HISTORICAL TIDBITS: WHY THE TITLE “THE WILLIAM H. MINER AGRICULTURAL RESEARCH INSTITUTE”

William H. Miner created his charitable trust in 1923 to fund the Chazy Central School, the Plattsburgh Hospital, and an agricultural college that the Trustees would create when funds became available. The Trust declared:

Said College shall embody in its curriculum thorough courses in both practical and theoretical farming, and that instruction should be given in such subjects as dairying, animal husbandry, plant pathology, soils, agricultural chemistry…

Then the document added:
And…opportunities be given for experimental and research work in order that, in addition to training worthy young men and women in practical husbandry and farming, the school may serve to advance the science of agriculture.

Clearly, the Institute’s founder put education and demonstration in practical farming or agricultural education. So they chose as the Institute’s first President J. Rockefeller Prentice, a former member of Miner’s law firm, who pioneered the use of artificial insemination to improve the breed of dairy cattle and later founded the American Breeders Service. Time magazine called him, “the most imaginative of all animal researchers,… who brought to commercial perfection the technique of quick freezing …the semen of prize…bulls.” Prentice sought to make the Miner Institute a national center for genetic research.

 Actually, the research direction proved both appropriate and prophetic. Technology drove the work of Heart’s Delight Farm in William Miner’s day. But by the 1950s the technology had changed from machines to genes.

Forging institutional missions takes time. It took decades for the staff and faculty of the Miner Institute to find the right balance of research, education, and demonstration. Many colleges and universities treat these three goals as separate and unequal. At the Miner Institute, we see them as one and inseparable, like the States in our Union.

― Joseph Burke
Chairman of Miner Institute’s Board of Trustees
FROM THE PRESIDENT'S DESK – VACATION MUSINGS

Warning by the author: this article was written while on family vacation and contains little to no useful information.

As a mental diversion during a recent family vacation, I read two books that would ordinarily fall far outside my scope of reading. I hoped to glean some useful ideas that I could apply to my everyday focus on animal science.

I first read The Grand Design by physicist Stephen Hawking, which explains in lay terms the “theory of everything in the universe” known as M-Theory in modern physics. I admit that I barely grasped classical physics and apples falling from trees. And now it seems that modern quantum physics asserts that all possible alternative past and future histories represent actual, separate universes. For example, I might observe a ball flying through the air, but in a second universe the ball is already on the ground, while in another it was never thrown, and so on. I don’t pretend to understand the mathematics, but one potential application seemed obvious to me: If someone criticizes your farm management decisions, simply tell them to find another universe that better fits their biases and go there.

Admittedly, I failed at applying quantum physics to managing cattle.

So, the second book was one I borrowed from my high school-senior son on Introductory Metaphysics. I learned that metaphysics investigates the very nature of existence through intuition (deep thoughts essentially) with no reliance on empirical (observation and fact-based) science. I realized that I unwittingly adhere to metaphysical principles since I don’t like to let facts stand in the way of my favorite hypothesis or intuition of how something ought to work (for any serious scientists still reading this article – I’m kidding).

As with quantum physics, I didn’t deduce any obvious benefit of applying metaphysics down on the farm either.

At the end of the day, I had to admit to myself that I am simply an empirical scientist stuck in my one traditional universe. So, what can I do? I read the most recent issue of Journal of Dairy Science and was immediately comforted by the immense amount of useful knowledge that is being continually generated by fellow animal scientists. A scan of the table of contents revealed research on optimal pen management strategies for dry cows, effects of regrouping cows, essential oils as rumen modifiers, drinking water temperature and calf growth, amylase and starch digestion, and early weaning effects on immune system development (and these are just a few of the 54 papers published in just one month in one single journal!). At Miner Institute alone we reported 19 separate studies in dairy, agronomy, equine and environmental management in our most recent annual report. Increasingly, our challenge as researchers and educators will be to organize this deluge of new information into practical, accessible, on-farm tools that producers or agribusiness may use to enhance farm profitability, food safety, environmental stewardship, or animal welfare.

My take-home message from my vacation’s journey into modern physics: Perhaps one universe’s worth of cattle management research is enough!

