

William H. Miner Agricultural Research Institute FARM REPORT



Chazy, New York 12921

(518) 846-7121

<http://www.whminer.com>

January 2004

VET CORNER

The December herd health visit to the Institute was preceded by the annual NYSCHAP review meeting with Regional State Veterinarian, Dr. Don Russell. Miner Institute has made excellent progress by following the game plan to eliminate Johne's infection from its dairy herd.

- * Maternity area sanitation has been followed meticulously.
- * Calves are immediately removed to individual hutches to avoid exposure to pathogens carried by the dam.
- * Colostrum from test positive cows is discarded and not fed to calves.
- * Milking herd feed refusals are fed to the steers and do not infect replacement heifers.

With these strict control measures being followed so successfully, the herd is an excellent candidate to aim at Johne's Free Status. For the Miner Institute herd with its long-term time horizon, a need for cattle with no underly-

(Continued on page 2)



In December our Board of Trustees assembled for their annual budget meeting at Miner Institute. One of the highlights of the meeting was a tour of the new dairy barn in the process of construction. Pictured in the new milking parlor you will see Kirk Beattie, Finance and Personnel Officer; Dick Eakins and Bernard Leerkes, Trustees; Roger Forrence, Vice Chairman-Board of Trustees; Ev Thomas, Vice President-Agricultural Programs; Marco Turco, Farm Manager; Dr. Joseph Burke, Chairman-Board of Trustees; Dr. Ann Willey, Rocky Giroux, and Roger Forrence, Trustees; and Dr. Rick Grant, President.

NORTH COUNTRY CORN CONGRESS THURSDAY, MARCH 4TH

- | | |
|-------|---|
| 10:00 | Commercial exhibits |
| 11:00 | Introductions, program announcements. |
| 11:15 | Making the most of fiber digestibility—Rick Grant, Miner Institute |
| 11:45 | Insect control in corn—Elson Shields, Cornell University |
| 12:15 | Lunch, view commercial exhibits |
| 1:15 | Corn hybrids for silage: What we're learning—Ev Thomas, Miner Institute |
| 1:45 | Insect control in alfalfa—Elson Shields, Cornell University |
| 2:15 | Corn silage research update—Ev Thomas, Miner Institute |
| 2:45 | Door prize drawings |

**Pesticide Recertification credits (NY and VT)
and Certified Crop Advisor credits will be available.**

(Continued from page 1)

ing problems to conduct proper research trials, and an interest in marketing superior registered stock, complete elimination of Johne's is a proper goal.

Johne's Free status may not be appropriate for many commercial Northeastern dairy farms, but there is certainly economic significance to preventing exposure of your valuable cattle. Since there is no treatment, Johne's is considered a test and cull disease. The costs associated with Johne's Disease are premature culling and increased replacement costs, decreased milk production, decreased salvage value at slaughter, and the costs of testing and added management to control infection. According to the Vermont Cattle Health Improvement Program, **\$235 per cow** is the estimated economic loss per cow in a herd when 10% of the culled cattle in the herd have clinical signs of Johne's Disease. The Vermont program admits that the financial support of the state program does not come close to covering the entire cost of testing a state average-sized dairy of 115 milking cows. The financial rewards are 3 to 8 years off in the future, so it will be hard to visualize and monitor the economic benefits of a Johne's control program. Still, dairy farms with a time horizon over 4 years and which raise their own replacements should discuss state-supported programs with their herd health veterinarian.

Kent E Henderson, DVM
cowdoc@adelphia.net

FARM REPORT SUBSCRIPTION NOTES

- ✍ Thanks to all of you who returned the reader survey forms. We received a number of good suggestions. The next subscription update won't be for another two years.
- ✍ Our reader survey suggests that about half of our readers don't know the primary source of Miner Institute's income. The Miner Foundation is the major source of Miner Institute's revenue, as it has been for fifty years, providing about **70%** of our income, with **18%** from farm operations and the remaining **12%** split between research grants and miscellaneous income.
- ✍ Contact Wanda at emerich@whminer.com if you'd like to change from the "snail mail" copy of the *Farm Report* to the email version. We'll send you a monthly email telling you that the new *Farm Report* has been posted on our (soon to be new-and-improved) website. We save in printing and mailing costs; you receive the on-line newsletter a few days earlier and the photos are in color.



CORN WEED CONTROL ALTERNATIVES AND COSTS

One of the best field crops publications is the *Cornell Guide for Integrated Field Crop Management*. This used to be the *Cornell Recommends for Field Crops* before the university lawyers apparently realized the potential liability of Cornell actually recommending a particular crop variety or pest control alternative.

