



InFarmation

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TSM® Services, Inc.

Crops Are Ahead of Schedule

By Randy Simonson, Ph. D.

The corn is really looking good and is way ahead of schedule. The old saying is “knee high by the fourth of July”. How about tasseling by the fourth? Some of the corn around here is starting to tassel. The corn on the main farm was planted on May 6 and the other corn fields were planted on May 7. Two Kruger hybrids, K-9313 and K-9910 YGCB, and two Mycogen hybrids, 2A812 HXI and 2G768 HXI, were used at the research farms. We used Lumax and Force from Syngenta on all the corn. Agrium provided the nitrogen for the corn in the form of their new polymer-coated, slow release urea called ESN. Specialty Fertilizer Products supplied the TSM® Pre-Mix for all the TSM plots and Allerton Supply Company provided pelletized lime.

A local equipment dealer, Glascock Equipment, allowed us to use two unique Great Plains items. The first is called the Turbo-Till, and is used for vertical tillage. It cuts up the residue, but leaves much of it on the surface. The second piece of equipment is a twin row planter. Instead of one row, it plants a pair of rows 8 inches apart. The benefit of this is that you get greater spacing of the corn plants, more light interception and a regular 30-inch combine head can be used to harvest the corn.

The soybeans are looking very good also. We started planting the soybeans on May 8, but did not get done until May 29. Rain in May kept us out of the fields. FirstRate and GlyphoMax from Dow AgroSciences were post applied to kill the weeds. Optimize soybean inoculant from Nitragin, Inc. also was used. We used three different Kruger soybean varieties, K-393RR/SCN, K-380RR/SCN and K-282RR/SCN. These varieties were high yielders in our soybean variety trials last year. **TSM®**

Micro-Boost Looking Great on Soybeans

By Randy Simonson, Ph. D.

Last week, I was looking at some soybean fields in Illinois. Some had TSM® Micro-Boost liquid micronutrients post applied to them and others did not. We could visually see a difference in the soybeans. The soybeans with the TSM® Micro-Boost were both greener and were more even. They did not seem to have as many spots in the field where the beans were shorter.

The soybeans in our plots yielded 5 bu./acre more with TSM® Micro-Boost last year, but we have had reports of up to a 14 bu./acre yield increase with Micro-Boost on soybeans. **TSM®**

Looking Back at Soybean Yields

By Randy Simonson, Ph. D.

The 11 year mean for soybean yields at the TSM[®] Research Farm, continues to show TSM[®] E as the high yielding treatment. TSM[®] E averaged 62 bu./acre over the past 11 years with TSM[®] A and the Tri-State recs coming in second at 60 bu./acre. The U of IL treatment averaged the least with 57 bu./acre. While 57 bu./acre is still a good soybean yield, with the high price of soybeans these days, a 5-bu./acre difference from what the TSM[®] E treatment produced is a substantial loss in revenue. **TSM[®]**

1993-2003 TSM[®] Research Farm

Catlin, Illinois

Soybean Yields (bu/acre)

11 Year

<u>Trt</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>Mean</u>
TSM A	57	58	43	53	64	52	72	60	66	76	54	60
TSM E	62	73	44	57	61	55	72	64	65	75	58	62
TSM I	58	65	40	54	60	52	62	55	63	72	55	58
U of IL	56	65	38	56	57	52	65	60	60	67	54	57
Tri-St.	-	-	-	56	54	53	66	59	62	72	57	60
Conv.	56	59	41	55	60	53	70	60	63	66	55	58

