GETEP SEEDTREATMENT

2024 UPDATE

- Concentrated Microbial Formula
- Over 2 Dozen Strains of Versatile and Viable Microbes
- Nodulating Bacteria Included

CROP EXCELLENCE

CE Carolina

Eastern, Inc. GET UP® SEED TREATMENT is a powerful new technology that utilizes diverse living organisms to improve the initial germ, early growth, and optimized stand of your seed. GET UP® ST is a "pro-biotic" treatment added to seed to change the ecology or environment around the germinating seedling bringing health and vitality to the young plant the moment it begins to grow. Additional benefits include nodulating strains of bacteria that form nitrogen-producing nodules on the roots of legume crops like soybeans.

Siderophore (iron magnets) releasing strains in GET UP® ST encourage Iron uptake and nodulation to begin as early as emergence producing higher numbers of nitrogen rich producing colonies that improve early color and growth. GET UP® ST lives on well into the season in symbiosis with the roots and continues to provide health benefits to plants long after crop protection chemicals have been chemically or microbially degraded. Treat your seed with GET UP® ST and treat yourself to the confidence in knowing your seeds have been given the power of life to maximize yield and productivity.







GETUP MICROBIAL TEAM TECHNOLOGY

PLANT GROWTH

SOIL HEALTH

MICROBIAL SURFACTANT PRODUCTION: Improves soil quality, water-retention, and nutrient-holding capacity DEGRADATION OF COMPLEX ORGANIC POLYMERS: Cellulose, Lignin, Chitin, Starch, Waxes & Oils PETROLEUM, HYDROCARBON, BIOREMEDIATION: Oil, Diesel, Gas, Chemical carrier degradation PESTICIDE + HERBICIDE BIOREMEDIATION: Specialized remediation capabilities

NUTRIENT EFFICIENCY

PHOSPHATE SOLUBILIZING MICROBES:

FREES unavailable P for plant update **AMMONIFYING MICROBES:** Converts organic N to ammonia for plant uptake POTASSIUM SOLUBILIZING MICROBES: Convert insoluble K into soluble plant available form **DIAZOTROPHIC MICROBES:** Nitrogen fixation, converts atmospheric N into ammonia **NODULATION:** Nodule-forming Nitrogen-fixing rhizobia SIDEROPHORE PRODUCTION: Iron-chelating compounds that increase plan available Iron SULFUR OXIDIZING: Convert insoluble sulfur into plant-available form **ZINC SOLUBILIZATION:** Solubilizes insoluble forms of Zinc for plant uptake

STRESS MITIGATION

ETHYLENE REDUCTION:

ACC Deaminase production, inhibiting Ethylene formation, promoting plant tolerance to stress

VITAMIN/HORMONE:

Vitamin production and other compounds that promote plant health and vigor

VOLATILE COMPOUNDS:

Production of VOCs, which promote systematic resistance to stress and plant vigor





PRODUCT ATTRIBUTES

Improves Germination Improves early growth and vigor Application window of 90+ days Compatible with other products Contains nodulating N-fixing inoculant Contains other beneficial microbes Provides food sources for microbes in blend Contains phosphate-releasing technology No special replant restrictions Produces multiple enzymes around the root Contains dozens of strains of microbes Contains iron-releasing technologies Built specifically to work in high-pH calcareous soils No special mixing or agitation required No special bag tagging required Live the entire season in conjunction with plant roots Produces enzymes that fix atmospheric N to soil Produce enzymes that degrade cellulose into food Produce enzymes that degrade chemicals into food Contains Sinorhizobium (Next Gen Rhizobium) Contains multiple strains producing chitinase Contains strains that work in a wide temp range Contains food sources that chelate micronutrients Contains strains that work in varying O₂ conditions



