

Resources for dealing with Spring Weather Delays

Cornell Cooperative Extension

PRO-DAIRY

While the forecast still seems unsettled we are all hopeful that we are past the worst of the rain and can begin catch up on springs work. Here we have attempted to summarize a variety of relevant topics as you consider how to best tackle all the work that needs to take place in a condensed timeframe. As always contact your local Extension office for more information on any of these topics.

Safety First!

Harvest is a busy time for most farm operations. Time means money when it comes to yields, production schedules, and operating costs. However, time also ensures safety at harvest. The extra time it takes to perform a task properly can determine whether the job is completed at all. Harvest season comes with many stresses. Exposure to dangerous situations can increase the mental pressure, and your risk of injury. Follow safe practices around harvest equipment to make the most of your work time. *The most important goal this spring is to send all family members and employees home to their families SAFE ... EVERYDAY!!*

Planning and Team Work

With your condensed time window for key field activities this spring, the solution to accomplishing everything on time might come from a different way of thinking. Consider the 5,000-foot view of the land that you and your neighbors work and think of the inventory of people and equipment potentially available to apply manure, fit fields, plant, harvest, haul, pack bunk, etc. for the *collective* land base. Are there opportunities to share equipment and time even where you haven't done so before? Can you bring in equipment or a custom operator to take care of one activity while you focus on another? Does it make sense to use the 4-row planter when a 6-row is sitting idle a mile away? Can you bring in extra help for milking? Do you have any retired neighbors who could lend a hand with field work?

Consider gathering with your neighbors to strategize and to make sure that the most efficient equipment is fully utilized this year. Remember: you and your neighbors are in the same boat, so you might as well paddle together!

Tillage and Impact on Wet Soil

While driving on and tilling wet soil may be somewhat unavoidable this spring, there is still an opportunity to reduce the amount of damage that is done. Here is a summary of pointers from *Tom Kilcer, Advanced Ag Systems, Kinderhook, NY*:

- Keep tillage shallow, in friable top soil not wet soil underneath.
- Utilize vertical tillage, avoid equipment such as disks that simply smear and ruin the structure of wet soils.
- Minimize weight whenever possible (fertilizer hoppers, etc.).
- Make sure wheels on planter tractor are offset and not compacting the corn rows.
- Check the seed furrow when planting: if planter is smearing sidewalls, it is too wet to plant.
- Pay extra attention to seed placement and row cover by planter.

Park the Corn Planter when 1st Cutting is Ready!

The window of opportunity for high quality hay forage is 1-3 days. Window of opportunity to plant corn is April 25 to June 1 = 36 days. The harvest opportunity for corn is corn silage or snaplage or HMSC or dry shell or ear corn.

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First cut is 40% of yield in 3 cut system. Delaying cutting alfalfa past optimum first-crop harvest timing reduces the quality. Subsequent crops are then also delayed, making timely harvest of the last crop before fall more difficult. It is important to get that first cut off somehow. If forage inventory is good, consider alternative storage options to feed to heifers or just chop poor quality forage back onto the field. Do you really need all of it? Re-growth is critical for a 3 cut system.

To go from ideal alfalfa of 20% CP, 30% ADF, and 40% NDF, to 17 - 34 - 45, takes only 5 or 6 days! Obviously, poor quality forage does not have the same milk producing potential.

What nutrient changes can you expect in alfalfa due to advancing maturity?

- Decreased intake - due to higher NDF, which increases about 0.9% per day.
- Decreased digestibility and energy value - due to higher ADF, which increases about 0.7% per day and a larger amount of lignin, which is indigestible.
- Decreased protein - decreases about 0.5% per day.

How much does it cost me to delay harvest? A lot! For each unit of NDF increase past 40% NDF for will:

- Need: increased energy and protein supplements.
- Have: lost production from the effect of lower NDF digestibility on dry matter intake.

