



ACS

Agricultural Consulting Services

Summer 2016 Newsletter

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CAFO To-Do List - Getting Ahead On Maintenance

Ryan Travers, ACS Environmental Planner

1. **Manure Application Planners (MAP)** **- Don't spread without one!**

Manure recommendations in a MAP require manure samples, updated manure records, and crop records.

- Take manure samples during the next spreading event for 2016. If you need manure sample bottles, please contact either your planner or service manager.
- Prepare and organize manure records or update Fields and Crops software.
- If any crops have changed during the season, please notify either your service manager or planner, so that a more accurate Manure Application Planner can be created.

2. **How is operation and maintenance (O & M)** **going on your farm?**

This year is rather dry in many parts of the state, which allows for O & M to be a little easier, especially in VTAs.

- mow and remove vegetation in the VTA
- Remove, repair, and re-seed any concentrated flows/kill zones
- Make sure level lip spreaders are working properly
- Remove debris from your low flow collector



End of a Vegetated Treatment Area

3. **Other Important O & M**

Summer is always a good season for repairs, especially this summer.

- Repair/clean storm water structures (i.e., roof gutters, drip trenches, culverts)
- Inspect all concrete and repair as necessary

4. **How are discussions with your planner going?**

- There will be changes to the Phosphorus Index. How that will affect your farm?
- The General Permit is undergoing revision. What should you be doing to prepare for it (i.e. Professional Engineer Evaluations)?

Please don't hesitate to contact your planner or service manager with any questions or concerns.

Curbing the Effects of Variable Weather - Management Strategies for Improving Soil Health

John Kiehle, ACS Service Manager

As the actor and humorist Will Rogers once said, "A farmer has to be an optimist or he wouldn't still be a farmer." Every year I tell myself that this is going to be a great year, all the while knowing that a curve ball is coming. Some years there isn't a thing you can do differently to change the outcome of a season. But one thing we can do is choose management practices that build soil health and fertility over the long term.

Today, soil health is more important than ever. High cost of inputs, smaller return on investment, and unstable market prices are just a few of the challenges farmers must deal with. I truly believe that increased attention to soil health can improve the bottom line of today and for years to come.

Some key factors that influence good soil health:

- High organic matter
- Good tillage and soil structure
- A balanced combination of water infiltration and holding capacity
- Well-balanced nutrient levels
- A robust population of beneficial organisms

Here are some things you can do to minimize negative impacts on the soil:

- Use less aggressive tillage equipment
- Reduce soil compaction from heavy equipment
- Work soil when conditions are right
- Invest in subsoil drainage infrastructure
- Move away from extended years in one crop
- Include cover crops in your rotation
- Switch to no-till whenever possible
- Measure and monitor soil health

Improving soil health can't be done overnight. We need to be out in the field assessing our soil at all times of the year to see where there may be issues. A couple things we can easily do right now are looking at soil test results, and thinking of how our current practices hurt or limit the buildup to good soil health. Talk with your agronomist about your soil and check out Cornell's website (<http://soilhealth.cals.cornell.edu/>) to learn more.

While we keep trying to grow the best crops possible, Mother Nature will keep sending us

challenges. Better soil health can help us through the challenging seasons and help us exceed our yield expectations in good years.

When to spray for Japanese Beetles

Justin Marcus, ACS Field Technician

Japanese beetles are a common pest that have a distinct bronze abdomen and shiny green thorax. In corn, Japanese beetles affect the plant in a number of ways, including skeletonizing the leaves. However, the most damaging impact these insects can have on corn is during silk. If too much silk is eaten before or during pollination, then pollination rates can significantly decrease.

Determining thresholds for this pest can be challenging because they tend to cluster, making it difficult to get an accurate count for the entire field. If you are scouting, be sure to go beyond the hedgerow and count at least five different spots for each field.

Thresholds are exceeded when four events occur simultaneously:

1. Each ear has three or more beetles
2. The silks have been decreased to ½ inch or less
3. There is below 50% pollination
4. Beetles continue to feed

If all of these are present, using an insecticide can be economically beneficial.



Japanese Beetle feed on corn silks.
Image credit: Erin Hodson, Iowa State Extension

In soybeans, thresholds are exceeded when too much defoliation occurs. The same methods for scouting corn apply, except that instead of measuring silk removed, you are measuring defoliation. Advisories for action happen when:

1. Defoliation exceeds 30% before blooming OR
2. Defoliation exceeds 20% after blooming
3. Beetles continue to feed



Damage from Japanese beetles on soy plants.
This leaf is between 5-10% defoliated.

Generally, insecticides used to treat Japanese beetles are Mode of Action groups (MOA) 1A (Carbamates), 3 (sodium channel modulators), or 4A (neonicotinoids). If initial treatment is not effective, using an insecticide with a different MOA should eliminate the problem. It is important to be aware of cost/acre of spraying, along with the commodity prices of the crop. Ask your ACS consultant if you have questions about scouting your crops or insecticide application.

<http://www.cceoneida.com/assets/FactsheetPDFs/Beetles-Japanese-Beetles.pdf>

<https://www.agry.purdue.edu/ext/corn/news/timeless/silks.html>

<https://extension.entm.purdue.edu/fieldcropsipm/insects/corn-japanese-beetles.php>

<https://www.lewishybrids.com/Agronomy/Documents/Management%20of%20Japanese%20Beetle%20in%20Corn%20and%20Soybean%20-%20Lewis.pdf>

<http://bulletin.ipm.illinois.edu/pastpest/articles/200213f.html>

2016 Research at ACS

Nitrogen Response Trials

ACS Agronomists are working with 5 client farms across New York to implement N Response Trials in corn. These trials are helping each farm identify how much nitrogen is needed to help them reach their yield goals in any given year. This work builds on an initial set of response trials done in 2015. Two field days are planned to look at the in-field preliminary results, come check it out!

- August 4th as part of the Corn and Soybean Growers Summer Crop Tour at Sunnyside Farm.
- Late August or early September in Western NY. More details to come.

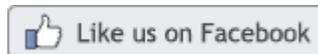
Fungicide in Corn

ACS has a third year of research into fungicide use in corn; one trial on one farm in central New York. Call Brian Boerman, ACS agronomist (585-314-5313) for more information on these results or if you are interested in viewing these plots this year.

Past Research Results

If you are interested in any past research (listed below) that ACS has helped clients to complete, please visit our website <http://www.acsoffice.com> and follow the link to "Resources" and then "Publications" for all out project reports. Or give us a call for the quickest summary!

Fungicide Program on Alfalfa	1 farm, 44 plots, 2 years
BTN on Corn	4 farms, 42 plots, 2 years
BTN on Alfalfa	5 farms, 20 plots, 1 year
Agro-Culture on Alfalfa	1 farm, 24 plots, 2 years
Nutriplant	1 farm, 39 plots
Instinct in Manure on Corn	1 farms, 24 plots, 1 year
Organic Fertilizer Comparison	1 farm, 16 plots, 2 year
Aphanomyces Survey	32 farms, 42 fields, 1 year



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