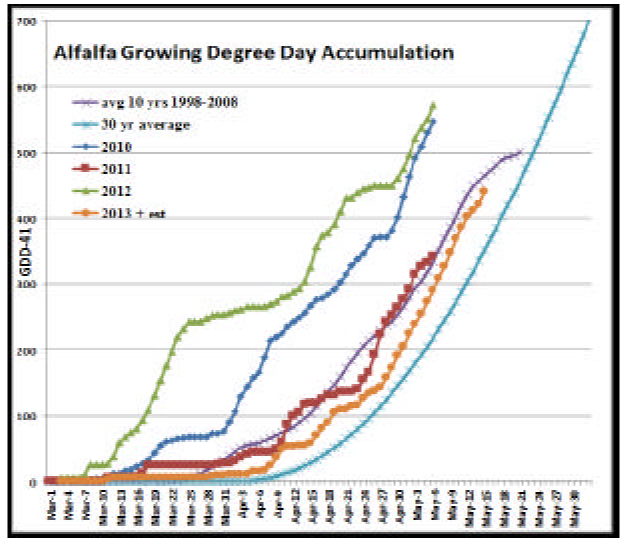
SCNY Dairy & Field Crops Digest

The Great Leap Back to Normal

Thomas Kilcer, Certified Crop Advisor, Advanced Ag Systems,



Each year we track where the crops are to give the farmers some idea if they should panic and stop planting corn to do haylage, or to keep planting. This year is no exception other than we, with our short term memory, are comparing it to the record early season of 2012. Yes, it is snowing in the mid-west. We had a major snow on Mother's day in the 1980's. The bottom line is that the weather has moved back to a near normal condition, something we are not used to having.

Tracking the year's heat accumulation, we find that the season is made early or not, in late March and April. Once we get to the first part of May, it seems to settle into a somewhat regular growing degree day accumulation. As you can see in the graph, this March and April were just the opposite of 2012 in that they had zilch for growing degree day accumulations. **This year, May 1 we had hit the same GDD accumulations as we had on MARCH 22 of 2012!** This year is much closer to the 30 year average (note: 2013 GDD accumulation are base on recorded data to May 1, and predicted weather from May 2—May 15). Much of the heat has only arrived in the last week in our neighborhood. As most readers are not in the Hudson Valley, nor the state or even the US, how do you adjust for the weather in your particular farm?

This decision is critical as farms have found that high forage diets in the Northeast can significantly increase herd health, production, and profitability. You need enough for-age – a significant problem on a large number of farms after the droughts of 2012. Just as critical, you need quality forage. Having piles of "chainsaw forage" is not going to help the production or profitability. A minimum of 60% NDFd is needed to support a high forage diet. YOU decide what quality forage you can feed by **WHEN** you **START** and **FINISH** your haylage harvest. A help is that there is a very big difference as you go from southern, low, warm elevations, to the more northern, higher elevation sites.

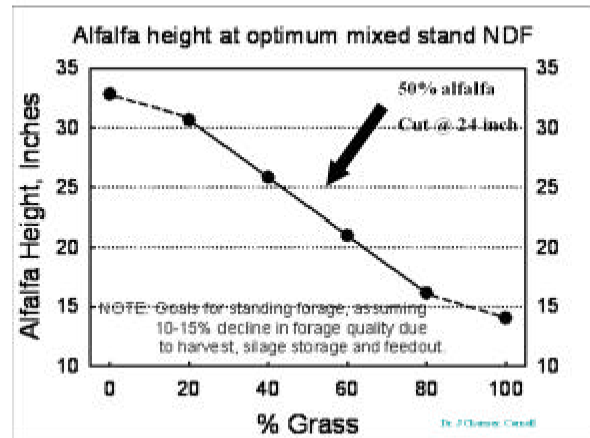
The above growing degree day calculations is to give you a general idea of how the season is progressing. **YOUR INDIVIDUAL FIELDS SHOULD DETERMINE WHEN YOU SHOULD START HARVEST,** using ***YOUR alfalfa as a phenological predictor***. This is a fancy way of saying that the height of alfalfa can predict when it and grass fields, in your local climate and condition, should be cut. With the high forage diets, Dr. Cherney at Cornell recommends that optimum milk production from grass is at 50 NDF. This starts to occur when alfalfa in the same or near-by field is 15 inches tall. Measuring **nearby alfalfa** at **15 inches** (38.1 cm) means that the grass field is at peak quality for cutting (in the dry areas the grass is short but will make up yield in 2nd cut). In mixed stands (50% alfalfa), when alfalfa is 24 inches tall (61 cm) then you should start cutting the 50% alfalfa stands. When pure alfalfa stands reach 30 inches (76 cm) , the harvest window is open. Most farms will not stop harvest to wait for the crop to catch up.

(Continued on page 2)

MAY 2013

Cornell Cooperative Extension South Central NY Dairy & Field Crops Program

(Continued from the cover)



YOU ARE BETTER TO CUT TOO EARLY THAN TOO LATE. This is especially critical with the grasses. What you lose in yield in first cut you make up for in 2nd cut. Fields that are in a low, warm, sheltered location, **are ready earlier** than the rest of the farm. A well drained soil will have more mature forage than poor drained soil. A north facing slope will be further behind a south or south east facing slope. For some farms, their south facing well drained clear alfalfa may be ready before a mostly grass field on a wet north facing slope.

