ISSUE 10

TSM® Infarmation Newsletter

July 2011

Unlock the Potential For Higher Yields

TSM Services, Inc is dedicated to providing growers and farmers the absolute best soil fertility programs today. The TSM® goal is to provide a program that is agronomically sound, economically justified, and environmentally friendly. Our fertility programs are proven to meet all three standards, with 18 years of research to back all of our claims.

For further information. Feel free to call us during business hours at 1-800-626-3806, or visit us on the web at www.totalsoil.com

this issue

Let's Review

In this issue of the ***TSM® Infarmation Newsletter,*** I want to review the past few months' newsletters. Some of you indicated that you were late getting on our list and missed some of the issues. We will be glad to send you any issue you want free.

January (1) we reported the 2010 research "yield" study on the "Fertility Plots". We have 18 years data. We compared the University of Illinois to Tri-State (Purdue, Michigan State & Ohio State) to Total Soil Management® (we took both the U of IL & Tri-State, made a soil fertility program coordinating the two programs and then moved both of them up a "couple of notches"). The Total Soil Management® program had the highest yield in 2010 and also the 18 year average. (all programs were replicated a minimum of 5 times each year)

(2) we also did a "profitability" study on these same three fertility programs for crop years 2009 and 2010 covering a corn-soybean rotation. The Total Soil Management® soil fertility program out profited both the University of Illinois and Tri-State by 6.3% in corn and 7.8% in soybeans.

(3) we also discussed "What makes the TSM® soil fertility program different from both the U of IL and Tri-State programs?" We entitled this "Nutrient Relationships" which neither of the other programs considers. We started with the Zinc(Zn)-Phosphorus(P) relationship. I gave several local examples.

February - (1) we reported the amount of rainfall on our Catlin Research Farm by month during the growing season for the years 2008, 2009 and 2010.

(2) we finished discussing the Zinc-Phosphorus relationship and also mentioned the relationship between Boron(B) and Nitrogen(N) again giving local examples.

March - (1) we had several people ask us what our highest individual plots were for both corn and soybeans. The top 4 plots in 2009 and 2010 were:

CORN		SOYBEANS	
2009	2010	2009	2010
320	297	78.4	82
317	295	77.7	80.6
308	292	77.3	80.4
308	290	77.3	80.1

(2) we took up the subject of "Fertilizer Efficiency". What is it and what can you do about it. We showed data indicating that normal fertilizer efficiency is somewhere between 26% and 30%. Not real impressive! The Total Soil Management® soil fertility programs increases the efficiency of fertilizer. You need to read these newsletters. We have 4 TSM® soil fertility programs to fit any budget.

March – we sent out a second newsletter in March due to all the questions about micronutrients.

(1) We covered to 2 basic markets for micronutrients:
   a. A "Product" market where a grower wants a micronutrient product as cheaply as he can get. Many think it makes no difference which micronutrients you apply just as long as you apply something. You are wasting your money.
   b. A "Agronomic" market – where a grower has a specific micronutrient need and he goes about to solve it. These products are higher prices but they WORK!

(2) We attention was directed to one particular product that had several micronutrients but also had Calcium(Ca) and Magnesium(Mg). Most would think this was a good idea. Since high pH ties up most micronutrients, you wouldn't think adding limestone would be beneficial. You would correct! This product may be using dolomitic limestone as filler because it is a cheaper source of filler. A good agronomic micronutrient product will not have limestone included at all! BY THE WAY, WE SELL THE "AGRONOMIC" MICRONUTRIENTS! Maybe this is one of the reasons our programs out-perform?

April – we slipped up on this one. We sent you a repeat of the first March issue. Sorry about that!

May – we discussed our research on liquid starter/germinator products. "Is there a benefit from using a liquid starter/germinator?" We used 3 gallons per acre placed directly on the seed compared to no starter/germinator. We used 2 different hybrids replicated 4 times. The average of the 4 replications using a starter/germinator yielded 10 bushels more per acre than where no starter/germinator was used. You do the mathematics.

What Makes TSM® Different?

Cation Exchange Capacity (CEC)

As Hank Williams, Jr would say, "Are you ready for some football?" Well, I'm saying. "Are you ready for some soil fertility?" We are going to have fun because it is in this area that TSM® "bumps up" soil fertility several notches higher than the university or soil lab programs. When you get to where you understand CEC, you will understand a majority of what it takes to do soil fertility and what it is going to take in the future to get the high yields.

How much corn do you think we will ever be able to raise per acre? One of my favorite U of IL professors was Fred Welsh (my mentor). Fred was in charge of "high yield research" for the U of IL for several years. One year, Fred went out on a 40 acre field and harvested just the outside row all the way around the field. What do you think this yielded? Any of you remember this? If you do, you will be remembering back over 30 years ago. The yield was in excess of 650 bushels per acre. So I would say that 650 bushels per acre might well be possible. Can you remember when you raised the first 100 bushel corn yield? I can, it was around 1953. We raised 107 bushels per acre.

Soil fertility nutrients are either negatively charged ions called "Anions" which means that this nutrient molecule has more electrons (negatively charged) than protons (positively charged) thus would have a net negative charge. A "Cation" would be a nutrient molecule with more protons (positively charged) than electrons (negatively charged) thus would have a net positive charge.

First, let's take the name "Cation Exchange Capacity" and define each word so we can get an idea of what this CEC is all about.

1) What is a "CATION" – a cation is a positively charged ion (an ion is a nutrient atom or molecule).
2) What nutrients are "CATIONS"? – the main ones are Calcium (Ca^{++}), Magnesium (Mg^{++}), Potassium (K^{+}), Sodium (Na^{+}) and Hydrogen (H^{+}).
3) What is meant by "EXCHANGE"? – the CATIONS have the ability to exchange or replace one another on the soil colloid or particle. All CATIONS cannot replace any other CATION anytime it wants to. There is a "pecking order". We will talk more next issue.
4) What is meant by "CAPACITY"? – all CATIONS are not held equally tight on the soil particle. Some are tightly held and others are loosely held. Again, we will talk about this next time.

Trivia question in preparation for next issue – "Which cation is dominate and has the ability to replace any other cation on the soil particle, if you apply it?"

Trivia question in preparation for next issue – "Which cation is always the last one to attach to the soil particle and the first one to get removed?"

SOIL SAMPLING

3 seasons or times of the year for soil sampling:

FALL
Anytime after harvest
(September thru frozen ground)

SPRING
Anytime after thaw and before planting
(March thru planting)

EARLY SUMMER
Anytime after planting until too high
(April thru too high)

Call us now and get your name on our list for this summer, fall or spring.

I plan on bringing you many more pieces of Information, the purpose of which, is to convince you that "we are different and better".
Why don't you try us and see?

"GOLD" Program
"SILVER" Program
"BRONZE PLUS" Program
"BRONZE" Program

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