

March, 2019

WINTER WEATHER AND SOIL MICROBES

At the time we are writing the newsletter, we have seen plenty of winter weather. Our fall season ended with a 14-inch snow just after Thanksgiving, but we did have a relatively mild December. In fact, we were able to get out in some fields and collect soil samples and check residue decay trials in the weeks before Christmas. We even had one day with a high temperature above 50 degrees in early January. Then, the polar vortex settled over the Midwest, and we had one night with a low temperature of -33 degrees F. We have also had plenty of snow and ice in late January and February. One of our local weather stations claims that this winter is only the seventh worst season on record, and this claim must surely be wrong.

Despite the cold weather, we still find evidence of microbial activity in the soil. For example, one of the residue trials we checked in December was in central Illinois where they had cold temps but little snow cover to insulate the ground. After the temps recovered, we found ample evidence of renewed decay in the treated corn stalks. Also, we have been taking jars of soil to the winter farm shows to illustrate the Solvita CO₂ Burst test. Although these jars were definitely frozen during some of our travels, the microbes in these soil samples recovered quickly and demonstrated high levels of biological activity shortly after the jars started to warm. It is interesting how resilient the microbes are to extreme and sudden changes in their environment.

AN EASY QUESTION TO ANSWER

When we started Midwest Bio-Tech in the 1980's, there were only a few ag biological products on the market, and many people did not understand the role of biological activity in crop and livestock production. Over the past five to ten years, the situation has changed completely – farm papers and magazines routinely print articles about soil health, and many ag companies now offer biological products.

As a result, more of the people we visit with at farm shows and other events are well informed about biological products, and they often want to know how we differ from the competition. In particular, one of the most common questions we now receive is “So, what type of bacteria are you selling?”

For us, this is an easy question to answer since we are not marketing bacteria or any other microbes. The enzyme products developed by Chandler have some key advantages over microbe-based products. First, enzymes are chemically stable and have longer shelf-life (at least 3-4 years) than microbial products. Second, enzymes are largely unaffected by the presence of other chemicals, so you can safely mix them with pesticides or fertilizers without reducing product performance. Third, enzyme products are not affected by cold temperatures and only start to degrade at high temperatures (above 140 degrees F). Thus, enzyme products tend to be more reliable and cost effective than microbial products, and they are easier to fit into your existing farming practices.

2019 NET RETURNS FROM CHANDLER PRODUCTS

As we did last year, we estimated the net returns from using Chandler Biocat 1000, Dry Seed Treat, and Soil for the 2019 crop season. The revenue gains are based on the latest projected farm prices for corn (\$3.60) and soybeans (\$8.50). Please note that these prices assume soybean tariffs continue and acreage shifts from beans to corn. Also, the net returns are based on the full retail price of the Chandler products, and the net returns will be higher if you buy under our volume or seasonal discounts.

Chandler Dry Seed Treat

Each 15# bucket will cover about 60 units of corn or bean seed at 4 ounces per unit, so the product cost is \$2.67 per unit. To compute the product cost per acre, we figure the planted population is 32,000 for corn and 140,000 for soybeans. Also, we try to be conservative in the calculations, and we use expected yield increases that are about half of our long-term averages:

	Corn	Soybeans
Yield gain	+4 BPA	+2 BPA
Revenue gain	\$14.40 / A	\$17.00 / A
Cost per acre	\$1.07	\$2.67
Net return	\$13.33 / A	\$14.33 / A

Also, Dry Seed Treat may be used in place of talc in your planter, and most of our customers report that they use less graphite on seed treated with Dry Seed Treat. So, you can spend less on these other planter lubricants. For these reasons, many of our customers tell us that Dry Seed Treat is a “no-brainer” because they get the biological benefits of the product as a bonus.

Finally, you can use Liquid Seed Treat if you are applying other liquid treatments like inoculants or fungicides. At the full retail price, Liquid Seed Treat costs about \$0.80 per acre on corn and \$2 per acre on beans, and the expected yield gains are identical to Dry Seed Treat.