We Now Have a System That Allows You to Tailor Harvest for YOUR Farm, YOUR Fields

Dr. Cherney has developed an even better system. http://www.forages.org/joomla/index.php/tools is where you download **GMT-2 Alfalfa-Grass NDF Estimation** and directly enter data to the program. It will give you an estimate of **how many days until that field reaches peak quality**. You just go from field to field, enter the data and get the potential harvest date. If the weather is predicting rain for that date, harvest earlier. A healthy dollop of **common sense is needed with any biological system**. Dr. Cherney's is one sys-tem that you can use to your advantage.

Winter Forage Harvest

With many new growers of winter forage (triticale), harvest timing is critical. Stage 9 where the flag leaf has just emerged, is higher milk/ton (4200) feed value yet still gives yields of 8—12 tons of silage/acre. If you miss and get early boot (stage 10), it is still 3600 milk/ton which is the same as corn silage and 20-30% higher yield, and can be fed to the lower producers. To get this heavy crop dry for silage you will need to wide swath **and** use a tedder. A new option is to make a wetter, high sugar, same day silage, and ferment with a **good straight homolactic bacteria** type product to bring the pH down fast and actually limit some of the excessive wild acetic that is made. This is not the L. buchneri types for these wet crops. L. buchneri is for drier forage. The whole process can be read at **http://advancedagsys.com/october-2012-wet-forage-5/**. The only caution is that if we get a week of cloudy rainy weather and you mow on the first sunny day, the crop will probably NOT be high in sugar for rapid fermentation; I don't know what will happen then. On the good news side, there is 60% less available water under a winter grain and so in the high rainfall areas, this may be the driest fields. ⊠

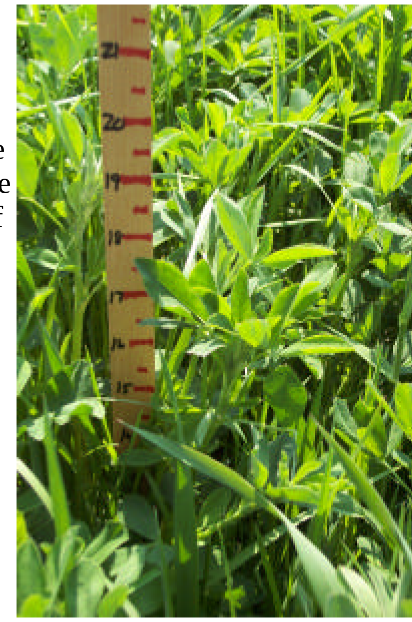
We are pleased to provide you with this information as part of the Cooperative Extension Dairy and Field Crops Program serving Broome, Cortland, Tioga and Tompkins Counties. **Anytime we may be of assistance to you, please do not hesitate to call or visit our office.**

Janice Degni
Team Leader & Field Crops Specialist
CCE Cortland County
(607) 753-5215
jgd3@cornell.edu

Fay Benson
Small Farms Educator
CCE Cortland County
(607) 753-5213
afb3@cornell.edu

**Dairy Digest Designed By: Sharon VanDeuson, Administrative Assistant,
CCE Cortland County, (607) 753-5078, shv7@cornell.edu.**

Targeting Alfalfa Harvest



We have a very good field measurement for predicting alfalfa NDF in the field called PEAQ (Predictive Equations for Alfalfa Quality) for pure or nearly pure Stands. By simply measuring the tallest alfalfa stem and knowing the stage of the most mature stem we get a pretty good handle on what the NDF of the alfalfa field actually is. Table 1 gives the NDF for the measured height and maturity of alfalfa. An NDF of 40% is the goal so on most farms we will need to start earlier than 40% NDF if we are to get all of the alfalfa harvested on time.

If you are measuring alfalfa that is on the short side looking to predict when to begin harvest remember **alfalfa NDF increases about 0.5 to 0.7 points/day.** Expect the lower end of that range in cooler weather and the higher end in warm. We have certainly seen these differences play out depending on the year.

	Stage of Most Mature Stem		
Length of longest stem from soil to stem tip (in inches)	Late Vegetative	Bud Stage	Flower Stage
16	28.5	29.7	31.4
17	29.2	30.4	32.0
18	29.9	31.1	32.7
19	30.6	31.8	33.4
20	31.3	32.5	34.1
21	32	33.2	34.8
22	32.7	33.9	35.5
23	33.4	34.6	36.2
24	34	35.3	36.9
525	34.7	35.9	37.6
26	35.4	36.6	38.3
27	36.1	37.3	38.9
28	36.8	38.0	39.6
29	37.5	38.7	40.3
30	38.2	39.4	41.7
32	39.6	40.8	42.4
33	40.3	41.5	43.1
34	40.9	42.2	43.8
35	41.6	42.8	44.5
36	42.3	43.5	45.2
37	43.0	44.9	46.5
38	43.7	44.9	46.5
39	44.4	45.6	47.2
40	45.1	46.3	47.9

Grasses

When most of the acreage in this area is in grass or legume/grass mixes it may seem strange then to begin with alfalfa. Like it or not alfalfa height seems to predict NDF content well, very well, even for grass or alfalfa/grass mixes. David Parsons and Dr. Jerry Cherney at Cornell sampled many fields though out the state in 2004 and 2005 to come up with prediction equations for grass or alfalfa/grass NDF that work as well as the ones do for alfalfa NDF.

For a pure grass field you would find a nearby alfalfa field or part of the field that is pure alfalfa and measure the alfalfa height. **If the alfalfa is 15 to 16 inches tall you would begin to harvest nearby grass fields. Typically NDF increases about 0.8 to 1.2/day for grass.** Again expect the lower end of that range in cooler weather and the higher end in warm. Going strictly by alfalfa height there is no difference made for grass maturity, height or species.