One of the few things the *Cornell Guide* lacks is the per-acre cost for the various pesticide recommendations. Including these costs would be almost impossible because of changes in pesticide prices, sales programs, regional pricing, etc. However, the price differences between the various corn herbicide programs are considerable and well worth some window shopping on your part.

From a price standpoint alone, Roundup Ready corn programs are worth a look. If you take a final alfalfa or grass harvest the fall before you rotate the field into corn, you can plow after harvest, plant Roundup Ready corn the following spring and, after corn and weed emergence, use any of several Roundup or glyphosate products. Last year we used Roundup WeatherMax at 22 oz/acre plus a quart of Prowl and a quart of atrazine; including the spray additives, total herbicide cost was only \$20 per acre. Even with the extra cost of Roundup Ready seed, that's pretty cheap weed control, and our first-year corn fields were practically weed-free.

I don't like to spend \$40 and more per acre for weed control in corn, but that's the price with 44 oz/acre of Roundup WeatherMax before plowing followed by one of several postemergence herbicide combinations. Last year wet weather prevented our applying preemergence herbicides to first year no till corn (Roundup applied Oct. 2002), and instead of less than \$10/acre for atrazine + simazine, it cost over \$20/acre for postemergence herbicides.

Ev Thomas
thomas@whminer.com



SNIFFEN NEWS

Charlie and Judy Sniffen have finally settled in at their New Hampshire home. Judy has been decorating and volunteering, while Charlie has been busy developing his consulting businesses—you didn't actually think that he was going to retire, did you? Charlie learned that things have changed, however, when one evening he arrived home two hours late for dinner. Charlie: "Is my dinner still warm?" Judy: "It should be—it's in the dog."

Friends wanting to contact Charlie may do so by writing him at P.O. Box 546, Holderness, NH 03245.

FORAGE LAB: MIDI-SILO RESEARCH

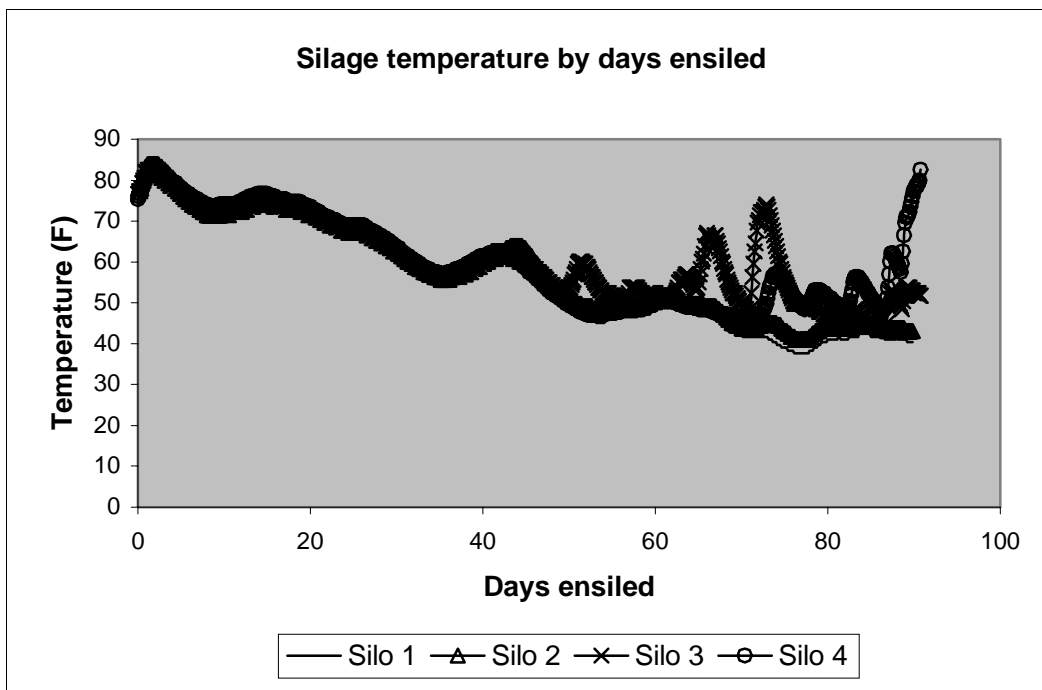
Our most recent forage quality research involved looking at the effects of DM on the fermentation characteristics of chopped corn for silage in our midi-silo system. The midi-silos are 4' tall x 3' diameter concrete culverts, planted in the ground on end and fitted with concrete floor with drainage to a collection bucket. This is an attempt to simulate upright silos. We have 12 of them, allowing us to replicate treatments and providing enough volume that we actually have enough sample to analyze both well fermented forage and spoilage. I must say we have made some nice silage in these things.