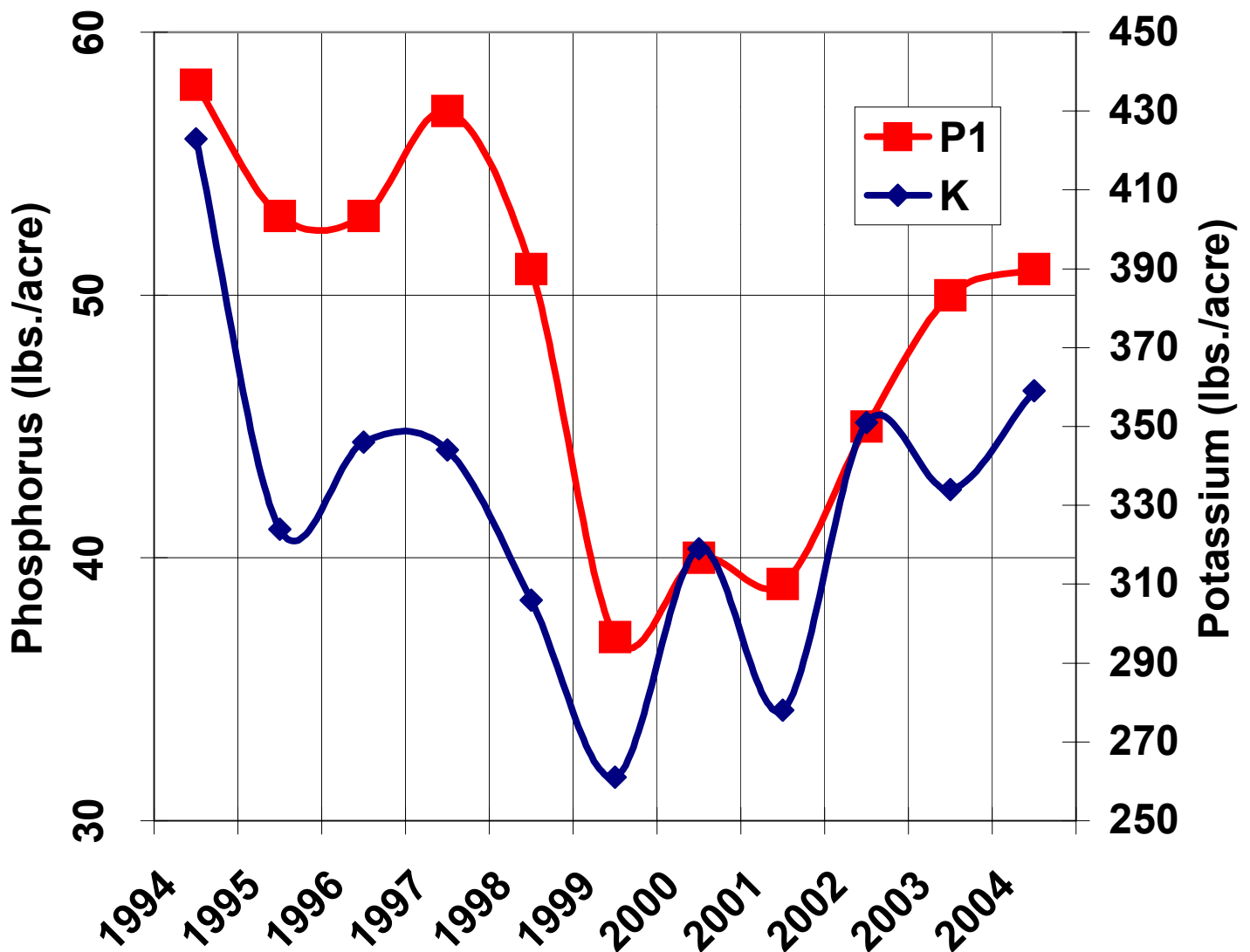
Cycling Up, and Down

By Randy Simonson, Ph. D.

We soil sample each plot on the TSM® farm every year. These soil tests show some interesting things. The chart has the phosphorus and potassium soil test levels for each year over the last 11 years. In the past we thought these tests would not change much, but as you can see they move up and down from year to year. We talk about cycling at our grower meetings and here is a perfect example of it.

The phosphorus and potassium levels generally move together from year to year. Sometimes the changes are small, and at other times the changes are great. The main thing this chart shows is the importance of soil sampling often. We recommend soil sampling every year so that you know exactly where your nutrient levels are. Then we can make the best possible fertilizer recommendation for the field. **TSM®**

