

# THE MIDWEST

# BIO-TECH NEWS

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**December, 2008**

## **CONTROLLING COSTS WILL BE THE KEY TO 2009**

One year ago, we led off the first page of the December, 2007, newsletter with an article that indicated controlling costs “may” be the key to farm profits in 2008. At that time, the 2008 crop outlook information pointed to continued high levels for corn and bean prices, so the revenue side of the profit equation looked good. However, there was a lot of uncertainty about how much higher crop production costs would move. Farmland rents and values were jumping at double-digit rates, and everyone expected petroleum prices to continue moving upward. So, all of the major crop input costs were expected to rise.

Today, the crop outlook situation is almost reversed, and most of the uncertainty is on the revenue side of the profit equation. The prices for most farm products are well below their recent peaks but still above the typically price level we saw 6-8 years ago. Several market analysts believe prices have reached a new higher plateau and cannot fall much more. However, I recently read an article by one of the folks who has a regular column in the *Illinois Agri-News*, and he indicated that there is still a decent chance that prices can fall even farther to the levels we saw back in 1999-2001.

In contrast, it looks like most of the cost factors will not move down that much during the coming year. Of course, fuel costs will be lower, and it looks like this will be true for the next several months. However, there are a lot of companies that raised their prices over the past two years due to the high price of fuel, but they have not

dropped their prices in response to the recent cut in fuel costs. So, it looks like the costs of seed, fertilizer, chemicals, and land will remain relatively high for the 2009 crop season, and the most important factor for maintaining your bottom line in 2009 is controlling production costs.

For this reason, we are happy to report that our regular retail and pre-season discount prices for all Chandler Crop Products will be the same in 2009 as they were in 2007 and 2008. Although we had to increase our shipping charges last summer due to the big jumps in the UPS rates, we have not followed their recent upward trend and have maintained the same shipping rates for the past 3 months. So, even if your other crop production costs increase for 2009, you won't have to pay more to use Chandler Crop Products. Also, the full line of crop products can help you to manage the uncertain gap between farm revenues and costs by allowing you to reduce fertilizer and chemical application rates while increasing crop yields.

Due to these advantages, we have attracted a lot of new customers in the past two years. While most of our long-term users are familiar with our history, there are many of the new folks who don't know about our 30 years of experience with these products. To provide some background information about Midwest Bio-Tech, we have included a one-page insert with the newsletter. We outline how we got started in the business as well as some of the initial field test results from our own farm that convinced us of the potential value of these products in Midwest farming.

## TYPICAL FIELD REPORTS FROM CHANDLER USERS

In the December newsletter, we usually report the first set of crop yield results for the year as reported to us by our users. However, we only have a limited number of reports at this time due to the very late harvest this year. So, we provide a brief summary of the results from the past few years, and we will report the 2008 field results in our March, 2009, newsletter.

In accordance with our privacy policy, we only provide the main details of the results and do not report names, addresses, or any other identifying information about our users. We take these steps because many of our users find that the products give them an edge over their neighbors, so they prefer to keep this advantage a secret. We appreciate their willingness to share this information about their own experiences with Chandler Crop Products and are happy to comply with their wishes.

