

INDEPENDENT AGRONOMIC ADVICE proagconsulting.com

Regional Sales Managers

Chris Behl (25yrs) behl.chris@gmail.com Bloomington, IL 888-879-2297 Cell 309-826-8020

Ted Huber (18vrs) thuber@consolidated.net Oakland, IL 888-305-4411 Cell 217-259-8221

Jason Boerngen (17yrs) jandjboerngen@mmtcnet.com Montrose, IL 888-732-2530 Cell 217-254-3038

Matt Schilling (16yrs) marva74@live.com Dahlgren, IL 618-643-4060 618-925-1566 Cell

Gary Frye (32yrs) Hull, IL 217-656-3474 Cell 217-460-0001

Pro-Ag Consulting, LLC PO Box 41 1503 Kentucky Ave. Windsor, IL 61957

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Fulvic Acids Vs Humic Acids

In farming, we seem to hear about new buzz words each year. Sometimes the "new thing" is actually something old...but guys just realize again the benefits that it has. This year everyone seems to be talking about Humic and Fulvic Acids. These types of products have been around for years, but more farmers are starting to discover the benefits of using them in their farming operations.

Humates are the end products of decayed vegetation. A humate contains three types of acids: humic, fulvic and ulmic acid. All three have very valuable roles in the soil. Their benefits include improving water retention in the soil, increasing soil flocculation levels, and assisting mineral transportation to the plants.

In addition to the soil benefits, these acids are also critical to having a healthy crop. And, there are differences on how each acid is utilized by the plant. Humic Acid has a much bigger molecular size than that of Fulvic Acid, therefore it doesn't leave the roots of the plant. On the other hand, the Fulvic Acid molecule is very small; therefore it is very easily transported throughout the plant. As Fulvic Acid goes through the plant, it takes along with it minerals and nutrients that the plant needs. Most Humic Acid products have a higher pH to try to keep the humates in suspension. Products like C-CAT from TEVA Corp. are Fulvic Acid, and C-CAT has a neutral pH, which is much easier on your plants and soils.



Fulvic Acids will increase energy and photosynthesis in the plant, help in root development, enhance the uptake of nutrients, and assist in the transportation of trace minerals. Fulvic Acid is also one of the best chelating agents that a farmer has to help him get different kinds of products into the plant.

C-CAT has shown very good yield increases over the 18 years that it has been on the market. In several University Studies, it has shown to give an average of 8-10 bushel increases in corn and soybeans and around 10-14 in wheat. Please take a look at our yield and grower data online at www.tevacorporation.com.

Newsletter May 2014

Pro-Ag Update



this issue

Pq 3

Pro-Ag Approved Int. Lab NAPT - What is it?

Why NAPT?

Zinc Deficiency Symptoms

Scholarship Availability

Things to Know About Applying Gypsum

Applying too much Gypsum at one time can be a disaster. Following certain simple rules of application can make applying Gypsum a very good deal.

The simple and best rule to follow is to make the amount you apply based on your CEC of your soil tests. If your soil test CEC is less than 5, apply only 1000 lbs./A. If between 5 and 10, apply 1500#/A. If your CEC is greater than 10, apply a maximum amount of 1 ton/A/year for three straight years.

Gypsum is a very good soil amendment and has a high amount of Ca++ which is good for healthy plant growth. But too much applied will cause the Ca++ to displace other cations such as Potassium which the plant has to have for high yields.

Gypsum also contains Sulfur as Sulfate. Applied in the fall, the Sulfate will probably be lost by spring planting. If applied in spring, the crops could get a big boost from the Sulfate as it is readily available and water soluable.

Customer Meetings

Attendance at this year's meetings was outstanding. The number of people attending was greater than any previous year.

One of the outstanding presentations which was full of very useful information was made by Charles Haubold and Mark Coots of the TEVA Corp., Benton, MO.

Mr. Haubold presented product information and Mr. Coots discussed agronomical topics. Other presentations on weed control and grain marketing created a lot of interest.

Planting is starting and before we know it, we will be looking at the harvest of this year's crops. We hope you will have a very successful growing season and harvest.



Visit our Web site for the latest in state wide crop news. Each area of business will have the latest information for you.

proagconsulting.com

To do a Simple task **Exceedingly well** Spells Success

Our 35th Year

We are starting

our 35th year of soil testing and fertility management. We thank each and every one of you for your splendid support and encouragement. We started with 1.000 acres in 1980 and over half of that ground is still in our program. 90% of the people who started with our program are still with us today. This is a fact we are very proud of!

Again, thank you for your support
If you have an idea about a service we do not offer, please let us know about it.

Pro-Ag-Now an Approved International Lab

Pro-Ag Consulting, LLC applied for and received approval from the USDA to be designated as an approved soil testing lab for soil from foreign countries.

