Here's a question: given a choice between eating a delicious meal or some unpalatable food, which would you choose? Now, what if you had to sit beside a jerk to eat the tasty food, but could eat the less appetizing food in peace? Finally, would it matter to you how close you had to sit to the bossy person? I don’t know the answers to these questions for humans, but the most recent issue of the Journal of Dairy Science has a paper that answered these questions for dairy cows (Rioja-Lang et al., 2012. J. Dairy Sci. 95:3954).

These researchers trained dairy cattle to prefer a “highly palatable feed” that was a pelleted grain containing molasses rather than a “low palatability feed” which was comprised of rolled barley and soybean meal. Both feeds had similar energy and protein content, but differed in palatability. Cows were presented with a choice: they could either choose the highly palatable feed or the low palatability feed. For the cows, this appeared to be a “no-brainer” with an 80% preference for the more palatable feed.

For the actual experiment there was a catch: the subordinate cows were still asked to choose between a high and low palatability feed, but now the highly palatable feed came with a dominant cow feeding in close proximity while the subordinate cows could eat the low palatability feed alone. The preference for each feeding situation was assessed with a manger space per cow of 30, 24, 18, or 12 inches.

With the two smallest manger spaces per cow (18 or 12 inches), subordinate cows preferred to dine alone. However, when manger space was 24 or 30 inches/cow, the subordinate cows showed no preference. In other words, cows with lower social status within a pen willingly sacrificed higher food palatability, or quality, to avoid close proximity to dominant cows. From a building design perspective, these data tell us that feed bunk space

See FEED, Page 5
Calves under three weeks of age have a thermal neutral zone (TNZ) between 59 and 78ºF. Below this zone they begin to experience cold stress, and above this zone they experience heat stress. Calves and heifers over three weeks of age begin to experience heat stress at 70ºF.

Impact of heat stress on calves:
- Energy requirements increase. Similar to lactating cattle, heat stress causes a decrease in feed intake. However, heat stress also causes an increase in energy requirements due to increased respiration and metabolic rate.
- Immune system weakens. Energy that was supposed to go towards supporting the immune system is shifted to respiration. Cortisol (the “stress” hormone) is also increased with heat stress, leading to a weakened immune response.
- Reduced growth rates. Energy for growth is shifted towards respiration.
- Water intake increases. Calves will (and need to) consume one to two gallons of water/day, this value increases as the temperature climbs. This is water that is separate from what is provided in the milk/milk replacer. Inadequate water intake can lead to dehydration and death.

Heat stress abatement strategies:
- Shade: Make sure calves have access to a shaded area and are never in direct sunlight. Hutches can be realigned to capture shade and the prevailing winds, or a temporary shade canopy can be constructed.
- Timing: Increased body temperature from heat stress can lead to a compromised immune system. Perform potentially stressful activities (moving, grouping, vaccinating and dehorning) in the early morning when it is still cool.
- Fresh & Clean: Feed or bedding this is important!

• Feed – Keep starter and water fresh. Calves eat more starter when it is cool out (6 p.m. to 6 a.m.).
• Provide fresh starter every evening (to prevent spoilage) instead of the morning. Fresh, clean and cool water should be provided throughout the day. Make sure you clean feed, water and milk buckets regularly to prevent bacterial growth.
• Bedding – bedding loaded with manure or urine not only heats up, but also attracts flies. Keep it clean to keep it cool.

Water: Heat stressed calves can drink three to six gallons/day. Providing fresh, clean and cool water helps cool the calf, reducing the effects of heat stress.

Feeding Frequency – Feed calves in the early morning and late afternoon to prevent peak temperatures coinciding with digestion peaks. Increasing feeding frequency stimulates starter, thus hopefully preventing a decrease in feed intake that can lead to additional negative performance parameters.

Bedding: Sand makes a comfortable and cool surface in hot weather. Try to avoid straw bedding during summer months as it holds more heat and will attract flies.

Electrolytes: Calves lose water and electrolytes through panting and sweating thus leading to dehydration. In addition to water, consider adding a midday electrolyte feeding to calves. If calves exhibit signs of dehydration, they have likely been dehydrated for six or more hours, and you should administer oral electrolytes immediately.