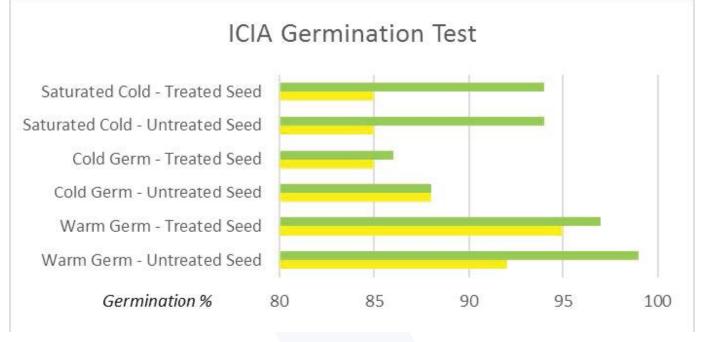




ICIA SOYBEAN GERMINATION TEST

The Indiana Crop Improvement Association, ICIA, performed germination tests for GET UP® SEED TREATMENT following their long-established protocols. For over 100 years the ICIA has been a leader in seed certification, seed quality testing, genetic testing, and research. ICIA, a non-profit, self-supporting agency, exists to deliver unbiased, needed services to its member customers.

The results from the tests show enhanced germination with the use of **GET UP® SEED TREATMENT** (detailed below). Tests were performed on both Treated Soybean Seeds (fungicide and inoculant) and Untreated "naked" Soybean Seeds. Not only did seeds treated with **GET UP® SEED TREATMENT** show strong germination in ideal conditions (Warm Germination Test) but particularly seeds treated with **GET UP® SEED TREATMENT** showed significantly better germination in cold/wet conditions (Cold Germination and Saturated Cold Test).



With GET UP® ST

Without GET UP® ST





F + I STABILITY STUDY

GET UP® SEED TREATMENT was blended with Obvius® Fungicide Seed Treatment. Total Aerobic Counts were performed at time zero, 90 days, and 180 days. Total aerobic counts were performed by an independent lab.



Time Zero = 7 x 10⁸ (700 million microbes per ml) 90 Days = 2 x 10⁸ (200 million microbes per ml) 180 days - 9 x 10⁶ (9 million microbes per ml)





SOYBEAN SEED TREATMENT TRIAL

ILLINOIS SOYBEAN FIELD TRIAL CONDUCTED BY BECKS INDEPENDENT RESEARCH (2018)

38 VARIOUS SEED TREATMENTS (2 REPS)

GET UP® SEED TREATMENT = 69.4 BPA (#1 out of 38)

BASE = 63.4 (- 6 BPA) | UNTREATED 59.2 (- 10 BPA)