- After 2-3 years of applying Chandler Soil and Seed Treat, many users see less yield variation across their fields based on their yield monitor data. There are not as many spots with extremely low yields, and the overall average for the field is higher.
- Many long-term users of Chandler Soil report that they are able to pull their chisel plows a gear or two faster and a couple of inches deeper than before they used the product. They also have to replace chisel points less often.
- Chandler Soil helps to reduce compaction and improve water infiltration. The users who have applied Soil for three or more years rarely see running or standing water in their fields. They also find that the soil is mellower and has more earthworms than before they used the product.
- Over the past few years, we have had an increasing number of reports from users who include Chandler Soil when they top-dress their wheat and other cereal grains with nitrogen. Many of these folks say the product helped them to produce the best wheat yields they have ever had.
- Over the past 30 years of side-by-side field trials, we have consistently seen an increase of 2,000 corn plants per acre with Dry Seed Treat. Several users tell us that they have cut their planted population by 2,000 plants per acre in order to maintain the same harvested population while cutting their seed costs. The seed cost savings is about 3-4 times the cost of the Dry Seed Treat, and they also enjoy the other benefits of the product. Similar plant population increases are observed in soybeans and other crops.
- Most users of Chandler Seed and Soil do not use any insecticide, and they report little or no problems with insects. The treated plants generate more plant sugar, which deters most harmful insects.
- Chandler Foliar is becoming an important part of crop production programs, especially for beans, alfalfa, and pastures. The product enhances the photosynthesis process and generates more plant sugar, which deters most harmful insects. The Foliar users also report higher crop yields and other benefits of the product.
- For example, one Foliar user planted alfalfa in two side-by-side fields a year ago. One field was treated with Chandler Soil and Dry Seed Treat at planting and sprayed with Foliar in early spring. The other field was not treated with any of the products. At the time of the first cutting, the treated field was ready first, and there were no insects present. When the untreated field was ready two days later, the tractor operator reported that there were so many insects he could hardly stand to stay in the field.
- Another user reported that each of his neighbors found spider mites in their soybean fields, which were located on all four sides of his bean field. They all sprayed their beans with a pesticide and told him that he would have to spray because the mites would move from their beans to his field. However, he had already applied Chandler Foliar to the beans, and he did not have any insect problems during the whole season.

## WINTER FARM SHOWS

As in the past, Midwest Bio-Tech, Inc. will exhibit at several major farm shows during the winter months. The dates and locations of the shows we will attend from December, 2008 to March, 2009 are:

Dec. 2-4	Greater Peoria Farm Show Civic Center Peoria, IL
Jan. 13-15	Fort Wayne Farm Show Allen County Coliseum Fort Wayne, IN
Jan. 18-20	Quad Cities Farm Show QCCA Expo Center Rock Island, IL
Jan. 28-29	Midwest Ag Expo Gordyville USA Gifford, IL
Jan. 31 & Feb. 1	Agricultural Mech Show Western Illinois University Macomb, IL
Mar. 3-5	Hawkeye Farm Show University Dome Cedar Falls, IA

When you attend any of these winter farm shows, please be sure to stop by our exhibit booth and say hello. We always enjoy this chance to visit with our customers and get caught up on the most recent changes with your family and farming operation. We will also have the most up-to-date field results, product brochures, and other information available in case you have any questions about the Chandler Crop Products.

Also, please remember that you can save on shipping charges by placing an advance order and picking up your product at one of the farm shows. If you want to do this, **please let us know at least five days before the show begins.** We usually bring some buckets of Dry Seed Treat and a few gallons of liquid product to sell at the shows, but we try not to carry any extra liquid product during freezing weather. However, if we know you plan to pick up all or part of your order at the show, we can make sure to have it ready for you when you drop by our exhibit booth.

## FULL LINE OF CHANDLER CROP PRODUCTS

While we are at the winter farm shows, we can provide information about all of the Chandler Crop Products:

- **Biocat 1000** --- Biocat 1000 accelerates the decomposition of crop residue by stimulating the soil microorganisms that break-down plant materials. The nutrients in the residue are made available for use by the next crop. The lack of residue decay is the second most limiting factor in crop production (behind soil compaction).
- **Dry Seed Treat** --- An enzyme seed treatment that is applied directly to the seed at planting time. Dry Seed Treat enhances germination, root development, and nutrient uptake to promote higher crop yields and improved crop quality.
- **Foliar** --- A nutrient suspension applied as a foliar spray. It is formulated to be readily available to the plant and to enhance the availability and uptake of other nutrients by the plant. The product also helps to improve plant vigor and reduce the impact of various types of plant stress, including insects, drought, excess moisture, and extreme temperatures.
- **Soil** --- A liquid biological soil conditioner applied directly to the soil to improve soil fertility and tilth. Chandler Soil increases the beneficial soil bacteria that convert all applied fertilizers, lime, and other soil treatments to a form that the plant can use. By applying Chandler Soil, you can make more efficient use of these soil inputs, and you can reduce your fertilizer application rates while achieving the same or higher yield levels. The product also helps to reduce soil erosion, improve water and air infiltration, and lessen the impacts of chemical carryover.