For this trial our intent was to ensile corn for silage at 3 moisture levels (28%, 35% and 42% DM) in order to collect effluent from the silo drains and document spoilage, nutrient retention, VFA and pH levels. This allowed for replication of 4 silos with the same %DM corn. We held constant the pounds of DM in each silo by taking DM at filling and then packing the same pounds of DM in the same volume of silo. Packing was done the old fashioned way: by foot. So far no mechanized system has provided adequate speed, ease or silage density as our bouncing on

the balls of our feet.

We allowed the fermentation process 90 days from ensiling before we emptied them out for sampling and analysis. Ninety days from mid-September put us in mid-December, which was quite cold and snowy. I hope the research team earned some respect from the farm crew for weathering the elements while literally cutting chunks of frozen silage

There was no difference in the corn going into the silos within each % DM condition. There was 1 bad silo within each of the 28%, 35% and 42% DM conditions. Recalling our previous runs with these midi-silos, we always had a bad silo or 2 but attributed it as a fluke of that trial. Looking at the temperature data for each silo that was continuously measured with imbedded ther-

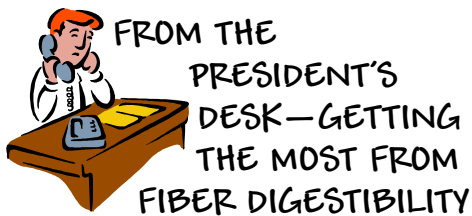


mometers, the bad silos all had unexplained spikes in temperature at 70-90 days post ensiling. Days 1-70 all looked good as temps rose slightly in the first few days and then cooled down to ambient temperature, 50°F by 60 days. However, the bad silos showed drastic temperature rises

after day 70 post-ensiling to near 90°F (see figure above of silos 1-4, noting silos 3 & 4 temperature rise after day 70). There were no perturbations, no disruptions, and no air or water leaks of any kind that we could find. We have yet to run the complete nutrient and VFA analyses on all of the samples. For now, we have no good explanation as to why random silos, with the same forage and ensiling conditions, just go nuts.

out of our concrete tubes with an ax. No need to research the effects of wind chill on the north facing side of an upright silo. Once we hacked our way to the center of the silos, we generally found good feed; in fact, most of it was very good feed. Packing density was about 11 lbs of DM per cubic foot. There was about 6" of spoilage on the top and a little around the edge and bottom by the drainage pipe—all to be expected. What was not expected was the totally random bad silo. Within each DM treatment, there was at least 1 out of the 4 silos that just stunk.

Kurt Cotanch
cotanch@whminer.com



Ev recently let me know that he has scheduled me to be the first speaker at Corn Congress this winter so that the attendees wouldn't miss anything very important if they happened to show up late for the meeting. I can't blame him because it's the same reasoning we used when we scheduled him to be first at Dairy Day in December (although we told him he was first because he was so important). Over the past few weeks I've been thinking about the topic I will present at Corn Congress, and it will focus on why we sometimes fail to capture a performance response from feeding high digestibility forages on-farm. Two phone calls I had from farmers the past two weeks dealt directly with this issue.

The first farmer (from New York) had planted what was supposed to be a higher NDF digestibility corn hybrid and had been feeding it since Thanksgiving. When he switched to the new corn silage the cows didn't respond in milk; actually, they dropped a few pounds. When he called me, his question was—is this a “slump” that's usually associated with new corn silage that hasn't steeped long enough? Because it was over two months since ensiling, that probably wasn't the answer. I suggested that the farmer send in a sample for measurement of NDF digestibility to determine if the crop really was higher in digestibility than the previously fed corn silage. When the analyses arrived from the forage testing lab, the supposedly higher NDF digestibility corn hybrid actually had a fiber digestibility that was slightly lower than the corn hybrid this farmer had been feeding previously. The take-home message is obvious—always test your forage crops for NDF digestibility and never assume that a crop marketed as a high-NDF digestibility crop will actually turn out that way on your

farm. In most cases it will, but there are always factors such as growing conditions, harvesting, and ensiling conditions (and frankly some factors and interactions that researchers don't understand yet) that can *influence the specific nutrient content and digestibility of any given hybrid on your farm.*