— Rick Grant, grant@whminer.com

SAMPLING FORAGES DURING WET CONDITIONS

The impact that wet weather has on your silage dry matter content depends to a great extent on where it’s stored. Tower silos aren’t affected much at all; neither are silage bags as long as you do like many farmers do and fold a hunk of bag plastic over the feeding face.

At most risk are bunker and stack silos, which have a much larger feeding face, on most farms entirely open to the elements. The almost daily rains we’ve been having throughout much of Northern dairy country can really make it tough to weigh out the silage in TMRs.

Relying on a silage DM test during a dry spell (remember those?), and then mixing this silage by weight right after a big rain, can result in serious underfeeding of the silage. Of course that’s because you’re feeding a lot of rainwater with the silage, and the face of a bunker or stack silo can really absorb the “liquid sunshine.” In some cases, it would be better to feed heavily rained-on silage by volume rather than by weight: For instance, if you’ve been putting two front end loader buckets of corn silage into your TMR mixer (and know how much this has been weighing), you may be better off to feed two buckets of rained-on corn silage without paying attention to how much it weighs.
INTRODUCTION OF FREESTALL HOUSING ALTERS HEIFER BEHAVIOR

Following weaning, the series of housing that dairy heifers experience is one of the greatest challenges that they face in route to joining the milk herd. At Miner Institute, heifers will shift from having resting space provided in a hutch, to a bedded pack, to freestalls. The last change is the most difficult.

A Norwegian survey of stall refusal found that an average of 6% of cows refused to use a freestall, however the range across enrolled farms was from 0 to 55%. Similarly, the feeding barrier changes from individual buckets to a post-and-rail barrier to headlocks as heifer transition from the weaning phase of their development to the breeding phase. Successful adaption to each new barrier is a must as there is no alternative means to access feed. Despite the importance of the successful transition from one housing environment to the next, there is little research detailing the behavioral changes that occur during adaption. Understanding these changes is the first step to establishing what changes are the most problematic and developing management practices that will minimize them.

A recent study published in the Journal of Dairy Science from the University of British Columbia investigated the respective changes to resting and feeding behaviors when heifers were introduced to freestalls and headlocks. Secondarily, these researchers quantified the effect that one aspect of stall design, the neck rail, would have on usage when introduced. Freestalls included in the study were 2.6 ft wide (center-to-center) and 5.9 ft long, cleaned once daily, and bedded with clean sawdust weekly. Unrestricted access to fescue grass hay and 2.3 kg/heifer per day of concentrate was provided initially via a diagonally slanted feeding barrier 9.8 in wide; the response to freestalls was quantified, then headlocks (13.8 in wide). The effect of the neck rail was tested by comparing the lying behavior in the presence or absence of a neck rail.

The transition to freestalls lying time per day decreased to 11.3 hours from an average of 14.2 hours/day in the bedded pack. Lying times increased to 13.6 hours/day in the freestall housing. On the day of freestall introduction, heifers spent 2.5 hours lying in the alleyways, a behavior that was not observed in the bedded pack. Over the course of the experiment, lying in the alley decreased to 1.5 hours. The lost lying time on the day of transition was spent standing, ideally in the feed alley. Feeding time (6 hours/day) was unaffected by the transition to freestall housing. On the other hand, the shift in feed barrier decreased feeding times by 30 min without affecting lying or standing behavior. Feeding time eventually increased to 5.9 hours in the headlocks, which was not different from the diagonally slanted barrier. The presence or absence of the neck rail had little effect on stall usage. Time spent lying in a freestall or standing in the alley was the same with either neck rail scenario. Standing with two feet in the stall was the one aspect of stall usage altered by the neck rail. In its presence, there was a two-fold increase in this behavior.

Overall, the results of these experiments suggest that, in general, heifers readily adapt to the various housing conditions to which they are exposed. However, some individual heifers did quite poorly when introduced in spite of the quick return to the mean time budget established in the original housing conditions. This indicates the importance of closely monitoring heifers when introducing new housing features (freestalls, headlocks, etc.) to ensure that all have sufficient access to resources.

