

HOW TO ADD 1000 POUNDS... continued from front

The implication is dairy producers can enhance herd life through better early life nutrition. Dr. Kertz agrees.

Many dairy producers have used “20-20” milk replacers, offering calves 20% protein and 20% fat in their liquid feeding program. There seems to be no solid scientific evidence for that 20-20 mix other than it became

popular in the late 1970s and 1980s and it is what many milk replacer manufacturers have offered.

The research says calves need greater than 20% protein — otherwise ADG could be primarily fattening as opposed to desirable frame and muscle growth. Dr. Kertz recommends tossing the 20-20 feeding

approach and moving to something closer to 28-15. “I’d say 28% protein and 15% fat are about the optimal levels,” Dr. Kertz says.

Want more details? Agri-Basics has an expanded white paper available on this topic. Just call your local Agri-Basics nutritionist for a copy.

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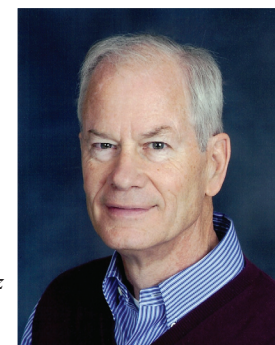
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HOW TO ADD 1000 POUNDS TO A COW’S FIRST LACTATION

Better Feeding Yields More Than Traditional Genetics – by Curt Harler



Dr. Al F. Kertz

The next time you see Mike Collins with his Supreme Milling cap on, quiz him on research that shows the value of doubling a calf’s birth weight in eight weeks. Collins, who also is General Manager of Agri-Basics, will point to sessions he has had with Dr. Al F. Kertz, nutrition expert in the dairy field technical service group of Milk Specialties Global Animal Nutrition. Dr. Kertz says savvy dairy producers can add 1000 pounds of milk to a cow’s first lactation if she is treated right as a calf.

Dr. Kertz, who works closely with Supreme Milling, recently reviewed literature on weight gain in calves and says researchers at Cornell and the University of Illinois have reached the conclusion that a key to added production is having a calf double its birth weight by two months of age.

“If they are weaned at 6 or 8 weeks of age, have a good milk replacer feeding program and a good free-choice texturized starter they easily can attain doubling their body weight, without undue fattening” Dr. Kertz asserts.

The Cornell study showed that, for every pound of average daily gain (ADG) above 0.5 lb/day prior to weaning, milk yield increased 940 pounds in first lactation. Boost a calf’s ADG and you can boost her future milk production. For the 450 animals with three lactations in Cornell’s study, the lifetime effect of enhanced ADG was 5,023 pounds of milk for every 2.2 pounds of daily ADG above 0.5 lb. prior to weaning.

“The Illinois data shows that calves can be weaned at six weeks, if you feed more moderate levels of higher protein milk replacer like 70 to 75 lbs. over the six weeks before full weaning,” Dr. Kertz says.

If you are a dairy producer who pores over genetic figures at night, consider this: While genetic selection effects between 150 and 300 pounds milk per year, calf nutrition and management can yield four to eight times more per lactation than genetic selection. That’s a lot of milk.

Forget Catching Up

Agri-Basics nutritionists will work closely with you to implement the program Dr. Kertz outlines. Forget about having the calf catch up later. You either do things right in those first eight weeks or you lose the 1000-pound gain.

This research dismisses some widely held beliefs about calves being able to “catch up” if they are slow starters

Dr. Kertz says the Illinois findings show that calves fed 2.0 to 2.5 pounds daily of dry powder gained more before weaning. “But in the weaning transition, they went down to one-half pound ADG and they ended up struggling for several weeks to catch up with the other animals not fed that much,” he says.

Weaning is stressful when added to other changes going on at the same time -- calves get moved into a new group, are introduced to forage, get vaccinated. Calves are stressed and immunity drops. That can lead to respiratory outbreaks.

“A calf with respiratory problems will do poorly all her life,” Dr. Kertz states. “Based on New York field data, she will average six months older as a first-calf heifer, she will have more calving difficulties, and she will be culled sooner.”