Fly Control: In addition to heat during the summer, calves are also a hot spot for flies. Weakened immune systems in combination with the diseases that flies can carry could lead to disaster. Talk with your nutritionist about feeding a milk replacer or starter that contains a fly control product. Keep calf pens clean and dry, and feed dry and fresh to reduce fly populations.

Breeze: Whether you can capitalize on the natural breeze, or create one with fans, it will keep calves cool, the area dry, and discourage flies. Hutches can be elevated on one side to create a “tip.” (See related article, page 11) This leads to increased ventilation and cooler internal hutch temperatures.

During the summer there’s lots to get done on a farm. Hay needs to be mowed, chores need to be done, fence moved, lactating cows need to be cared for… this list goes on and on. Everyone (cows and people) are hot and tired. Calves are often easily overlooked at the end of a long day; however, this can cost you. Decreased feed intake, growth and weakened immune systems can lead to increased treatment costs, deaths and cull rates, all impacting your bottom line. Include these heat stress abatement strategies into the normal management protocols on the farm and reduce one potential headache.

— Kimberley Morrill
Northern New York Dairy Specialist
Cornell Cooperative Extension
COLOSTRUM: MORE THAN JUST IGs AND PASSIVE TRANSFER OF IMMUNITY

At the Advanced Dairy Nutrition Conference held at Cornell a few weeks ago, Dr Mike Van Amburgh gave an interesting presentation regarding the role of colostrum in calf and lifetime feed efficiency and growth. He reiterated the value of colostrum relative to transfer of Igs (immunoglobulin) for development of the calf immune system and for optimal growth rate. What was new to me was hearing Mike mention the value of the other compounds in colostrum in terms of calf gut development aside from the transfer of Igs.

Colostrum contains many hormones and bioactive proteins other than just Igs, including: IGF-I, IGF-II, Prolactin, Insulin, Leptin, Relaxin, Lactoferrin, essential and non-essential amino acids, and fatty acids.

The role of these other hormones and proteins is becoming more clear relative to calf health and growth. For instance, colostrum aids in calf gut maturation, improving tissue development and function resulting in greater digestive and absorptive capacity of nutrients. The presence of these hormones increases the absorptive capacity of the calf’s developing gut tissue, which will stay with her for life. These hormones are believed to alter genetic “set points” for feed intake and feed efficiency. This touches on the topic of epigenetics, or the effect of nutrition and environment on activating the genetic potential of the calf. Through prolonged feeding of colostrum, these proteins and hormones can direct the calf development resulting in a more nutrient efficient, higher producing animal for life. Mike noted research that determined 3 days of colostrum feeding resulted in a greater number of GIT (gastro-intestinal tract) insulin and IGF-1 receptors compared to only 1 day of colostrum or none (Hammon et. al., 2002). Another study by Roffler et al. (2003), showed enhanced gut function, absorption and enzyme activity of calves when fed colostrum that had the Ig’s extracted.

When compared to colostrum replacement, colostrum still improved feed efficiency in spite of similar Ig status between the two feed treatments (Jones et al., 2004). In other words, the proteins and hormones in colostrum, other than the Ig’s for passive transfer of immunity, are greatly improving calf gut development and lifetime nutrient absorption, and future milk production.

Conclusions:
Colostrum provides more than just passive transfer of immunity.

Colostrum contains a multitude of proteins and hormones that positively affect calf gut development for improved nutrient absorption for her lifetime.

If possible, feed colostrum for more than a single feeding or single day.

Some thoughts to consider:
Are we short-changing the calf by getting her onto replacer right after a single feeding of colostrum?

How can we better feed the dry cow to ensure sufficient colostrum quantity and quality?

How many milkings do these other proteins and hormones still reside in the milk in order to feed the calf?