The research indicated none of these predicted the grass NDF as well as alfalfa height. This may be hard to understand given the emphasis that has been placed on harvesting grass by maturity, hoping to harvest when the grass is in the "boot stage".

In mixed stands make a visual assessment of the amount of grass. **If the field is 50/50 grass and legume then begin harvest when alfalfa in that field is 22 to 23 inches tall**. At this alfalfa height the grass component will be higher in NDF than would be desired if it was harvested by itself but the alfalfa in the mixed stand will be of extremely low NDF to compensate. Yield from the alfalfa given its low height when cut will be less than a pure stand but the grass component will be higher yielding and make up for it.

NDF Guidelines for Forages (% of DM)	
Grasses	48-55%
MMG (70% grass)	42-50
MML (70% legume)	40-45
Legumes	38-42
Corn Silage*	40-44

*Corn silage NDF% may be deceiving as grain content may be 20-60%. A diet that is 50% corn silage as a sole forage source, with corn silage that is 50% grain is technically only 25% forage.

There are certainly some practical aspects to this that may make it difficult to implement on all farms. Many times the alfalfa ground is in the lower well-drained valley soils and the grass is being grown on the hillside at a higher elevation giving different growing conditions enough to make prediction with alfalfa inaccurate. So if you don't have any pure alfalfa areas on the hills you may be able to work with alfalfa height if you adjust for the fact that it may be taller in the valley to give the correct NDF for the hill grass than would be expected at the same elevation. Also in many fields alfalfa will be more concentrated in better drained parts of the field with grasses dominating the poorer drained areas. Although the prediction equations were based on perfect mixes of alfalfa grass these prediction equations still hold some validity in fields where there is not a perfect mix. These fields will still need to be harvested with the alfalfa shorter favoring the chance to cut when total quality of the hay crop is high.

Kevin Ganoe is the Field Crops Educator with Cornell Cooperative Extension in Chenango, Fulton, Herkimer, Montgomery, Otsego and Schoharie Counties.

(Continued from page 8) ***From Field to Silo -2013 Update***

Goal % NDF:

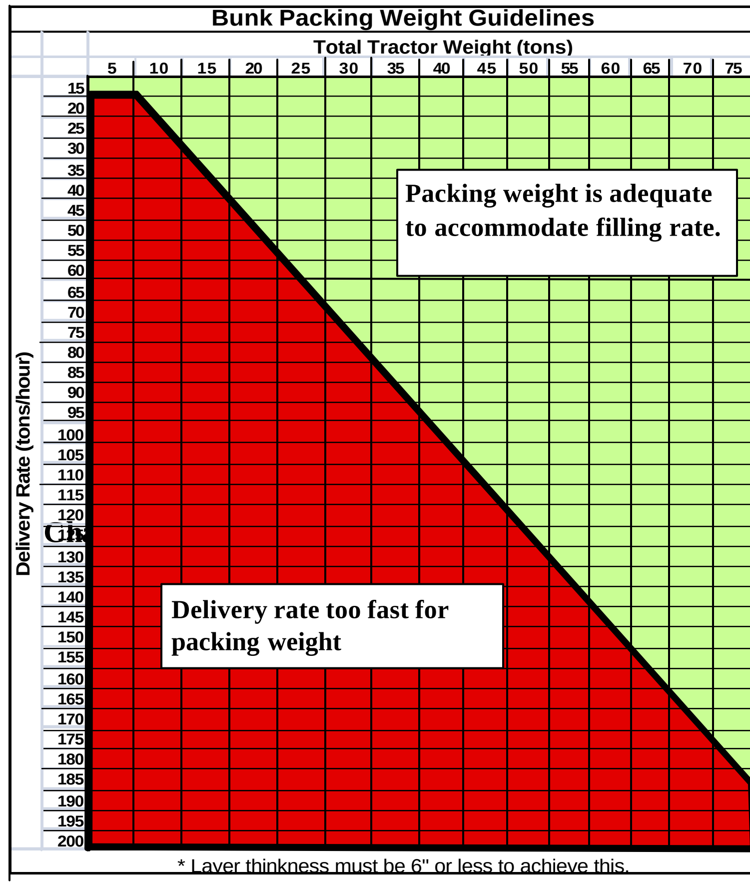
NDF (Neutral Detergent Fiber) is by far the best predictor available to determine forage quality for lactating dairy cows. NDF content in the field is best predicted by using alfalfa height for both alfalfa and grasses. *(See Chart)*

Grasses the goal is an NDF level (on a dry matter basis) is 50% (target range 48-55). Tallest alfalfa height will be 16-17 inches.

Alfalfa the goal is an NDF level of 40% (target range 39-43). Tallest alfalfa height will be 28-30 inches.
Begin harvest early enough so that most of your crop is harvested by the "ideal" range.

Mixed stand of 50% grass and 50% alfalfa the goal is an NDF level of 43%. Tallest alfalfa height will be 22-23 inches.
Begin harvest early enough so that most of your crop is harvested by the "ideal" range.

Typically NDF increases about 0.5 to 0.7/day for alfalfa was and about 0.8 to 1.2/day for grass. Expect the lower end of that range in cooler weather and the higher end in warm.



Total Tractor Weight	Optimum Filling Rate
Tons	Tons/Hr.
15	40
20	50
25	60
30	75
35	90
40	100
45	115
50	125
55	140
60	150
65	165
70	175
75	190
80	200

Applied Research: What is the Optimal N rate on fall planted Cover Crops When Harvested for Forage?