— Peter Krawczel
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Although this question may seem inherently simple, studies have shown that the answer may not be as obvious as you think. And considering the resurgence of the local food movement, it’s a concept worth investigating.

Michael S. Hand and Stephen Martinez explored this issue in an article entitled “Just What Does Local Mean?” in the 2010 1st Quarter issue of Choices magazine. Choices is an online peer-reviewed magazine published by the Agricultural & Applied Economics Association (AAEA) and explores issues related to the policy and management of agriculture, the food industry, natural resources, rural communities, and the environment. The authors point out that although there are arguments being made for the localization of the food supply, it would be beneficial to consider the diversity of opinions of what constitutes a local product. Not only do people differ in their opinions, but individuals may also have different definitions contingent on the specific product, as shown in a 2003 survey by Wilkins, Bowdish, and Sobal. Although they questioned only 120 people, the survey resulted in 140 unique responses to an open-ended question of the definition of local food. Therefore, before too many investments in policy and infrastructure are made, it would be valuable to understand what local food means to consumers as well as the motivations behind their preference for it, as these often inform their opinion.

The New American Oxford Dictionary’s 2007 word of the year was “locavore,” which is defined as a person who attempts to eat food grown or produced within a 100-mile radius. However, this is just one of many definitions, though it does utilize one of the more common criteria, distance. Yet within just this one criterion there are a variety of opinions. These opinions may be based on preference as well as one’s availability to certain products. The State of Vermont considers a 30-mile radius to be the definition of local food, Wal-Mart defines local as coming from within a state’s borders, and the U.S. Congress defined local in the 2008 Food, Conservation, and Energy Act as within 400 miles or within the state in which it was produced.

Considering this diversity of definitions, as a consumer in Chazy, NY, could I consider a product from the Lake George, NY area that is approximately 100 miles away to be a local product and not produce from a farmer 10 to 15 miles away just across the border in Vermont? The answer would lie in my motivations for choosing to eat local products. Are my motivations based on freshness and quality, desire to stimulate the local/state economy or to support small farms, knowledge of the producer’s farming practices (i.e. animal welfare), or to decrease my ecological footprint? A 2009 article in The New York Times illustrated the fact that people base their opinions of local food on much more than geography. The article posed the question of whether potato chips produced by a large corporation and sold in the same area where the potatoes were grown and processed could be considered local food. The overwhelming majority of local food advocates and online readers responded that they would not consider the potato chips local food. The respondents appear to have multiple reasons for consuming local food that rely less on geography and more on some of the previously stated motivations.

Understanding the variety of definitions of local food is necessary in order to help shape the programs and policies that have begun cropping up. Without this knowledge, it will be difficult to determine whether the investments are meeting the consumer demands and in turn, benefiting the producers. To learn more about some of the federal programs promoting local food, you can visit the USDA website under the Know Your Farmer, Know Your Food program (http://www.usda.gov/knowyourfarmer).

— Laura Klaiber
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*References:

FOOD FROM THE FARM

On Saturday, March 19, nearly 200 people gathered in Plattsburgh to enjoy a delicious meal prepared with local foods from Northern NY’s Clinton and Essex Counties. The event, “Food from the Farm: Eating Local in Clinton County,” was put on by Cornell Cooperative Extension in conjunction with Adirondack Harvest.

Local chef and owner of The Great Adirondack Soup Company, Chris Dominianni prepared a meal that featured local meat, produce, fruit preserves, and maple syrup.
MANAGING GRASS FOR SILAGE

If you applied nitrogen or manure to your grass fields last month they should be starting to look thick and lush. The profitability of your grass crop will be determined by your harvest management in the coming few weeks: Grass harvested in the boot stage (no heads emerged) is “high group” cow feed, with very digestible fiber. Grass harvested after heading is “low group” and “heifer” feed since grass digestibility plummets after heading. (“When you see the head, the quality is dead.”) Some grass species—orchardgrass, for instance—decline in quality faster than others (Have I mentioned lately that I hate orchardgrass?), but none hold quality very well after heading.