The key here is to minimize the number and degree of changes thrust upon the calf. The optimum weaning age, Dr. Kertz figures, is between six and eight weeks.

One strategy that works is to wean at six

weeks and keep the calf in her hutch or pen for two weeks post-weaning. This lets her take in more starter, develops the rumen further, and subjects her to less stress at one time. Weaning could be at eight weeks, of course. Dairy producers will object that this lengthens the calf’s stay with another 2 weeks post-weaning in the hutch and that more hutches will be required. That’s exactly why Dr. Kertz recommends weaning at six weeks.

“The calves are not too big for the hutch then and you’ll still have the ability to spread their changes over a couple of more weeks,” Dr. Kertz says. “If you have good texturized starter and water intakes, six weeks is a good time to go.”

Why It Works

Dr. Kertz says epigenetics (the study of heritable genetic changes caused by factors other than the underlying DNA) says there are things which impact which genes get turned on or off. This could explain the increased lactation and longer life expectancy of calves whose ADG is better.

There is also a relatively new concept called the “Lactocrine hypothesis.” Basically, it says that maternal programming is extended beyond the uterine environment through ingestion of milk-borne morphological factors. Milk, in this case, includes colostrum. Researchers (working with pigs) found that maternal Relaxin from milk stimulates development and differentiation of the uterus of the offspring by mediating the effect of estrogen on differentiation of stroma and epithelial cells and then proliferation.

While they are not yet ready to take it to the bank, the Cornell researchers also believe that feeding calves energy above maintenance actually sets the calf up to be a better lifetime milk producer. They also think “stayability” or herd life may be directly correlated to milk production.

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A JOB WHERE EDUCATION EVER ENDS

Dairy and beef producers are a smart group and it takes some doing to keep up with people whose livelihood depends on being aware of the latest profitable practices. When Curt Umble, Agri-Basics nutritionist in Landisville, PA (cumble@comcast.net) sits down at the table with a producer, he is backed by an amazing amount of continuing education and informal brainstorming.

Education and idea-sharing are the keys to providing top customer service, Umble says. Having an internal brain trust to tap makes his job easier and customer outcomes better. “We feel it is a big advantage to our producers to be able to work closely together, generate ideas, and share practices,” he continues. “It makes us, as Agri-Basics nutritionists, unique.”

Agri-Basics thrives on educational activities and related programs that are available to all nutritionist-associates on the team. The goal, says Mike Collins, general manager of Agri-Basics, is to enable nutritionists to advance their knowledge. Each year, Collins organizes four associates meetings concentrating on both dairy and beef topics. While the programs are heavy on nutritional information, they also include bankers, financial planners, agronomists and other professionals.

“We try to be on the cutting edge,” Umble says, noting that sessions with the money people can be of personal benefit to the

nutritionists as well as producers. It is not unusual for the speaker list to include experts from Wisconsin or Missouri, as well as Penn State, Cornell and Delaware.

Suppliers send their technical staff to the meetings to share best management practices and to keep the Agri-Basics nutritionists abreast of what is going on. Often they get early peeks at emerging trends.

“When a speaker leaves, we discuss – as a group -- what we heard and what we learned,” Umble explains. That information will be relayed to producers in the coming weeks. “It is so helpful to be able to do it together,” he adds. While one consultant might be strong in nutrition, another might focus on veterinary practices while a third is best at calf feeding. It results in a solid uplifting of the entire team.

Sometimes when Umble looks for information, he dials his cell phone to chat with fellow Agri-Basics nutritionists. The younger members of the team also get full benefit of the perspective of senior consultants, often absorbing an informal seminar as they ride along on farm visits. Meantime, Mike Collins updates the staff with a continual flow of emails on pricing, commodities, and program updates.

“Of course, we pound the Internet,” Umble says. “I get Feedstuffs, some like Hoard’s Dairyman, some look at Farmshine. And we all have contacts at Penn State, University of



Curt Umble,
Nutritionist

Delaware, Cornell and the associations we’ve joined.”

