MidWest Bio-Tech News

March, 2021

MEASURING AND MANAGING SOIL CARBON

On February 25, we co-sponsored our ninth webinar with *No-Till Farmer*, and the title was “Measuring and Managing Soil Carbon”. The main purpose of the webinar was to discuss the different forms of carbon that exist in soils, including total carbon, organic carbon, and active carbon. We also reviewed the tools used to measure these carbon forms, and we examined the ways these carbon resources can be managed by farmers and landowners. Although most of the webinar content was not related to the Chandler products, we did share our comparison of the carbon dioxide (CO2) generated by molasses, humic acid, and Chandler Soil that we reported in the December newsletter.

Some farmers have known about the importance of soil carbon for many years, and they have adapted to manage this important resource for their own benefit. However, the benefits of soil carbon have extended beyond the farm due to growing concerns about climate change. The experts tell us that if we can sequester or store carbon to offset the amount emitted into the atmosphere, then the future impacts of global warming may be reduced. More and more companies and individuals are now willing to pay for the costs tied to their carbon emissions.

Markets that balance the supply and demand for carbon credits have existed for many years but in limited form. There are several new entrants into the carbon trading business, and they hope to satisfy the new demand by developing new suppliers, including famers who build soil carbon.

In the past year, we have talked to many farmers who are just starting to learn about carbon markets. One of the most common questions points to the fundamental issue for these markets – who is willing to pay for carbon sequestered on farmland? Although we are not directly involved in the carbon markets, we answer this question with an example from our own operation.

We have customers in over 40 states, and we ship most of the orders to distant customers by UPS or Old Dominion Freight. The delivery trucks burn fuel and release CO2 into the atmosphere. We pay UPS and Old Dominion for their labor, fuel, and equipment, but the environmental costs of the carbon dioxide are not covered by anyone involved in the shipping transaction. However, we all eventually pay for the emissions through climate change, warmer temperatures, and more erratic weather.

Recently, UPS added the option of paying for these carbon emissions when making a shipment request. If shippers pay to offset their carbon emissions, then UPS would buy the required number of credits in a carbon market. The carbon sellers can be anyone who sequesters carbon. Ultimately, these carbon credits could be supplied by one of our customers who use Chander Soil or Biocat 1000 to build organic matter on their farm. Hopefully, these markets work as planned and farmers can get paid for some of the public benefits of carbon sequestration while continuing to enjoy the private benefits of healthier soils.

CHANDLER SOIL APPLIED IN-FURROW ON SOYBEANS

Last year, one of our long-term customers established several side-by-side plots to test the impact of Chandler Soil applied in-furrow on soybeans. In the treated plots, he applied 8 ounces of Chandler Soil with 5.5 gallons of water per acre in the furrow at planting time. At harvest, the plot yields were checked with a weigh wagon, and the untreated or control plots averaged 69 BPA while the plots treated with Chandler Soil ran from 73 to 75 BPA.

Based on the projected fall price for 2021 beans ($12 per bushel), we can estimate the net return from this in-furrow treatment. If we use the lower end of the yield increase (+4 BPA), the expected net return from the 8 ounce application of Chandler Soil is:

Treated soybeans	**8 ounces Soil**
Yield gain	+4 BPA
Revenue gain	$48.00 / A
Cost per acre	$6.15
Net return	$41.85 / A

The per-acre cost of Chandler Soil used in this estimate is based on a one gallon jug purchased at the full retail price. This per-acre cost would be lower if you purchase Soil in larger volume packages or during one of the discount periods.

We often note that you should expect the Chandler crop products to perform better when the crop is under stress like drought or extreme temperatures. Some people interpret these statements to mean the they should not expect much gains from the Chandler crop products in a high-yield environment. However, these results show that Chandler Soil can still improve on soybean yields that are relatively high.

Another important point to note here is that this expected return only represents the yield value generated by Chandler Soil. It does not account for the other long-term benefits of improved soil health like better water infiltration or deeper root penetration.

NET RETURNS FROM CHANDLER SEED TREAT

The expected net returns from giving your seeds a biological boost in 2021 are based on the latest projected farm prices for fall corn ($4.50) and beans ($12). The per-acre costs 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.