-Janice Degni, Area Extension Field Crops Specialist

Fall planted cover crops are gaining acceptance as a beneficial practice to hold nutrients and buffer the soil over the winter. Cover crops scavenge excess nitrogen, capturing it in its plant mass, saving it from loss through the fall and winter and make it available to the following crop after plowdown. Soil tilth benefits as well as the soil biology by maintaining a living crop on the soil year round.

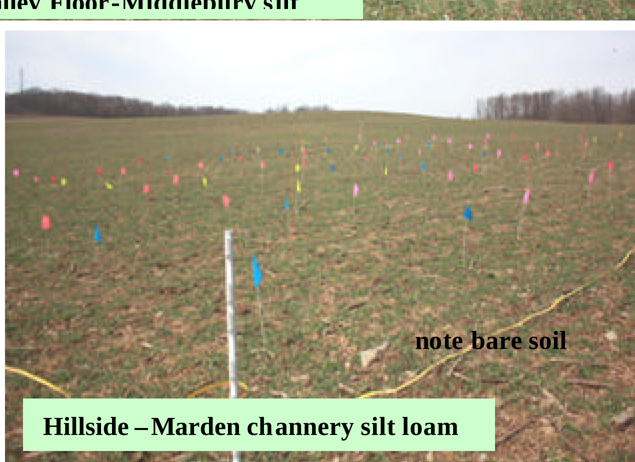
Another benefit of fall planted small grains is the potential for an early spring harvest of silage. In conjunction with the Cornell Spear Nutrient Management Program we have 2 field trials comparing 5 rates of nitrogen on fall planted triticale. One of the trials is on a valley floor on a *middlebury* silt loam soil and on a hill on a *mardin* channery silt loam soil.

Twenty small plots per site, 10 ft X 10 ft, were established on April 9.

The difference in growth between the valley floor and higher elevation and soil type are evident in the pictures.

Plot establishment April 9:

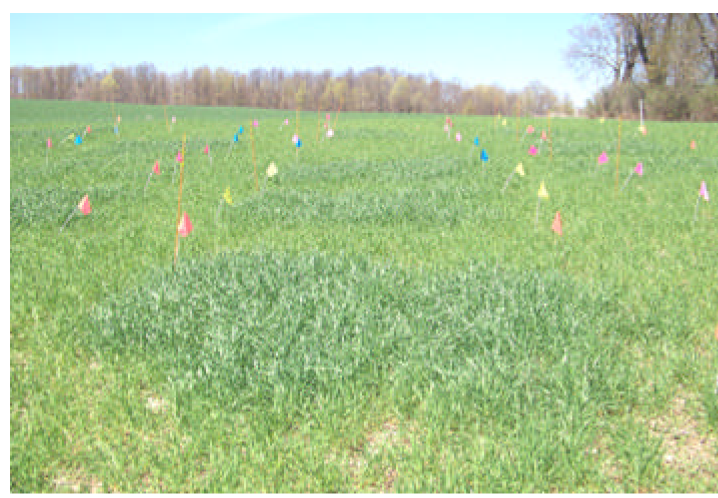
Valley Floor-Middlebury silt



Hillside – Marden channery silt loam

May 2: Valley Floor received winter manure

May 2 – Hill Site. Note differences in color & growth



We applied 5 rates of nitrogen (0, 30, 60, 90, & 120 lbs/ac actual nitrogen) with 4 replications. The colored flags in the photos represent the different rates of nitrogen.

We will be measuring harvest before May 20, the anticipated farm harvest date.

Does My Soybean Crop Need Sulfur?

Daniel Kaiser, Extension Soil Fertility Specialist, University of Minnesota

I know there are still questions on the application of sulfur for soybean. We have been working on a number of projects focusing on sulfur management on corn, soybean, and spring wheat. Recently the soybean research has been fully summarized so I want to take a minute or two to highlight some of the findings to outline where we are at with the current guidelines for fertilizer management on soybean.

The extension publication on fertilizer guidelines for soybean was recently updated and one of the major changes deals with sulfur application to soybean. In 2008 and 2009, through funding provided by the Minnesota Soybean Research and Promotion Council, we conducted a series of strip trials looking at combinations of nitrogen, phosphorus, and sulfur banded to the side of the row. One of the major findings of this work was a significant yield response that occurred at one location.

We have been mainly focused on researching sulfur response for corn. One thing that seems to come to the forefront in this research is the overall importance of soil organic matter when considering where a yield increase will occur. For soybean it is not that simple. If you go through much of the research from around the country there is not much supporting evidence for recommendations for sulfur application to soybean. I believe much of any potential for response of soybean to sulfur is related to a few factors, the most important of which revolve around climatic conditions. Where we saw the response was in 2009 which was a year that saw very large responses to sulfur in many of our corn studies. With temperatures being cool and with most areas being relatively dry the potential for mineralization of sulfur from organic matter was low. Two other factors I think were important at the locations were the soil and the previous history of sulfur deficiency symptoms in other crops (alfalfa and corn). The site was on a silt loam soil in southeastern Minnesota with an organic matter concentration that averaged less than 2.0% in the top six inches. All these factors together created a perfect storm in terms of creating conditions were a sulfur application would benefit soybean.