Education goes beyond in-house staff. Each year, Agri-Basics offers producers a seat at the Annual Beef Producers Meeting or at the Annual Dairy Producers Meeting. This year they will be held August 9 in Lancaster and December 8 in New Holland, respectively.

As every producer knows, it gets quite lonely when a big decision looms. “As independent consultants, we know the feeling, too,” Umble says. “There are so many times I’d have been hanging out there alone without help and backing from the team. It is so cool having this network that lets us relate together. The younger guys learn proven practices and the senior guys keep up to date on the latest. It’s a great program both for us and for our producers. Those formal and informal educational opportunities are key to helping us keep our producers on top of things.”

SUMMER STRATEGIES AGAINST MYCOTOXINS

Today would be a good day to walk some of those maturing corn fields and scout for possible mycotoxin problems. Early scouting as the crop matures and proper timing of the harvest are the two best things a farmer can do to assure mycotoxins-free silage for the herd.

“Get on top of harvest at the right time,” states Dr. Greg Roth, extension professor of agronomy at Penn State University. “Harvesting at maturity and assuring good fermentation will limit problems in the silo.” He admits that there are lots of real-world logistics that go into making that happen.

One counter-intuitive suggestion he makes in cool years is not to chop the first corn that is ready. “Think about using it for grain,” he says. “Harvest the later corn for decent silage.” This assumes that the farmer has been doing a good job of scouting for maturity, has a handle on where there is ear damage or possible mold development.

Sometimes, hybrids simply are ready earlier than the calendar says. If the corn is too dry going into the silo, fermentation will be slowed and mycotoxins can develop.

“If you create a situation where there is a long, extended dry-down period in the fall, you are prone to mycotoxins problems,” Roth says. That exposure is higher with high-moisture corn.

The classic recommendation is to look for the black layer at the base of the corn kernel to establish physiological maturity. “For high-moisture grain, the sweet spot is in the next 7 to 10 days,” Roth says. For field-dried corn, figure another two or three weeks.

“The problems (with mold) are most serious when the corn gets frosted before black layer,” Roth says. That happened in 2009 when, even after Thanksgiving, many growers had standing corn that ran 20-25 percent moisture. That provided perfect conditions for fungus to create mycotoxins and for feed to be contaminated.

This past year, the situation was the opposite. We had an excess of growing-degree days and corn everywhere was near 15 to 18 percent moisture by October 1. While there was little problem of mycotoxins forming from slow dry-down, another problem occurred. Corn

went into the silo so dry that the fermentation process was slowed markedly. That, too, gives mycotoxins a chance to form.

If you have fields that are traditionally prone to problems – for whatever reason -- consider harvesting them for shelled corn rather than putting it up as silage.

River bottom fields or fields with bird damage (or, worse, both) are prime candidates to scout for ear molds. If there is a problem, consider harvesting for shelled corn. Then, take your silage from other fields.

If you are blowing silage into a bunker, mold problems from one field might not be as acute. But if the corn silage from a problem field is being blown into an upright silo, there is a strong likelihood that there will be a layer, several feet thick, of mold-infected corn.

If you planted some earlier hybrids, keep in mind that they dry rapidly. Be sure to monitor moisture content, Roth says. Harvest when the corn is ready so you don’t get caught with moldy feed.

WHY THIS VET PRESCRIBES INDEPENDENT CONSULTANTS

By Mark Hill

Growers can count on self-employed consultants to bring the BEST of best management practices to the table.

“A self-employed consultant has a much better understanding of the ins and outs, highs and lows, and the stresses of operating their own business,” says Trent Lartz, DVM. As an AGRI-BASICS consultant based in Shippensburg, PA where he runs Mountain View Veterinary Services and Ridge View Animal Consulting, he knows first-hand the decisions an independent operator faces.



Trent Lartz, DVM

From the producer’s point of view, the greatest benefit Lartz sees to having an independent consultant serve a producer is that consultant’s freedom to utilize any product or any service available from virtually any company.