— Kurt Cotanch
cotanch@whminer.com


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STUMPING THE EXPERTS

Just when you think you’ve seen it all, something happens to remind you that you haven’t. The latest is the frost damage to alfalfa-grass stands that occurred in many parts of the Northeast and upper Midwest. February and March brought record warm weather, including 70- and 80-degree days in early March. Alfalfa, sensing that spring was here, broke dormancy and started growing. Then “normal” weather returned, including a couple of nights when temperatures dropped into the low 20s. This froze the tender new alfalfa growth, not killing the plants but setting them back and causing considerable farmer angst. Grasses weren’t nearly as affected, so in many fields the grass shot past the alfalfa and reached the boot stage — the ideal harvest time for grasses — when the alfalfa was scarcely a foot tall. Farmers then had a difficult choice: Harvest the field when the grasses were ready, potentially injuring alfalfa plants that were just starting to recover from the effects of frost, or wait until the alfalfa was in the bud stage — the ideal combination of yield and quality — and have the long-since headed grass result in poor overall forage quality.

Pondering these options, farmers asked “the experts” what to do. The answer, in many cases, was: “Gee, we’re not sure.” That’s because we all were in uncharted territory, a fact acknowledged by agronomists at the Michigan State University who immediately began a research project in an attempt to answer these questions. Because even the experts are limited by the experiences they and others have had, and this was a new one to most all of us.

A similar situation occurred in January 1998 when the North Country was hit by a devastating ice storm, some say the worst natural disaster to hit the region in 500 years. Fields were covered with several inches of ice, and farmers started asking about the fate of the alfalfa in these fields. An emergency “What do we know?” meeting was held at Miner Institute, attended by agronomists and Extension educators from NY, Vermont, Quebec and Ontario. Within a day or two Cornell University’s Jerry Cherney had his staff in the affected areas, sawing blocks of ice, snow, alfalfa and soil from fields and hauling them to Cornell for greenhouse trials. The result was that well before spring arrived we were able to tell farmers how much damage to expect, which ranged from almost none to a total wipeout depending on how much snow was between the soil and the ice sheet. An inch or so of snow between soil and ice resulted in most of the alfalfa coming through quite well.

So even the experts don’t know it all — which shouldn’t come as any surprise — but the least we can do is to learn from these experiences, as unpleasant as they may be, at the same time hoping that they never happen again!

— Ev Thomas

thomas@oakpointtny.com

NORTHERN NEW YORK DAIRY MANAGEMENT SURVEY

A collaborative effort between Miner Institute and Cornell Cooperative Extension of Northern New York

We are looking for your participation! Your farm may receive a call looking for your help in conducting an on-farm survey to help us categorize dairy farms and current management practices across Northern New York. The results of this survey will be used to develop programs of interest and demonstrate needs of our area farmers as well as to identify areas of research which would directly apply to current on-farm management strategies. The focus of the survey is primarily calf management, but also includes some information about lactating herd management. Participating farms will be entered into a drawing to win a $100 gift card, with a winning entry drawn at the end of June, July and August! Entries are eligible for all three drawings as soon as we set a visit time, regardless of when we are able to visit your farm.

If you are interested in participating please contact one of the following:

Kimberley Morrill, PhD
Dairy Specialist, Cornell Cooperative Extension
Cell: (603)-568-1404 or (518)-564-0498
Office: (315)-379-9192 ext. 233
Email: kmm434@cornell.edu

Heather Gauthier
Research Technician, Miner Institute
Cell: (518)-726-6944
Office: (518)-846-7121 ext. 153
Email: gauthier@whminer.com
CROP CONDITIONS HERE AND THERE

According to the Book of Matthew, it rains on the just and the unjust. Be that as it may, summer rains in Northern NY have been very spotty, with eastern areas faring much better than western portions. For instance, Miner Institute got about 1.5” of rain in early July, while Massena and Watertown only had about one tenth of an inch during the first two weeks of the month. Chazy needed the rain, since it had only about 2” in June while Watertown and Massena had over 3”.

North Country crop conditions are stellar, however, compared to what’s been happening in the Corn Belt. I had a phone call the other day from one of the managers of a huge Indiana dairy farm with thousands of acres of corn for silage, and they were about to start chopping their corn since it was tasseled out and barely waist-high. The crop was so short that they’re considering mixing it with corn byproducts during the ensiling process. This farmer isn’t alone: The current USDA Crop Condition report rates over 60% of Indiana’s corn as “Poor” or “Very poor.” For the 18 major corn producing states, 30% of the corn acreage is rated as poor or very poor, compared with only 9% last year. And crop conditions deteriorated considerably in the past week.