The last half of May is prime time to harvest grass in most of the Northeast. Our practice at Miner Institute has been to harvest first cut grass as fast as possible once it reaches the boot stage, ensiling the entire crop. We continue to harvest grass until our alfalfa is in the late bud stage, at which time we stop grass harvest and start alfalfa-grass, beginning with the stands that have the greatest percentage of grass. We have enough acres of grass that we seldom get all of it harvested before it’s time to harvest alfalfa, so our grass silage tends to be either very good, or not so hot (for milk cows, at least). However, this late-cut grass, stored in a separate silo, works just fine in our heifer ration; fed right it’s just the ticket to prevent them from getting fat.

Mowing height: Unlike alfalfa, the nutrients for the next cut of grass are stored in the bottom few inches of the above-ground portion of the plant, so leave about 4” of stubble. If you’ve been “shaving” fields to 2” stubble height with your disc mowing-conditioner you may be amazed at how the combination of early harvest and a 4” stubble height makes the second cut really take off.

Post-harvest management: Second cut grass needs N for maximum yield and quality, but at lower application rates than first cut because yields are almost always lower. Commercial N is quick to apply—I prefer about 50 lbs of actual N as UAN or a 50:50 blend of urea and ammonium sulfate — but manure is a good option and by the time first cut is finished many manure storages are full — at least! The recommended application rate depends on the nutrient content of the manure, and to a great extent that’s determined by solids content. Rates have to be very heavy indeed to “smother” grass; I can’t remember ever seeing this happen. The sooner you apply the manure the better. And as long as you apply manure to your grass fields once each year there’s little chance you’ll need to apply P or K fertilizer for the life of the stand. Manure application will make it difficult if not impossible to produce low-potassium grass for prefresh cows, so you might designate a field or two for these animals and use commercial N instead of manure on this land. If you apply N fertilizer instead of manure, second cut is almost always lower in potassium than in first cut. And the potassium in dry hay is less bio-available to cows than it is in silage, so if you’re going to bale any cutting, make it the second cut and do a forage analysis (wet chemistry, not NIR) to see if it’s suitable for prefresh cows.

— Ev Thomas
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THE SHRINKING COOPERATIVE EXTENSION SYSTEM

Severe cuts in federal, state and county funding are having drastic impacts on Cooperative Extension programs, locally, regionally and nationally. Late action by the N.Y. State Legislature saved a number of valuable statewide agricultural programs including Pro Dairy and the Integrated Pest Management Program, but a number of county programs are hurting.

One county Extension Association moved its offices into the basement of a church to save on rent. Last year the N.Y. Extension system lost 18% of its staff, and it’s unlikely that this will be the end of staff reductions. In the past Cooperative Extension has been resilient in finding more efficient ways to operate including multi-county staffing arrangements (including a regional dairy and field crops team for Northeastern NY that’s in the formative stage), but you can only cut so much before the impact becomes too great to continue “business as usual.”

New York Cooperative Extension isn’t alone; the situation may even be worse in Pennsylvania, facing a 52% reduction in funding to the state university system—including Extension programs. Farm groups are fighting the Keystone State cuts and there’s some hope for at least a partial restoration of funds, but as of late April the proposed cuts were still in place. While the impacts of reduced financing will differ from state to state and county to county, in the years ahead Cooperative Extension will almost certainly have a reduced impact on agriculture. And that is truly sad.

— E.T.
WHAT'S HAPPENING ON THE FARM

We enjoy meeting the farmers, nutritionists, and dairy industry professionals that visit our farm. As we show people around the facility and discuss different management strategies, there are a few questions that people almost always ask. One of those is about our hoof care and footbath protocol. Currently we are running a footbath twice a week for all three milkings; the cows go through the footbath six times a week. We alternate weekly between copper sulfate and tetracycline hydrochloride in the footbath.

The footbath used to be set up at the beginning of the sort gate/chute and the cows often balked at entering a narrow gate and stepping into a tub of water. Last year we moved it to the end of the chute and now cow flow through the footbath is much easier and faster. Running the footbath doesn’t slow down milking like it used to. At least once each milking, manure is scraped out of the alley. This helps keep the cows’ hooves a little cleaner, hopefully making the footbath more effective. Depending on cow numbers, 300-325 cows pass through the footbath and at the end of milking it gets dumped out and rinsed off.

