

September 4, 2015 *Mike Stanyard, Regional Agronomist, Cornell Cooperative Extension*

Pre-Harvest Forage Day

At our Pre-Harvest Forage Field Day at Mulligan Farms last week, Ev Thomas from Oak Point Agronomics gave a great presentation on corn silage titled "Facts, Fiction, Fantasies and Opinions". Below is a summary of his discussion.



Fact: 30% DM is NOT the "gold standard" for corn silage.

The corn plant increases by about 30% in starch content as it matures from 30% to 35% DM (Approximately 1/4 to 3/4 milk line.) This typically takes about a week. If you routinely run out of season before your corn reaches 32 -33% DM then starting next year plant earlier hybrids. (If "size matters" and you care what the Boys in the Coffee Shop say about your corn, plant 4 rows of 115-RM corn around any fields that are near the road.) Just because you see 30% DM stated as within the recommended range for corn silage stored in bunker silos and drive-over piles doesn't mean that it's the ideal DM.

<u>Fiction:</u> Chop corn before 35% DM to avoid declines in stalk and kernel digestibility.

Stover (stalk) digestibility declines very little (if at all) until the corn plant is well over 35% DM. Dry matter yield and predicted Milk/acre is higher at 40% DM, and kernel digestibility doesn't decline until it approaches black layer. The increase in kernel starch as the plant matures to 35% DM overwhelms any small changes in the rest of the plant. However, don't wait until 40% DM to start because of increased frost danger and potential packing problems.

Opinion: BMR corn hybrid yields are increasing, but some "yield drag" persists.

There's very little university trial data on BMR performance, but I think there's about a 10% yield drag. More during drought stress, less with ample midsummer soil moisture. Some BMR hybrids have been more susceptible than conventional hybrids to Northern Leaf Corn Blight, so scout BMR fields and apply fungicides at VT or R1 if over 10% of the leaves from the ear leaf and above are affected. And in spite of what some seed dealers selling against BMR hybrids may claim, I don't think that increased BMR yields are impacting these hybrids' high digestibility.

Fiction: When processing corn, "start with a nickel, end with a dime".

In most cases *lose the nickel* since often this roller clearance (2 mm) results in too many whole and partly broken kernels. Better to start with a dime (1.5 mm) and reduce to 1 mm as necessary. Monitor results by checking loads as they're delivered to the silo, and remember that fields and hybrids may differ.

Fantasy? Higher Kernel Processing Scores with shredlage will permit delaying corn silage harvest to 38+% DM, which will maximize starch content.

This may or may not be a fantasy....*zero* data so far. But what happens if you wait until 38-40% DM, then bad weather prevents harvest for a week or more, by which time the plant is over 45% DM due to frost and advancing maturity? Time (and research results) will tell, but at this point I'd continue to aim for 33-35% DM for both shredlage and kernel processed corn silage.

Fiction: It doesn't pay to inoculate immature corn chopped for silage.

It's important to inoculate corn chopped at less than 30% DM because naturally-occurring acetic acid-forming bacteria (already on the growing crop) could produce very high acetic acid levels, resulting in slower fermentation, increased dry matter losses and potential intake problems.

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Opinion: Use a standard silage inoculant on immature corn, not a L. buchneri inoculant.

When LB inoculants are used in 30%+ DM corn silage the higher acetic acid levels improve aerobic stability without the negative effects of the acetic acid produced by naturally-occurring bacteria in immature corn silage. Why? We don't know—they just do! Immature corn silage needs all the help it can get to ferment properly: Standard inoculants are cheaper, and *in this case* I think they're the better choice.

Bunker Silo Safety Reminder from the OSHA Work Group: NYCAMH, NEDPA, NYFB and PRO-DAIRY.

Corn silage harvest is fast approaching. Days are getting shorter. Before harvest begins, be sure to get the crew together for a safety meeting. Please review this general list of ideas for a safe harvest season.

A sample of things to cover:

- Make a list that fits your farm!
- Rules of the road, speed, specified routes and alternatives to reduce neighbor irritation, beware of complacency- the 28th time at the same stop sign can get boring, but still need to stop!
- Get a good night's sleep. Tired operators are more likely to make mistakes.
- Carry water and snacks/stay hydrated.
- Stay in communication, let others know of hazards when they are observed.
- Stay in trucks or equipment when waiting. If must exit, radio other operators.
- No extra riders unless in training.
- Make sure lighting is adequate for all work performed after sunset.
- Make sure that staff use the proper personal protective equipment, such as hearing protection in noisy areas.

Pre harvest:

- Check over trucks and equipment, tires at proper inflation, worn tires changed, lights all functioning.
- Check field entry routes for wash outs and culvert problems, especially after all the rain we experienced in places this year.
- Mark driveways with flags so that drivers do not have to guess where the edge is.
- Check common routes for road crew activity or other new issues.
- Consider providing hi-visibility clothing for staff.
- Daily: remind drivers, packers and chopper operators to be safe, use safety belts and no unnecessary risks.