Movement of P & K at the TSM® Research Farm



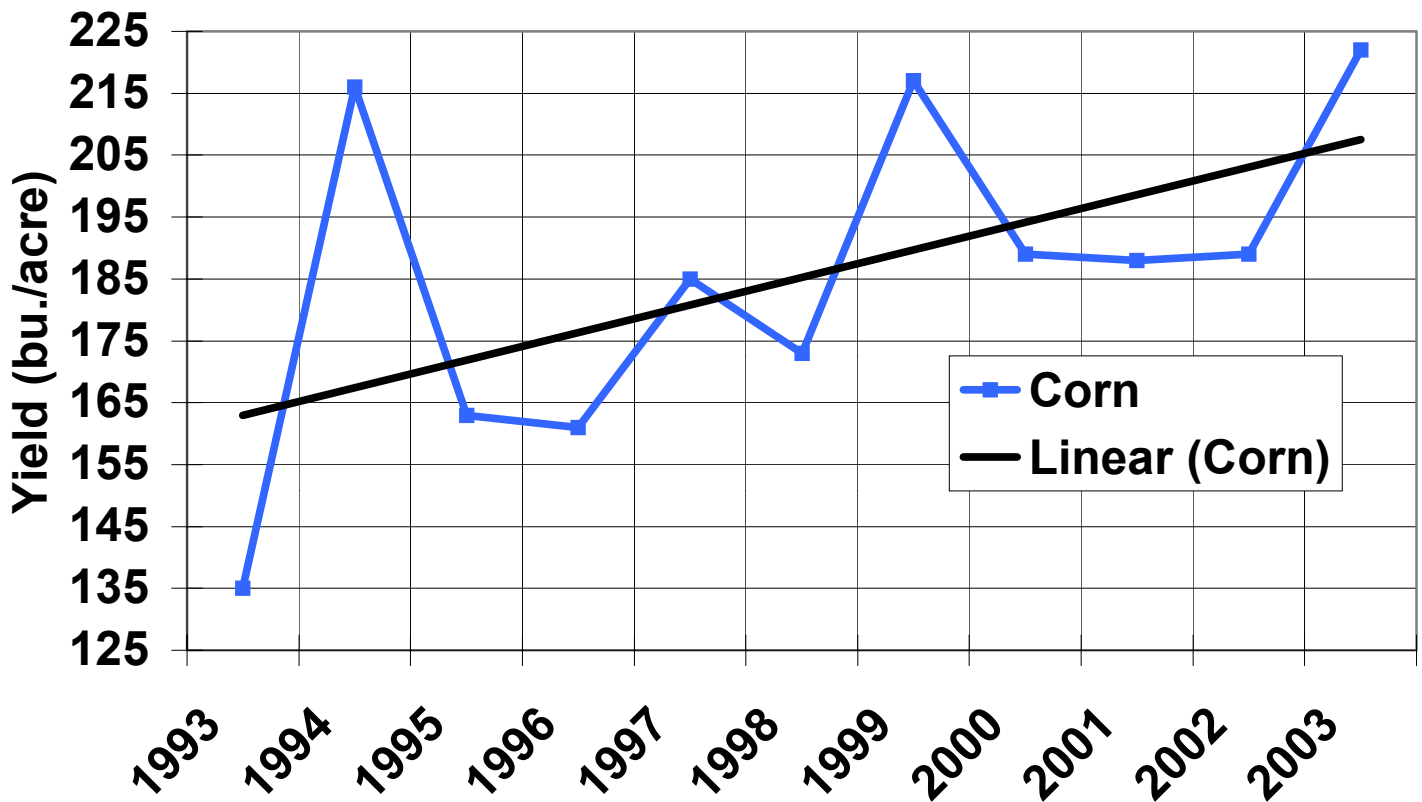
Charting Progress

By Randy Simonson, Ph. D.