Other than the field location in 2009, there was one other instance that I know of where sulfur benefitted soybean at the Southwest Research and Outreach Center at Lamberton. In this instance soybean yielded higher with sulfur, but the sulfur was applied before the previous corn crop. To follow up on this response we set up trials to look further into the sulfur cycling within corn-soybean rotations to better understand if there are greater benefits from application before the corn crop. One thing that we found in the studies in 2008 and 2009 is that we increased the amount of soybean plant material relative to the total grain produced, meaning we had more plant material per acre. When sulfur and phosphorus were added with N there was a large increase in soybean vegetative growth at all locations. This concerns me due to extra water usage in dry years and potential for disease pressure to increase.

So what are the overall benefits? Increased yield is the overall goal but I do not think that there is a widespread need for sulfur to be applied on all soybean acres. I think the best bet would be to look at fields that are in a areas prone to sulfur deficiency on corn or alfalfa, soil organic matter is around 2.0% or less, and the field has not had any sulfur (including manure) applied to it for several years. In this case 10-15 lbs of sulfur broadcast per acre should be enough for soybean. I would suggest not applying high rates of nitrogen and phosphorus with sulfur. In our field trials we broadcast potassium sulfate and did not see the large increases in plant mass. Another source that may work is gypsum.

I do not think sulfur needs to be applied to soybean if it was applied the previous year. Based on all of the data we have there does appear to be enough sulfur cycling from year to year that the soybean crop should have enough. Sulfur does leach out of the soil but the relative rate it will leach is lower than some other anions. In coarse sand our data indicates that given enough rainfall any sulfate applied will be below the 2 foot depth in the soil by the middle of the growing season. Even with a small increase in clay content that rate can be reduced. At another site with a loam soil texture we just started to see elevated levels of sulfate by the end of the growing season. Thus, there will likely be some sulfate still in the profile for the soybean crop as long as rainfall is not excessive.

The other aspect we have been studying is sulfur cycling in corn residue. Based on the information I had a few months ago there did not appear to be much, if any, sulfur that would mineralize from the breakdown of corn stover. However, a more recent set of data shows that it may be possible. From the data we have now, without sulfur, the ratio of carbon to sulfur tends to maintain at a point where the

(Continued on page 7)

(Continued from page 6)

breakdown of corn stalks will not release or tie up sulfur. However, when we looked at the data from 10 and 20 lbs of sulfur applied to corn, the ratio became smaller indicating a potential for a small amount of sulfur to potentially be released. The amount released will again depend on soil temperature, moisture, and tillage to incorporate the residue. This cycling mechanism may explain some of the response we saw in 2009. We also studied higher rates, but the effect appeared to not extend past 20 lbs of sulfur.

To reiterate, if sulfur is applied before another crop I do not think it needs to be applied before soybean, especially corn where the chance of a profitable return is much greater. I think yield can still be increased without a direct application and we also have evidence of increases in grain protein concentration when sulfur was applied before corn. These increases have only been identified in our work in Southeastern Minnesota at this time. While most of our evidence does not support widespread use of sulfur on soybean, some of the isolated responses indicated that some changes needed to be made to our recommendations. Moving forward we will continue to study the cycling mechanisms in order to provide the most up to date information for our current guidelines.

6.3 Managing the Crop

Use soil test results to determine both lime and fertilizer requirements (see Table 6.3.1). Soybeans have the ability to fix nitrogen and, under optimal growing conditions, do not require nitrogen fertilizer. If used, band-placed fertilizer should be at least 2 inches to the side and 2 inches below the seed. Do not place any fertilizer in contact with the soybean seed. Diammonium phosphates or urea should not be used in the fertilizer band. Do not use more than 40 pounds of potassium in the fertilizer band at planting either.

The most frequent cause of disappointing soybean yields is drought in the month of August, when seeds within the pods are enlarging and filling. The crop is actually fairly drought resistant before that, but moisture stress in August causes pods to shed and seeds to abort. For this reason, it is recommended that soybeans not be grown on sandy or gravelly soils. ✸

Table 6.3.1. Fertilizers for soybeans. [1]

		Fertilizer Nutrients to Be Added (lb./A)									
		Phosphorus (P_2O_5)					Potassium (K_2O)				
		Soil Test Levels (lbs P/acre)[2]					Soil Test Levels (lbs K/acre)[2]				
Soil Management Group	**Nitrogen (N)**	*Very Low*	*Low*	*Medium*	*High*	*Very High*	*Very Low*	*Low*	*Medium*	*High*	*Very High*
I, II, and III	0–20	50	40	20	20	20	40	40	20	20	0
IV and V	0–20	50	40	20	20	20	60	60	40	20	0

[1]A more specific guideline will be obtained from a complete Cornell Morgan soil test analysis.
[2]See Table 2.10.1 for soil test results values within each level.

Lodging before harvest is commonly encountered, but modern combines are designed to handle lodged soybeans. At maturity, leaves have been shed and only stems and pods must be passed through the machine. Soybeans store safely at 14 percent moisture. They crack or break if handled roughly, especially when they are very dry, as they usually are when in storage during the coldest months.

Source: 2013 Cornell Guide for Integrated Field Crop Management

Corn & Soybeans

2013 Crop Insurance Fact Sheet for New York State

IMPORTANT DATES:

Final Planting: 6/10/2013 Acreage Reporting: 7/15/2013

Reporting Requirements

You must file a report of planted acreage to your crop insurance agent by the acreage reporting date established for your county. Since acreage reporting dates vary by crop and county, consult your agent or for more information see: http://www.rma.usda.gov/tools.

