



ON FEED

A newsletter of Dakotaland Feeds

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A Difference You Can See

On occasion, we have opportunities to take producers to the Purina Research Farm near St. Louis, Missouri. The research done there translates to benefits on your farm for your livestock. We want to be confident that the products we offer are going to deliver what you need and expect and the research farm enables us to see the results before anything is implemented on your farm.

In a Nutshell:

- * **Research helps us answer questions before you feed it**
- * **Comparing one year to the next can be difficult**
- * **Purina is continually does research on beef cattle production**
- * **Repeatability and predictability are important to us**
- * **The ultimate test is the response of your cattle**
- * **Purina has the research behind the products**

Why do we need research? We need research so we can help determine the most successful course of action. **It helps us determine the answers to questions you might have before you start feeding your cattle.** When we do research, a very important part of it is making sure to control any variables that might influence the outcome. We want to make sure that IF there is a difference in two groups of cattle, it is because of the one thing that we did different, not because Joe fed Pen A and did a great job and Bob fed Pen B and did a terrible job. We also don't want to simply compare pasture 1 to pasture 2 because there may be natural differences in those pastures, and so we will also need pastures 3, 4, 5, and 6 so we can repeat it and make sure that something is working. In animal science, we generally use a value that gives us 95% confidence that a difference is because of the 'treatment' we applied.

In the 'real world' we often compare what we did last year to this year, which sometimes leads us to make erroneous conclusions. The year effect, especially with cattle, is a huge factor. Think about all of the things that differ from one year to the next: weather, rainfall, heat, forage availability, forage quality, silage quality, different herd bulls, number of calves from first calf heifers, weather at calving, weather at weaning, pen conditions, bunk space, maybe different feeding equipment, feeding time, or person feeding and list could go on and on. Yet, some would have you believe that a different result for you was solely product X that you tried this year and that you found the magic bullet.

At the Purina Animal Nutrition Farm, **research is ongoing on cattle all year long.** Researchers there are evaluating the effects of mineral nutrition on fetal programming, the influence of maternal nutrition on their offspring, the effect of intake modification on gain and feed efficiency, how to manage mineral intake through different formulations, managing supplementation on range, how to improve forage digestibility, and the interaction between reproduction and nutrition. Purina is the only major feed company in the US to have their own private research station. Other companies sponsor research at other facilities or do 'field trials' but no one has the same capability as Purina.

Some products have little to no research behind them. One fad that is difficult for me to comprehend is livestock vinegar. Vinegar is acetic acid. Acetic acid is also one the volatile fatty acids (VFAs) that the rumen produces in mass quantities. So why anyone would pay for a supplement that the rumen is already producing in large quantities, and that most of the time we are trying to reduce? If the rumen produces 1600 grams or more of acetic acid every day (Stewart et al, J Anim Sci), then adding another 7 grams to that (which is what you get with 4 oz of vinegar that is just under 6% acidity) is not going to make a difference of any measurable proportion. Save your money and put it toward your mineral and protein needs that we know make a difference in your herd.

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Something else that happens in the industry is that because compound X works this way, compound Y is similar to it and should work the same way. That is not always the case. There can be slight, but very significant and important differences that mean products don't perform the same as a 'similar' one. There are interactions between feed ingredients that can change the function of others from time to time. If you haven't done the research, you really don't know what is going to happen in the real world.

Repeatability and predictability are important factors too. Sometimes one study will show that a product had positive results, but when implemented in the field or even in another study, the results don't even come close. In order for studies and research to really be meaningful, they have to happen more than occasionally. They have to produce pretty consistent results. That doesn't mean that there will never be a case where a product doesn't work exactly like expected, but it does mean that those occasions will be very few and far between. One way to make sure that products work is to continually do research on them. Purina can do that at the research farm.

We can look at a million different possibilities and measure a million different factors, but at the end of the day, **the ultimate test of whether a product gets to you or not is whether it can influence animal performance.** If a product increases plasma X and liver X just like Availa-4 but it has no effect on animal performance, health, or reproduction, then it isn't worth implementing in your program. We can measure lots of things, but they have to equate to \$\$\$ in your pocket somehow. If we are going to make a recommendation, we want you to have return on that investment.

Purina has the research behind the products. We know that Availa-4 works for starting calves and breeding cows. We know that Diamond V Yeast Culture has significant benefits to the newborn calf when fed to the cow. We know that Ration Manager and Accuration products work to manage intake in free-choice feeding settings. If there were better quality products that performed consistently with a better return on investment for you, we would know (and we are always working on them).

Not everyone places importance on the performance of the products they buy. Some producers just want the price to be cheap. But **we consider product quality, product performance, and results as critical in our business.** We want to do the absolute best for you that we can. Relationships are also very important and our people get the training and have access to a knowledge base that can provide you with answers. One tagline Purina uses is "A Difference You Can See." If you would like to visit the research farm to see the difference for yourself, we would be glad to take you there sometime.

Roxanne Knock, PhD

What do you need to be thinking about this time of year?

- * Remember to **HEAT TAPE lines on liquid systems**- this keeps the line fluid.
- * Get prepared for calving- get chains, OB sleeves, lube, and calf puller in place and *colostrum replacement* on hand
- * Think about ramping up your mineral program for cows prior to calving, ask about **Ultimate Breeder 8**
- * Get Stress tubs for the first and second calf heifers before calving
- * Feed Rumensin to the cows to improve feed efficiency and to limit environmental coccidiosis prior to calving
- * Check with your Livestock Production Specialist to see if your ration is meeting the calves' needs
- * Check your water source and make sure it is not freezing up- poor water intake can limit performance
- * Set up a herd health plan for vaccinations, de-worming program, and treatment protocols with your veterinarian
- * Inventory your projected feed resources and project your winter feed needs so you can plan accordingly