HOARD'S DAIRYMAN

by John Goeser and Damon Smith

Evaluate fungicide use by economic outcome

AFTER learning from High Plains Ponderosa Dairy's Greg Bethard over the past few years, his comment, "It's all about the cost of production" sticks with us. So much so that Goeser has the quote at the bottom of his daily to-do list.

Cutting costs is one way to clamp down on the cost of production per cow (or cost per hundredweight, cwt.) for most dairies. But cutting only goes so far, and sometimes it goes too far. In light of a new economic normal, where wild swings and variation in dairy margin (dollars per cwt.) have appeared to vanish, our focus now needs to shift toward identifying dairy business efficiency opportunities that lessen the cost per cwt. This is a very different concept from cutting costs.

In working with veterinarians, agronomists, and nutrition consultants from the East to West Coast (and abroad), we often find commonly unrecognized efficiency opportunities with farms. For example, unseen feed cleanliness and stability opportunities (invisible yeast or bacterial growth at feedout), suboptimal grain and starch digestibility, or as will be discussed here, plant health opportunities in the field that will greatly influence resulting quality.

Each of these examples impacts feed conversion to milk, thus indirectly impacting feed costs per cwt. Capturing these opportunities often requires some investment in labor or dollars. Don't shortchange your dairy business in the name of cutting costs because a 0.25-unit improvement in feed conversion corresponds to about $1 less in feed costs per cwt. These opportunities are out there and will help your bottom line.

Even before harvest

Plant health is an intriguing area that can influence forage quality. With growing fungal and disease pressure, the impact on forage crop yield and quality are becoming better understood. While yield is often perceived as an indicator of top production practices, we would argue quality and hygiene are nearly as important. Factors such as high planting populations and narrow row spacing can push yield while compromising feed quality and hygiene due to added stress on corn plants. Balancing plant stress with high yield may improve feed conversion efficiency. Some plant protection products, such as fungicides, can also improve hygiene when used at the right time and in the right system.

But farmer beware — fungicide protection is not uniform. There are a variety of fungicide options for forage crops. They can be used to reduce foliar fungal pressure, along with mitigating mycotoxins (for example, deoxynivalenol, commonly known as vomitoxin).

Fungicides come in various modes of action, and there are various choices depending on your goal. If you are trying to protect against a foliar disease, your choice might be different than if you are trying to reduce the levels of vomitoxin.

Spend some time determining what your goal is if you are going to use a fungicide. This can help you make an informed decision on what product to buy.

Success with a fungicide will also depend on the potential risk for a plant disease. Humid, warm conditions around tasseling will be more conducive for plant disease than hot, bone-dry conditions at the same growth stage.

Success with a fungicide might be more likely when conditions are wet, humid, and warm but not hot. Also, remember that fungicides are protectants. They don't add anything; they just keep fungi from negatively impacting the plant.

With that said, you should lower your expectation of what you will see with the products. They are not perfect, and 40 to 50 percent reductions in foliar disease or vomitoxin levels might be all you achieve with a well-timed application. Fungicide simply makes a bad situation less bad. Work with your crop consultant to understand the wide variation in fungicides available and how to maximize their return on investment.

Crop protection costs may be far back in your mind, as economic conditions have been tougher the past few years. However, we must focus on efficiency opportunities, plant health not excluded.

Investment dollars are harder to come by, but this is how crop protection, and fungicide in particular, can be thought of. And it may help to not think of the investment per acre, but rather on a per ton or per cow basis. The table below can help your farm break the costs down for a number of different yields by product cost and feed rate combinations.

The fungicide costs per cow (last column) pale in comparison to pretty much every other ingredient or additive potentially included in the diet. While the cost per cow can be low, remember that there are unforeseeable long-term costs. For example, repeated applications of fungicide can lead to plant fungal pathogens that are resistant to the fungicide you use. Practices such as rotating fungicide products and only spraying when the odds of a positive return on investment (ROI) are high can reduce some of these long-term costs.

Plant health matters

Using a University of Wisconsin-Madison decision support tool, intended to evaluate hybrid type versus milk yield cash flow (BMR [brown midrib] or conventional seed; available at on.hoards.com/decision-support), one can also better understand corn silage seed costs and economic impact thanks to how the tool presents farm level data. A 500-cow dairy, with today's corn silage production costs, has somewhere between $180,000 and $190,000 invested in corn silage.

This total value is not often discussed as it has incurred over the year; however, the dollars are real. But take a moment to consider this question: Would your farm purchase a tractor or piece of equipment of this value without ensuring you maintain and do what's necessary to keep it running cleanly? Probably not, and we shouldn't think any differently of our corn silage investment.

Recap these talking points with your crop adviser, nutritionist, and key stakeholders in discussions around efficiency opportunities. Crop protection may help both digestible yield per acre (total digestible nutrients, TDN) and help keep a major ingredient (corn silage) in most diets cleaner — both of which will benefit your bottom line by lowering your feed costs per cwt. and total cost of production.

Fungicide costs per ration inclusion

Fungicide type	Cost per acre	Yield (ton, 35% dry matter)	Cost per ton	Cost per pound (35% DM)	Corn silage intake per cow (35% DM)	Cost per cow
A	$25	20	$1.25	$0.0006	60	$0.0375
B	$35	20	$1.75	$0.0009	60	$0.0525
A	$25	30	$0.8333	$0.0004	60	$0.0250
B	$35	30	$1.1667	$0.0006	60	$0.0350
A	$25	20	$1.25	$0.0006	35	$0.0219
B	$35	20	$1.75	$0.0009	35	$0.0306
A	$25	30	$0.8333	$0.0004	35	$0.0146
B	$35	30	$1.1667	$0.0006	35	$0.0204

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