CODE	TREATMENT	IL Neoga	2	Av
			-	
Treatment #31	Base + Get Up® Seed Treatment	72.1	66.6	69.4
Treatment #8	Base (1.6 IMD rate) + BIOST Nematicide + VPH	74.0	64.3	69.2
Treatment #25	Base + Headsup + BIOST Nematicide	62.5	74.6	68.6
Treatment #24	Base + T-methyl + BIOST Nematicide	68.6	67.6	68.1
Treatment #33	Base + BDX Seed Treatment	73.4	62.6	68.0
Treatment #14	Lumisena + FST Concept	73.0	62.5	67.8
Treatment #7	Base (1.6 IMD rate) + ILeVo + BIOST Nematide + VPH	68.9	66.4	67.7
Treatment #5	Base (-Imidacloprid) + PonchoVotivo + ILeVo	64.8	70.2	67.5
Treatment #18	Base + OBT 2003	69.7	65.1	67.4
Treatment #13	Base (-IMidacloprid) + Lumisena	61.3	71.4	66.4
Treatment #30	Base + Agra-Rouse	66.4	66.2	66.3
Treatment #17	Base + Excalibre SA 18BE_04056WP	61.1	71.5	66.3
Treatment #9	Base (Duplicate)	58.7	71.6	65.2
Treatment #35	Base + AVEO	66.0	63.6	64.8
Treatment #34	Base + UHC Innoculant	71.2	58.0	64.6
Treatment #27	Base + S 208	66.7	61.6	64.2
Treatment #6	Base (low rate F) + Intego Solo	65.3	62.9	64.1
Treatment #4	Base + ILeVO + VPH	61.2	66.7	64.0
Treatment #28	Base + Exp. BC9	65.1	62.7	63.9
Treatment #32	Base + N1b-10L ST	64.0	63.1	63.6
Treatment #2	Base	64.0	62.7	63.4
Treatment #3	Base + VPH	64.1	62.2	63.2
Treatment #12	Base + BASNem 1	62.0	64.1	63.1
Treatment #21	B775+B798	59.6	65.8	62.7
Treatment #26	Base (1.6floz IMD rate) + BIOST Nematicide	64.4	60.7	62.6
Treatment #19	Base + OBT 2012	59.8	64.4	62.1
Treatment #16	Base + Commence	58.5	64.9	61.7
Treatment #29	Base + Exp. GX3	61.0	62.3	61.7
Treatment #15	Base + F4018	59.5	63.8	61.7
Treatment #23	Base + BIOST Nematicide	58.7	62.3	60.5
Treatment #10	Base + Vibrance	56.5	64.3	60.4
Treatment #20	B775	61.2	58.0	59.6
Treatment #22	Base + B798	57.4	60.9	59.2
Treatment #1	UTC	62.5	55.8	59.2
Treatment #38	Base + Root-Tek	57.1	60.9	59.0
Treatment #36	Base + AgRho S Boost ELX	59.4	57.6	58.5
Treatment #37	Base + Biovante XP	61.2	53.2	57.2
MEAN				63.8





NC IOWA SOYBEAN TRIAL

170 ACRES (2018) 24 ROWS EACH | BLUE w/ GET UP® ST | ORANGE WITHOUT GET UP® SEED TREATMENT = +5 BPA







WHEAT SEED TREATMENT TRIAL TRIAL CONDUCTED BY BECKS INDEPENDENT RESEARCH 7 STATES | 39 REPLICATIONS | 26 DIFFERENT BIOSTIMULANTS GET UP® SEED TREATMENT = 79.6 BPA (+3 BPA) MEAN = 76.7 | UNTREATED = 77.2