The second farmer (from Nebraska) had also planted a higher NDF digestibility hybrid and when he substituted this hybrid for his previous corn hybrid, milk production didn't change. He had already sent in samples for analyses, including NDF digestibility, and I asked him to call me back when he received the results. In this case, the new corn silage actually was higher (by 6 percentage units) in 48-h NDF digestibility than the previous corn silage he had been feeding. So, why no milk response? Here, we get directly to some of the points I want to develop at Corn Congress. First, recent research shows clearly that stage of lactation (or level of milk production) can greatly influence how cows respond to increased NDF digestibility. For instance, high producing cows respond better to higher NDF digestibility corn silage than lower producing cows, particularly when the hybrids are substituted on an NDF basis (i.e. diets have the same NDF content) rather than simply on a dry matter basis (i.e. direct substitution, pound for pound). So, if the silage is fed to a mixed group of cows in all stages of lactation, the positive

response to the hybrid may be diluted out by lower producing cows who simply don't respond. Clearly, feeding strategy also plays a role in determining cow response. Any strategy that compromises feed intake or predisposes the cow to acidosis will limit or erase the benefit of higher NDF digestibility. Also, some higher digestibility corn silages (particularly brown midrib) require higher forage content in the ration (~60%) for optimal milk response. Another key factor which researchers are in the midst of evaluating is how corn grain digestibility interacts with fiber digestibility for a given corn hybrid. We must always remember that the milk response to corn silage reflects both the grain and the stover digestibility. In this farmer's case, the apparent problem was a cow grouping and feeding strategy issue. He separated the early lactation cows and observed a milk response because 1) the lower producing cows no longer diluted the response, and 2) there was less competition for feed with the new grouping strategy.

The bottom line here is that successfully ensiling a higher NDF digestibility crop is only part of the solution. The final step is to ensure that your cows are managed properly and the ration is formulated so that the cows can respond to the greater NDF digestibility in the forage.

Rick Grant
grant@whminer.com

SULFUR—A CORRECTION PLUS SOME NEW INFO

In the December article titled “Sulfur for Corn Production,” milk/acre for the ammonium sulfate treatment was 22,770 lbs, not 20,770. As stated in the comments section, ammonium sulfate fertilizer resulted in significant increases in both milk/ton and milk/acre.

The EPA recently announced new measures aimed at dramatically reducing sulfur dioxide emissions. Sulfur dioxide emissions have already been reduced considerably, but over the next 10 years or so, the goal is to reduce emissions by another 5.6 million tons. What this means in the long run is that farmers will get even less sulfur in precipitation and will therefore need to supply more as a fertilizer. It's not much of a stretch to think that in the next decade or so, sulfur may become the fourth “major” nutrient along with N, P, and K.



WHAT'S HAPPENING ON THE FARM

What a conclusion! The sky cried snow, sleet and rain for days as 2003 came to its end. Slivers of awesome sunrises, glimpses of the full moon, all tantalizing, allegorical whispers of what may be. On the Miner Institute's dairy farm we've had moments of humor, instances of upset, and a collective sigh of relief. The last days of a year on a farm are always like this—a mixed-up time when it seems even the animals are waiting for something to happen.

The NYSCHAP meeting went off well. Our farm is now on the "Johne's Test Negative" program. We had our last clinically diagnosed Johne's cow shipped off. According to our vet, Dr. Kent Henderson, it's rather odd that Vermont is willing to certify a herd as being Johne's free, but New York is not. It seems, according to state vet comments, that New York is worried about the possibility of liability. Being certified Johne's free would be a wonderful selling point for breeders. Bovine Leucosis remains an issue—there is a noticeable lack of direction on what to do about this, other than not to feed colostrum from BL+ animals to calves. But, what else can be done without getting extreme and embarking on a debilitating culling path? A few Staph animals were spoken about—separate them into a group or cull them?

Production remained erratic, from the high 60s to the mid 70s. Snow in the forages, ice in the TMR and cows became 'loose' with a seesawing of intakes and refusals. One problem that has been of concern was the increased incidence of retained placentas and metritis. Our nutrition advisor, John Couture, has re-looked at the close-up rations and increased both the levels of Vitamin E and selenium (though we do give a Mu-Se shot when pregnant animals are moved from far dry to close ups). This high occurrence of uterus problems will no doubt have a longer-term effect on our pregnancy rates, days to first conception, and eventually days in milk. Talking about days in milk (DIM), we are rather pleased with having reduced our DIM to 173. Although aiming for the 160 goal, it does not happen overnight and has been quite a slog to get to this point. The somatic cell count (SCC) is hovering at a monthly reading of 100,000—not low enough to be sure, but on the right track. It can be a challenge achieving and maintaining low SCC when going from a 3X milking to a 2X milking schedule, but with heightened attention to keeping stalls clean and well-groomed, adding fresh bedding three times per week, and a tight adherence to milking protocols, it is attainable.

