



# SHOULD YOU USE THAT FEED ADDITIVE?

Use these guidelines to decide.

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**S**HOULD I OR SHOULDN'T I? OVER THE LAST 12 months, you've probably been weighing the pros and cons of your ration ingredients, including feed additives.

Maybe you've made some cuts to your ration to save money or you're considering a change. Every ingredient in the ration should be scrutinized to make sure it's paying its way.

But cutting feed ingredients or additives is not necessarily always the best option. You may need to add something

to your ration to improve your profitability.

"We worry so much about wasting money on feed additives. But it's just as important to remember we might be losing out (financially) on a production response if we don't use an additive," says Mary Beth de Ondarza, nutritionist with Paradox Nutrition in West Chazy, N.Y.

For example, an additive might cost 10 cents per cow per day. If the additive doesn't work, you are only out 10 cents. On the flip side, if this same additive returns a profit of 39 cents per cow per day and you don't use it, you would lose out on 29 cents per cow per day, says de Ondarza.

There isn't an exact formula to evaluate whether a feed additive will work on your operation and provide a financial return. But there are a number of things that you can look at that will help you decide, and minimize the risk of a feed additive not working.

Here is a look at how to evaluate feed additives.

## Evaluate expected response

What performance change should you expect from the feed additive you are considering?

Feed additives can do a whole host of things, such as increase milk yield, raise milk components, improve dry matter intake, stimulate rumen microbial growth, increase digestion, stabilize rumen environment and pH, improve feed efficiency, minimize weight loss, reduce heat stress effects and/or improve health.

Based on the expected response, you have to decide if there is enough of a financial return.

## Learn how the additives works

It's important to understand the feed additive's mode of action.

Reputable companies will tell you how the product works in the cow, says de Ondarza. This is important because feed additives can have overlapping technologies. If you understand a feed additive's mode of action, you can reduce the possibility of overlap between additives.

Palatability is another concern with overlapping technologies. Some feed additives are not very palatable, says Matt Budine, independent nutritionist and chief executive officer of Progressive Dairy Solutions, Inc. in Oakdale, Calif. If you're duplicating technologies, and using a feed additive unnecessarily, you may be reducing intake, creating an unintentional negative effect.

## Beware of testimonials

Testimonials are not research.

Be very suspicious if a company just presents testimonials, says de Ondarza. "John Doe's cows were more healthy and vet bills were reduced when fed product x," does not tell you if the product really works.

Be wary of "On, Off trials." These are typically no better than testimonials, says de Ondarza. This information can appear to be a research trial with lots of numbers, impressive graphs and nice glossy print, but the information can't be trusted.

An "On, Off trial" will look at milk production when a

group of cows was on a particular feed additive and when they were off the feed additive. The reason you can't trust an "On, Off trial" is that you really don't know what else changed between the month when the cows were fed product "x" and the month when the additive was removed from the ration. Variables, such as weather changes and forage changes, can't be accounted for.

### Analyze the research

Check to see who conducted the research.

University research is the most unbiased, and typically published in peer-reviewed journals. On-farm research performed by a company is not as unbiased, but it can still be good research, says Mike Hutjens, dairy specialist at the University of Illinois.

Make sure the research was conducted on dairy cows. A lot of additives show a great response on swine or poultry, but the response has not been replicated in cows, notes Budine.

Examine the details of the research trial. The trial should be set up to have a fair comparison, which means that control and treatment cows are in the same barn, eating the same forages, under the same management, subject to the same environmental temperatures and received specified rations at the same time. The more cows per research study, the better.

Look for treatment groups that have been balanced — in terms of statistical mean and standard deviation — before the trial begins. Milk production, days in milk, lactation number, and expected milk production or ME<sub>305</sub>'s should be balanced in the groups before a study begins. Optimally, a study will have a really low standard deviation. Research studies that swap control and treatment groups mid-trial are good.

The particulars of a ration used in the research trial should be available. This is important because the response may have been artificial due to the lack of a well-balanced diet, notes Budine.

### Look at the "p-value"

P less than .05 is good, which means there is less than a 5 percent chance that the production difference between the two treatment groups occurred due to random events.

P less than .10 means that there is less than a 10 percent chance that the difference between the treatment groups was due to random events.

With P less than .10, you can't be entirely sure the change is really due to the feed additive in the diet, says de Ondarza.

### Look for repeatability

See if the additive responded the same way in other research trials.

Good companies will invest in many experiments, with many different feeding situations in multiple conditions, notes Hutjens.

If the additive performs consistently in a numbers of trials, you can be more confident that it will perform in your situation and you will have a good rate of return, says Budine.

### Which cows respond

Find out which cows respond to a particular feed additive. Is it just early-lactation cows or just the mature cows that responded? Find out if there is a particular time of year when the product will work better.

This knowledge is vital to target feed additives where you are going to get the greatest response. This also eliminates some of the slush factor that is encompassed by the industry rule-of-thumb that every dollar spent should return \$2 to cover non-responsive cows and field conditions that could reduce response, says de Ondarza. "Today's margins don't permit us to have slush factors. We need to know which cows will respond best and put the additive there."

### Watch out for the "me too" syndrome

Keep an eye out for products that pretend to be something they aren't.

It is important for research to be product-specific, since yeast products come in different strains, fat products and mycotoxin binders have different chemical structures, and bypass amino acids have different coating technologies.

One company's feed additive is not the same as another's, says Budine. Many producers fall prey to the "me too" syndrome, as product "x" may appear to be the same as product z, but cheaper. That does not mean it will work the same in the cow, provide the same results or return on investment.

### Look for a meta-analysis

A meta-analysis will give you a good idea if the feed additive will work on your farm.

A meta-analysis is a statistical analysis of a large number of studies conducted with an additive in different settings with different diets. Factors that affect feed additive response, such as stage of lactation and level of milk production, are identified.

### Decide if it works

Consider more than the bulk tank when deciding if an additive works or not. Look at milk components, body condition, reproduction, herd health profiles, hoof health and heifer growth charts.

Don't forget there is often a lag time. Some products can take several weeks to have an effect, while other responses are immediate.

You can't just throw an additive in, and two days later take it out, because you don't see the bulk tank come up, says de Ondarza.

It's also important to consider all of the factors that could affect response, so you can minimize the risk of not getting a positive response, says Budine. It's best to make one additive change at a time. 🐄