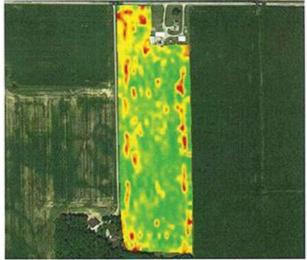
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Base + Seed Treat #10		16.4 M.	3	.2 68.4	63.6	64.8 I	b4.3	22.8	21.3		24.8	41 22	2. 28	.4 29							43.4	43.3						1.3 84.4	22.1	"	183.6 1				14.9 23	.7 73.3		h						24.1		.4	.3 101		3.3 184	8	0.0	
Base + Seed Treat #8	81.3	14.3 55.	4 87.	.3 64.3	61.8	87.4	61.3	77.8	73.6	21.8	73.7	*** 74	.: 78	.1 23		.3 24			1.4	13.8	11.7	43.1		*3	.4 43.4	43.3		6.1 21.4	-	-11	194.0	14 19		184.6	14.3 bb	.7 67.6			1.3 66.	4 21	4 11		1.3 11.3	11.5			.7 48	.7 11	11.1	7	9.6	
Base + GetUp® ST #17	81.8 I	63.3 87.	2 58	.3 87.4	62.4	\$4.2	81.2	82.1	72.3		27.3		1.2 66	a 21	.a 83	.3 23		2.1 29			46.3				3 46.3	41.0		1.2 16.1				1.1 102	1.3		5.1 28	.3 33.3		1.2 1	1.7 61.	2 10				21.4	21	,a 19	2 184		9.4 92	' 7	9.6	
Base+ Seed Treat #15		14.3 11.			b1.b	17.3	11.3	82.4	24.8		28.4	28	1.1 21	.3 24	.1 13	.8 24	.4		2.1				2 10.4	"	.4 41.4	44.5		1.4 83.8	85.7		183.3 1	113 111		111.2	1.1 57	.7 \$2.1		1.8 6	4.) b2	.1	a 67		21.3	28.6	22		.3 18	4	1.1 12	' 7	9.6	- 92
Base + Seed Treat #14	83.b	12.6 12.			b1.8	11.1	89.4	24.4	29.8		24.5	*** 26	.1 24	.6 22	1				1.3	17.6	46.4		H.3		.4 47.4	89.9		L.) (1.3	11.5		48.3 1		1.4	12.4	2.4 23	4 10	94 P	2.1 6	1.4 1.4	4 78	• •	1.6 20	21.3	22.3	2 22	4 102	.3 .44		12.1 12	1 7	9.6	
Base + Seed Treat #4	11.1	H.) IL.	4 82.	.2 \$1.2	10.1	b2.4	68.8	22.8	72.4		28.2	24	1. 73	.8 28		.9 87		.3 83	1.4	u.1	47.1	47.1	H.I	"	.6 82.8	36.5		1.1 16.9	11.1		106.4	11.4 A.9			1.4 24	.3 73.4		4.1 6				1.6 82	2.4 28.3	28.3	2. 24	.6 17	.2 .91		13.1 46	1 7	9.5	
Base + Seed T reat #12	b2.8	b2.9 49.	1 11		19.4	12.5	68.7	83.3	73.8	24.8	22.4		.: 73	.3 78			.2 11				8.2		1 8.1	"	4 16.4	18.5			83.7	"	18.3 11	13.7 181			8.5 67	.7	1	4.7 6		1 11	4 63		78.6	72.1	7.	.4 187	.2 185	1	4.8 183	1 7	9.4	
Base + Seed Treat #22		(9,8 b2.			88.4	12,5	b1.2	21.5	78.8	24.3	73.7	" 78								11.1	4.1	11 93.4		**	.9 99.3	- 18.0	22		82.4		(83.8 ()			ma i	1.8 h	.9 22.0	•	2.6 8	d.1 68.	• ••	3			26.8	28	.1 11	.1 92		b.8 91	. 7	9.4	- 00
Base + Seed Treat #11	0.1	(2.2 11.		4 11.4	67.3	88.8	k3.5	83.1	28.8	28.8	29.8	71	.: 28	.4 73		.2 79			1.3	91.3	101.4			13	43.3	- 11-1		1.8 27.1	8.4		97.7 (1	12.4 10.2	1.4	111.3	13.4 44	.2 69.4	13	1.8 6	3.7 63.		• •	.4 .0	.3 24.1	28.8	21	.2 187		1.7 0	11.4 11.4	" 7	9.4	
Base	86.5	- 10.	2 . bl.		89.2	k4.2	b3.8	73.3	24.6	26.8	24.4	*** #3	.: 73	.8 26		.1 23	.4 78	.8 22	2.8	11.1	46.8	11 .46.3	3 8.3	"	11.3	87.8			11.2		186.2 1	11.3 11.3	1.3	183.3	3.8 24	.2 69.1			1.1 62.	2 78	4 10	.6 20	.2 10.1				.1 .16		1.4 44	" 7	9.2	200
