

WIDMER &  
ASSOCIATES, LTD.

**FOR THE  
RECORD:**

Data from OARDC  
Fremont, Matt Hofelich

April Rainfall: 3.37"

Cumulative GDDs: 197

Soil Temperature: 57.5

**Websites of Interest:**

[www.widmerassoc.com](http://www.widmerassoc.com)

[www.weather.com](http://www.weather.com)

<http://vegnet.osu.edu>

<http://corn.osu.edu>

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**INSIDE  
THIS ISSUE:**

Technology 2  
Tips

Food Safety 2  
Audits

HOOK 3

Drip 3  
Irrigation

Side Dressing 4  
Corn



# The W&A Q&A

Dedicated to Excellence in Growing Crops



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## Suggestions for using On-farm Test Plots - Les Widmer, CCA

Using one's own fields to help evaluate the possible benefits of new products, cultural practices, or to compare different products or practices against each other does have its merits. It allows one to evaluate a product or practice using one's own equipment and cultural practices and where one can inspect and follow it throughout the growing season.

The following are a few suggestions for making on farm testing a reliable and beneficial tool and to help make the effort worthwhile by providing useful information when completed.

**PRE-PLAN YOUR TEST PLOTS** -Putting in a worthwhile test plot requires more than just filling a sprayer or a planter with a different product in a field application. Testing can be so much more beneficial if one has planned out the objective of the tests and how it is to be laid out in the fields before even going to the field.



**SITE SELECTION IS VERY IMPORTANT** - Plan where plots are to be located where variability of soils, crop rotations, seed varieties, drainage, and other variables are as uniform as possible. In doing on farm field trials, some variability will usually always exist, the objective is to minimize it as much as possible and to not do a lot of extra work and not get worthwhile information when completed.



**REPLICATION IS A MUST** When doing on farm comparisons of products or practices, one should always plan on having tests replicated. If the plans are to do tests on only a few fields, the tests should be replicated in at least 3 areas in a field and always compared to a control area. The trials should be replicated in at least 2 fields using this approach. Single side by side product comparisons in a field should only be used if plans are to replicate the tests in a number of different fields where enough comparisons can be evaluated.



**GET THE RESULTS** So many times we have seen on farm test trials put out and when harvest times rolls around good reliable yield information is not accomplished. Be sure to review before harvest season begins with all individuals that are involved with harvest where tests plots are located and the type of information that is to be gathered at harvest time. Achieving properly documented information is so important in being able to make good decisions for future management decisions. **PROPERLY EVALUATE TEST PLOT INFORMATION** - Once good documented yield information is gathered, it is important that the results be evaluated properly. All comparisons need to be evaluated as to whether reliable information was achieved. Are comparison results in the different plots consistent, or are there large variance's in the different locations? Properly evaluating your data can help make good management decisions for your farming operation.

**ACRE Election**

If you have not yet made a decision on enrollment in the new Farm Program; Average Crop Revenue Election (ACRE) you have until June 1st to make a decision. Analysis tools are available to evaluate your individual farm potential on the Ohio Corn Growers Website:

www.ohiocorn.org

**Do you apply chemicals on your own farm?**

“HOOK” is a new product offered by W&A that is actually an adjuvant capable of spreading and enhancing chemical penetration into the plants. It is capable of making the active ingredients in your spray mixture behave as a surfactant.

“HOOK” offers superior adhesion to plant surfaces, improved contact activity which means more efficient spreading and penetrating power to your active ingredient without adding a lot of soap. Contact W&A for information on prices.

# Technology Tips— *Dusty Sonnenberg, CCA*

Most guidance systems work off of the free WAAS satellite system controlled by the Federal Government via the Department of Defense. Tracking the proper satellites is necessary for your GPS equipment to provide the proper guidance functions.

There are two satellites that broadcast WAAS corrections. They are numbers 135 and 138.



They are both currently operational. 138 is farther to the east and is a stronger signal for most of the mid-west. 135 however, is expected to become unusable within the next 3 to 4 weeks (by Mid May 2010) due to loss of control of the satellite.

Most of the newer models

GPS light bars should automatically look for 138 and make the necessary adjustments. If you are using an older style light bar, it is advisable to go in to the settings and manually make the update to have it look for satellite 138 only by “turning off” 135.

As always, if you have any questions about your GPS equipment, feel free to call our Precision Ag. Specialists at W&A!

**BREAKING NEWS!!!** The Environmental Protection Agency has approved DuPont's **refuge-in-a-bag** system for its Pioneer Hi-Bred seed corn that will allow growers to plant their rootworm insect resistance refuge without switching seed in the planter. Optimum AcreMax 1, allows growers to reduce the size of their rootworm insect refuge from 20 percent to 10 percent.

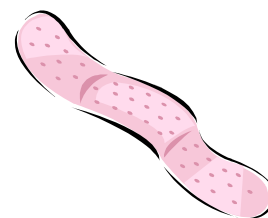
## Food Safety & Traceability— *by Rex Marquart, CCA*

The following items should be covered in your initial employee orientation training topics, as well as reviewed annually.

1. Employees must wear proper attire (no open toe shoes, no shorts).
2. Employees are to wash their hands before starting work, after using the rest-rooms and after breaks.



3. Only wedding bands are permitted. All jewelry must be removed before starting work.
4. Only drinking water with single use cups are permitted in the field.
5. No food or drinks are permitted in the field.
6. Smoking, chewing tobacco and chewing gum is not permitted in the field.
7. No glass items are permitted in the field.
8. Only use product containers for their intended use.
9. All trash must be put into the proper trash collection containers
10. Employees who are sick must report to their supervisor immediately.
11. Employees who become ill must report to their supervisors immediately.
12. All cuts and open sores must be properly covered before starting work.
13. Any products that come in contact with blood must be destroyed.
14. All Employees must use the toilets provided at the field.



