

Regional Sales Managers

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

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

Jason Boerngen
jandjboerngen@mmtnet.com
Montrose, IL 888-732-2530
Cell 217-254-3038

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

Gary Frye
Hull, IL 217-656-3474
Cell 217-460-0001

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

Visit us on the Web!

@

www.proagconsulting.com



Where are they now?

Kevin Knapp of Magnolia, IL was our 2001 scholarship winner. Kevin attended the University of Illinois and majored in Ag Engineering. Upon completion of his schooling, he started working for Case/New Holland in Pennsylvania as a Combine Engineer. He remained in the PA area for over 5 years and his job took him Brazil four different times and Australia twice. He also traveled everywhere in the states where combines operated.

He is very happy with his career and currently works for J. I. Case as a Product Specialist and lives in the Henry, IL area. In his spare time, he helps his dad, Ken, with the farming operation.

If they need help with the Combine, they don't have to wait for the specialist to show-up – he is already there!

Scholarship Forms Available

Each year we accept scholarship applications for the \$2000 Jim Koester Memorial Scholarship. The scholarship pays \$500 per year for college attendance. Forms may be obtained by calling our Windsor Office 1-800-879-2297.

Applications are reviewed by a committee and a winner is chosen. Only requirements are that the recipient must be related or associated with one of our clients and plan on majoring in an agricultural related field.

PRO-AG has awarded over \$33,000 in scholarships in memory of Jim Koester, Wateska, IL. Jim was a client of PRO-AG Consulting prior to his untimely death.



this issue

Base Saturation P.2

CEC affects on Soil Fertility P.2

Benefits of Using Gypsum P.3

Where are they Now? P.4

When is the Best Time to Sample your Soil?

We are often asked this very question. The answer I give more often is “the same time each year.” That is an over simplified answer so let me explain!

In our program we are using an “inventory system” for making recommendations for your crops. So it is very important that we inventory your soil the same month each time. In early spring soils have released nutrients from the soil lattices, crop residue has dissolved and freed up nutrients used in last years crop productions. Also, there are no growing crops taking up nutrients that would lower the amount of available nutrients. Available levels of Potassium and Phosphorus are usually the highest at this time.

As fields are planted and crops begin to grow, nutrients are taken up by the crops and are unavailable in the soil test readings. This continues until late August-late September or until the crop matures. If I were to take a soil test at this point in time, my soil test would not match the one taken in early spring. Total nutrients are close to the same but part of them are in the growing crop and cannot be measured with a soil test alone.

At the completion of the growing seasons, crops start to download nutrients back into the soil. These nutrients are available not only on our soil test but also on the next year growing crop.

The corn residue still holds nutrients until they are completely dissolved. Ex, corn stover has an average of 105#N, 32#P and 68#K. If the stover is not dissolved, much needed nutrients could remain tied up and unavailable for next year's crop.

So when is the best time to sample your soil? Many northern and central Illinois farmers prefer the summer sampling season. We start our summer season as soon as the ground is fit, usually after April 15. The samples are dried, maps prepared and returned to our clients. Several advantages to summer samples are as follows: we are able to see a growing crop, we get to scout the crop, we know the nutrient levels for this year's crop and plant food can be ordered for the fall application.

Southern Illinois is somewhat different. Most of you apply P and K in the spring before planting. Therefore you would have sampling opportunities in the summer, fall or spring, just before planting. Any of those times are good but just remember how the growing crop affects the soil test readings. It is best to stay on a cycle of sampling the same month each year.

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

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

To do a Simple task
Exceedingly well
Spells Success

Have you Visited our Website?

Our web site – PRO-AG Consulting.com is full of very useful information. It is linked to the DNT network, has the latest market information, news stories and headline news. Daily mid-day hot sheets always have interesting videos.

You may also find information about our program and services. Copies of past newsletters are also available. A feature you may enjoy is the Office Blog. Contained in the Blog are pertinent articles scanned from various news services. This year a new feature will be added. Once a week, each of our Regional Managers will give an update on crop and soil conditions throughout the state. You can visit our web site and see the latest info or you can subscribe to our Blog and have each new entry sent directly to your E-Mail address.

Below the subscribe box are recent posts and below that is access to archived articles from past years.

Be sure to try our web site. You will enjoy the information!

Base Saturation

On our new maps you will be receiving, their will be several columns with the heading – Base Saturation.

What is Base Saturation? Base Saturation is the amount of positively charged ions (Ca+, Mg+, K+, Na+) excluding Hydrogen and Aluminum ions, that are absorbed on the surface of soil particles and are measured and reported as a percentage. Base Saturation is positively related to soil pH because a high Base Saturation value would indicate that the exchange sites on a soil particle are dominated by positive ions.

Simply stated – less Hydrogen ions or a high pH value allows more room for K, Mg and Ca.