Futures prices suggest that it’s likely that we’ll be dealing with $7 corn and $15 soybeans in the coming year. This will place an extra premium on forage quality, since high-forage rations will be the only way many dairy farms will be able to make a profit in the coming year. Milk futures prices are currently a bit under $18/cwt, without a lot of recent price movement. $18 milk used to sound great, but not with grain prices as high as they are — and are likely to remain. Two steps you can take, one immediately, the other down the road: First, maximize forage quality, even at the expense of a bit of yield. Harvest alfalfa in the bud stage, and grass as soon as there’s enough to drag a mower-conditioner through. And if you process corn, wait until whole plant dry matter is approaching 35% since the corn plant is adding grain every day as it matures.

— E.T.

FEED, Continued from Page 1

needs to be at least 24 inches per cow. Interestingly, even when manger space per cow is greater (i.e. 24 to 30 inches) some subordinate cows still preferred to avoid proximity to a dominant cow and instead chose to eat poorer quality feed alone. The potential implications for this research on feed facility design are tremendous.

On the other end of the spectrum, there is also evidence that cows form friendships and tend to eat in close proximity with their “friends” at the feed bunk (Val-Laïllet et al., 2009. Appl. Anim. Behav. Sci. 116:141). Especially among first-calf heifers, the cows that most often feed together at the bunk also tend to engage in more social grooming. Cows seem to have preferences for certain other cows — in essence, they form friendships and these cows can be consistently found together at the feed bunk and elsewhere in the pen. The friendships seem to endure regardless of pen stocking density and the level of competition for feed.

When I was still at the University of Nebraska, we conducted some on-farm observations that indicated that cows seem to have preferred locations along a feed bunk — we never addressed the question in a systematic way, but this question needs an answer: Do cows use the entire length of the feed bunk equally? There is research that shows that cows do have preferred stalls and that competition for these stalls is greater than for the stalls judged to be less desirable by the dominant cows in a pen. Ordinarily the preferred stalls are nearest the feed — no surprise.

Taken together, it is clear that cattle feeding dynamics are complicated and that our traditional approach of feeding a pen as if it were comprised of a homogeneous set of cows ignores a tremendous degree of diversity among individuals. Future designs for dairy cattle housing will need to be more sophisticated if we want to truly accommodate these behavioral differences among cows and provide each individual cow the opportunity to optimize feed intake and performance.

— Rick Grant
grant@whminer.com
WHEN TO GIVE UP

Each winter viewers of ESPN’s college basketball coverage have the chance to listen to cancer-stricken Jim Valvano’s classic “Don’t give up, don’t ever give up” speech. A great message, but when it comes to weather-damaged hay crops there does come a time to give up. That time is before the forage starts to stink, or compost right in the windrow. (When the grass under a windrow is chlorotic, the result of several days or more with no sunlight reaching it, the windrow has been there too long.) I well remember traveling down I-87 past a windrowed field of triticale-peas that got pounded by a thunderstorm just before the farmer was going to chop it. There it sat, and several days later even at 70 mph — oops, make that 65 mph — I could smell it.

Chopping weather-damaged forage back onto the field hurts. It hurts your feelings, and it hurts your wallet because you’ve invested time and money in growing and mowing the crop, and now you have to spend more time and money to chop it back. But really, what’s the alternative? If you have silage bags you could stuff the gamy forage into a bag, planning to feed it to a specific group of animals. But what animals do you care so little for that you’d feed them spoiled forage? Your heifers, which are the future of your farm? Your dry cows, which are supposed to be your top producers in the coming months?

In most cases it’s not necessary to haul weather-damaged forage from the field. I’ve been surprised at how little of a chopped-back crop appears in the following harvest, especially if you wait until the forage is fairly dry and do a good job of blowing it out across the field. A very high percentage of the chopped forage finds its way to the soil surface, and as long as you don’t scalp fields as you harvest succeeding crops, that’s usually where it stays.

