

Managing Harvest Variability

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This year, we have seen quite a bit of variation in corn both among and within fields. Given the variability of crops this year, here are a couple of questions that you should start thinking about:

Will the crops outgrow any of this variation, especially in field variation?

What can be done to manage variation during harvest?

The answer to whether or not crops will outgrow variation is that the results are dependent on a variety of factors. In a corn field, there is potential to get out on the field and apply nitrogen (N) to green up the yellowing parts of the field. If you have access to variable rate equipment, use it. Applying N to the whole field at the rate for the corn that has the most yellow will overapply to the green areas of the field and just change your variability rather than make a more uniform field.

Variability across fields in forage and corn will be more manageable at harvest, but there are some challenges to this. How much storage area do you have? How many different piles of feed or storage areas can you manage? What is your feeding rate? Is there a need for different types of forage on the farm? Variability across fields can be managed by staggering harvest or by separating harvested feed based on quality. Now is the time to start looking at fields with your agronomist and your nutrition consultant to determine how to manage variability at harvest.

Weather and soil type are the two biggest contributors to variability of crops, both of which we have little control over. The next best step is to monitor crops and fields as they are growing and determine harvest management plans to deal with crop variability. For more information, contact Sally Flis via e-mail at sally.flis@dairyone.com.

Strategies for Handling These Extreme... or “New Normal?” Weather Conditions

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Most of us can agree that this has not been a very easy or typical growing season. However, it seems like this pattern of late springs, followed by a very wet June is starting to become more and more the norm. So instead of hoping the weather will change, we need to change the way we think about our cropping strategies and try and create a system that reduces our risks of a potential weather related crop failure.

Go Early

Getting going early is one way to spread risk over a larger planting window and it usually doesn't require any monetary investment, just good planning and some hard work. Early planted corn this year got a head start on the rain, and was much healthier and stronger once the rains started. This early corn handled the stress of saturated soils much better than corn that was only 2 – 3 leaf. Although we all know it is a good idea, now more than ever we need to use those slower late winter days to get equipment ready to roll out as soon as the threat of a hard frost is gone, and the soil temperature is above 50 degrees. Remember to also plant at around 1.5 inches in early spring and then move to a depth of about 2 to 2.5 inches for late planted corn.

Improve Soil Health

Improving soil structure and water holding capacity greatly reduces your risk of crop failure in a wet spring. During field observations this spring, I saw cover cropped and reduced- or no-till fields showing much less standing water and stronger/healthier plants. Plowing breaks down the soil structure and removes the air spaces in the soil that would normally hold water during heavy rain events. Air spaces also allow water to move down through the soil profile and leave the root zone.



No-till corn crop.

Improved soil structure through cover cropping and reduced- or no-till systems will also withstand the erosiveness of raindrops and surface runoff, and reduce surface crusting. And last but not least, these soil health strategies will help reduce the impact of plow layer compaction, which is much more of an issue in these wet conditions.

Use Nitrogen Management Tools

Nitrogen management is probably the most difficult part of an extremely wet spring. Luckily, there are new tools like Adapt-N and Trimble's Green Seeker that are available to us to help make these challenging decisions.

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VTA Maintenance

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Do you have a Vegetated Treatment Area (VTA) on your farm? If you do, it's most likely treating your high flow bunk leachate runoff and possibly runoff coming from your open barnyard. Remember to properly maintain your VTA in order to keep it healthy, functioning, and available for runoff treatment for many years to come. A lack of regular maintenance could mean the VTA can no longer treat the runoff and, you may find yourself capturing and mixing that water in your long term storage lagoon.



Well-managed double celled VTA with solids settling basin.

A few regular maintenance activities can help prolong the life of your VTA:

1. Mow & Remove. Make sure that you mow and remove the vegetation from your VTA at least once a year. Late summer tends to be ideal as warmer drier weather moves in. This prevents the growth of woody vegetation and removes the excess nutrients these VTAs are meant to absorb. Make sure that whatever equipment you use for mowing and harvest doesn't

- leave ruts in the treatment area that could lead to preferential flow paths and a lack of treatment resulting in a need to re-engineer and regrade.
2. Clean and Re-level. Level lip spreaders become clogged or stone filled trenches at the head of your VTA can settle oddly and/or fill with debris. All of the collected water running into your VTA should be moving evenly across the field but if one area of the spreader is lower than the rest, you can be sure the wastewater will find it. Uneven drainage from the level lip spreader can cause kill zones and preferential flow paths that might leave parts of your VTA unusable, too wet to manage, or in need of replacement. If you find your level lipped spreader is no longer level, it's time to remove that stone, regrade the spreader, and refill it.
3. Remove captured solids regularly. Whether you have a series of screens or a retention basin make sure to remove all the collected solid debris that gets captured regularly. Removing this debris after each heavy rainfall event will prevent any of it from clogging your level lipped spreader and stop water from ponding behind it.