Forages: From Field to Silo - 2013 Update

Ron Kuck, Dairy Specialist, CCE Jefferson

Preserving every ton of forage per acre you harvest.
Storage losses can be staggering without the proper techniques and preservation tools. Silage loss from field to feed bunk is 5-10%. In the most ideal situation, achieving shrink of 10% at the bunk is achievable, but losses of 30% are common and 50% still happens. Forage quality factors you cannot control include weather and equipment breakdowns (provided you did maintenance this winter).
The six forage quality factors you can control:

1 .Harvesting at optimum maturity. (chart 1)

2. Harvesting at correct DM and chop length.

3. Using inoculants or preservatives.

? Good fit for hay crop silages.

? Provide insurance that forages will ferment properly.

? Inoculate with a minimum of 100,000 colony-forming units (cfu) of lactic acid producing bacteria at ensiling.

? Propionic acid-based products added at a rate of 2-4 lbs./ton of 35% DM silage.

4. Filling and packing the forage effectively.
Filling silos as rapidly as possible reduces silage exposure to air and rainfall:

? Proper shape and size (3:1 Run/Rise ratio)

? Achieve a Higher Silage Density-Chart #2

? The goal for both bunk silos and bags is at least 15 lbs. DM per cubic foot

? Higher packing density lowers shrink loss. (Don't over pack bags!)

? Every 1#DM/cu foot increase in density reduces shrink by 2%.

? If weight of tractors/# of tractors limits packing slow down delivery or add tractors weights. These can be built on farm or purchased and weigh 7800# plus or minus, a popular option!

5. Covering and sealing.
Main reasons for shrink are uncovered bunks, leaky uprights, or ripped Ag Bags.

? 6-8 mil thick polyethylene plastic containing ultraviolet light protection.

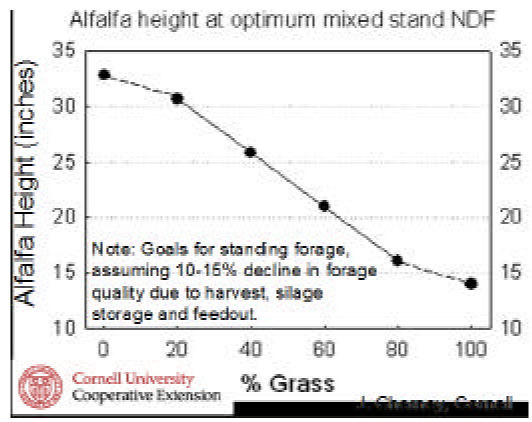
? New oxygen barrier cover.

? Much lower oxygen permeability than polyethylene.

? Second layer of plastic or a tarp is used on top to protect the thin plastic layer.

? Reduces dry matter loss at the top of the silage by 50%.

Chart 1.



6. Managing the feed out.
A smooth, firm silage face fed-out at an appropriate rate reduces silage losses.

? Bunkers - Recommended removal rates are 6 inches/day or greater

? Bags - Remove at least 6 inches/day.

? Tower silos - Feed out losses with tower silos can occur a few different ways.

? Remove at least 4 inches/day

? Losses due to wind can be high if the silage is directed into a conveyor with no protective shelter, covers, leaking drop pans, or liners.

7. The customer is always right!

Dairy Situation and Outlook, April 22, 2013

By Bob Cropp, Professor Emeritus, U Wisconsin Cooperative Extension, U Wisconsin-Madison

A year ago milk production was running strong, the result of more milk cows and increases in milk per cow. March milk production was 4.3% higher than the year before and 4.2% higher January through March daily adjusted. USDA, NASS has ceased their monthly milk production report showing milk cow numbers and milk per cow but continues its estimated total milk production for 23 states and the U.S. For March USDA estimated milk production to be 0.1% lower than a year ago with U.S. milk production unchanged. Milk production continues to be lower for most Western states with production down 2.8% for Arizona, 3.3% for California, 2.9% for New Mexico and 4.1% for Texas. Idaho had a small increase of 0.5%. For the Northeast milk production was up 1.8% higher for New York, 0.3% for Pennsylvania, 3.0% for Michigan and 2.3% for Ohio. In the Upper Midwest production was up 1.8% for Minnesota, 1.0% for Iowa, and 3.0% for Wisconsin.

USDA is now estimating milk production for the year to total 201.8 billion pounds, 0.7% more than 2012 unadjusted for the extra day in February 2012 or 1.0% adjusted. An annual milk production growth of less than 2% is positive for milk prices especially with the level of anticipated dairy exports this year.

Not knowing what is happening to cow numbers it is not known whether the March milk production was due to more or less cows or changes in milk per cow. Cow numbers could be declining or at least not increasing as dairy cow slaughter thus far this year has been 5.0% higher than a year ago, and a year ago dairy cow slaughter was running 0.4% lower than the year before for this period. However, dairy cow slaughter has slowed for the past couple of weeks. Further, January dairy replacements expected to enter the dairy herd within the next months was 4% fewer than a year ago and average just 31.7 per 100 milk cows which is a little lower than the normal turnover of cows in the herd.

The latest dairy product report was for the month of February. Adjusting the production for 28 days in 2012 and comparing it to 2013 shows production was down 0.7% for butter, 2.2% for American cheese, 3.5% for total cheese and 12.1% for dry whey. While the production of nonfat dry milk was down 22.8% skim milk powder was up 128.6% in response to export potential.

Domestic sales of cheese are reported to be fair with butter sales strengthening. But beverage milk sales continue their downward trend. January sales compared to a year ago were 2.1% lower.