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

Tips for haylage harvest:

- DO NOT ensile haylage wetter than 30% (target 32-40% DM). You all will be in a hurry to get haylage in the silos. Haylage wetter than 30% will have a greater chance of clostridia fermentation and butyric acid production.
- Do NOT chop alfalfa WET!
- Do INOCULATE at the forage harvester!
- DO ADD another PACK tractor or weight to existing tractors.
- Consider harvest strategies such as HAY IN A DAY to lower weather risk and improve forage quality. Hay in a Day YouTube video: <http://www.youtube.com/watch?v=oSsQvVga6tw>
- Keep windrows up off the ground to minimize soil contamination at harvest.

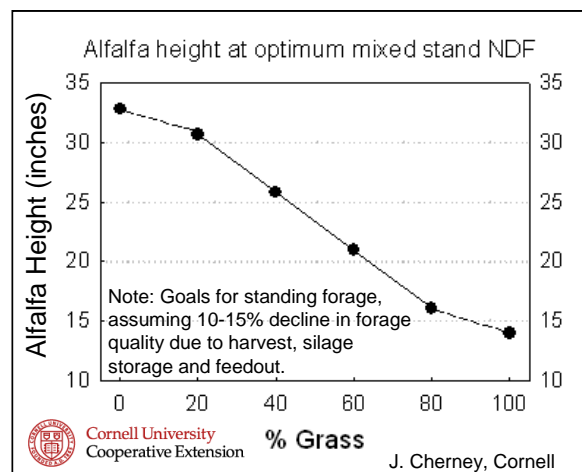
Issues with wet haylage:

- Reduced intake
- Potential health problems -ketosis
- And for problems to get worse with time
- Dispose of silage with very high (>2%) butyric acid content
- Bad silage can be good fertilizer.

Don't fill your storage with poor first cutting. You'll feel duty-bound to feed out even as it depresses production, cash flow and you.

1st Cutting is just around the Corner

Despite the wet start to the season, we have had more heat than many think. So even though other aspects of springs work are behind the hay is not, with reports from around NYS showing that it is on track for this time of May. *So take the time to check those hayfields starting now!*



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Inoculants to Minimize Risk with Haylage Made Under Adverse Conditions?

The probability you may be forced into putting up at least some of 1st crop wetter than you would like has gone up with near-normal relative maturity for the date (5/5/11) and saturated soils. Having an effective forage inoculant on hand with a track record of pushing fermentation towards “normal” and away from “clostridial” is good risk management.

Manufacturers and suppliers of inoculants practice supply and demand risk management. They cannot afford to be hung out to dry with pallets full of unsold/unused product. There is only so much product available beyond the pre-orders taken during the winter. If you act fast you may have a shot at some supply.

Effective inoculant? Not much controlled research is done testing inoculants under these known (wet) adverse conditions. Yet we seem to face them more often than we'd like. Check the literature that was dropped off by the representative. Look for actual forage analyses of wet haylage put up under actual farm conditions within the past 5 years with their inoculant. Make sure it was truly “wet”, in the 28 – 34% dry matter range (or worse). A slow, cold clostridial fermentation consumes energy, creates intake-depressing butyric acid and breaks down the nitrogen in protein to ammonia. If use of the inoculant was a financial “win” for the farm, these key measures will serve as gauges. pH < 4.5, Lactic Acid > 2 (alfalfa) – 3 (grass), Acetic Acid < 2 (alfalfa) – 3 (grass), Butyric Acid < 0.1 and Ammonia as % of N < 15.

This paper from a University of Minnesota Nutrition conference is a good comprehensive reference: http://www.cvm.umn.edu/dairy/prod/groups/cvm/@pub/@cvm/documents/asset/cvm_22260.pdf

Is It Too Late for Spring Forage Seedings?