Dry Seed Treat

One 15# bucket treats about 60 bags or 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	$18.00 / A	$24.00 / A
Cost per acre	$1.07	$2.67
Net return	$16.93 / A	$21.33 / A

Liquid Seed Treat

One gallon treats 64 bags or units of seed at 2 ounces per unit. The expected yield gains are identical to Dry Seed Treat, and the product cost is lower since Liquid Seed Treat does not include the dry carrier. The expected net returns are:

	Corn	**Soybeans**
Yield gain	+4 BPA	+2 BPA
Revenue gain	$18.00 / A	$24.00 / A
Cost per acre	$0.80	$2.00
Net return	$17.20 / A	$22.00 / A

Many of our customers tell us that using Dry Seed Treat or Liquid Seed Treat is a “no-brainer” because they get the biological benefits of the product at a very reasonable cost per acre.

REVISED WEBSITES OPEN FOR BUSINESS

Over the past three months, we updated our main website (*midwestbioman.com*) and the backup site (*midwestbio-tech.com*) so they are now faster and easier to use. We have also created a separate website for the Midwest Bio-Tech Soil Health Lab (*soil-health-test.com*) and its backup site (*midwest-soil-health.com*). Finally, we have added SSL certificates to each site to assure the security of your experience.

RECYCLE CROP NUTRIENTS THIS SPRING

Due to weather events last year, many farmers have wind-damaged or drought-damaged corn fields with dropped ears and excess amounts of undecayed residue. Chandler Biocat 1000 can accelerate the decay process to recycle the nutrients in these stalks and reduce volunteer corn problems. Although we usually recommend fall applications of Biocat 1000 if possible, we have also seen very effective results from spring applications.

Based on recent on-farm test results, we determine the additional nutrient released by a spring application of Biocat 1000. The value of these nutrients is based on the current fertilizer value of N, P, and K, and the expected net returns are:

Net returns from faster corn residue decay	Value
Increased available NPK	$47.10 / A
Biocat 1000 cost	$10.50 / A
Net return	$36.60 / A

These results do not include the expected yield gain from using Biocat 1000 before the next bean crop. In soybeans following corn, we have seen a 2 BPA increase in our recent on-farm trials. This added bonus is now worth about $24 per acre in addition to the net return stated above. Finally, we do not include the value of reducing volunteer corn problems in the following bean crop.

PHIL FRIEDRICH DOES IT AGAIN!

Phil Friedrich of Green Valley, IL, is a long-term participant in the National Corn Growers Association Yield Contest, and he has won his class or ranked near the top for the past several years. In the 2020 NCGA contest, Phil won the Illinois Conventional Irrigated class with 306.14 bushels per acre. Although this yield was a few bushels lower than his 2019 performance due to the unusually wet spring weather, his contest yield was still among the highest irrigated yields in the central Corn Belt. The corn plot was planted with Dekalb DKC66-18 seed, and Phil also used Chandler crop products to produce his winning yield. We are proud to be part of his contest program.

NATIONAL COVER CROP SUMMIT

For the second time, we have signed on as a title sponsor for the National Cover Crop Summit. The summit is held twice per year (March and November), and the event for Spring 2021 will meet online during March 17 and 18. The free presentations offered to conference participants include important topics like reducing herbicide carryover, balancing carbon-nitrogen ratios, managing cover crops in dryland farming, and integrating livestock and cover crops.

Registration for the National Cover Crop Summit is free of charge, and continuing education credits will be available. You can find the registration page at the Cover Crop Strategies site (covercropstrategies.com). People who register for the conference can view the recorded presentations at any time or in any order on March 17 and 18. If you upgrade your registration to the VIP level for $49, you can extend your online access to the summit presentations for 12 months.

If you have questions about the National Cover Crop Summit, please send email to info@covercropstrategies.com, call (866) 839-8455 or (262) 432-0388, send a fax to (262) 786-5564, or visit the conference web address provided above.

MARCH CUSTOMER APPRECIATION DINNERS

Although the virus transmission rates are easing at this time, we will not hold our traditional customer appreciation dinners in March. We really regret having to cancel the meetings on short notice last spring, but it was necessary due to the state closures. We also believe this is the best decision to help protect everyone's health and safety this spring.

If you regularly purchase product at one of these meetings, we will send a letter that outlines our discount pricing offer plus your shipping or delivery options. We look forward to better days ahead, and we very much hope to get back to our regular March meeting schedule in 2022.