Deep snowdrifts and an electric fence are simply not mutualistic. The steers escaped! Roundup occurred, of course in the dark, accompanied by pouring rain. If you cannot see sublime humor in these events then farming may not really be in your best interest. The steers are now lan-

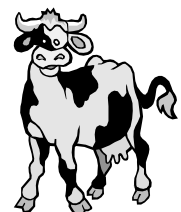
guishing in the disused side of the greenhouse in what is starting to resemble an undercover feedlot. Until the absurd amount of snow arrived they were doing rather well outdoors. They did not seem unduly bothered by the weather, though we did notice an increase in intakes—both food and water—to account for the higher energy demands needed to produce body heat. I suppose it's all about structure and process, the ecology of dairy farming.

The calf hutches for a time looked more like Inuit igloos than calf housing. We measured the temperature inside the deeply straw bedded hutches: A balmy 54 degrees! Calves kept outdoors (with hutches) will often eat snow—not because they are thirsty or hungry but because they are inquisitive infants. My well-fed baby daughter tries to eat the brightly colored walls in her bedroom, for goodness sake. When the calves insist on devouring snow, the inevitable loose manure results. There is little you can do, though we noticed that enticing them with a little good quality alfalfa helps, as does giving them a feeding of warm beef broth, mixed with baking soda, salt and kapectin.

We have restarted the effective management of compost from our equine bedding, used shavings, waste straw, and spoiled silage. Designated rows, a well-drained, well-maintained spot far removed from any waterways or secondary source points is resulting in high-quality production of much-needed agricultural organic matter. Compost piles are a great place to store used biomass, reduce carcasses, and work for improved nutrient cycling. While the biosustainable benefits of having viable compost heaps is undisputed, they do require a certain level of almost daily management. Growing another hill in the Adirondacks or Green Mountains does not qualify as an economical or environmentally sound compost heap.

A new year lies ahead. Much has happened in 2003, both positive and negative here and elsewhere. On the farm there has been tremendous personal growth in the staff that milk the cows, care for the animals, feed and cultivate our crops. It has been interesting to watch the changes in people, the dynamics of employees, how they relate to one another, how they deal with problems both mechanistic and personal. Without doubt the dairy operation's greatest asset, its most valuable component, is the people who, through all kinds of weather, on every day of the year, keep it running; without them the ethos of the Miner Institute would not exist.

Marco Turco
turco@whminer.com



NEED PESTICIDE RECERTIFICATION OR CCA CREDITS?

Once again Miner Institute will offer several opportunities to earn NY and Vermont Pesticide Recertification credits and Certified Crop Advisor (CCA) Continuing Education Units. All meetings will be in the auditorium at Miner Institute at the corner of the Ridge Rd. and NY Rte. 191.

Weed Control in Field Crops—Several area custom pesticide applicators will join Ev to discuss what they consider to be the most serious weed problems and what herbicides have been working best for them. **Tues., Feb. 17th, 1:00-3:00 pm. 2 Credit Hours.**

Insect Control in Field Crops—Ev will discuss the current insect pest situation, the effectiveness of biological controls, and changes in insecticide recommendations. **Wed., Feb. 25th, 1:00-3:00 pm. 2 Credit Hours.**

Corn Congress—Elson Shields, Cornell University entomologist, will discuss insect control in corn, including how the new seed treatments compare with soil insecticides for cost and effectiveness. **Thurs., March 4th, 11 am-3:00 pm. 1 Credit Hour for Pesticide Recertification, 2 Certified Crop Advisor CEU.**

Credit hours and CEU are subject to change since they haven't yet been approved, but we've submitted the required paperwork and don't anticipate any problems.

The top 10 agrochemical corporations control 84% of the \$30 billion agrochemical market; the top 10 veterinary pharmaceutical companies control 60% of the \$13.6 billion world market; and the top 10 pharmaceutical companies control an estimated 48% of the \$317 billion world market (Globalization, Inc. Issue #71). Only six corporations control 98% of the world's market in genetically modified crops: BASF, Bayer-Aventis, Dow, DuPont, Monsanto, and Syngenta (Action Aid Report). The same six firms also control 70% of the world's pesticide market. And 94% of all genetically modified crops grown worldwide are from one company's germplasm: Monsanto's (Dorsey).

On April 25, 2003, the Genetic Engineering Approval Committee (GEAC) under the Ministry of Environment and Forests (MoEF), Government of India, denied commercial clearance to Monsanto's Bt cotton for the northern Indian states. This follows on the apprehensions of the Research Foundation for Science, Technology and Ecology (RFSTE) and others who warned the government about the severe repercussions to Indian farmers and their livelihood if further clearance to the Bt cotton had been allowed in view of its large scale failure in the first year of its commercial planting on approximately 40,000 hectares (Shiva, and Jafri).