Dairy exports are starting out the year above year ago levels. Compared to a year ago exports were up 34% for butter, 9% for cheese, 37% for lactose, and 43% for whey protein concentrates. But, exports of nonfat dry milk/skim milk powder and dry whey were respectively 15% and 9% lower. Exports are anticipated to continue to improve as drought in New Zealand has cut their seasonal milk production short and milk production is running lower in Argentina and Australia with production also lower for most EU countries. With this level of milk production in the major exporting countries we can expect exports of nonfat dry milk/skim milk powder and dry whey to also run above year ago levels by summer. With tighter world supplies world prices of dairy products are increasing which will help U.S. exports.

Despite lower dairy product production stocks of dairy products grew from the end of January to the end of February. These increases were as follows: butter 16%, American cheese 3.7%, total cheese 3.8%, nonfat dry milk 13.6% and dry whey 9.2%. Ending February stocks compared to a year ago were as follows: butter +17.1%, American cheese +5.1%, total cheese +4.5%, nonfat dry milk +16.5% and dry whey +38.7%. Stocks normally do increase as we approach May and early summer reflecting the spring flush in milk production.

Dairy product prices have shown real strength in recent weeks reflecting anticipation of continued growth in domestic sales and favorable exports. CME butter was $1.575 per pound the beginning of March and improved to $1.7875 by April 19th. CME cheddar barrels were $1.56 per pound the beginning of March and improved to $1.77 by April 19th. CME cheddar blocks were $1.575 per pound the beginning of March and improved to $1.88 by April 19th. Nonfat dry milk has shown slight strength and is trading in the range of $1.54 to $1.68 per pound. Dry whey prices are steady trading in the range of $0.53 to $0.59 per pound.

Stronger dairy product prices are adding strength to milk prices. The Class III price was $16.93 in March compared to $15.72 a year ago. The Class IV price was $17.75 compared to $15.53 a year ago. April prices will improve to near $17.65 for Class III and $18.30 for Class IV. Dairy futures continue to show strength for distant months. Class III futures are in the low to mid $19s from May through September and end in December at $18.30. Class IV futures are $20 plus from June through October and end in December at $19.40.

Based on existing milk production and market conditions, the Class III and Class IV futures seem quite reasonable. If the growth in milk production continues well below 1% and domestic sales and exports continue favorable, the Class III reaching even higher at $20 by summer or early fall is quite possible. In recent weeks corn and soybean prices have fallen. However, hay and soybean oil meal prices remain high. If crop conditions look good by mid-summer, feed prices will decline further. With higher milk prices and lower feed cost milk cow numbers could once again start to increase by late summer along with higher production per cow increasing the rate of growth in milk production and lowering milk prices at the end of the year and into 2014.

REDUCING THE COSTS OF RAISING DAIRY HEIFERS BY GRAZING

But Still Achieving Targeted Growth Goals

Fay Benson, Cornell cooperative Extension - South Central New York Dairy Team

Dairy replacement programs within dairy farms are one of the largest expenses for dairy farms. In a 2008 study from Cornell's Department of Applied Economics and Management (AEM), seventeen above average herd size farms with high levels of management, showed dairy replacements entering the herd with a total investment of $1,884 per animal. These animals were calving at 22.9 months of age and weighing 1290 pounds. The animals averaged 1.73 pounds of gain per day at a total raising cost of $2.49 per day per heifer, or $1.45 per pound of gain. Feed costs were the most significant cost, followed by labor. If we were to update the 2008 feed costs by 20% to simulate today's cost of forage and grain the feed cost would be higher (see Table 1). Through the use of management intensive grazing some New York Dairies are savings $0.30 - $0.40/day in labor & feed costs per animal per day of grazing. For example a 180 day grazing season would save at least $54 per animal grazed.

Table #1
~Confinement Feed & Labor Costs taken from **"Dairy Replacement Programs: Costs & Analysis" AEM - EB 2008-16**

	COST OF FEED AND LABOR /DAY FOR DIFFERENT SIZES OF HEIFERS IN CONFINEMENT		
	201 – 700 LBS	701 – 850 LBS	851 - Calving
2007 -	$1.30	$1.50	$1.60
2013	$1.50	$1.70	$1.80
Common Custom Grazing fee/day	$1.20	$1.30	$1.40

Targeted Growth Goals with Grazing Forage Alone or Through Feeding Additional Concentrate

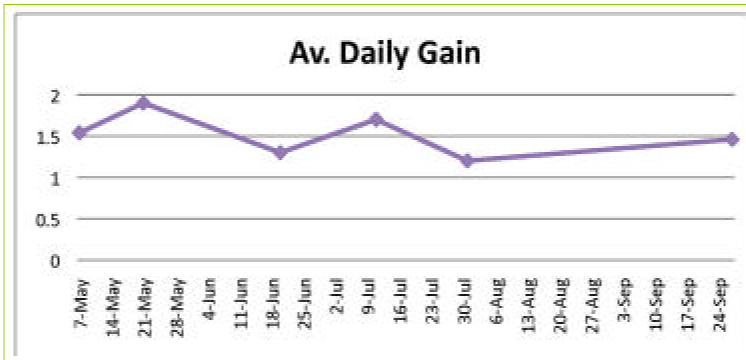
Through a NE Sustainable Agriculture Research and Extension Grant (NE SARE) regular forage samples were taken from pastures being grazed by dairy heifers. The samples were entered into Cornell's CNCP model, it showed grazing forage varied throughout the season, this meant that the ADG varied as well. See ADG Table.

