How to Earn an Extra $48.40/acre

Raising Corn This Year

Introduction

This report is a way for me to continue the pursuit of MEY, or if you will "Maximum Economic Yield". Some of my early thoughts on this whole concept started while running a retail fertilizer outlet in Northwestern Ohio. I was doing seed corn plots with different types of fertilizer treatments to see what could make a difference in my fertilizer recommendations for my customers.

There were a couple of young chemical reps who called on my plant at various times, and like I, they were searching for answers. One of them even brought me an article about a young farmer in West Central Michigan who had just broke the world record for corn production. His yield was over 300 Bushels Per Acre. At that time I was still wet enough behind the ears to think that bushels meant profitability.

The rest of this report is about raising the maximum yield with practical approaches in an attempt to sustain or increase the economics to the "Ultimate" customer (farmer).

In the pursuit of economics

I left that fertilizer plant in the fall of 1978 to work with a very progressive regional seed company. They were one of the first "Private Line Soybean" companies. We had superior genetics for the times and that led to the University's breeding programs taking the backseat to the Private industry. Better yields meant better returns to the customer.

A few years later, I joined a very aggressive seed corn company as they came west of the Mississippi River. I was able to work with the Area Agronomist in the planting of the research plots as well as conducting the plots in southern Ohio for my dealers. At the time we were planting and harvesting 45-50+ farm plots a year. It gave me a opportunity to see what was performing and doing the job over a wide area. It was here, when we started assigning dollars to the plots that my eyes were finally opened. Highest yield did not always = maximum profit. Sometimes the lowest yielding hybrid in a plot was actually the most profitable to raise.

A few years later, I went back to the fertilizer industry, this time in Southern Michigan. The concept of **M**aximum **E**conomic **Y**ield was being discussed by a number of people in the industry. It was a concept to which several of my customers attached themselves. The whole concept is to raise as much yield as possible and to do it economically.

The fertilizer math was easy. Many times the difference of being fertilized for 130 bushels and 150 bushels was only $7-8/acre (difference in the nitrogen rate). Earlier planting was a freebie. Seed selection prior to the trait seeds was, in effect, a freebie or low cost way to be more profitable. Tillage, or lack thereof, was and still can be a way to greater profitability.

We looked a different fertilizer sources, micronutrients, application timing, impregnating chemicals with fertilizer, and other aspects of yield, and how to do it profitably for the customer.

We don't hear **MEY** talked about much anymore, especially in fertilizer circles. I frequent an Ag Chat site called New Ag Talk (**http://talk.newagtalk.com**) and economics of production is discussed everyday. So I know farmers are still concerned about profitability whether their suppliers are looking after them or not.

Part of the conflict is that the retailers are looking around and seeing many of their former competitors going broke, and it concerns them. At one time we thought running our competition out of business was a good thing. That isn't the thinking in the industry anymore. They are thinking survival and how to best get there.

Kind of leaves a farmer in a pinch! Higher costs for inputs leaves the farmer in the hunt for survival! How do we in the fertilizer industry get the margins we feel we need, and the farmer still survive?

I contend the answer lies in new ways for products to be used so that efficiencies improve. We have seen the invention and reformulating of products to make them more attractive to the farmer, but few actually have made it more profitable. The introduction of the Roundup Ready crops have helped the weed control costs, but the trait costs have eaten up much of the savings. And so it goes!

Approximately 5 years after coming to Michigan to manage the fertilizer plant, I joined another fertilizer company. They gave me a plot planter to do replicated starter fertilizer trials. It was there I learned that the starter fertilizer you use could make all the difference in how profitable your operation was in a given year. Assuming no real deficiencies, the starter you chose could easily make a difference in profitability of $20+/- per acre. We found ways to take even the most profitable products, and enhance them with a program approach to produce another $12-18/ acre after expenses.

A few years later we went to a major mid-western University with a plan for a study. They had a planter that was setup to do multiple row widths. We being a seed-placed fertilizer company felt that as we narrowed rows of corn from 30" rows down to 20" or 22", or even tighter into 15" rows, that the need for fertilizer/acre would increase. After all that's what we had been preaching to the soybean growers, and it only made sense. More feet of row, probably more seeds per acre, more fertilizer just made sense. We went to the University with our plan and expected to do a 3 year study.

Sure enough, the study showed just what we were after. More fertilizer/acre (maintained the concentration per foot of row) as we went to narrower rows did increase yields, and it did it with good economics. Just what we were after! Now we could with confidence go out to sell more fertilizer. We had the proof!

