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Capital Area Ag Report
August 15, 2013

Announcements

Tuesday, September 10, 1 – 3 pm, Field Meeting - Soybean Integrated Pest Management - at Stone House Farm, 3169 Route 9, Hudson. Learn to identify and manage pre-harvest soybean insects, weeds, and disease. Led by Ken Wise, CCE IPM Specialist & Aaron Gabriel, CCE Agronomist. 2 pesticide re-certification credits. No charge, but please call for a head count, Aaron Gabriel, 518-380-1496, adg12@cornell.edu.

Wednesday, August 21st, at 1pm to 2:30 pm—Monthly Pasture Walk— at Paul Wais Farm, 479 Farm to Market Rd., Athens. Topics: Managing pastures in August; Pasture renovation; Preparing for Frost Seeding; Extending the Grazing Season. No charge, but please contact Aaron Gabriel (518-380-1496, adg12@cornell.edu) for a head count

A sincere thank you to our Dairy Tour host farms this summer: Hill-Over Holsteins; Landview Farms, LLC; and Dutch Hollow Farm. In the next couple weeks we will post pictures and commentary on our blog: http://blogs.cornell.edu/capitalareaagandhortprogram/

The “Ag Report” is prepared by Aaron Gabriel

Capital Area Agricultural & Horticulture Program Staff

Sandra A. Buxton
Farm Business Management

Aaron Gabriel
Crops and Soils

Tom Gallagher
Livestock Production & Marketing

Steve Hadcock
New Farmer / Market Development

Chuck Schmitt
Commercial Horticulture (Greenhouse, Nursery, Landscape)

Regional Fruit Specialist
Kevin Iungerman

Capital District Vegetable and Small Fruit Program
Chuck Bornt
Laura McDermott
Crystal Stewart
Corn: So, how late can you effectively put nitrogen on corn? The weather has moderated somewhat and some fields are a little pale. This figure (courtesy of Pioneer) shows the proportion of nitrogen taken up in corn during its growth stages. It shows that at tasseling, corn has taken up only 60% of the total nitrogen it will use. That means 40% of its total nitrogen is still in the soil. Also, it is at tasseling that the plant begins to cannibalize leaves and other parts to send nitrogen to the ear. So, lower leaves should not show nitrogen deficiency until after tasseling. To answer the question. Corn will take up applied nitrogen at tasseling (and a little later). A reduced rate should be calculated and apply it so that it will not leach or denitrify in water-logged soils.

Weather Data—August 15, 2013

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<th>Rain This Month</th>
<th>Rain Since April 1st</th>
<th>GDD 86/50 Past Week</th>
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Alfalfa: Third cutting is beginning. A reminder from last week, harvesting alfalfa the first week of September is usually stressful on the plant. It may be too soon after 2nd cutting and it may not have enough time in the fall to replenish root reserves after it has used up energy for regrowth. Alfalfa can handle one stress but not two. So, be sure that insects (potato leafhoppers), weeds, and fertility are under control as it gets ready for winter.

Soybeans: This week I have seen quite a few aphids, some spider mite, and a whitefly or two on soybean. The critical time to make yield in soybeans is during the reproductive stages. Beans are now in the pod initiation and seed filling stages. It is a critical time. The recent rains should be very beneficial. But you want to reduce stresses from insects and disease. Of course, the plants are big and you have to judge whether running over plants will do more damage than the bugs or disease.

The white oval on the left is an immature whitefly. The white thing on the right is a young soybean aphid.

Know The Good Bugs

Immature ladybug    ladybug pupa    Flower fly (@ 11 & 4 o'clock)
another insect predator
Pastures: The recent rain will help pastures grow back. Give them time to rejuvenate. Feed some hay for a couple weeks if necessary to allow pastures to recharge their roots. If you have not already clipped weeds. Now is a good time. We are getting into the cool moist season. Our cool-season grasses and legumes are adapted to this type of weather and will grow well. Set back the weeds, and let the good species grow in.

Renovating Hay Fields: Do you want to replant a worn out alfalfa field back to alfalfa? You have to eliminate the alfalfa for a year before reseeding to alfalfa. If you are also trying to get rid of bedstraw, here is a prescription. In September, spray Crossbow herbicide. It will kill all broadleaf weeds and the alfalfa. It is the only registered herbicide we have for bedstraw. You may need a second application next year (2014) to take out new bedstraw. The grasses will remain. Feed them to fill and so that you do not lag on yield. Then, in fall (2014) kill all the grass with glyphosate. In the spring (2015), no-till seed alfalfa and other species you want in your hay field.

Dairy Nutrition Fact Sheet  
August, 2013 (Revised)

Considerations for Working with Immature Corn Silage

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In some parts of New York, the 2013 corn crop may not reach normal maturity. There may be small ears, poor grain fill or even no ears on the corn plant at the time of harvest. We have seen this same situation in previous years. The following points may be helpful as you work with immature corn that will be harvested for corn silage.