Filling:

- If new silage is being added to old silage, mark where the two materials are joined: the joint areas can be very unstable during silage removal and can collapse without warning. Extra caution is warranted with any activity in these areas.
- Avoid putting new silage over the top of existing piles covered with plastic. Major slippage of the top pile can occur during silage removal.
- Pile height should not exceed the reach of the unloading equipment. Staff should be told the target pile height.
- Packing tractor(s) should be ROPS equipped, operators belted in.
- Rollover hazard is obvious. Side slope steepness is an important safety concern. There are many factors that influence safe operating gradient. Minimize exterior side slopes as much as practical, beware of soft spots. Safest packing is achieved when driving up and down the pile: some references suggest no more than a 3:1 slope for this type of operation.



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- Only the most experienced equipment operators should pack. Provide new packing operators with proper training.
- Due to tip-over hazard, for hydraulic dump bodies, do not back up onto the pile to dump.
- Inform all staff that only authorized personnel should be in the silo filling area, extra people should be kept out. Make sure appropriate signage such as "No unauthorized personnel" and "Danger" is posted visibly.

Covering crew:

- Conduct safety meeting before going up onto the piles.
- Designate those that will work near the edge, all others stay away!
- Make sure workers are not wearing slick surface shoes.
- Remind workers to watch out for each other and no horseplay on top.

Cover Crops following Corn Silage

It's September and the first corn silage fields are being chopped. What a difference a month can make when it comes to planting cover crops. Following winter wheat harvest, we had lots of options particularly in the first half of August. As we go past Labor Day, many of those crops such as clovers, peas, radishes, and oats, will not gain the biomass needed to be an effective fall cover. What's left? Planting winter cereal grains are our best option after corn silage in NWNY

Cereal rye is always the safest cover crop when it comes to establishment and biomass accumulation in the fall and spring. However, it can also be a nightmare in the spring if weather conditions do not allow for it to be sprayed, rolled or plowed under it a timely manner. Rye seed does germinate at the lowest soil temperatures and would be the best bet on those later harvested fields.

Winter wheat also establishes well in the fall and makes good cover. It does not grow as fast in the spring and therefore provides a wider window for management. If you can find some bin run wheat seed, it also can be a cheaper option. Seeding rates for these cereals should be about 120 lbs. per acre (2 bushels). I would go a little heavier if it is bin-run wheat.

Winter triticale is a hybrid between rye and wheat. It is the best option if you plan on harvesting the cover for forage in the spring. This has become a very popular option in the last year due to lack of forage inventories and has shown to be a good quality feed. Planting depth should be 1.25 to 1.5 inches deep at 100-120 pounds per acre. We have seen been better success when drilled vs broadcast. See link to Tom Kilcer's article on our webpage for further advice on successfully planting and fertilizing winter triticale (http://nwnyteam.cce.cornell.edu/submission.php?id=497&crumb=dairy|1). An additional fact sheet on winter triticale forage can be found on Cornell's Nutrient Management Spear Program site at http://nmsp.cals.cornell.edu/submission.php?id=497&crumb=dairy|1). An additional fact sheet on winter triticale forage can be found on Cornell's Nutrient Management Spear Program site at http://nmsp.cals.cornell.edu/submission.php?id=497&crumb=dairy|1).

BQA in A Day Training, September 19, 10:00am – 2:00 pm, Runnings in Canandaigua

Dr. Michael Baker, Cornell University Beef Cattle Extension Specialist, will be leading the classroom portion, covering care and husbandry, feedstuffs, feed additives and medications, processing and treatment records, and injectable health products. Dave Wilson, DVM, will be leading the afternoon training, which will include proper animal handling and vaccine use.



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BQA is a national program for beef producers that provides science based management practices that enhance carcass quality and safety and improve animal care. BQA works to return more profits to producers and to protect consumer confidence in our beef supply. The BQA program is producer based, voluntary and locally led. In NYS, it is coordinated through a combined effort of the New York Beef Council, Cornell University and the New York Beef Producers' Association.

Participation allows beef producers to complete most of the requirements for certification and qualifies for recertification. The program is being held at **Runnings, 3191 County Road #10 Canandaigua, NY 14424**. Trainers and sponsors will be available to speak with the public regarding the proper care and management of beef cattle.

The event is free but registration is required. Please contact Nancy Anderson at 585-394-3977 x427. Only those registered will be guaranteed a lunch. BQA manuals will be available to purchase for \$10.

This special event is sponsored by Runnings, Boehringer-Ingelheim, Merck, Merial, and Zoetis.

October is BQA month in New York. Many training opportunities are planned around the state. For details or more information contact the NY Beef Council at 315.339.6922 or email <u>cgillis@nybeef.org</u>. Details for trainings can also be found on the New York Beef Council website www.nybeef.org in the Cattlemen's Corner.