USE IN CHICKENS OR TURKEYS.

The material safety data sheet (MSDS) contains more detailed occupational safety information. To report adverse effects, obtain an MSDS or for assistance, contact Merial at 1-888-637-4251.

RESIDUE WARNINGS: Do not treat cattle within 35 days of slaughter. Because a discard time in milk has not been established, do not use in female dairy cattle 20 months of age or older. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

PRECAUTIONS

The effects of ZACTRAN on bovine reproductive performance, pregnancy, and lactation have not been determined. Subcutaneous injection of ZACTRAN may cause a transient local tissue reaction in some cattle that may result in trim loss of edible tissues at slaughter.

ADVERSE REACTIONS

Transient animal discomfort and mild to moderate injection site swelling may be seen in cattle treated with ZACTRAN.

EFFECTIVENESS

The effectiveness of ZACTRAN for the treatment of BRD associated with *Mannheimia haemolytica*, *Pasteurella multocida* and *Histophilus somni* was demonstrated in a field study conducted at four geographic locations in the United States. A total of 497 cattle exhibiting clinical signs of BRD were enrolled in the study. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. Cattle were observed daily for clinical signs of BRD and were evaluated for clinical success on Day 10. The percentage of successes in cattle treated with ZACTRAN (58%) was statistically significantly higher ($p < 0.05$) than the percentage of successes in the cattle treated with saline (19%).

The effectiveness of ZACTRAN for the treatment of BRD associated with *M. bovis* was demonstrated independently at two U.S. study sites. A total of 502 cattle exhibiting clinical signs of BRD were enrolled in the studies. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. At each site, the percentage of successes in cattle treated with ZACTRAN on Day 10 was statistically significantly higher than the percentage of successes in the cattle treated with saline (74.4% vs. 24% [$p < 0.001$], and 67.4% vs. 46.2% [$p = 0.002$]). In addition, in the group of calves treated with gamithromycin that were confirmed positive for *M. bovis* (pre-treatment nasopharyngeal swabs), there were more calves at each site (45 of 57 calves, and 5 of 6 calves) classified as successes than as failures.

The effectiveness of ZACTRAN for the control of respiratory disease in cattle at high risk of developing BRD associated with *Mannheimia haemolytica* and *Pasteurella multocida* was demonstrated in two independent studies conducted in the United States. A total of 467 crossbred beef cattle at high risk of developing BRD were enrolled in the study. ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline was administered as a single subcutaneous injection within one day after arrival. Cattle were observed daily for clinical signs of BRD and were evaluated for clinical success on Day 10 post-treatment. In each of the two studies, the percentage of successes in the cattle treated with ZACTRAN (86% and 78%) was statistically significantly higher ($p = 0.0019$ and $p = 0.0016$) than the percentage of successes in the cattle treated with saline (36% and 58%).

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commodity handling impact shrink losses. These are typically related to weather, especially when using open commodity sheds, as well as the presence of rodents and birds. Attention to cleanliness and feed area organization are critical.

• Impact of different storage designs.

Much has been written about the advantages of storing ingredients in upright bins compared to open-sided commodity sheds, but flat storage systems are usually preferred for high inclusion-rate ingredients. Also, flat commodity bays are usually recommended for protein mixes with high levels of liquid fat or molasses.

However, other ingredients or feeds should be kept in upright bins, typically limiting shrink losses to 1%-2%, compared to 5%-15% with open-sided commodity bays.

• Silage storage and extraction.

Proper silage confection and face management reduce shrink losses. Silage extraction and face management training is critical. Also, weighing what goes in and out of each silage bunk or pile is the most accurate way of keeping good feed inventory.

Mixing and feeding process

Precision, consistency and attention to details are the keys to any successful feeding program. Improving loading accuracy and reducing variability during mixing and feeding will not only improve animal performance and health, but will also control costs.

Here are some suggestions to improve mixing uniformity and consistency:

- Use pre-blends of concentrates, mineral and vitamin packs and any other small-inclusion rate ingredients.
- Develop a mixing protocol, including mixing time and ingredient loading sequence. Monitor feeders to make sure they stick to those protocols.
- Test forage dry matter at least once per week, or more often if necessary. Make necessary adjustments according to forage moisture variations.
- Invest in feeding management software. This can help monitor feeding accuracy and consistency, control feed inventory and reduce shrink losses. This technology gives the manager and nutritionist the opportunity to work closely with employees, giving them better performance feedback. It can also be a great tool to develop incentive programs, or do employee performance appraisals.

5 steps for managing feed inventory and reducing feed losses

- 1. Establish a receiving and handling system/protocol.** With the help of your nutritionist and/or consultant, establish forage and ingredient receiving and handling protocols.
- 2. Establish a monitoring system.** Start measuring shrink by weighing forages and ingredients coming onto the dairy and going out in the mixer. Weigh refusals daily. Use a feeding management software program to help keep accurate inventories, monitor the feeder's performance and accuracy, and establish goals.
- 3. Develop standard operating procedures (SOPs) and job descriptions.** Establish and communicate the feeder's importance to the dairy. Develop SOPs to reduce variation among and within feeders.
- 4. Develop key performance indicators (KPIs) and goals.** Establish feeding process parameters that impact feed losses the most, identifying those directly affected by the feeder's performance. Examples may be loading accuracy, feed delivery accuracy, and shrink losses of key ingredients. Monitor KPI's daily (or at least weekly), sharing results and feedback with feeders.
- 5. Develop a training program.** Develop a feeder training program covering all main aspects of feed and forage quality assessment, feed handling and storage, feed inventories, the mixing and feeding process, feedbunk management and mixer maintenance.

- Periodically check mixer scales for accuracy.
- Monitor TMR uniformity.
- Periodically evaluate manure consistency.

Feed bunk management

By feeding cows more accurately, you can better control feed cost. Periodically update cow numbers in each pen, making the necessary adjustments to reduce feed refusals. Running 4%-5% refusals when feeding lactating cows is no longer an option. Reducing refusals to 1% -2% can have a significant impact in feed costs. Fresh cow pens may be the exception, since some nutritionists prefer to have a higher refusal rate, up to 3%, in these pens.

While some value will be retained by feeding refusals to heifers or low-producing cows, if your current feed refusals are 3% and your feed cost is \$8.50/cow/day, feed losses will be over \$93,000/year for a 1,000-cow herd. By keeping feed refusals at 1%, feed losses would represent about \$31,000.

Before adopting aggressive feed-bunk management goals, discuss them with your nutritionist and consultants.

Conclusions

To improve dairy margins, focus on the largest expense – feed. Some of the areas to evaluate:

1. Do an assessment on how ingredients are being handled from the time they arrive at the farm. Do you have SOPs in place? Is there room for improvement?
2. If you are currently storing expensive protein sources and concentrates in a commodity shed, calculate current losses and decide whether it could be profitable to invest in a few upright bins. If current losses are 4% or more, investing in a few bins will likely be worth it.
3. Develop mixing and feeding protocols to minimize within-batch and between-batch variations.
4. Spend time and money coaching, training and giving feedback to your feeders. If necessary, use con-

sultants or nutritionists who can speak their native language.

5. Use feeding management software to monitor and adjust your feeding process.
6. Closely monitor feedbunks and weigh refusals.

Research citations available upon request

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Hauler Bob Meendering (l) and DFA Member Rick Bousquet (r)

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