“Being a self-employed consultant allows me to have discussions with several different companies about similar products to determine which product is the best fit for each individual farm,” Lartz says. There is no one-size-fits-all approach when an advisor is able to choose product or medications from

any company on the globe. “A self-employed consultant can also offer services tailored to his or her specific knowledge area and expertise,” Lartz adds.

An independent consultant is beholden only to one boss: the producer who hired that consultant. There is no tie to a corporation that provides that representative with a weekly paycheck.

This is not to say that company representatives would deliberately give a producer bad or misleading information. Some company reps are pretty darn good at what they do, Lartz says. On the other hand, those company reps are not obliged to talk about issues that might not reflect kindly on their employer’s product line and it is a rare instance when they recommend a competitor’s product.

“A self-employed consultant truly works for the producer and not for some corporation,” Lartz confirms. With a vested interest in the profitability and success of the farm operation, and not some parent corporation, there is a higher level of accountability for the consultant, Lartz notes. “Self-employed consultants are able to suggest using any commodity or product available and not just those offered by a specific mill or company. So they make recommendations based on the best fit for the farm – not for the company or mill.”

On top of that, independent workers develop a business model that best fits the clientele in their home area...not some distant board of directors in New York or Minneapolis.

“It is in our best interest to offer the best possible advice for the subsequent success of

“A self-employed consultant truly works for the producer and not for some corporation. – Lartz”

the farm,” Lartz says. “The farmer, in turn, looks for the best advice to make the farm the most profitable, successful operation it can be. This interaction should place both on the same page when making decisions.”

All of this means that the self-employed consultant should do a better job educating a farmer, Lartz continues. Since the consultant’s suggestions and decisions are based solely on the success of an individual operation, an independent gets no benefit from a one-time, quick-profit sale.

Can an independent really be smarter than a company-backed advisor? Lartz notes that an independent gets regular education from any and all avenues possible.

AGRI-BASICS consultants often toss around ideas and share situations, both formally and informally. “It is great to have a group of self-employed consultants who work together and use each other’s expertise,” Lartz says.

“Being a self-employed consultant and veterinarian gives me the opportunity to work even more closely with the farmer. I can work on their udder health, reproductive management, vaccination programs, and nutritional programs. This helps to keep all aspects of production and health on the same page and to keep everything headed toward the same goals,” Lartz concludes.

Rain Splash - Keep an eye on Your Forage Ash Levels

Water, water everywhere...this Spring’s driving rains caused more soil splashing onto forage plants than normal. And it will make a difference when you analyze your forage quality, warns Penn State Forage Specialist Marvin Hall.

This splashed soil will cling to plants and will show up in the forage quality analysis as Ash. Forages high in ash content can skew forage energy and dry matter intake estimates, Hall says. The normal ash content of legume-grass forages is near 9.0% (DM basis). However in years with lots of rain forages can contain up to 18.0% ash. If a dairy producer feeds 25 pounds (DM basis) of forage containing 18.0% ash they would be feeding each cow nearly 2.5 pounds more soil

each day than normal.

There isn’t much that can be done about the soil or ash already on the plant, Hall concedes. However, you can take steps to minimize the soil that gets added during the hay making process. Here is what he recommends:

1. Keep the windrow off the ground: Starting with a wide swath and placing the cut forage onto dense stubble will eliminate harvesting a layer of soil on the bottom of windrows. Putting hay into a wide swath also increases drying rate. The windrow should be high enough so that it can be raked or merged without the rake touching the ground.
2. Keep rake tines from touching the ground:

This can be done if the forage is on top of stubble and the ground is level. Wheel rakes tend to incorporate more ash because they are ground-driven.

3. Minimize moving hay horizontally to reduce stones and other ash. It is better to move two swaths on top of a third in the middle rather than to rake all to one side.
4. Using a windrow merger rather than raking will result in less ash content since the windrow is picked up and moved horizontally by a conveyer rather than being rolled across the ground. Merging can result in one to two percent less ash in the hay or silage.