Also, you can visit our company website at [www.midwestbioman.com](http://www.midwestbioman.com) to get the latest information about the pre-season discount prices, recommended application rates, field test results, and other technical details.

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Address Service Requested

## **PRE-SEASON DISCOUNT PRICE PROGRAM**

We have enclosed a copy of the full price list and shipping cost schedule under our "Special Pre-Season Discount Program." The 12% December discount period ends at midnight on January 10, 2009, so you can benefit from the lower prices in the 2008 or 2009 tax year. You can save more in the early months of the program, and the regular retail prices for all Chandler Crop Products go back in effect on April 1, 2009. Although we have faced higher product and shipping costs in the past year, **the regular retail and pre-season discount prices for all Chandler Crop Products are the same as last year.** Also, please note that all orders over \$800 qualify for freight-free shipping, and you can place an advance order and pick up your product at one of the winter shows to avoid shipping charges.



*Seasons  
Greetings*

I also want to take this opportunity to say "thank you" for the privilege to have served you in the past, and I look forward to serving you in the future. I also extend to you my personal "Seasons Greetings" and wish you a "Very Prosperous New Year."

Sincerely,  
*Jim Miller*

# Background Information on Midwest Bio-Tech

## Introduction

We have a lot of new users of the Chandler Crop Products as well as many other readers of the newsletter who are interested in the products but are not familiar with our history. So, we thought it would be appropriate to review our background in this business. As well, we will share some of the common experiences that our long-time users have observed over the years.

## How did you get involved with these products?

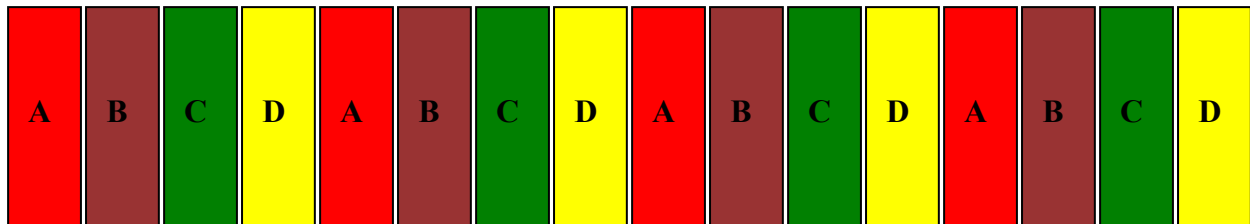
This is one of the most common questions that people ask us when we first meet. Our history with these products goes back over 30 years to the fall of 1978. At that time, we heard about a laboratory that planned to start registering a new line of biological products for livestock and crop uses in the Midwest, and we went to Salt Lake City, Utah, to check them out. At that time, they had about three years of experience with the products, and most of their data came from foreign countries due to the ease of registration and the centralized decision process. We liked what we heard, but we were not convinced that these products were really ready to be marketed in the US. So, we purchased enough of the various crop products to do some extensive testing on our own farm.