Chandler Soil

Our recent on-farm test results showed 5 to 12 BPA more corn and 2 to 15 BPA more beans with 8 ounces per acre of Chandler Soil applied in-furrow or near the row. Our tests also showed the same results when Soil is broadcast at 16 ounces per acre.

The estimated net returns are based on the lower end of the typical yield increases for corn (+5 BPA) and soybeans (+2 BPA). The expected net returns for 2019 are:

Corn	Banded	Broadcast
Yield gain	+5 BPA	+5 BPA
Revenue gain	\$18.00 / A	\$18.00 / A
Cost per acre	\$5.63	\$11.25
Net return	\$12.37 / A	\$6.75 / A
Soybeans	Banded	Broadcast
Yield gain	+2 BPA	+2 BPA
Revenue gain	\$17.00 / A	\$17.00 / A
Cost per acre	\$5.63	\$11.25
Net return	\$11.37 / A	\$5.75 / A

Please note that these results only reflect the yield benefits from a first-year treatment and do not reflect the full set of advantages from improved soil health over the long run.

Chandler Biocat 1000

Last year, we reported the fertilizer value of additional nutrients recycled by Biocat 1000 applied to corn stalks. The results were based on three separate on-farm trials conducted in 2016 and 2017. Recently, one of our customers asked us to revise these estimates based on his current costs for urea, potash, and MAP:

Corn	Value
Increased available NPK	\$50.80 / A
Biocat 1000 cost	\$10.50 / A
Net return	\$40.30 / A

The estimates reflect the additional decay generated by Biocat 1000 through July, and the full season returns will be higher.

CONGRADULATIONS TO PHILLIP FRIEDRICH!

Phil Friedrich of Green Valley, IL, won the Illinois Irrigated class of the National Corn Growers Association (NCGA) Yield Contest for 2018. His winning contest yield was 313.1814 bushels per acre, which was the fourth highest yield among all finalists from the central Corn Belt in the irrigated class. The corn plot was planted with Dekalb DKC64-35 seed, and Phil also used Chandler crop products to produce his winning yield. Phil is a long-term veteran with the NCGA Yield Contest and has won his class or ranked near the top for several years. We are proud to be part of his winning program.

LIMITED NUMBER OF REPORTS AVAILABLE

Last year, we co-sponsored two special reports that were published by the *No-Till Farmer* editors at Lessiter Media. Special Report #58 is "Managing Residue to Make No-Till More Effective" and examines many practical topics such as the economic value of removed residue, ways to set up your planter or combine to handle residue, tips for managing continuous corn residue, and grazing corn stalks in a no-till system.

Special Report #59 is "Supercharging Soil Biology for Better No-Till Productivity" and covers a wide range of topics related to soil health. In particular, the report includes a very interesting article about the impact of glyphosate on soil microbes.

Although Lessiter Media assembled these special reports for their no-till audience, we co-sponsored both publications because they contain lots of valuable information for all farmers who are interested in biological farming and improved soil health.

At this time, we still have a limited number of these special reports on hand, and we would be happy to provide free copies to anyone on our mailing list who would like to have one. If you are interested, please let us know by calling our main office number (309-659-7773) or by sending us email.

NEW WEB PAGE FOR OUR SOIL HEALTH LAB

We recently added a dedicated page at our web site for the new Soil Health Lab. At this time, the page provides a basic introduction to the Solvita tests and other diagnostic tools that are available, and we also explain how these tests may be used to make production decisions. Over time, we will add links that allow customers to order specific lab tests and to submit soil samples for analysis.

The web address for the soil lab site is www.midwestbioman.com/soil-health-lab. If you have any questions about the posted content, please let us know by email or phone. We also welcome suggestions for important soil health topics or questions that we should address at the Soil Health Lab web site.