The footbath we’re using now is 50” wide x 80” long and is filled with about 4.5” of water. It takes up the entire width of the chute so the cows have to step through it – no squeezing by on the edge. Also, it is long enough that sometimes the cows step into the solution twice. We put about 80 gallons of water in the footbath along with 22-24 lbs of copper sulfate or 1.1-1.2 lbs. of tetracycline.

On the ZinPro website (zinpro.com) in the dairy section, there is a page about footbaths – it has some good suggestions and gives the calculations for determining the concentration of the product in the footbath. Currently we are running a copper sulfate footbath with a concentration of 3.6-3.7%...a little lower than recommended.

We still do have some hairy heel warts that are dealt with during maintenance trimming or when the wart is affecting the animal’s gait. Below are a few pictures from last week when our hoof trimmer, Kris Kalvaitis, took care of a large wart.

— Anna Pape, pape@whminer.com

OLD SPREADER IS "LIKE NEW" NEW AGAIN

Before purchasing a brand new manure spreader, you might want to consider whether you can replace the tank and make do with a “like new” manure spreader. Miner Institute recently did just that with an 11-year-old Houle spreader.

In November 2000, Miner Institute purchased a Houle 4500-gallon manure spreader for $13,500. This spring, Jake Ashline, our crops supervisor, started pricing out new spreaders to replace the old one. What he found, not surprisingly, was that prices had gone up astronomically. He contacted the Houle dealer, who informed him that it’s possible to replace only the tank, and that it works well. Jake made the decision to replace just the tank, which saved considerable money.

Continued on Page 7
MANAGING HAY CROP FORAGE DCAD WITH CHLORIDE FERTILIZATION: ANOTHER OPTION?

Producing forage with an ideal dietary cation-anion difference (DCAD) for dry cows can be a challenge. For dry cows, DCAD values less <0 mEq/kg are desirable, with –50 to –120 mEq/kg considered ‘ideal’. Charbonneau et al. (2006) reported that lowering DCAD from +300 mEq/kg to 0 mEq/kg reduced the predicted risk for clinical milk fever from 16.4 to 3.2%.

There are three basic approaches to manage DCAD: i) Establish dedicated low fertility fields (low soil test K) for dry cow forage production where manure is not applied, ii) Adjust ration DCAD with minerals, and iii) Fertilize forages with chloride. Many dairy farms use a combination of the first and second approaches. Dedicating acres to dry cow forage production makes sense, but depending on your storage set up, it may not be practical to separate fields unless you bag all of your haylage. At the Institute, we use a mix of bags and bunkers and separate dry cow haylage from lactating haylage. However, since our dry cow feed comes from a range of fields, DCAD levels vary and we must add minerals to lower DCAD. In the ideal world, a farm would have sufficient low K fields to produce the needed dry cow forage and the ability to store and feed all of it separately.

Although less common, chloride application can also effectively lower DCAD levels. Research at Miner Institute previously demonstrated that a one-time application of 50 lb/acre of chloride (as urea calcium chloride) to reed canarygrass reduced DCAD levels by 45% for first cutting (Thomas et al., 1998). Last year we tested whether a one-time addition of 70 lb/acre of chloride (as liquid calcium chloride) could effectively reduce DCAD of both alfalfa-grass and grass over a wide range of soil fertility. Three replicate plots were established on grass and alfalfa-grass fields at each of four sites. Chloride was applied at green-up following first cut harvest. Plots were harvested near the third week of June 2010 (second cut) and again near the end of July (third cut). Chloride addition nearly doubled the Cl content of the forage and significantly reduced DCAD (see figure). Results were similar for the next cutting and there were no negative impacts on yield or other forage quality measures. Results suggest that chloride fertilization is a good option for managing DCAD. While mineral addition to the ration seems easier, fertilizing forages in the field may produce more palatable feed. In addition, work is needed on the economics of fertilizing forages with chloride versus ration supplementation. Stay tuned.

— Eric Young, Katie Ballard, Suren Mishra, and Ev Thomas

SPREADER, Continued from Page 6

Because the tires, rims and undercarriage of the old spreader were all still in excellent shape, replacing only the tank made good economic sense. “You have to look at the spreader you have to decide if it’s worth it,” Jake said.