The late season spurt in milk production in Europe has been referred to as a "second peak." Although this volume was not as high as the spring flush in all countries, milk receipts were heavier in many. Germany and the Netherlands reported higher production trends, while Ireland and France were not as strong. Milk quotas are being looked at in many of the countries that are realizing significant increases, and producers in some of the countries are already looking at what they will have to do to adjust their deliveries before March 2004. This late-season increase in milk volumes allowed for some unexpected increases in manufacturing schedules that enhanced inventories in many parts of Western Europe. Up to that point stocks were not that plentiful and now handlers and traders have product to work with. International buying interest remains slow (Farmnet).

Forty-one percent of British dairy farmers questioned in an independent survey last month have started diversification enterprises on and off farm—and of that percentage, 72% are planning further diversification. Average age of the milk producers interviewed was 42, with 76% of the 508 interviewees questioned being under 50 years of age. Diversification is seen as a sensible precaution in these turbulent times in the dairy industry. It was also encouraging to note that many of the enterprises started had given producers sufficient incentive to increase their diversification. It was interesting to note that most of the farmers sampled were still breeding for type and yield rather than for constituents. Also, that a flat calving pattern is the current situation for 75% of the sample. When questioned about future calving patterns, 32% said they wanted to change and, of those, 58% want to move to all year round calving. This would seem to indicate that most producers are hedging their bets on what will happen to milk prices and no longer take heed of the spring flush (Dairy Event).

A drought in South Africa is emptying reservoirs and parching crops, raising fears of a failed corn harvest and skyrocketing prices for the country's staple food. This has been a dry year for South Africa. Twenty-seven percent of the country has had the lowest amount of annual rainfall since the country began keeping records in 1915. Most of the country's corn should have been planted by now, but dry soils have forced many farmers to delay. A poor harvest in South Africa, Africa's largest agricultural producer, could affect the whole continent. A South African drought could have an impact on the World Food Program's ability to respond effectively to the ongoing food crises in countries like Zimbabwe, Malawi, and Zambia.

VET CORNER UPDATE

Since the original Vet Corner article for January was written, BSE diagnosis in the USA occurred. From my perspective as a local practitioner, there is little new information that I can present except to list some helpful websites to monitor as events unravel:

For recent official news releases:

<http://www.usda.gov/index.html>

For general education about BSE:

<http://www.avma.org/communications/brochures/>

For risk of spread to humans:

<http://www.cdc.gov/ncidod/diseases/cjd/cjd.htm>

For downer cow composting recommendations:

<http://www.cfe.cornell.edu/wmi/Compost/NaturalRenderingFS.pdf>

Legislation in the US House of Representatives to ban human consumption of downer cows failed by one vote last fall, so the USDA ban on downers comes as no surprise. An offshoot of this decision will be that few downer cows will now be inspected for BSE. Please check out the great website that Dr. Belinda Thompson, Cornell Extension Veterinarian, recommended to begin your composting project. Also, Miner Institute manages a compost site and could be called on for practical advice.

Hopefully, the international export ban of US livestock and beef will be short-lived, because the infection is presently assumed to have occurred in Canada. Several years ago a BSE cow was found in Canada and she was traced directly to the United Kingdom outbreak, so the export bans on Canadian livestock were quickly removed. This is the time for our food inspection system, beef growers, and animal feed industry to prove its worth and integrity to the trusting beef-eating US public.

—K.H.

DAIRY DAY NUMBERS

Dairy Day at Miner Institute was held in December with approximately 180 people in attendance. We took advantage of this opportunity to look at cow numbers represented by those in attendance in order to catch a glimpse of our impact in the area. The table below shows the region and number of cows and heifers represented by farmers in the audience.

	NY Cows	NY Heifers	VT Cows	VT Heifers	Canada Cows	Canada Heifers
Total head '03	4942	4007	2571	1528	1526	1017
Average '03	353	286	214	153	66	57
Average '02	240	349	182	151	61	58

Wanda C. Emerich
emerich@whminer.com

CROP VARIETIES,

THEN AND NOW

The Crops Dude was looking through a 1965 Miner Institute/Cornell University field day publication and noted the crop varieties entered in the various 1964 trials. Old Timers: How many of the following 85-90 day RM hybrids do you remember? Pioneer 3891, Pride 5, Seneca 285, Penn. 290, Pioneer 392, DeKalb 45, Michigan 250, Cornell M-4, PAG 38, Funk G-11A, Pioneer 388. (I remember 7 of the 11, definitely placing me in the O.T. category. However, the older I get, the older old is.) Every one of these corn hybrids has long since disappeared, although Funk G-11A, the top-yielding hybrid in the 1964 statewide trials, was The Hybrid That Wouldn't Die, surviving well into the 1980s.