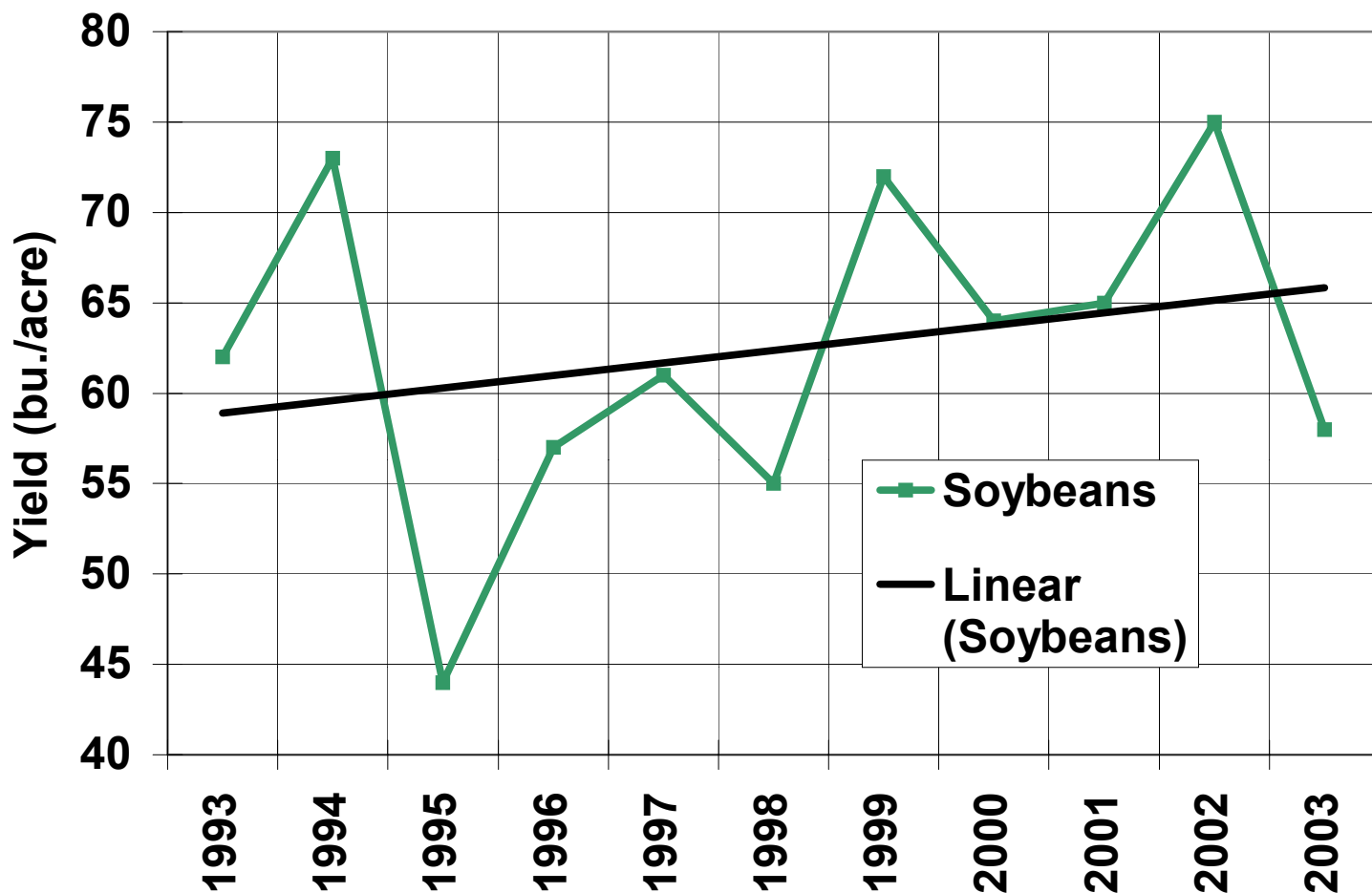
Here are a couple of interesting charts showing the corn and soybean yields for the TSM® E treatment over the past 11 years. Then we added a linear line to show how the corn and soybeans yields are slowly increasing over time. The corn is increasing faster with an average of 3.9 bu./acre/year and an average increase of 2.1%/year. The soybeans only increased yields at a rate of 0.6 bu./acre/year with an average increase of 1%/year.

I think there are a couple of main factors in increasing yields over time. The first is that the TSM® program is getting the soil more into balance. We often tell growers that it may take two or three or four years before the soil really gets into balance where they can see a difference in their crops. The second factor is genetics. The seed companies work very hard to breed crops that will yield more. **TSM®**

Corn With TSM® E Over 11 Years



Soybeans With TSM® E Over 11 Years



The Testing Continues

By Randy Simonson, Ph. D.

Every year at the research farms we test new products and retest some of the old products. Here is a list of some of the products we are testing:

TSM® Micro-Boost micronutrients at pre-plant and post-emerge on corn and soybeans

N-Texx® bacteria placed in-furrow on the seed of corn and soybeans

T-22® fungicide added to the planter box to the corn seed

Chandler® enzymes applied pre-plant on corn and soybeans

Avail® from SFP® which reduces soil fixation of phosphorus

ESN® polymer-coated, slow-release urea applied pre-plant on corn and soybeans **TSM®**

Precision Equipment That Pays

By John Witter, Manager/GIS Specialist,

I am asked many times throughout the year about precision ag products and services. The majority of the questions pertain to the best new equipment and services for a retailer to offer and a farmer to use. This may seem like an easy question to answer but every time I'm asked this question my head begins to spin with all of the possible answers. I think about the basics like grid sampling and yield monitors then think about things like remote sensing and auto steer setups for equipment. Yes the latter is 100% viable this year. A farmer can read a book or nervously bite his fingernails while a GPS equipped computer steers his tractor through the field. Actually the farmers are watching the equipment closely, but they are able to "relax" more, but I'm saving the auto steer story for another day.