LEARN ABOUT ORGANIC LAWN CARE

During the week of March 22, Midwest Bio-Tech is co-sponsoring a free webinar on soil health and organic lawn and turf management. The webinar is one of several online presentations scheduled for Midwest Grows Green Week. The event is supported by a consortium of groups that promote nutrient management and reduced chemical use on lawns and sports fields. If you are interested, you can find more information about the event schedule at the website, www.midwestgrowsgreen.org.

SPRING DISCOUNT PRICE LIST ENCLOSED

Our discount and retail prices remain the same for the spring season, and they have not changed in nearly five years. As we announced in the December newsletter, we have increased our shipping fees due to the sharp increases in freight rates in the past year. The price list and shipping fees are enclosed with this newsletter. Please note that the 4% March discount on all crop products expires on April 1, 2021. As always, we cover the shipping costs on all orders over $800.

ONLY ONE FARM SHOW THIS SPRING

At this time, we only have one winter farm show remaining on our schedule. The Hawkeye Farm Show in Cedar Falls, Iowa, was originally scheduled for March 2-4, and the show organizers recently told us that it is still going to happen as planned. Unless the Hawkeye show is cancelled at the last minute, we will be there. We have already heard from some customers who plan to pick up their product order at the show. Even though the virus infection rates have been declining in Iowa, we encourage everyone to assess their own risks before attending the show.

For a while, it looked like a few of the other shows might happen this year. The Greater Peoria Farm Show was originally scheduled for early December, and the Fort Wayne Farm Show was set for its usual time in early January. Both shows were moved to the second week of March, but the show organizers cancelled both shows in the past few weeks. The National No-Till Conference and the Illinois Soy Summit were moved online, and all other winter events were cancelled for this year.

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.

In accordance with our privacy policy, we do not provide our mailing list or any other identifying information about our past, present, and prospective customers to any other party without obtaining their express permission in advance.

2020-2021 PRE-SEASON DISCOUNT PROGRAM
for CHANDLER CROP PRODUCTS

Chandler Products	Retail	March	Feb	Jan	Dec
15# bucket of Dry Seed Treat	160.00	154.00	149.00	144.00	140.00
2 to 5 buckets (per bucket)	155.00	149.00	144.00	140.00	136.00
6 or more buckets (per bucket)	150.00	144.00	140.00	136.00	132.00
Single gallon of Liquid Seed Treat	134.00	129.00	125.00	121.00	118.00
2.5 gallon Liquid Seed Treat (per gal.)	128.00	123.00	119.00	115.00	113.00
(per 2.5 gal. jug)	320.00	307.00	298.00	288.00	282.00
30 gallon Liquid Seed Treat (per gal.)	120.00	115.00	112.00	108.00	106.00
Single gallon of Chandler Soil	102.00	98.00	95.00	92.00	90.00
2.5 gallon Soil (per gal.)	98.00	94.00	91.00	88.00	86.00
(per 2.5 gal. jug)	245.00	235.00	228.00	220.00	215.00
30 gallon Soil (per gal.)	90.00	86.00	84.00	81.00	79.00
Single gallon of Biocat 1000	100.00	96.00	93.00	90.00	88.00
2.5 gallon Biocat 1000 (per gal.)	96.00	92.00	89.00	86.00	84.00
(per 2.5 gal. jug)	240.00	230.00	223.00	215.00	210.00
30 gallon Biocat 1000 (per gal.)	88.00	84.00	82.00	79.00	77.00
Single gallon of Chandler Foliar	124.00	119.00	115.00	112.00	109.00
2.5 gallon Foliar (per gal.)	118.00	113.00	110.00	106.00	104.00
(per 2.5 gal. jug)	295.00	283.00	275.00	266.00	260.00
30 gallon Foliar (per gal.)	110.00	106.00	102.00	99.00	97.00
Single gallon of Chandler Organic	116.00	111.00	108.00	104.00	102.00
2.5 gallon Organic (per gal.)	110.00	106.00	102.00	99.00	97.00
(per 2.5 gal. jug)	275.00	265.00	255.00	248.00	242.00
30 gallon Organic (per gal.)	100.00	96.00	93.00	90.00	88.00

Dry Seed Treat is priced per bucket. We offer quantity discounts for pallets of 48 buckets.
All other products are priced per gallon. We offer quantity discounts for 180-270 gal. totes.