Optional Base Saturation Percentages are:

Potassium (K)	2-7%
Magnesium (Mg)	12-20%
Calcium (Ca)	65-75%
Sodium (Na)	>10%
Hydrogen (H)	>3%

In this illustration, the pH of the soil would probably be 6.8-7.0.

PRO-AG CONSULTING INDEPENDENT AGRONOMIC ADVICE proagconsulting.com 800-879-2297													
Soil Test Summary													
Area: 52.47													
Lab Name:													
Sample Date: Oct 09, 2012													
SampleID	SSI_ID	PHW	P1	K	OM	CA	MG	CEC	PERK	PERCA	PERMG	PERH	
none	none	none	lbs per acre (st)	lbs per acre (st)	none	lbs per acre (st)	lbs per acre (st)	meq/100g	percent	percent	percent	percent	
#1	Average:	10	6.6	45	249	1.7	1,704	124	5.5	5.9	76.9	9.5	7.7
#2	Average:	14	5.9	46	309	1.8	1,644	707	9.1	4.9	39.2	33.5	22.4

Field #1 has the desired percentage of K, Ca, Mg and H. Field #2 has a higher CEC but the Mg and H percentages are all too high. An application of Lime will increase the CA plus lower the Hydrogen. An additional application of Gypsum could also increase the CA percentage without making the pH too high.

How Does Cation (Cat-Eye-On) Exchange Capacity affect Soil Fertility?

Cations = K, Calcium, Magnesium, Ammonium, Hydrogen and Sodium

The Cation Exchange Capacity (CEC) shows how well a soil can hold onto and store Cations. A soil with a high CEC would be able to hold more nutrients and a soil with low CEC for example would not only be missing some important nutrients but also would not be able to hold onto nutrients as well as a soil with a higher CEC. So, even adding nutrients to a soil with a low CEC (below 5) would not be very effective in improving fertility.

Soils with a lot of Cations can also hold water better since water is a polar molecule and is therefore attracted to the positively charged Cations. Plants that grow in soils with a high CEC value do not have to spend as much energy looking for minerals and water and therefore are able to devote their energy towards growth. Micro-organisms that are essential for good soil health also thrive in these conditions.

However, a soil with a high CEC can also hold more of the Acidic Hydrogen Cations (H+) so when your soil test calls for adding limestone to correct your acid pH, the high CEC acts as a buffer requiring more limestone to adjust the soil pH. On heavy clay, high CEC soils, correcting the pH takes a longer time and usually more limestone

The Many Benefits of Using Gypsum in Agriculture

By Ron Chamberlain, Founder and Agronomist for GYPSOIL

“Soil is the world’s most under-appreciated, and yet fundamentally important resource for our civilization.” – David Montgomery, University of Washington professor and author of “Dirt: The Erosion of Civilizations.”

Gypsum has been used for centuries as a tool to improve soil quality. Colonial crop growers observed increased productivity when gypsum was applied. It is reported that Ben Franklin even applied mined gypsum in a pattern to reveal the words, “This field has been land plastered!” in visibly lush, green clover to promote applications among other farmers.



Ron Chamberlain, founder of GYPSOIL

Despite its soil improvement qualities, gypsum’s use dwindled in agriculture except for certain high-value specialty crops such as potatoes and peanuts. It was simply too expensive to mine and bulky to transport long distances.

Thanks to a new supply of high quality and lower cost synthetic gypsum, called flue gas desulfurization gypsum or FGD gypsum, the economics of using gypsum have changed drastically in the past few years. FGD gypsum is produced in wet scrubbing systems used to clean sulfur emissions at certain coal-fired utilities. Synthetic gypsum is also produced as a co-product at some food-grade industrial manufacturing facilities. Our company works with many of these suppliers to market synthetic gypsum as GYPSOIL™ brand gypsum.

Approximately 120 power plants nationwide have modern scrubbing systems that produce roughly 25-30 million tons of co-product gypsum each year, according to industry statistics. GYPSOIL is permitted in 17 states throughout the Midwest, Mid-South and Southeast regions of the United States.

Synthetic gypsum or calcium sulfate dihydrate (CaSO4•2H2O) has the same basic chemical composition as mined gypsum. It supplies 13-16% sulfate sulfur and 17-20% soluble calcium.



GYPSOIL transforms tight clay soils into porous or “friable” soils that allow water and air to infiltrate efficiently. Improved soil structure means soil is less prone to compaction, easier to work and more productive even when weather stress is present.

In addition to contributing to soil structural changes, gypsum provides a supply of needed soil nutrients, including sulfur that is depleted in many agricultural soils today. It is a excellent option to elemental sulfur because it is immediately available to the crop.

For more information about using gypsum and videos from the recent Midwest Soil Improvement Symposium: *Research and Practical Insights into Using Gypsum*, visit www.gypsoil.com.