If I had to choose one piece of equipment to recommend to every farmer or retailer who is already utilizing the basics of precision ag, it would be GPS lightbars. Actually, a lot of people consider these to be old technology but it's been my experience that they are not commonplace in every operation although I think they should be. The reason is that they will save you time and money. This is accomplished by an increase in productivity and a reduction in input costs. Here are a few of my favorite reasons to support the last statement.

1. Minimizing application overlap and skip, meaning less application material is required and a reduction in the application time per field.
2. A reduction in recurring foam marker expenses such as purchasing foam and maintaining foam marker systems. Most applicators will reduce their foam use by at least 75% or more.
3. Applicators don't need to continually look to the side of the vehicle therefore they can drive faster and more precisely. This in turn reduces fuel consumption and decreases the overall time per field. Field trials comparing GPS lightbars and foam marker guidance show that in ideal foam marking conditions, operators using GPS drove 13-20% faster than when using foam.
4. Because GPS works in all weather and lighting conditions, operators can avoid costly work stoppages and continue swathing in low visibility conditions such as dust, fog and darkness.

There are many more supportive reasons one could list for a GPS lightbar system but I want to focus on the increase in productivity and the reduction of input costs. Here is a real life example for reducing the input costs. A farmer or custom applicator will apply NH₃ to 1,500 acres this fall, at a rate of 200# of N, using a bar that measures 37.5 feet and the NH₃ will cost \$325/ton. Test trials have shown that most applicators will overlap 1.5 feet without using a GPS lightbar system and the same applicators will only overlap 0.5 feet when using a quality GPS lightbar system. In this example the non-lightbar applicator will overlap a total of 60 acres at an additional cost of \$2,378.05 while the same applicator, with a GPS lightbar system, will only overlap 20 acres at an additional cost of \$792.68. If the lightbar were used on the 1,500 acres the applicator would have saved \$1,585.37 and 40 acres of his time. This savings will pay for a lightbar in one season.

Lightbars can also be used for the application of dry products and chemical, plus tillage, planting and anything else that requires you to drive through the field. Feel free to use the above example using your chemical prices instead of NH₃. A retailer or farmer applicator will save time and money by reducing the amount of overlap while spraying as well, allowing him to move to the next field faster and at a lower cost.

I have used and read about many different lightbars that are on the market today. If I had to choose one model to recommend it would be Trimble's AgGPS EZ-Guide Plus. (This is assuming I wasn't talking to a John Deere only person because Deere's system is a good unit and it integrates nicely into their other systems).

I recommend this system because the EZ-Guide Plus system is easy to learn, easy to use, it is very affordable, plus Trimble has been the leader in GPS systems for many years.

Here is a quick highlight of the EZ-Guide Plus lightbar and why it stands alone.

1. Provides guidance on straight-line (point A to point B), straight-line A+, and curves.
2. It guides on multiple headlands and straight-line guidance inside the headlands.
3. Provides guidance on center-pivot fields
4. It automatically guides to the next swath for any pattern.
5. It has a pause and resume feature that will guide back to the paused area. This is important for fill-ups.
6. It will show acres for headland fields.
7. Indicates the approaching headland area that has already been applied.
8. This system can be upgraded to a full auto steer system.

In summary I feel that a GPS lightbar system will save you time and money and is one piece of equipment that should be given serious consideration. If you would like to learn more about this lightbar system or purchase a unit please call or email me at johnw@tmsr.com . Have a safe and enjoyable summer. **TSM®**

Fall Will Be Here Before We Know It!

By Larry Schonert, President

It looks as though we are headed for an early harvest in most parts of the country this year, but there are a few exceptions. Some of our dealers to the north and to the east were delayed by rain, and did not get planted as early as the rest of our dealers. For those who were not delayed, we could be looking at some harvesting being done as early as the last part of August.

It doesn't seem all that long ago that we could always count on having some time off during the summer while waiting for harvest and the fall season to begin, but with the advent of the post emergent herbicides, free time during the summer months is definitely not what it used to be. The unfortunate side affect to our business at TSM® is that it's harder to get back into the fall fertilizer season thought process, because everyone is still trying to get done with the old crop season, let alone looking ahead to a new crop season.

I also wish to thank each and every one of you for your support of the TSM® program. Crop year 2005 will represent our 21st year in this business, and it has been a privilege to be of service to each of you. There have been a lot of changes over the past 21 years, but the basic principle of providing a top-notch agronomy program has never changed since the first days of the company. We are looking forward to the next 21 years with great anticipation. **TSM®**

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