A – The 12% December discount period ends at midnight on January 9, 2021
B – The January, February, and March discount periods end at midnight on the last calendar day of the month
C – Customer must pay for product within the specified discount period to get that discount
D – You may take delivery of the product at time of payment or we can store it for you until spring
E – Prices are subject to change, and product cannot be returned for credit or exchange due to insurance regulations
F – All prices are F.O.B. Erie, IL

ORDER FORM

MIDWEST BIO-TECH, INC.
P.O. Box 156 – ERIE, IL 61250
Phone 309-659-7773

Name _____
(please print)
Address _____

City _____ State ___ ZIP _____

Phone _____ - _____

Qty	Products	Unit Price	Item Total
	15# Bkt Dry Seed Treat		
	Gal Liquid Seed Treat		
	2½ Gal Liquid Seed Treat		
	30 Gal Liquid Seed Treat		
	Gal Soil		
	2½ Gal Soil		
	30 Gal Soil		
	Gal Biocat 1000		
	2½ Gal Biocat 1000		
	30 Gal Biocat 1000		
	Gal Foliar		
	2½ Gal Foliar		
	30 Gal Foliar		
	Gal Chandler Organic		
	2½ Gal Chandler Organic		
	30 Gal Chandler Organic		

PRICES SUBJECT TO CHANGE WITHOUT NOTUCE

Product Total _____

UPS Shipping _____

TOTAL AMOUNT ENCLOSED _____

All orders over $800.00 will be shipped Freight Free.
After January 9, add UPS fees for orders under $800:
$18.00 for each single gallon of liquid
$22.00 for each 15# bucket of Dry Seed
$24.00 for each 2.5 gallon jug of liquid

Enclose check payable to Midwest Bio-Tech, Inc.

Please provide your shipping instructions for this order on the back of this form.

When would you like to receive the product that you have ordered?

_____

What is the best way for us to contact you about the shipping details for this order? Please note that we will only use this information as needed to complete this order, and we never provide your name or other personal information to any other party without your prior permission.

Telephone call to:

_____

Text message sent to:

_____

Email message sent to:

_____

THANK YOU FOR THIS BUSINESS!

RECOMMENDED APPLICATION RATES FOR CHANDLER CROP PRODUCTS

Chandler Dry Seed Treat

4 ounces per bushel or unit for corn, beans, and small grains and 8 ounces per bushel for alfalfa, clover, vetch, or other small-seeded crops. The actual amount of Dry Seed Treat required depends on seed size and humidity, so you should adjust the rate if you need better seed coverage or have excess treatment in the seed hopper.

Chandler Liquid Seed Treat

2 ounces per bushel for corn, beans, and small grains and 4 ounces per bushel for alfalfa, clover, vetch, or other small-seeded crops.

Chandler Soil

Broadcast 12-16 ounces per acre in the fall or spring or apply 8-10 ounces per acre in the row at planting or when side-dressing. Use the higher rate in these ranges if you are using Chandler Soil for the first time or if your soil is heavy, compacted, or poorly drained.

Chandler Biocat 1000

Corn Residue – 12-16 ounces per acre. We recommend that you use the 16 ounce rate for heavy residue in corn fields that yielded 200 BPA or more.

Soybean and Small Grain Residue – 8 to 10 ounces per acre

Chandler Foliar

Alfalfa – for new seedings, apply 10 ounces per acre. For established crops, apply 10 ounces per acre after the first spring growth. Later, apply 10 ounces per acre 10-14 days after each cutting. For seed production, apply 10 ounces per acre before flowering.

Oats – apply 10 ounces per acre at the second to third leaf stage.

Soybeans – band 6-8 ounces per acre over the row or broadcast 10 ounces per acre. The best times to apply Foliar to soybeans are at the second to third trifoliate leaf stage or between flowering and pod set.

Wheat – apply 8 ounces per acre at the second to third leaf stage. In the spring, apply 8 ounces per acre at the beginning of new plant growth or tillering.

Pasture – apply 8 to 10 ounces per acre when there is ample foliage to receive the spray.

Chandler Organic

Use the application rates listed above for Chandler Soil when using Organic as a broadcast or in-row soil treatment, and use the same rates as Chandler Foliar for foliar treatments.