Chop weather-damaged forage back onto the field and it hurts for a little while. (Been there, done that.) Harvest and ensile weather-damaged forage and it has the potential to hurt for a long time. Your call.

— E.T.

A VERY BUGGY YEAR

This year may be remembered, and not fondly, as the Year of the Bug. In June the worst infestation of armyworms in many years ravaged forage grasses and small grains, while black cutworms did spotty damage to corn fields. Then potato leafhoppers blew up from the south and attacked alfalfa fields, turning them yellow and red from “hopper burn” (See photo). We often have some leafhopper problems in the North Country, but 2012 has been an especially bad year for them. The western half of Northern NY often has more leafhopper damage than eastern portions, but this year the problem was widespread.

There are several insecticides that provide good control of leafhoppers if applied in timely manner (easier than it sounds), but the opinion here is that leafhopper resistant alfalfa varieties are a much better alternative. Newer varieties are more competitive to non-resistant ones when leafhoppers aren’t a problem, and much better when they are. Using resistant varieties is one less thing for a farmer to worry about, and no insecticides that can kill the beneficial insects in alfalfa and alfalfa-grass fields, not the least of which are the alfalfa weevil parasites that have been doing a stellar job for decades in keeping this serious pest mostly at bay.

For reasons we don’t completely understand, leafhopper damage is less severe in alfalfa-grass stands than in clear alfalfa. This isn’t simply an observation, but has been confirmed by field research. This is one more reason to plant alfalfa-grass where soil fertility is adequate. (As has been noted in a previous Farm Report article, don’t seed alfalfa-grass where soil test potassium status is low since the grass will intercept the potassium and starve out the alfalfa.)

— E.T.

Leafhopper-resistant alfalfa varieties are really “showing their stuff” this year. Guess which plots contain leafhopper resistant alfalfa? Photo courtesy of Cornell University.
MINIMIZING ALFALFA TRAFFIC DAMAGE

Alfalfa may be considered the “queen” of forages, but it is also known for its low tolerance of less than ideal soil conditions and management. Maintaining high yielding, persistent alfalfa stands can be challenging, particularly when soils are limited by imperfect drainage or compaction. In NY, soil acidity is often noted as the most limiting factor to alfalfa yield and persistence. In Northern NY, drainage may be a close second. While soil acidity and drainage can be managed to some degree, harvest management also influences growth.

University of Wisconsin research showed that wheel traffic damage from normal harvesting operations can cause alfalfa yield reductions as high as 80% (Undersander and Moutray, 2001). The amount of damage was related to the length of time regrowth occurred before driving on the alfalfa. More recent research from Wisconsin showed a 4-6% reduction in alfalfa yield when alfalfa was driven on after one day of mowing, whereas wheel traffic at 5 days had an average yield penalty of 20% (Undersander, 2008). The reduction in yield was attributed to damaged and/or broken crowns caused by tractor wheels (e.g., a100 HP tractor was driven over alfalfa four times). It is estimated that about 70% of a field's area is driven over at each cutting, so avoiding unnecessary trips across the field is key to minimize wheel traffic damage.

Soil compaction from tractors and manure spreaders also reduces alfalfa productivity and persistence. Compacted soil reduces pore space and hinders fine root growth. All else equal, compaction potential increases with soil wetness and clay content. Lower field areas are usually more imperfectly drained due to their landscape position—they collect surface water and have water tables closer to the soil surface. These lower areas of the landscape also tend to have greater silt and/or clay contents compared to higher landscape positions, which makes them even more susceptible to compaction damage.

Consider the following five management practices to help minimize alfalfa damage caused by wheel traffic and compaction:

1. Harvest as quickly as possible after mowing (utilizing wide swaths to speed up dry-down) to avoid traveling on alfalfa regrowth.
2. If applying manure, apply it as soon as possible following harvest, always before regrowth, and avoid spreading on wet fields.
3. Utilize controlled traffic patterns to minimize the field area traveled on. For example, utilize the same area of the field to the extent possible when entering and exiting the field with trucks or forage wagons during harvest.
4. Consider planting traffic-tolerant alfalfa varieties.
5. Avoid using dual wheel tractors on alfalfa fields, and try to utilize lighter weight tractors when merging, raking, etc.