Base + Seed Trea #16	19.4	D.1 II.		.1 68.1	61.5	b1.5	63.4		73.3	72.6	28.5	• • •		.1 73	.2 11	.4 77		1.1 41		41.3	42.7	*** 43.		43	.4 12.4	82.4		4.1 84.4	11.1		188.2 10	12.4 10	1.3	181.8	4.3 78	.2 28.0	2				4 63		1.1 28.1	13.5	"	.) U		.4 10	13.8 44	1 7	9.2	
Base + Seed Treat #23	82.2	bb.8 82.	• •		17.1	n.1	k8.3	72.8	21.8	b7.4	28.8	*** 73	1.1 24	.1 24					1.4 4	11.2	11.1	** 13.1		**	47.5	41.1		1.3 83,3			100.1 11					.7 88.9	1	2.9 1	1.3 hb.	8 78	.1 .14		1.1 22.4	22.0	28			1	1.5 18	° 7	9.0	.0
Base + Treatment #26	19.4	H.I II.			87.7		11.1	26.1	72.7	22.3	24.8	73		.1 .73					1.3	17.3	11.7	11 94.1			.9 99.3						18.2 10			184.2 1	3.3 63	.3 68.4		2.6 61			a 63		. 9 24.0				.4 107	1.1 1	1.2 11	' 7	9.0	-
Base + Seed Treatment #6	82.8	87.1	84.		78.6	b2.7	86.4	11.3	72.3	29.2	27.2	24	6. 29	.8 28	.2 78			1.1 21			12.8	9 9L	1 10.1	17	.3 91.3	42.6	22	1.1 11.3	18.2	-1	183.8 1	11.4 14		11.0	8.3 82	.1 71.1	•	2.1 bi	1.7 14.		2. 64	.7 22	.8 24.8	28.5	2. 78				12.4 11	. 7	8.8	
Base + Seed Treatment #9	13.4	11.5 B.	. 12			19.3	64.1	76.8	78.4	79.8	28.8	73	.: 78	1.1 24					1.6		11.7		3 80.4	•7	.4 43.5	18.8			82.8		94.3 11	12.4 17		11.1	4.7 78		0 3	1.3 6	1.3 18.	3 67				26.3	2 78	.4 05	.1 107		1.1 11	" 7	8.8	
Base + Seed Treatment #25					b7.1		44.F	P			***					• •				11.1	18.1		1			18.5	1							37.3															1.7 78	. 7	8.7	
Base + Seed Treatment #13		86.3 b2.	3 19.		b8.3	b3.3	b1.5	11.5	28.4	76.3	76.1	*** 28	. 22	1.1 21		.9 74	.1 #2	.3 7	•••	18.2	18.8		2 8.7		.2 91.4			k.) 82.9	73.3		182.9 11	12.4		11.6	11.5 A		S •	1.2 1	8.1 82.	4	1	.2 22		28.5	28		.1 100	1	2.8 188	* 7	8.6	
Base + Seed Treatment #5	84.3	88.1 82.	.7 84	.3 84.3	89.3		87.3	76.3	67.8 S	24.3	22.8	11 29	.1 76	.h 28			.1 83		1.7	11.3	16.3		1 8.1	-		13.8	21		24.8	10	184.3 1	11.A 33			4.8 77	. 21.4	,	1.3 6	1.9 69.			.1 2	2.1 86.9	27.6	21		.7 187	.2 11	1.1 11	• 7	8.5	
Escalate	47.8	81.7 82.	.2 83.		\$4.8		61.7	28.1	26.1	21.6	24.3	-12 83	. 21	.4 76		.7 11			2.4	91.5	42.4		3 77.3	43		11.3				ui -	188.3 4	19.1 10			3.3 66	.4 78.3	- 7	2.8 8			3 63			94.9	7 76		.1 12		2.4 47	• 7	8.4	
Base + Seed Treatment #21	11.1	n.s n.			b8.3	12.1	19.2	78.3	78.3		22.8	1 23		.1 77		.1 13	. 22	. 21		17.2	97.5		1 8.1	"	.4 11.3	92.9	2	2.1 11.1	11.1	"	17.3 1				61.5 bi	.3 68.1		-	1.8 63.	• •			1.1 1.2.1	27.3	2 24		.1 117	1	4.8 12	1 7	8.3	