On the other hand, here are some of the forage varieties planted in the 1964 trials: Viking and Empire birdsfoot trefoil, Climax timothy, Saratoga brome-grass, and Pennlate orchardgrass. All three of the grass varieties were included in the 2002 Penn State variety trials. Saratoga was the top-yielding brome-grass, Pennlate was in the middle of the orchardgrass pack, while Climax held its own pretty well in the timothy trials. In current Cornell University trials, Viking birdsfoot trefoil and Saratoga brome-grass are still among the better yielding varieties, while Climax is an also-ran.

—E.T.

BIOTECH CROPS

According to a recently released report, on a worldwide basis 51% of soybean, 9% of corn, 20% of cotton and 12% of canola acreage is genetically modified (GM). The 145 million acres of GM crops grown worldwide were grown by 6 million farmers, or an average of 24 acres per farm. Of the 6 million farmers growing GM crops, 5 million are in developing countries. This is contrary to the popularly held notion that most farmers growing GM crops are in the industrialized countries.

BUNKER SILO MANAGEMENT

Kansas State University's Keith Bolson is a leading authority on silo management. Following is a summary of five important silo management practices, from his presentation at last year's Western Dairy Management Conference.

1. *Use a bacterial inoculant.* A summary of over 200 studies involving nearly 1,000 silages and 25,000 silos, indicates that bacterial inoculants are beneficial over 90% of the time. Bolson estimates that inoculation increases per-ton net returns of corn silage by \$6.67 and alfalfa silage by \$14.95.
2. *Achieve high silage density.* Factors affecting silage density are delivery rate, packing tractor weight, number of tractors doing the packing, forage layer thickness, and silage depth. Packing tractor weight can be increased by adding weights or filling tires. Dry matter losses are one third higher at a silage density of 10 lbs vs. 15 lbs DM/cubic foot.
3. *Protect silage from air and water.* Covering silos with plastic tarps is a tedious and time-consuming job, but it's a necessary one. Losses from an uncovered 40' x 100' silo of corn silage can exceed \$2,000. Losses in uncovered silos are much higher than they appear because the spoiled silage has deteriorated (shrunk) and the silage underneath the brown gunk is also lower in quality.
4. *Manage the feedout face.* Average removal rates of 6-12" per day are recommended, but during hot, humid weather it may be necessary to remove 18" of silage per day, especially for corn silage. (Although not included in Bolson's comments, silage inoculants containing *Lactobacillus buchneri* may improve the situation.)
5. *Discard spoiled silage.* Some farmers think that as long as they mix spoiled silage in with good silage it won't hurt much. Wrong. A study comparing normal silage to that consisting of 75% normal and 25% spoiled silage found that the blended silage resulted in decreased DM intake, dry matter digestibility and fiber digestibility. Fiber digestibility decreased the most, from 63% to 56%.

—E.T.

WEATHER DATA

One of the drawbacks of making crop recommendations that depend on the weather (don't they all?) is that a particular set of weather conditions applies to a relatively small area. This is especially true when we're dumped on by thunderstorms—or not, as the case may be. A case in point is the 2003 growing season precipitation at Miner Institute vs. at the Crop Dude's house 20 miles to the south, in beautiful downtown Peasleeville. (Peasleeville is notable for having lost its Zip Code, 12971, when the postmistress decided she didn't want to do that anymore.)

Growing season precipitation, inches

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Chazy	1.6	3.3	2.3	2.6	5.4	2.7	5.2	23.1
Peasleeville	2.8	6.8	4.8	4.6	4.5	3.0	6.1	32.6

As you can see, when it rained in Chazy, it poured in Peasleeville. And when it poured in Chazy...well, the image of a cow and a flat rock comes to mind.

—E.T.