— Eric Young
young@whminer.com
GRAIN CORN VS. SILAGE CORN

An increasing number of farmers in the North Country have either started growing corn for grain or have upped their grain corn acreage. From a fertility standpoint there’s a considerable difference in what corn silage vs. corn grain remove from the soil, which eventually may have an impact on nutrient management. Both crops require the same amount of nutrients, but because with grain harvest more than half the dry matter is returned to the soil, nutrient removal is much less. Incorporation of the stover also improves soil structure and adds to organic matter. But don’t assume: Rely on soil analysis, which will indicate any changes in fertility. And if you’ve been lax on doing routine soil analysis — once every three years or less is recommended — a change in crop management is a really good reason to shape up.

Harvesting corn for grain means that the corn will sit in the field for an additional month or more after normal silage harvest time, at the mercy of weather, insects, and four-legged critters large and small. Plant breeders have done a great job of improving standability, and neither corn rootworms nor corn borers are as serious a problem in Northern N.Y. as they are in the Corn Belt. However, be on the lookout for potential problems that while perhaps not obvious in September may be serious by the time the combine pulls into the field. If you have a field next to a forest be on the lookout for squirrels (yes, squirrels), which can remove an amazing volume of kernels from corn ears. This isn’t a problem during silage harvest, but as the grain matures the squirrels really get busy. Charlie Hesseltine once told me that he had just such a field in Franklin County (N.Y.). During grain harvest as he headed up the tree line his combine suddenly stopped making its normal harvest sounds. While the corn plants were still standing, he discovered that squirrels had cleaned the kernels from the ears on the outside several rows. And there was no doubt as to the culprits as he saw a squirrel, cheeks stuffed with his cash crop, hightailing it from the field.

Bears aren’t usually considered a problem in corn fields, but the Adirondacks and adjoining areas are notable hotspots for black bears, Ursus americanus. Bears are omnivores, meaning that they’ll eat a variety of foods, including corn. We’ve had some experiences with bears feeding in Miner Institute’s corn fields, discovering that they are much more damaging than any other four-legged critter, trampling a lot more corn than they actually eat. Not sure if their activity involves nutrition, procreation or just Bears Having Fun, but they sure make a mess. One year we had so much bear damage in one 7-acre field intended for grain harvest that we had to abandon the whole field. The good news is that bear damage is usually restricted to fields bordering forestland.

— E.T.

CRITTER NEWS

• After watching sheepdogs herding his owner’s flock of woolies, Champs decided to try it himself. What’s newsworthy about this is that Champs is a pet rabbit, near a small village in Northern Sweden. What he lacks in size he makes up for in enthusiasm, running back and forth to keep the sheep in line. What’s more remarkable is that Champ does it all quite well, enough so that a sheepdog breeder who watched him commented that he herds better than most sheepdogs. In spite of Champ being size-challenged, the sheep mind him quite well. The bunny’s antics have been a hit on YouTube, approaching one million hits.

• Two Giant Turtles at an Austrian zoo have decided that they don’t like each other anymore. In fact, according to the zoo director, “We get the feeling they can’t stand the sight of each other anymore.” Divorces happen, but not usually after over 100 years of cohabitation, because the turtles have been together since they were young and they’re both 115 years old. Spats between Bibi (the female) and Poldi (the male) are of concern since they both weigh well over 200 lbs with powerful jaws that could wreak havoc. The main problem seems to be Bibi, who simply wants to be left alone. Maybe she has a headache.

• Researchers have discovered this disturbing fact about Antarctica’s Adelie penguins: They apparently have sex just for fun. Perhaps the researchers shouldn’t have been all that surprised, though, since the penguins can’t fly, there’s no cable TV, and so they have to do something for entertainment.

