RESEARCH FOR RESULTS

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SoilBiotics Residue Digester Program Shows Huge Benefits

This is a report from a SoilBiotics representative for a customer in 2020. It shows soil test results of a side by side comparison of 120 foot swaths in Alvin fine sandy loam soils. In early November 2019 an application of SoilBiotics **Residue Digester Program – Conventional** was applied to corn stalk residue on 120' passes. Every other pass was a check with no treatment. The treatment was left on the surface with no incorporation. The nutrient results, therefore are mostly from breakdown of the surface organic matter. Soybeans (Pioneer Xtend 4.0 maturity) were planted on April 7, 2020. Soil samples were taken on 6/12/2020 and 6/22/2020 for analysis. The first **Test** soil sample (#1 in Table 1 below) was taken 60 feet into the residue digester side. The first **Check** soil sample (#2 in Table 1 below) was taken from the other 120 foot swath at 60 feet in and is the untreated control.

Table 1

GMS LABS | Soil Testing for Precision Agriculture

23877 E 00 N Rd, Cropsey, IL 61731, USA
309-377-2851 (O)

Soil Test Report

Dealer	GMS Lab
Client	Greg L Brown
Farm	Langford
Field	Langford

Order	41266
Report Date	06/16/2020
File	164.1
No. of Samples	2
Collected	06/12/2020
Received	06/12/2020
Analyzed	06/15/2020

#	Lab ID	pH Water	pH * Buffer	LOI %	P lb/ac	K lb/ac	Ca lb/ac	Mg lb/ac	CEC * meq/100g	K * % sat.	Ca * % sat.	Mg * % sat.	H * % sat.	S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Na ppm
1	2021401	6.9	7.0	1.4	203	326	2,004	351	6.9	6.1	72.7	21.2	0.0	9	5.0	205	188	0.8	0.4	41
2	2021402	6.9	7.0	1.2	173	183	1,260	236	4.4	5.4	72.1	22.5	0.0	6	3.7	108	135	0.3	0.2	42
Average		6.9	7.0	1.3	188	254	1,632	294	5.6	5.7	72.4	21.9	0.0	7	4.4	157	162	0.6	0.3	41

* indicates calculated parameter; % sat.: % base saturation
Tests performed by GMS Lab.

The second **Test** soil sample was taken from three rows (#1, #3, #5 in Table 2 below) also 60 feet into the residue digester side. The second **Check** soil sample (#2, #4, #6 in Table 2 below) was taken from the other 120 foot swath at 60 feet in and is the untreated control.

Table 2

GMS LABS | Soil Testing for Precision Agriculture

23877 E 00 N Rd, Cropsey, IL 61731, USA
309-377-2851 (O)

Soil Test Report

Dealer	GMS Lab
Client	Greg L Brown
Farm	Langford
Field	Langford

Order	**41306**
Report Date	06/24/2020
File	174.1
No. of Samples	6
Collected	06/22/2020
Received	06/22/2020
Analyzed	06/23/2020

#	Lab ID	pH Water	pH * Buffer	LOI %	P lb/ac	K lb/ac	Ca lb/ac	Mg lb/ac	CEC * meq/100g	K * % sat.	Ca * % sat.	Mg * % sat.	H * % sat.	S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Na ppm
1	2021763	6.6	7.0	1.4	192	342	2,259	291	7.3	6.0	77.4	16.6	0.0	10	5.0	240	189	1.0	0.6	31
2	2021764	6.7	7.0	1.0	134	240	1,313	207	4.5	6.9	73.7	19.4	0.0	8	3.6	139	149	0.3	0.4	29
3	2021765	7.0	7.0	1.8	175	259	2,371	368	7.8	4.3	76.1	19.7	0.0	8	4.5	190	168	0.7	0.8	31
4	2021766	7.1	7.0	1.3	156	215	2,081	334	6.9	4.0	75.7	20.3	0.0	11	5.0	139	154	0.5	0.4	20
5	2021767	7.2	7.0	1.4	206	228	2,231	360	7.4	4.0	75.7	20.4	0.0	14	6.7	186	177	0.7	0.7	37
6	2021768	7.2	7.0	1.0	178	189	1,769	345	6.1	4.0	72.5	23.5	0.0	10	6.1	127	151	0.4	0.6	44
Average		**6.9**	**7.0**	**1.3**	**173**	**246**	**2,004**	**317**	**6.6**	**4.9**	**75.2**	**20.0**	**0.0**	**10**	**5.2**	**170**	**165**	**0.6**	**0.6**	**32**

* indicates calculated parameter; % sat.: % base saturation
Tests performed by GMS Lab.

Summary: Soybeans were harvested on 10/3/2020. The customer reported a **10.15 bushel increase from check to treatment.** Cash soybeans at local elevator on the day of harvest were $10.31/bu, resulting in an **ROI of $104.65/A.** The soil test results show that application of SoilBiotics **Residue Digester Program - Conventional** resulted in a phenomenal breakdown of residue and increase in soil fertility for **only $13 per acre program cost.** Organic Material **(OM)** content in the soil (shown as LOI on charts) averaged 1.53% for treated rows vs. 1.10% for the check rows, **a 39% increase!** These tests show that growers utilizing an effective residue digestion program can see significant, low-cost increases in soil fertility from existing organic matter with corresponding increases in total ROI from higher crop yields!