Jake and his crew repainted the undercarriage and tongue of the spreader as well as the rims. A team of three was able to carry out the tank switch in just over an hour, Jake estimated. They used a loader to lift the old tank off the spreader body and then lower the new tank down. The old tank was sold for scrap iron. “Everything was just like it was meant to be. It fit just like a glove,” Jake said, adding that all the bolts lined up perfectly.

— Rachel Dutil
CORN PLANTING DATE

Due to miserable April weather farmers are understandably worried (or at least more worried than normal) about getting their corn planted on time. But as we’ve said before, as recently as in last month’s Farm Report, it’s not when you start planting corn, it’s when you finish. Depending on how much corn you have to plant, when it’s time to plant corn you should get after it instead of trying to get forages seeded. I think you stand to lose more by planting corn after June 1 than by delaying forage seedings until after corn planting is done. There’s no way to prove this since every season and every farm is different, but we’ve made successful seedings at Miner Institute even when they were considerably delayed. Although April is best, we’ve had success seeding alfalfa-grass every month from April through mid-August. I’d be much more concerned about late planting of small grains, since late-planted cereal crops are more susceptible to foliar diseases. The same with cereal-pea mixtures, never one of my favorite crops to begin with. June-planted field peas are not destined for greatness.

That said, I’m sure that someone reading this will drill in oats or cereal-peas in June and get a decent crop, but before you inform me of the error of my ways remember that just as the blind squirrel occasionally finds an acorn, sometimes weather conditions break in just such a way to make things turn out OK that normally have no business in doing so. That’s why a Clinton County dairy farmer who is almost certainly reading this article (you know who are, Joe) got away for a while with using 2,4-D for weed control in his alfalfa seedlings, and why a Franklin County dairy farmer got a fine stand of alfalfa after seeding it with sudan-sorghum that he let get chest-high before harvest.

— E.T.
ARE HIGH GRAIN PRICES TEMPORARY OR PERMANENT?

The good news is that milk prices have been increasing and in 2011 will average well above 2010 levels. The bad news (for dairy farmers) is that feed prices have been heading in the same direction, though at a much faster pace. We can get stirred up about high fertilizer prices — discussed elsewhere in this issue — but compared to feed prices fertilizer is a rather modest part of dairy farm operating costs. As we’ve noted before, $8 corn and $15 soybeans almost certainly will not become normal, but when grain prices do decline they’re unlikely to return to the levels farmers have been accustomed to.

The reasons for high grain prices are both short- and long-term: First, supplies are at extremely low levels: The world’s grain “cupboard” is almost bare — historically so. The response to this short-term problem (supply) will be increased acreage planted to grain crops. But the long-term problem is demand: Increased demand for food and feed grains—which to some extent are interchangeable—because of an ever-growing world population, and because as people become even slightly more affluent they want to eat more meat. It’s less efficient to produce a pound of meat by feeding grain than by eating the grain itself, but the vegan lifestyle appeals to only a tiny portion of the world population. A veggie burger may be a “PETA person’s” ideal meal but not to folks in developing countries. So, more folks will be consuming more meat, and probably more dairy products, too. That explains why 50% of the world’s hog population is in China.

Given this scenario, the profitability of the dairy industry will increasingly depend on its ability to make cows convert forages into milk, with somewhat reduced dependence on grains. “Feeding grain with a snow shovel” will be an increasingly poor road to profitability. And the higher the forage quality, the more forage a cow can consume and therefore the less grain she’ll need. This has always been true, but changes here in the U.S. and globally will make forage quality even more important in 2011 and in the years beyond. With more farmers becoming aware of this, this is a really fine time to be an agronomist!

— E.T.

FERTILIZER PRICES WILL REMAIN HIGH

While fertilizer prices for anhydrous ammonia are stabilizing, higher wholesale prices for fertilizers in general are working their way into retail markets. Don’t expect much of a price drop as the summer progresses.