— E.T.
Greetings! My name is Margaret Quaassdorff, and I am a recent graduate of the University of Vermont with a B.S. in Animal Science. Originally from small-town Hinsdale, NH, I had little dairy experience until my junior year at the University of Vermont where I joined the CREAM (Cooperative for Real Education in Agricultural Management) program. This led to a summer internship that allowed me to become acquainted with many of Vermont’s farmers. From there I fell in love with dairy farming, and gained a great understanding of and appreciation for the industry and the people. In the final semester of my undergraduate career, I found myself in the Advanced Dairy Management program here at Miner Institute, and I’m excited to be back as the new herdsman intern to embark on my year-long exploration of all that Miner Institute has to offer. I hope to find my niche within this fantastic multi-faceted industry, whether it be taking a position on a farm, collaborating with farmers in a supporting industry, or continuing my education in graduate school.

In my first month, I have been exposed to many aspects of the farm and business working closely with the current full-time herdsman. I have also been familiarized with calf and fresh cow care, milking, and am lending a hand to the summer interns to help ready their animals for the fair. I am grateful to have the opportunity to join the excellent staff at Miner Institute, and look forward to my year as the herdsman intern.

— Margaret Quaassdorff, dairy intern

GARBAGE BAGS AND SILO PLASTICS

You have a dinner that includes chicken or perhaps shrimp, and put the remains in a garbage bag. This time of year it doesn’t take long for the garbage to start to stink to high heaven. So you securely tie the plastic bag and put it in the garbage pail. A day or two later you open the lid of the pail and — wow, stinks, doesn’t it?

But the bag is tightly sealed, so where is the awful smell coming from? It’s coming through the bag, of course, because the plastic in garbage bags is not air-tight but slightly porous. Garbage bags have this in common with standard silo plastic sheeting, including the two-layer, white-on-black ones. Standard silo plastics reduce aerobic damage to the top layer of silage in bunker and stack silos, but don’t prevent it. That’s why you should consider either a high-density plastic sold by any of several silo plastic manufacturers, or two layers, with the bottom layer preferably a thin, high-density film that practically vacuums itself to the silage surface. Because while “chicken leavings” in a garbage bag can really stink, it also stinks to lose forage quality in the top several feet of your silo.

— E.T.

NOBODY ASKED MY OPINION, BUT...

• …recently during his sermon our pastor said that the church pays him to be good, but that the rest of us are good for nothing.

• …in all of recorded history has anyone ever had dry cleaning done in an hour at an establishment advertising “One-hour dry cleaning”? It might take them only an hour to dry clean your clothes, but you’re delusional if you expect your clothes back the same day, let alone in an hour. The closest you might come is overnight at a high-end hotel, but you’ll pay dearly for it.

• …the following seems fair: Since the Rules of Golf require the adding of two strokes to your score if you lose a ball, if you find a ball you should be able to subtract two strokes from your score.

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ALFALFA WEEVILS

Alfalfa weevils have been in the U.S. for over 100 years, including about 50 years in the Northeastern U.S., moving up from the first discovery of weevils in Maryland in 1951. By the late 1960s the weevil was a devastating pest in Northern NY, ravaging alfalfa fields from late spring through summer. By 1970 there was scarcely an alfalfa field in Northern NY that wasn’t near or over the damage threshold for chemical control. If an insecticide wasn’t applied the result often was no alfalfa. One scene I’ll never forget: An aerial application of insecticide to a Peru alfalfa field right after harvest, during one of the worst years for weevil damage. The farmer left an empty hay wagon in the field, so the little patch of alfalfa under the wagon didn’t get sprayed. The insecticide killed the weevil larvae and the alfalfa regrew nicely — except where the wagon had been parked. That area was almost bare.

By 1970, however, USDA’s alfalfa weevil control program through the use of parasites was well underway, and in the early 1970s I participated in the first releases of these tiny (gnat-sized) parasitic wasps in Northern NY. I received containers, each containing a few dozen parasites, flown from Ithaca to the Malone (N.Y.) airport, and that same day like Johnny Appleseed I spread them in a number of alfalfa fields in Clinton, Franklin, and Essex Counties—fields where the farmers had agreed not to apply any insecticide. Of the several species released, only one, Bathyplectes curculionis, was effective but boy, was it! The parasitic wasps quickly spread far and wide, and weevil damage levels soon plummeted. In 1980 USDA released several more species of wasps in NY that also became established.