The forage grazed by the heifers varied throughout the season. This was due to the changes to the forage plants and the maturity of the pastures given to the heifers. The computed ADG if pasture was the only feed was 1.54 lbs/day. The actual result for ADG for the group of heifers in this study was 1.7lbs per day. To achieve this, select feeding of concentrate was used to offset the transition to grazing the heifers were fed 2lbs of concentrate the first 2 weeks, and 2lbs again during the final 3 weeks to compensate for the declining pasture quality. These changes increased the ADG to 1.7 lbs/day for the group of heifers.

The points in the table to the left indicate the ADG for heifers fed pasture forage alone.

These results can be manipulated to reach desired goals by careful grazing management or additional grain being fed.

To achieve targeted goals it is important to follow guidelines set out in the publication "Grazing Heifers" An Opportunity for Large Dairy Farms which was developed by the author and Dr. Sam Leadley of the Attica Vet Clinic. The publication can be found at: http://smallfarms.cornell.edu/files/2012/04/Booklet-1dt7xgk.pdf.



6 forage samples from Groton NY Heifer System in 2010

There are many more variables to grazing heifers vs. feeding them in confinement. Understanding the variables and managing them will allow dairy farmers to take advantage of the costs savings which are associated with grazing.

Grain Marketing:
The 2013 Corn Crop Has Started Its March Towards Harvest

John Berry, Ag Marketing Educator, Penn State Extension

I have been calculating what grain price I need to stay financially sound and flexible while also remaining sane.

I do watch and wonder as grain price bids gyrate, but trend to try and stay somewhat emotionally detached. One of my favorite pastimes is collecting all the market pundits reasoning for price movement. Often, we see similar reasoning as prices go up as for prices going down. This activity is amusing, but not a very productive use of my time.
Not to be outdone by other market observers here is described what I see moving new crop prices:

- U.S. equities are perceived as offering a positive return. This draws investors out of commodities.
- The U.S. dollar has been gaining significant strength since mid-winter. This makes our grains more expensive to nations that import from us.
- The crop is getting planted. This offsets some of the production risk to our end users and makes them feel better about adequate supplies from the coming harvest.
- We are getting regular reports of a stronger housing market, lower jobless claims and robust car sales. All these signals have investors loosening their fascination with hard commodities (gold included) and putting their funds elsewhere.
- Beef feedlot placements continue weak, dairy cow slaughter is stronger than “normal” and swine producers remain mired in market doldrums. These significant consumers of our grain output are reducing demand.
- Energy of all types (oil, natural gas) is under price pressure. The relationship of corn and soybean prices to the energy market has been highly correlated over the past several years.
- Palm oil (and soy oil) is building stocks-on-hand. Adequate supplies of these critical food stuffs are apparently available.

We can list just as many (if not more) observations of why prices “have to get stronger!” However, I ask you to consider this – no one can predict the future. It is up to us as effective business managers to assess the price risks that confront our business(es) and then decide what to do about it. Guessing on the future may not be the best strategy. As we are offered prices that may cover the cost-of-production plus a profit, it is up to us as the farm manager to decide to take the price today or speculate it will be better tomorrow. And then, if the price is better tomorrow – will we take it? Marketing our expected harvest in increments we are comfortable with has proven a useful method of securing profits and also remaining flexible enough to take advantage of any price pops, especially at this stage in the season.

Of course, anything can happen. Anything can happen to put prices through the roof. Anything can happen to drive prices into the basement. There may be no business that is riskier than farming, and oddly enough we chose this business. As we get the opportunity, let’s participate in grain marketing educational activities that could enhance our understanding of and comfort with minimizing price risk and maximizing farm net revenue.

Source: Field Crop News. May 7, 2013. Penn State Extension.

Cornell University
Cooperative Extension
South Central New York Dairy & Field Crops Team

PRSRT STD
U.S. POSTAGE PAID
CORTLAND NY
13045
Permit No. 1

South Central New York
Cortland Tompkins Chemung Tioga
Area Dairy & Field Crops Team

60 Central Avenue
Cortland, NY 13045
Phone: (607) 753-5077
http://www.scnyat.cce.cornell.edu/dairy

Change Service Requested

CALENDAR OF EVENTS

JUNE 6 **CORNELL SMALL GRAINS MANAGEMENT FIELD DAY**

Musgrave Research Farm, 1256 Poplar Ridge Road, Aurora, NY. The Program will run from 10:00am-12:00noon, registration begins at 9:30.

Agenda:

- Crop development/ management *Bill Cox, Prof. of Crop Science*
- Weed management *Russ Hahn, Assoc. Prof. of Weed Science*
- Disease management *Gary Bergstrom, Prof. of Plant Pathology*
- Small grain varieties *Mark Sorrells, Prof. of Plant Breeding*
- Wheat grower practices *Mike Stanyard, NY Field Crops Educator*
- Growing malting barley in NY *Discussion* with several speakers
- Updates from all sectors of the small grains industry *Attendees*

NYS DEC Pesticide Applicator Recertification Credits
Category 1A 0.75
Category 10 0.75
Category 21 0.75
Northeast CCA Continuing Ed Credits:
Crop Management 0.5
Integrated Pest Management 1.0

All are welcome to attend. No fee but please pre-register!
Contact Mary @ mem40@cornell.edu. **For more information, please contact Mary McKellar at mem40@cornell.edu or 255-2177 or Gary Bergstrom at gcb3@cornell.edu.** An educational program of the Integrated Field Crop, Soil, and Pest Management Program Work Team in conjunction with Cornell Cooperative Extension with support from the Cornell University Agricultural Experiment Station.

Please be advised: We will soon start a recruitment process to fill our vacant dairy and farm business management positions. If you are interested in providing input regarding industry needs and/or participating in the selection committee please contact me. -Janice