## What kinds of tests did you conduct?

Over the years, we have conducted several different field trials with the crop products, but the first set of experiments that we started in the fall of 1978 convinced us that these products were for real. We took a field on our own farm that we normally farmed north-to-south and divided it into 16 plots running 800 feet east-to-west. In each block of four plots, we applied the following combinations of fertilizer and biological products:

- A. 40 rows at the full rate of fertilizer and no biological product
- B. 40 rows at the full rate of fertilizer and full biological treatment
- C. 40 rows at the half rate of fertilizer and full biological treatment
- D. 40 rows at the half rate of fertilizer and no biological product

The full-rate fertilizer application was based on a soil test taken from each plot, and the samples were numbered 1-16 and sent to Harris Laboratories for soil analysis. We requested a fertilizer recommendation for 160 bushel per acre (BPA) corn based on the initial soil analysis, and the resulting full-rate recommendation was 168 units of nitrogen. The full-rate plots in each block (A and B) were treated with this amount of nitrogen for each of four years, and the half-rate plots in each block (C and D) were treated with 84 units of nitrogen for each of the four years. The biological crop products were applied to plots B and C in each block of four plots at the recommended rate. The experiment was replicated four times across the 16 plots (see the figure below), and the same treatments were maintained in the same plots for each of four years.



## What were the test results?

After the first year, we saw very little difference in the corn yields across the 16 plots. By the end of the second season, the half-rate fertilizer plots with the biological products (C) started to show a difference in both the appearance of the plants and in the yield. After the third and fourth years, the half-rate fertilizer plots with the biological product (C) still had the best average yield, and the four plots with full-rate fertilizer application and the biological treatment (B) had the second best yield average. After the fourth year, the average yield advantage for the half-rate fertilizer treatment with the biological products (C) was 8 BPA over the plots with the full-rate fertilizer treatment with the biological products (B). Also, the soil test results for the half-rate fertilizer plots were just as good as the full-rate fertilizer plots after four years.

After the first three years of the trials, our local fertilizer dealer started to take notice of the results. They felt that the yield disadvantage for the full-rate fertilizer treatment was due to our 160 BPA target yield, which they thought was too low. They believed the full-rate fertilizer application would show an advantage over the half-rate fertilizer plots if we increased our target to 200 BPA. Since they had been very helpful with making the split-rate fertilizer applications across the plots for the first three years, we agreed to conduct the experiment that they suggested for year four. We selected our best 40 acre plot on the farm, and we applied the fertilizer dealer's recommended fertilizer treatment on 20 acres and half of this rate on the other 20 acres. Before we pulled the planter in the field, we had a total investment of \$152 per acre in the full-rate part of this plot --- \$131 per acre in fertilizer and \$21 per acre in liquid lime. At harvest time, the full-rate side of the plot produced 154 BPA of #2 corn, and the half-rate plot produced 176 BPA of #2 corn. So, the half-rate fertilizer treatment generated another 22 BPA while saving \$76 per acre in fertilizer costs. Even with the low corn prices we faced in 1982, the difference in the net return was over \$100 per acre.

## What did you conclude?

Based on these tests as well as field trials conducted in over 30 plots on other farms from 1979 to 1982, we decided to actively market these products in the Midwest. We also learned two main lessons from the combined results of these tests that have proven to be true over the past 30 years. First, we still need adequate fertilizer to raise corn and other crops, but the recommended application rates provided by many fertilizer dealers and soil testing labs are typically too high. We don't always need more fertilizer to produce higher yields, and there is some moderate level of fertilizer application rate that achieves a more profitable outcome. Many of these folks are now backing down from the high recommended rates due to high fertilizer prices and concerns about the environment, but this is something that we have known and have actively promoted to our users for years.

Second, we learned that biological products like Chandler Soil, Biocat 1000, Foliar, and Dry Seed Treat can release nutrients from the soil and plant residue and help the next crop to efficiently convert these nutrients into high quality grain and forage. However, like we saw in the replicated fertilizer plots back in 1979-1982, most of the gains from the biological products are realized after two or more years of continuous use. For example, many of the farmers who have used the Chandler Crop Products for at least 2-3 years in a row have been able to reduce their crop input costs by 40-50% from the levels they had paid before using these products.