SPRING DISCOUNTS RUN THROUGH APRIL 1

We included the spring discount price list and shipping fees with the December newsletter, and we have enclosed another copy of the price list with this newsletter. The 4% discount on all crop products is available during March, and the regular retail prices go into effect on April 1.

Please note that our retail and discount prices have been the same since April 1, 2016, and we expect the prices for all Chandler crop products to be unchanged for the rest of the 2019 crop season. Also, we will use the same shipping fees for jugs and buckets during the coming season.

As always, we cover the shipping costs on all orders over \$800, or you can avoid the shipping fees by picking up your order at a customer appreciation dinner or at one of our other spring or summer events.

The regular retail prices will remain in effect from April 1 through the end of August, 2019. We will offer our fall discount prices in September and October, and the fall discount price list will be included with the September issue of the newsletter that will be mailed by September 1, 2019.

MARCH CUSTOMER APPRECIATION DINNERS

We will host our Customer Appreciation dinners in March at several locations in Illinois and Iowa. The dinners are open to all past and present customers as well as anyone who wants to learn about using biological additives to increase yields and reduce costs. Given that most people have busy schedules, we will not have a formal presentation, and the schedule is open so you can feel free to arrive and leave at your convenience. We will be happy to answer questions about the products, and please let us know in advance if you want to pick up product at the dinner.

Invitations to the dinners will be sent to everyone on our mail list near the meeting locations. The time and location details will be included in the invitation letters:

- Rantoul, Illinois --- Tues., March 12
- Goose Lake, IA --- Thurs., March 14
- Independence, IA --- Mon., March 18
- Calmar, Iowa --- Tues., March 19
- Davenport, Iowa --- Thurs., March 21
- Dyersville, Iowa --- Tues., March 26
- Morrison, Illinois --- Wed., March 27

If you are not on our list but would like to attend a meeting, please let us know. Also, if you receive an invitation to one meeting but would prefer to attend another dinner, please call (309) 659-7773 or send email to info@midwestbioman.com to find out the specific time and location.

NOW ON SOCIAL MEDIA

We continue to upgrade our electronic capabilities, and we recently added social media accounts for Midwest Bio-Tech. Our new Facebook site may be found by searching for @midwestbiotech, and our Twitter contact is @MidwestBio. We plan to post our latest results on these sites as soon as they are available. Even if you do not use social media, you can find much of the same content at our company blog, www.midwestbioman.com/about-us/blog/.

NEW EVENT ON OUR SPRING SCHEDULE

For the first time, we had an exhibit at the Illinois Fertilizer and Chemical Association (IFCA) Annual Meeting. The event was held at the Peoria Civic Center on February 26 and 27. The IFCA meeting draws retail fertilizer and chemical dealers as well as crop consultants from across the state, and we were there to promote the services available from our new soil health lab.

NATIONAL COVER CROP SUMMIT

The first-ever National Cover Crop Summit is an online event scheduled for March 20 and 21, 2019. The event will include presentations by several prominent cover crop experts, and you can sign up at www.covercropstrategies.com. The summit has been organized by Lessiter Media, which is the company that publishes *No-Till Farmer* and *Strip-Till Farmer* magazines. We are not involved with the presentations or sponsorship of the summit, but we think many of our customers will find the event to be very useful.

The Midwest Bio-Tech News

The newsletter is published quarterly in March, June, September, and December, and the first newsletter was published in March, 1993. An electronic archive of the newsletters published during the past 5 years is posted at our website, www.midwestbioman.com.

We only send the quarterly newsletters to past and present customers of Midwest Bio-Tech and to people who have requested additional information about our products. We do not purchase external mailing lists or gather names for the mailing list from other sources. To have your name and address added to or deleted from the newsletter mailing list, please send email to info@midwestbioman.com, call 309-659-7773, or send a letter to Midwest Bio-Tech, Inc., PO Box 156, Erie, IL 61250. Also, if you prefer to receive the newsletter in electronic form, please send us your email address.

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