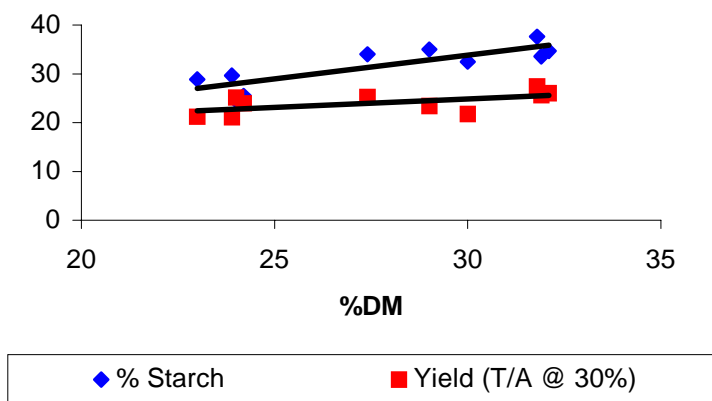
DAIRY NOTES

- ❖ According to a November 2003 report, dairy cow numbers decreased by 92,000 head since March 2003, good news for farmers hoping for higher milk prices. Over 75% of the decrease in cow numbers was in four states: Pennsylvania, Wisconsin, Minnesota and New York. These represent the "Rust Belt" of dairy states, which had thriving dairy industries long before many farmers had crazy ideas like milking cows in Idaho, Kansas, or, for heaven's sake, New Mexico. (In the past year cow numbers are up by 22% in Idaho and by 13% in New Mexico.)
- ❖ U.S. milk prices averaged about \$12/cwt in 2003. Prices in the U.K. and Ireland were about the same as in the U.S., while Japan had the highest price at \$33/cwt. Western European prices averaged about \$15/cwt while Malawi, Latvia and Poland reported the lowest milk prices of the 46 countries surveyed, at about \$8/cwt.
- ❖ Although the Bush Administration is opposed to easing trade restrictions with Cuba, if restrictions are eased, agricultural product sales could reach \$1 billion, with dairy products one of the major commodities.
- ❖ Herds with over 500 head are only 4% of dairy farms, but account for almost 40% of milk production.
- ❖ Vanilla ice cream outsells all other flavors by a wide margin, accounting for 28% of all ice cream sales. Chocolate is a distant second, at 8%.
- ❖ The Crops Dude really likes a new butter product, *Land O Lakes Spreadable Butter with Canola Oil*. The tiny bit of canola oil does nothing to affect the flavor, but in a side-by-side comparison with butter, it spreads much easier. And no nasty trans-fats...

CORN HYBRID TRIAL RESULTS

Miner Institute planted a corn silage hybrid trial once again in 2003. Since Syngenta supplied the seed, most of the ten entries were Syngenta hybrids. Last year was a good corn year in these parts, and the trial averaged just over 24 tons/acre at 30% DM. Because there was quite a range in maturity, we had to shoot for the middle and harvested when the earlier hybrids passed 30% DM. At this time the latest hybrids were under 25% DM. As the graph shows, the late-maturing hybrids paid a modest penalty in yield but a bigger one in starch content. Higher starch suggests that the early maturity hybrids were higher yielding because the kernels had the chance to fill more completely.

2003 Syngenta Corn Silage Trial



—E.T.

2004 DAIRY ECONOMIC OUTLOOK

Milk prices are expected to be close to what they were in 2003, at a national average of \$12.60/cwt. We probably won't hit 2003's highs, or lows, either. Cull cow prices should remain strong. Regional shortages of dairy-quality hay don't affect the Northeast as much as the West, but, combined with good beef prices should, keep cow numbers in check. The recently announced, temporary 15% reduction in Posilac supply will most likely have only a modest effect on milk production.

The concern is with grain prices, as corn prices will be slightly higher and soybean prices a lot higher. In late December, soybean meal prices were almost 40% higher than a year ago. While they're expected to decrease as we get further into 2004, expect them to remain relatively high, at least until the size of the 2004 soybean crop is known. Soybean sales to China certainly won't have a dampening effect on prices.



MAD COWS & DÉJÀ VU

The discovery that the single cow with Mad Cow disease was, in fact, a Canadian citizen, having been born there in 1997, was of some solace to harried USDA officials. And a few so-called traditionalists appear rather pleased that she was found on a large factory farm—but that fact should be obvious since the cow doesn't have a name. You see, cows on factory farms are identified by number, *a la* the penitentiary system, while cows on family farms have cute names such as Snowball, Misty, Penelope, Myrtle, and Peta. (Well, not all cute names, Peta having been named by a local farmer because of her thoroughly disagreeable disposition.)

The Mad Cow incident reminds us of the movie *Canadian Bacon*, wherein a U.S. President, his chances of reelection shaky, is convinced that what the U.S. needs is a quick, easily winnable war, and decides to invade our neighbor to the North. Of course this is a far-fetched idea, but it's only a movie, folks. Stars are John Candy, Rhea Perlman, Alan Alda, Rip Torn, and a host of other well-known actors that you might not realize are Canadian by birth. If you want some laughs and aren't horrified by slightly salty dialogue (it's rated PG), pick up a copy at your video rental place. Warning: If you don't live within an hour of the border, you may miss many of the one-liners. To wit: The reviewer from *The Buffalo News* gave it "three American stars, which counts as four Canadian."

—E.T.



CLOSING COMMENT

The difference between stupidity and genius is that genius has its limits.