The process was very involved as you can imagine especially when you have to work with the government - lots of paper work and then expensive equipment to purchase.

Soil must be received in a triple sealed container. Once in our building, the soil must be kept in a locked dryer until we are ready to process. Soil is ground and then grinders and dryers have to be cleaned and wiped down. Once the samples are run, the soil has to be sterilized in a special oven. Then the extracting chemicals, filters and cups must be sterilized in a pressure cooker. After completing all these procedures, the soil and chemicals can be disposed of in our normal manner.

We are subject to a drop-in-inspection at any time so the procedures must be followed closely.

Chris Behl of our Bloomington Office is coordinating our efforts working with a large farm operation in Uraquay, South America. That company will be visiting our lab sometime in June.

NAPT- What Is It??

When you employ our company to sample your fields, we take this very seriously. We implement a very strict set of controls to make sure we do a good job for you, but just as important is to get the correct results once the soil is in our lab.

When we sample, we have a plat page, previous maps or a GPS photo of the field. A control number is assigned before we start and that number is put on our field sheet and the boxes the samples will be put into.

When it arrives at our lab and checked in, it is given another control number that will be on the samples until the lab has finished testing. That number is also entered on our computer under your field's listing. Before we start your samples, our equipment must be set to the manufacturer's standard. Then our extracting chemical is tested. Once complete then a series of soil samples are tested and the results will be compared to the results of the standard. If we have everything set up correctly, we proceed, If not, we do not process any soil samples until it is correct.

Why NAPT??

We are one of the 3 labs in the State of Illinois that are members of NAPT – National Association of Proficiency Testing. Why do we belong? Each quarter we are sent soil samples from anywhere in the United States to be tested in our lab and the results sent back to them. The results are tabulated for the 100 or more labs testing the soil. That report is sent to us and each test on each sample is reported to us. We are then graded against all the other participating labs.

We review these results with our lab members. If we were out of specs, on any sample, we re-run it again to find the problem. Fortunately this does not happen very often.

One of the benefits is we get to keep the soil samples that were run by all the labs. We then use these samples as a standard when we set up our lab for each session we run. Last year we processed over 100,000 samples. Quality Control is #1 with us. We want you to know we are doing everything possible to produce the best possible results for the soil

Zinc Deficiency Symptoms

During the first 45 days of a corn plants growth cycle, it uses Zinc as a growth regulator. Zinc helps determine the height of the plant, width and length of the leaves and most importantly the length/girth of its ears. If a plant goes through a stressful period such as cold weather, dry or wet conditions, the plant may start to show signs of Zinc deficiency.

Conditions that greatly influence this problem are soils that have a high pH greater than 7.4 or in soils that have high Phosphate values. Phosphate levels of 70+ lbs. per acre tend to bond to the Zinc and make it unavailable to the corn plant creating a deficiency in the plant. 40-45 days after planting, the symptoms go away but the lack of Zinc has already reduced the yield. See Photos below:









When these conditions appear in the field, it is really too late to correct the problem for this year's crop. Yield reduction of 25-40 BU/A is not uncommon. Careful planning can avoid this problem in the future.

Zinc can be added in various forms and various ways. Most common is applying with fertilizer either in the row or broadcast.

Two common forms of Zinc are Zinc EDTA and Zinc Sulfate.

Scholarship Availability

Each year Pro-Ag Consulting, LLC awards a \$2000 scholarship to a youth who plans to attend college in the fall. The applications are available from your Regional Manager or can be obtained by calling our Windsor

Office – 1-800-879-2297.

The applicant must be a relative of a Pro-Ag client and majoring in an Ag-related field. To date, Pro-Ag has awarded nearly \$40,000 in scholarship money.

Our scholarship is awarded in Jim Koester's honor. His parents, Roy and Donna Koester have been customers of Pro-Ag since 1987. Jim met an untimely death in an accident on their farm.



Zinc EDTA is 100% water soluble and contains 10% Zinc. Zinc Sulfate is also 100% water soluble and contains 25-35% Zinc. Zinc can be applied broadcast at a rate of 5-10 lbs ZN/A chelated or at 15-30 LBS ZN/A as Zinc Sulfate. Broadcast applications provide enough Zinc to remain effective for several years if soil conditions allow.

Zinc can also be banded or added to a starter fertilizer at the rate of 0.5-1.0 lbs ZN/A as chelated or at 2-4 lbs ZN/A as Sulfate.

TISSUE TESTING

The very best way to determine Zinc deficiency is by tissue testing. If the plant is less than 4 inches tall, take the whole plant and cut off one inch about ground; for older plants, take the youngest collared leaf. At tasselling, take the leaf opposite the ear no later than several days past silking.



You may want to visit our lab and see how everything is done.

You are welcome to do so at anytime!