These few regular maintenance activities can prolong the life of your VTA for many years to come and potentially save you thousands of dollars in short and long term expenses. If you're currently experiencing problems with your farm's VTA, contact your Certified Planner to work together to get it working again today.

Spring Erosion

This spring saw many areas of New York and Vermont receiving quick, heavy rainstorms. This coupled with a late planting season has led to a lot of soil erosion across the states. Fields lost topsoil and the creation of new gullies ranging widely in size and depth can be seen across the landscape. In light of these new issues you should take the opportunity to consult with your ACS Team to see what practices are available to try and prevent this in the future. Available practices could include structural practices such as permanent grassed waterways, buffer strips, water and sediment control basins or cultural practices such as reduced tillage methods, cover or double cropping fields, or strip cropping a field along its contours. In some cases cost share funds may also be available from local NRCS and/or Soil and Water Districts. Let's put together a plan to keep your valuable topsoil where we want it: on your fields.

Extreme Weather Conditions, continued

Adapt-N is a nitrogen recommendation software that utilizes localized weather data, soil factors, planting date and field management, to come up with a Nitrogen recommendation. The Nitrogen recommendation changes daily throughout the spring based on these dynamics. ACS is currently involved in a Farmer Driven Research project with the folks from Adapt-N and will have real results coming out this fall. The GreenSeeker crop sensing system is another tool ACS consultants are using to monitor plant health and provide in field sidedress recommendations. ACS is also involved in Nitrogen trials based on the GreenSeeker system.


Don't panic

In truly extreme wet conditions, it's hard not to panic, and throw nitrogen and other inputs at your struggling crops. But we can sometimes do more harm than good and lose more money than we need to. Sidedressing or topdressing before the ground has dried out enough is one way to guarantee these losses. Putting Nitrogen down on saturated ground is NOT going to make it plant available immediately (even if it has been treated with a nitrogen stabilizer), and it's not going to make its way down in the soil, where the roots can utilize it. No to mention the ruts that will be left in the fields. In these scenarios considering realistic yield goals is going to save you money in the long run, reduce N losses to the environment and allow you to make the best management decisions.

As our weather patterns keep changing, we need to change as well. Luckily, there are new technologies and stronger plant genetics to help. At ACS, we're trying to stay at the forefront of these changes and bring them to



Beautiful cover crop planted while spreading manure. Manure with rye seed mixed in the manure tank and applied at 120lbs/acre or 8,000 gallons/acre with a single gang aerway. Land View Dairy, Mark Anderson.



ACS

Agricultural Consulting Services

Nitrogen Recommendation

Grower:

Farm:

Field: 82 RogTrkS

Zone: BLANK

Nitrogen recommendation for July 21, 2015:

100 lbs N/Acre

N recommendation

97-100

N recommendation range

Recommendation based on supporting estimates and assumptions:

283 lbs N/Acre

Expected N in crop at harvest

55 lbs N/Acre

N mineralization so far

110 lbs N/Acre

N loss so far

0 lbs N/Acre

Partial credit from soybeans

110 lbs N/Acre

N in crop now

2 lbs N/Acre

Expected Future Fertilizer Loss

19 lbs N/Acre

Future Net N Credits

49 lbs N/Acre

N in soil now

14.8" / 20.5"

Rainfall since planting /
Rainfall since 01/01/15

Field information

Soil: Sandy Loam

Maturity Class: Silage: late maturity (96-100 d CRM)

Planted: 05/11/15

Expected Yield: 34.0 tons/acre (65% moisture)

Harvest Population: 35,000

Organic Matter %: 1.94


Previous Crop: Silage Corn

N fertilizer already 136 lbs N/Acre applied:

Irrigation applied + 0" + 0" planned:

Manure applied + Yes + No planned:

Adapt-N Zone ID: 327071



Adapt-N recommendations

you. But as I tell all my clients, "I learn more from you than any article or class." So keep up the good work and let us know if you want to try some new technologies or have us help set up some field trials to measure the effectiveness of your strategies or ideas.

Hold the Date!

2015 Farmer Driven Research Field Day
September 8, 2015
Location: Southern Cayuga County

We will look at two trials:

1. Adapt-N Nitrogen Trial – four nitrogen rates on fields that received spring or fall manure
2. Bayer Fungicide Trial – one and two pass fungicide approaches on NCLB susceptible varieties

Look for more details to come!