Nutrient composition – Immature corn will usually be wet (<25-30% DM), higher in crude protein, higher in fiber, higher in sugar and lower in starch than “normal” corn silage. However, energy value may be 85-95% of the energy value of normal corn silage. Remember that corn silage is really grass forage with an ear attached. In the early growth stages, the plant can be a highly digestible source of fiber since lignin (as % of the total fiber) will often be lower than in mature corn silage. The energy in immature corn silage is mainly from the digestible plant rather than the grain. In 2000, we sampled some immature corn at the Cornell T&R Center. Most of this was in the dough stage and had starch levels between 5 and 20%. Normal corn silage is 25-40% starch. The predicted energy values for these samples were 80-95% of normal maturity corn silage.

Harvesting considerations – The biggest challenge is the moisture content of immature corn silage. It is not
uncommon for these plants to be < 30% DM when they are ready to harvest. Key points to think about are:

If at all possible, wait until whole plant dry matter is > 32-34% dry matter. Harvesting wetter increases runoff from the silage and makes it difficult to get a good fermentation.

Store any immature corn silage in a separate storage facility if possible.

Take some samples during harvest and have them analyzed to provide a base of information on the nutrient content of the crop.

Check chopper settings and particle size of the material coming out of the chopper. If using the Penn State box, target 10-20% on the top screen and < 40% in the pan. This may require increasing length of cut.

Since ear and kernel development is poor, kernel processing is probably not needed.

Follow normal silage management practices of filling fast, packing and covering the top with plastic or the new oxygen limiting silage covers.

Immature corn silage should be high in sugar content to provide readily available carbohydrates to support fermentation. However, it may be lower in the normal bacterial population coming into the silo from the corn plant. The addition of a lactic acid based inoculant may be beneficial to stimulate fermentation.

If possible, give the silo 3-4 months after filling before beginning to feed the silage out.

Forage analysis – Since there can be many factors that influence the nutrient composition of immature corn silage; an actual analysis of your specific corn silage is needed. This information can be used in both determining the price of this silage and also in balancing rations. A wet chemistry analysis may be better than NIR since calibrations for normal corn silage may not fit with immature silages. You may want to discuss this with the forage laboratory. Make sure that starch, NDF digestibility and a fermentation analysis are included.

Yield – Yield will be highly variable. Dr. Greg Roth at Penn State suggests that silage yield for corn plants without ears or poorly pollinated ears may be 1 ton of dry matter for each foot of plant height. This is based on the plants being 30% dry matter. Corn that is 5 feet high would be expected to yield about 5 tons of dry matter (16.6 tons of wet corn silage).

Economic value - The actual price will depend on a combination of yield, nutrient composition and dry matter content. Dr. Bill Weiss at Ohio State indicates that immature corn silage is worth about 85% of the economic value of normal corn silage at the same dry matter content. This is based on a number of runs over the years using the Sesame program. A major factor influencing the final price is adjusting for differences in dry matter content. The following example indicates how this pricing approach can be used to determine the value at the time of feeding:

Value of “normal” corn silage = $70/ton (35% DM)
Value of immature corn silage = $70 * 0.85 = $59.50 (still assumes 35% DM)
If actual dry matter is 27%, then the adjusted price = 45.90/ton
(27/35 *$59.50)
If you want to “estimate” the value of the standing crop, use 70% of the adjusted price. This would be $41.65 in this example.

Feeding considerations – Work with your nutritionist to determine the best way to use this silage on your farm. In some cases, it might be logical to use the immature corn silage for specific groups of cows or heifers. This will depend primarily on the nutrient profile, dry matter content and fermentation characteristics. It might be best to limit the use of this silage in rations for close-up dry cows and fresh cows if possible. Immature corn silage will often have higher acetic acid content after fermentation. This may decrease dry matter intake. The addition of sodium bicarbonate added to the ration at 0.75% of total ration dry matter may help intake. This is about 6 – 10 ounces per cow depending on the level of dry matter intake.

Summary –

Immature corn silage will vary both in nutrient composition and dry matter content. Typically, it
will be higher in crude protein, NDF and sugar but lower in starch than “normal” corn silage.

Dry matter content will usually be low (<30% DM) in immature corn plants. Ensiling wet corn silage can result in unusual fermentations and the resulting silage may cause decreased dry matter intake when fed to cows.

Try to hold off on harvest until whole plant dry matter is > 32-34%.

Forage analysis is essential to characterize the immature corn silage on your farm and determine how it can best be used in dairy rations.

The energy value will probably range from 80-95% of normal corn silage.

The economic value will be about 85% of normal corn silage before adjusting for dry matter content.