Base + Seed Treatment #7	82.6	11.1 17.		.d 88.0		18.d 1	bb.3	24.4	24.8	26.1	28.4	73	.1 73	.2 23			.a 73			12.7	11.5		BH.7			87.8	21		28.8		184.8 1	112 12		11.6		.9 21.8	•	2.8 1		9 21	• •	2.1 22	1.3 22.1	26.3	2 78		.2 100		6.2 IN	. 7	8.3	
Base + Seed Treatment #18	82.1	11.3 12.	.1 82		b3.3		-	78.5	72.4		78.3	*** 78	.1 22	.h 28		.3 76	. 22		1.8	91.3	93.3	•• •••	8.1		.2 18.0	87,7	•	1.7 98.8	27.3		182.8 11	114 19		11.1	17.1 22		.,	1.3 6	1.8 89.	2 68				28.8	24	a 10	.1		2.9 94	-	7.7	
Base + Seed Treatment #20	10.5	13.7 14.		.3 63.1	bb.8	¥3.3	b3.b	76.8	78.8		27.7	21	.1 22	.6 73	.3 73		. 71	.3 24	6.2	93.1	u.,			43	.6 92.4	89.3	21		10.4		11.1	18.1 184		101.1	4.4 4.7		<u>.</u>	1.3 8				.4 29		24.2	, ,,		.1 .1		1.3 14	• 7	7.5	
Base + Seed Treatment #19	17,1	13.3 13.	.7 84	.4 86.1		-	11.7	24.8	21.8	-	72.8	" 73	2. 76	73				.3 83	1.3 9	13.3	11.7		3.1	43	.7 16.1	11.7	•	1.3 13.1	28.4	44	186.3 9	16.1 184		182.6	4.3 78	.7 68.3						.7 83		28.8	24		.1 83			1 7	7.3	1
Untreated	83.7	n.1 II.	.3 84.	.7 78.3	83.8	17.7		23.2	29.3		24.3			.1 21	1.1 21			1.1 71		14.8	16.1							2.1 88.1	83.3	91	18.4 10			183.6	1.7 63		•			1 10			1.9 24.1		7.6	.2 .91			3.3 93	-	7.2	
Base + Seed Treatment #24	82.5		1 82.			12.1	6.1	28.4	68.I 3	28.8	21.2	11 21	1. 24	.8 22	.2 .84	.8 29	.a #3			14.8	11.8			-		43.8	21		29.2		184.6 1	014 UD		12.4	61.4 M	.8 \$2.1	63. •		C.4 63.		4 63			22.3	2 22				1.1	-	6.7	42
							61.7	-			28.1	-	+	21		+	-	-	6.4	-	-		•	+	-	18.3				-		-		111.7	-	-	•	2.1	-	+	-	.4	+	+	78	.4	+	+		-	8.7	-
	19 10			•			6.6		+	-	1.8	-	+			+	+			-		3.7			-	8.3			-	1		+		4.4	+	+	-		+	+			+	-	-		+	+		a.		-
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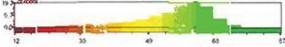




INDIANA SOYBEAN TRIAL TRIAL CONDUCTED BY FOREFRONT AG SOLUTIONS (2019) YIELD BY MANAGEMENT ZONES FIELD LEVEL MANAGEMENT ZONE DETAIL GROWER: (AC) NE IN: FARM | GRANDMA FIELD: WEST GET UP® SEED TREATMENT = + 4 BPA







Zone No.	Mgmt Zone Name	Range	Zone Name	Data	Avg Moisture%	Avg Yield	Total Yield	HarvestAcres	Ariea
Zone GET UP®	Seed Treatmen Test	t Min - Max	GET UP®	None	13.12	60.28 bu/ac	683 bu	11.33	11.37
Zone Normal	Seed Treatmen Test	it Min - Max	Normal	None	12.09	56.07 bu/ac	1138 bu	20.30	20.30







EED TREATMENT



Treat your seed with GET UP® SEED TREATMENT and treat yourself to the confidence in knowing your seeds have been given the power of life to maximize yield and productivity.