Until you looked at the best 30" row treatment and compared it to the best 15" row treatment. We had felt that the 5 gallon per acre on the seed treatment in 30" rows was the most bang-for-the-buck our customers would normally realize. Therefore, we felt that the 15" row rate should be 10 gallons per acre on the seed. That would maintain the same concentration per foot of row(in 15" rows you have twice as many feet of row as in 30" rows). Indeed, as you can see in the yield summaries, the 10 gallon rate gave one of the best yields in the plots. Forget everything else in the plots and go sell more fertilizer. That would be good for the farmer, and the fertilizer company. And it would!

But if you look a little further, there was more to the report. The best treatment in the 15" rows was actually the same 5 gallon per acre treatment as the best performing fertilizer treatment in the 30" rows. That treatment was giving us the best increase over the 30" rows, as well as the highest increase over the check treatment. The increase over the same treatment in 30" rows was a 3 year average increase per acre of 24.4 bushels per acre. Since there was no increase in fertilizer cost to achieve that gain, it is all profit! **At $2.00 corn per bushel that's another $48.80/ acre!**

Some of you already have the planters to achieve this. A Kinze planter with the splitter units set for 15" rows (for soybeans), or a John Deere 1790 with the splitters, will allow you to plant the 15" rows. We tried dropped populations from 27,000 to 38,000 seeds per acre. We pretty well settled on 32,000 as our desired drop. We used a diaphragm pump and a manifold with check valves to assure even distribution to each row.

As you can see, we used a check treatment in the experiments. In 2001 and again in 2002 the plots were planted late because of the responsibilities to the rest of the University agronomy program. And still the 15" rows with fertilizer treatments showed real promise compared to no starter with just the narrow row planting. In the first 2 years of the study the check treatment in 30" rows actually showed better than the treated plots in 30" rows. That isn't that unusual in later plantings and at high fertilizer levels like seen on the University property.

In the 3rd year of the study, the plots were planted earlier, still on the high fertility soils of the University. This shows that while levels may be high, early planting does utilize the starter quite well. It was interesting that we planted earlier, got better overall yields and got the best spreads in yield in the 3rd year of the trial.

So, we have shown that we can do it! And the economics appear to be there. How can we make it practical for you to do? If you have one of the above type planters (or something equivalent), you are half way there. Some of you already have a "Calmer Corn Head" for 15" rows. If you don't he would love to sell you one! Marion says you can harvest those 15" rows with a 30" head, if you will do a couple of things.

1) Plant a Bt corn hybrid so that when that 30" head starts pulling/pushing the plants they don't snap off.
2) Split planter – one-side 30" rows, the other 15" rows.
3) Plant a few rounds to try, not acres.
4) Start early.
5) Go Slow.

At that point, if your test has been successful and you are convinced of the merits of the 15" rows, Marion will be more than happy to sell you a 15" corn head.

There are obviously other issues come into play here: How do you apply you nitrogen? Some do it with pre-plant, some do it as weed-n-feed, some do it side-dress early with a skip-row system. How do you spray the result? Some are using the skip-row. Some are spraying cross-ways (15" rows give approximately 13" spacing). Some with the planter.

There are several of you have been in contact with me on the web about how you are doing it successfully. Some of you who are in 15" rows, are into silage, and have had excellent results.

This is not the end! It is just the beginning for people who are willing to stretch for the next possibility! I'm just glad to be along for the ride!

Even if you never try 15' rows, or "Twin Rows", or some of the other "new" ideas that are floating around out there, there are many small tweaks that can be made to most current operations to increase profitability by $10-20/acre. We at LFB Solutions, Inc would like to be a part of your fertility program to show you what we can do to help the "strive for survival".

Roswell Garst used to say that those who were among the first to adopt a successful new practice, were the ones who got the premium for having done it. The market would later adjust for the new technology or innovation and the rest would be no better off than before. Maybe worse!

I know that 10 years from now we will have substantially fewer farmers than today. That's reality. Just look back 10 years ago. Do you really think it will be much different in the next 10 years?

It is with that in mind, that I have undertaken some of these screwball projects to find better ways for those progressive farmers to survive. I don't claim to be first with any of these ideas. Many are already using "Twin Rows", that's the latest buzz in Agriculture. And I feel a good move for many.

Several of you have already moved on to 15" rows. Most are doing it without starter fertilizer because of the problem with fertilizer coulters. As you can see the change to 15" rows w/o starter is limited. The real promise in 15" seems to lie in being able to safely feed fertilizer to the plants to get them off to a better start.

I didn't invent 15" rows; maybe I can help make them better!

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