Anhydrous ammonia is expensive enough — about $800 per ton—that urea is being recommended as a replacement even with urea at $600 per ton. Urea prices decreased quite a bit late this winter due to an oversupply on international markets but are still high compared to previous years. Diammonium phosphate (DAP) is very expensive — as are all phosphates — and retail prices may reach $800 this summer. Muriate of potash is very expensive at $800. DAP and potash are about $300 per ton higher than they were at this time last year. Farmers using anhydrous ammonia may be faced with the sobering fact that every fertilizer ingredient they buy — ammonia, DAP, potash — will cost about $800 per ton. This is when a “nice round figure” may be round but isn’t very nice at all.

Costs per pound of plant nutrient base on the above prices: Anhydrous ammonia $0.49, urea $0.65, DAP $0.63, potash $0.67. At these prices fertilizing corn with 30-60-60 in the starter (300 lbs 10-20-20) plus 200 lbs of urea would cost almost $120 per acre. (Note: We still prefer MAP— monoammonium phosphate — to DAP as a corn starter.)

— E.T.

CRITTER NEWS

• In Belarus, Russia, a wounded fox shot a hunter when the man tried to finish it off with the butt of his rifle. According to an official investigating the incident, the fox “fiercely resisted” and in the tussle accidentally pulled the trigger with its paw. (Accidentally?) The fox then made its escape while the hunter was hospitalized with a leg wound.

• In Morecambe, England, a pet rat named No Name took a lit cigarette butt into his cage and started a fire that resulted in a visit from the fire department. No Name’s owner Nelly Banks commented: “I don’t know what he thought he was doing, it was about 3 am and I woke up and there was smoke everywhere." The rat escaped through the open door to his cage and was unharmed by the fire.
HOARD’S DAIRYMAN WEBINAR SERIES: FINE TUNING YOUR FEEDING STRATEGY

Hoard’s Dairyman holds a webinar series every second Monday of the month from 1 to 2 p.m. EST (noon CST). Thanks to Heather, Dr. Dann, for suggesting the April webinar for our Advanced Dairy Management class since I was responsible for the lecture that day; not that she doesn’t trust me, or maybe it was because a fellow Illini was presenting. Dr. Mike Hutjens was the honored presenter and his power point was entitled “Fine Tuning your Feeding Strategy.” The presentation was excellent and the sidebar discussions were very entertaining, but that is usually the case with Dr. Hutjens. Here are a few of the take home points that were presented:

- The Hutjens rule of ration formulation: 50:35:15
  50% forage
  35% concentrate as cereal, protein, and mineral
  15% swing, either forage, concentrate, or NFSS (non-forage fiber source)

Depending on forage quality and supply, deciding on the swing ingredient becomes a comparison of nutrient value and price. Forage is preferred based on price, rumen health, and nutrient cycling on farm as opposed to importing more P.

- Value of corn silage relative to cornmeal prices. Given the current cornmeal prices, how valuable is corn silage? What once was a simple factor of 8X the price per bushel of corn is now about 10X considering increased fuel, fertilizer, harvest, inoculant and shrink costs. Almost like the housing market, real or temporary?

- Rumensin. 300 mg of Rumensin per cow per day seems to be the norm, but 450 mg is actually where intake and milk are maximized.

- Fecal starch should be less than 4.5% of dry matter. Above that level indicates the need to review amount of starch, kernel particle size, and endosperm type in the ration.

- Feed additives with best return on investment:
  - Rumensin
  - Silage inoculants
  - Organic trace minerals

The webinars are easy to access online. The website below provides archived presentations.

http://www.hoards.com/webinars

— Kurt Cotanch
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DAIRY NUTRITION 2011 SHORTCOURSE

June 13 - 16, 2011 at Miner Institute

Course Topics:

- Forage crops in dairy nutrition
- Silage fermentation and roles for additives
- Rumen function/microbial ecology
- Dry matter intake and feed efficiency
- Carbohydrate fermentation and nutrition
- Fats and fatty acids in dairy nutrition
- Protein and amino acid nutrition
- Forage analysis: chemical composition, digestibility, and fermentation analysis
- Mineral and vitamin nutrition
- Nutrition and nutrient management
- Behavioral considerations for cows
- Calf and heifer nutrition
- Transition cow biology, nutrition, and diagnostics
- Herd practical evaluations
  - Cow-level assessment
  - Rumen function assessment
  - Forage and grain sampling and assessment
  - TMR management
  - Farm level evaluation approaches

Registration Information

The $500 registration fee includes all course materials, breaks, and lunches. Dinner is also included on Monday and Wednesday. Registrations will be accepted until capacity is reached (70).