The two most common alfalfa weevil parasite species affect the weevil when it’s in its cocoon. Ken Wise, N.Y. State Livestock and Field Crops IPM Coordinator, did a small study nine years ago and discovered that of the 200 weevil cocoons he examined, about two-thirds were parasitized. Judging from the tremendous success of this program in Northern N.Y., I’d guess that the percentage of parasitized alfalfa weevils in this area is even higher.

There’s also a naturally-occurring fungal disease, Zoophthora phytonomi, that kills alfalfa weevil larvae before they pupate. This disease is more effective during periods of above-average rainfall and high humidity. Look for brown or discolored weevil larvae on alfalfa leaflets as you scout your alfalfa fields. Soon after this disease was first discovered in the Watertown (NY) area, Cooperative Extension field crop educators gathered in one of the affected fields, collecting thousands of potentially diseased weevil larvae to be “transplanted” into alfalfa fields in their counties in hopes of spreading the fungus.

A point that shouldn’t be missed: Every year farmers are benefitting from past efforts of USDA’s research efforts; the decimation of the alfalfa weevil population is only one example. Farmers save time and money by not having to apply insecticides to alfalfa fields, and the environment benefits from reduced pesticide applications. Your tax dollars at work!

— E.T.

ANNUAL CORNELL NUTRITION CONFERENCE For Feed Manufacturers

October 16-18, 2012 Doubletree Hotel Syracuse, NY

The annual Cornell Nutrition Conference, in its 74th year, is designed to provide industry-leading research and information to feed industry professionals and nutritional consultants.

Online registration and payment will be available after Aug. 5, 2012. The registration fee includes all refreshment breaks, evening reception on Tuesday, lunch and evening dinner reception on Wednesday, and one copy of the conference proceedings.

For more information contact: Heather Darrow Conference coordinator 272 Morrison Hall Ithaca, NY 14853 Phone: (607) 255-4478 Fax: (607) 255-1335 dmconf@cornell.edu
A SIMPLE W A Y TO HELP
HUTCH CALVES WITH HEAT STRESS

Heat stress in preweaned calves can contribute to poor growth and increase the risk of sickness and death. The amount of heat stress experienced by the calf is influenced by the type of housing. Plastic hutches tend to be warmer than wooden hutches or well-designed barns. Air flow can be suboptimal in hutches...even ones with vents. In addition, heat, humidity, and carbon dioxide accumulate. All things that we want to avoid!

Dairy farmers now have another validated option for heat stress mitigation. Based on research conducted at Washington State, farmers should place a concrete block (8”x8”x16”) under the back of each hutch to reduce internal temperature and improve ventilation.

**Temperature**
- The study was conducted over a 48-hour period with external air temperatures ranging from the mid 60s to the mid 100s. During this time period, the internal hutch temperatures were higher than the outside temperatures when the hutches were on the ground. In contrast, the internal hutch temperatures were lower than outside temperatures when the hutches were elevated!

**Ventilation**
- With no hutch elevation, wind speed within the hutch was zero, except within 4” of the vents. Hutch elevation increased wind speed inside the hutches. The greatest air movement was found at 12” midline and 12” above the floor level at the rear of the hutches. A smoke test demonstrated air moving quickly toward the entrance, vents, or out around the concrete block.
  - Carbon dioxide concentrations were lower inside the hutches when the hutches were elevated indicating better ventilation.

**Calf response**
- The respiratory rate was higher with higher internal hutch temperature. For every 1°C increase in internal hutch temperature, respiratory rate increased by 2 breathes per minute. Hutch elevation lowered afternoon respiratory rate (58 vs. 44 breathes per minute. The normal range is 24 to 36 breathes per minute.

— Heather Dann
dann@whminer.com


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INTERNS SHOW MINER COWS
AT CLINTON COUNTY FAIR

From Left to Right: Year-long Dairy Intern Margaret Quaassdorff, a 2012 graduate of the University of Vermont; and summer interns in dairy management Kevin Jacque of The Ohio State University; Chantel LaValley of Rutgers University; Lauren Waltzer of the University of Texas at El Paso; and Ashleigh Covert of Michigan State University.
Closing Comment

If you think you’re riding ahead of the herd, take a look back every now and then and then to make sure it's still there.

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518.846.7121 Office
518.846.8445 Fax