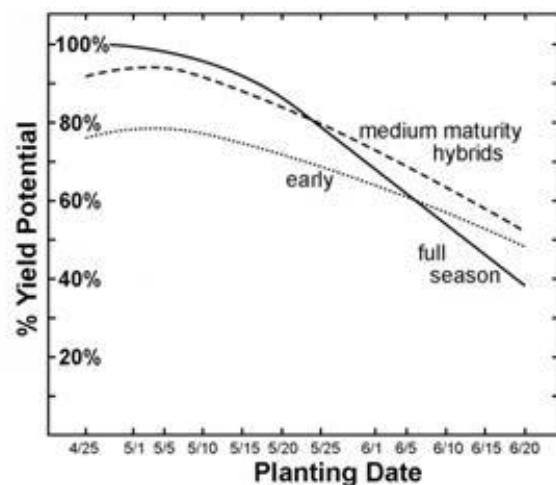
Wet soil conditions and delayed field work have prompted questions on how late alfalfa or clover/grass seedings can be made. The typical spring planting window is April through early May for NNY. Early June is not an ideal time to establish new seedings. The warm soil temperatures and hot weather will bring on large flushes of annual weeds, putting the new forage seedlings at a disadvantage. Consider shifting seedings to early August. In the meantime if you need tonnage you can put in an annual crop after hay is harvested.

If oats are used as a companion crop, their rate of seeding should be reduced to half of normal (or even eliminated) with May seedings.

When is it Time to Stop Planting Corn Altogether?

Here is a graph showing the effect on yield of delayed planting according to hybrid maturity. Unfortunately I don't think there is enough seed available for many farms to be able to switch out their longer season hybrids for short ones at this point. While it is important to keep hybrid maturity in mind, there are a number of other factors you need to consider for your farm. Here are a few of the considerations that may apply:

- Hybrid Maturity you ordered/have on hand
- Forage Inventories
- Ability to store and segregate different forages
- Capacity/ability of your landbase



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Excerpt from: 2011 Cornell Guide For Integrated Field Crop Management

To achieve the full yield potential of an early planting date, full-season hybrids (*hybrids that match the growing degree days in a region*) are necessary. After the first or second week of May, however, the yield potential of full-season hybrids decreases appreciably. Furthermore, full-season hybrids may not mature in the fall if planted after the second week of May. Therefore, for grain production, *full-season hybrids* should be planted only in late April or the first 10 days of May. For silage production, *full-season hybrids* can be planted until mid-May. The majority of corn acreage should be planted to medium-season hybrids (200 growing degree days less than the growing degree days in a region). If planting must be delayed until late May or early June, early-season hybrids are recommended.

Corn planted after late June will be sloppy wet and hard to deal with at harvest and feedout.

Warm Season Annual Forage Crops

Warm season annual forage crops provide additional forage when perennial forages are in short supply. While some farmers include them as part of their regular cropping system, many plant them for emergency forage crops. Delayed spring planting and following winterkilled alfalfa are situations where these crops fit on the farm.

Most warm season annual forage crops can be planted anytime between early June and mid July. There are many warm season annual forage crops that can be successfully grown in Northern New York. Teff and brown midrib (BMR) sorghum sudangrass are two warm season annual grasses that are well suited to our region.

Teff is a warm season annual grass that can be grown for hay, silage or pasture. Despite the fact that there has been very little teff grown in NNY, local research has demonstrated that it has the potential to produce high quality forage under proper management. See Agronomy Factsheets “Teff as an Emergency Forage” <http://nmsp.cals.cornell.edu/guidelines/factsheets.html>

In a one cut system, 1.5 to 2 tons DM per acre are expected, while in a 2 to 3 cut system, dry matter yields range from 3.3 to 4.9 tons per acre. When harvested at the proper time and sufficient nitrogen applied, crude protein will generally be between 15 and 16% of dry matter.

Brown Midrib Sorghum Sudangrass (BMR SxS) is a low lignin, highly digestible, warm-season, annual grass. It can be high yielding but harvest management can be an issue given its high moisture content. See Agronomy Factsheet “Brown Midrib Sorghum Sudangrass, Part 1” <http://nmsp.cals.cornell.edu/guidelines/factsheets.html>

Dry matter yields of 3 to 5.5 tons per acre are expected and when harvested at the proper time with sufficient nitrogen applied, crude protein will generally be between 15 and 16% of dry matter.

Warm season annual forages can provide needed forage at key times during the year and have been used successfully by producers for many years. In addition to Teff and BMR SxS, other options include Spring Grains, Buckwheat and Japanese Millet. Several factors should be considered before planting any crop. If you have any questions about growing summer annuals contact your local Extension office.

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