Visit http://www.ansci.cornell.edu/dm/dncourse/registration.html to register online.

For questions on lodging or registration, contact:
Heather Howland at (607) 255-4478
or email hh96@cornell.edu
Specifically our neighbors to the northwest, in Ontario. I recently wrote an article for an Ontario-based feed company’s newsletter and asked my contact there whether I should use English or metric units. Here’s the answer I received:

• For milk production the Ontario dairy industry uses the metric system, and milk production on their DHI records is in kilograms per cow. But when the milk goes to the processor it’s shipped in liters.

• Forage crops and feed grains are in metric tonnes, but Ontarians still buy and sell land by the acre. Therefore, crop yields are expressed in metric tonnes per acre! (Try to find that one in your English-metric conversion table.)

• For chop length and most other linear measurements they use both centimeters and inches, though inches are more common down on the farm. But for barn and silo dimensions Ontario only uses feet and inches since the building trades have never made the switch. But what the heck, the metric system was introduced in Canada a mere 41 years ago…wouldn’t want to rush things, eh?

Quebec, many of whose Francophone residents were eager to abandon anything English, has fully embraced the metric system, but in the rest of Canada it’s been a bit of a slog. Mathematical conversions from English to metric can be confusing, which contributed to the incident in 1983 when Flight 143, an Air Canada 767 jumbo jet, ran out of fuel at 26,000 feet about halfway through its flight from Montreal to Edmonton. Not even close, due to what turned out to be errors in calculating the required fuel load. The flight crew thought they had 23,000 kilograms of fuel, but they had 23,000 pounds. (Oops, my bad.) The pilots may not have been able to do math conversions but they sure knew how to fly and glided the plane to a safe landing in Gimli, Manitoba, (population ~5000) which is why the incident will go down in aviation history as the “Gimli Glider.” Fortunately the captain was an experienced glider pilot, though he probably never dreamed that he’d have to calculate the glide path for a 132-ton jumbo jet. Injuries among the 61 passengers were few and minor, and weren’t from the landing but from exiting the rear of the plane via the rear slides. However, following the landing (which blew out two tires and collapsed the front landing gear) and the “slide to freedom” there were a number of passenger requests for access to their luggage due to a sudden need for a change of certain items of clothing.

The Captain of the jet was demoted for six months, and the first officer suspended for two weeks. They appealed these decisions and were soon reinstated to flight duty. Not long after that the captain and first officer found themselves assigned to another Air Canada flight. In an ironic postscript, they soon realized that they were going to fly the same plane they’d landed at Gimli. They joked that they were not looking forward to a repeat performance, but just after takeoff they were horrified to be blasted with the low fuel warning sound! But this time it was just a false alarm and they continued safely to their destination.

— E.T.

Can you look at a forage field and come fairly close to estimating what the yield will be? Probably not, especially with grass that’s been fertilized with nitrogen and alfalfa fields that are on their way out but not yet ready for the plow. It’s a lot easier to get some idea after you mow the field by looking at the size of the windrows. After applying N to first-cut grass or grass-alfalfa stands, farmers have told me that they were amazed at the size of the windrows compared to the height of the crop. That’s because much of the yield increase was due to a thicker stand. But in the Northeastern U.S., with its many and varied soil types, often several within the same field, the yield at one end of a field may be much different than it is at the other end.

That’s why you need some quantitative measure of yield. The ideal is a set of truck scales, being seen on an increasing number of dairy farms, but if not scales at least some system to count and record the number of forage truck or self-unloading wagon loads from each field. From long experience at Miner Institute we know that measuring crop yields is sometimes a humbling endeavor, especially for second and third cuts in a dry year, but it’s better to make crop management decisions based on facts rather than on guesses.
Closing Comment

There are two theories about arguing with women.
Neither one works.

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