## *Drip Irrigation of Specialty Crops- by Mike Netz, CCA*

Many of our vegetable growing customers have started to use drip irrigation on their various vegetable crops that they grow. Drip irrigation requires much less water to be applied on a field to grow a crop. Due to the lower total volume of water needed, a much smaller pump & lower water pressures are used. The cost to lay out the drip lines for each row in a field is more costly than watering overhead. Drip irrigation pays dividends back to the grower for their investment in many different ways!

- 1) By not wetting the crops foliage, like with overhead, there tends to be less disease.
- 2) That huge stream of water you see coming out of the end of a big gun often damages the plants. With drip you don't have that effect either.
- 3) Yields are higher due to better water management & maintaining a healthier root system. After all it is the roots that are the brains of the plant. Their health & longevity has a huge impact on the final crop yield & quality.
- 4) Once the system is installed it requires a lot less time to run, saving labor hours. With overhead irrigation you often need to water at night when the wind speed is lower & you can achieve a more even water pattern. Watering overhead at night makes it more efficient due to less evaporation. With drip irrigation you don't have this requirement & can water during the day light hours!
- 5) Another huge benefit is to spoon feed fertilizers to the developing crop in the amounts that are needed for the different stages of crop growth!
- 6) There are many new insecticides & fungicides that are systemic & very effective. Most often these products are very expensive. When injecting fertilizer & chemicals thru drip lines you do not have to broadcast these products over the whole field. The reduction of surface area for these applications often saves 40% of the cost of a broadcast application. This can add up to a big savings for a grower as well.

Many first time growers often use the drip tape to deliver water only, in their first year. We at Widmer & Associates have become the local experts in helping growers to get the maximum use out of a drip system. We do not sell many of the major components, but we can offer a new grower some very good advice that will save him money in the design & layout of a system. Chemigation & fertigation of products is an area we have a lot of experience with. This is the area that I want to spend the bulk of this article on!

The injection of nutrients & pesticides is not a difficult thing to do. The cost of the equipment to inject these products is not that expensive or difficult to run either. There are many options & costs for equipment to inject with, this is another area that we can be a great help to a grower in deciding which one to buy. We have found that the most cost effective way to feed a crop is to apply certain fertilizers in a sequence that maximizes their effect & minimizes the total cost of the fertility program. A grower should always start by having a soil sample pulled from the field to be fertigated, the year before planting. This allows time to adjust the pH with lime if necessary & fall or spring apply some basic fertility products. We suggest applying the amount of phosphate needed as a broadcast or in row band before the crop is planted. There are not many products high in phosphate, which are cost effective to put thru a drip tape. We also suggest applying about 80% of the potassium as a broadcast or in row band before the crop is planted, for the same reason. The last major element left is nitrogen. The way in which nitrogen gets applied, the timing & form, is very critical. The total amount needed is decided ahead of planting & then we develop a program to best & most cost effectively apply it. Since most drip tape gets laid after the final cultivation, to prevent damaging it, that means the crop will be planted for 3-5 weeks before it can get its first fertigation. A plan to provide for the amount a crop needs during this time period is very important. Most crops require the majority of their total nitrogen needs during the time of vegetative growth, before the reproductive stage begins. The period during reproduction requires nitrogen also, but at a much lower rate. There are many different sources of nitrogen that can be applied thru drip tape. The majority of them contain all nitrate nitrogen. Growing a vegetable crop on all nitrate nitrogen often causes many negative effects. A plant growing on all nitrate nitrogen will have huge top growth & a smaller root system. This creates a great stress on the plant & the goal is to eliminate as much crop stress as possible. Nitrate nitrogen requires that sufficient amounts of other nutrients be applied in a touchy balance or negative things will happen. Plants grown under all nitrate nitrogen are more susceptible to disease, insect attack & weather related stress. Fruits high in nitrate nitrogen have a much shortened shelf life, reduced color, sugar content. Fruits that develop on a total nitrate nitrogen program are often not optimally formed or shaped. Care must be taken in balancing out the nitrogen forms, sources & timing of application. Micronutrients can be a very expensive part of any fertility program. Applying them thru the drip tape requires much less product & is a great savings compared to broadcasting them. When applied thru the tape, they are much more efficient & effective due to less tie up from contact with the soil. Calcium is a very important nutrient in vegetable production. There are several very good forms that can be applied thru the drip tape.

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## Sidedressing Corn Tips - Doug Mitchell, CCA

We are now experiencing a long (and increasing) gap in the planting season between April planted corn and May plantings. We are also experiencing unusually warm temperatures for late April/early May. Coupled with waterlogged soils, that adds up to an increased potential for denitrification losses of Weed and Feed applied Nitrogen. Potential losses can be as much as 6% per day with waterlogged soils and daytime temperatures in the upper 60's. The warm weather will also cause rapid growth of emerging

corn; a good problem to have but still a problem when it requires corn be sidedressed before planting operations are completed. Also some fields that weren't originally scheduled for sidedressing may need to be added to the list due to denitrification or leaching losses. Corn can be sidedressed any time after emergence, but most of it gets done between V-3 and V-5. After V-6 the logistics of pulling toolbars through the field without damaging plants can make for slow going. Dribbling 28%UAN

with drop nozzles can be an efficient alternative to trying to knife in N on tall corn and has the added benefit of decreased volatilization loss over broadcast surface applications. From a plant physiological standpoint, by V-8 the N needs of corn are already increasing rapidly and deficiencies will be occurring if the bulk of the N is applied at sidedress. For corn that has had most of its N applied previously, corn can respond to supplemental N applied even as late as tassel emergence.