

2021 HARVEST

TRIAL DATA



PO BOX 198 | DE SMET, SD 57231 | 605-860-8534 | YIELDMASTERSOLUTIONS.COM

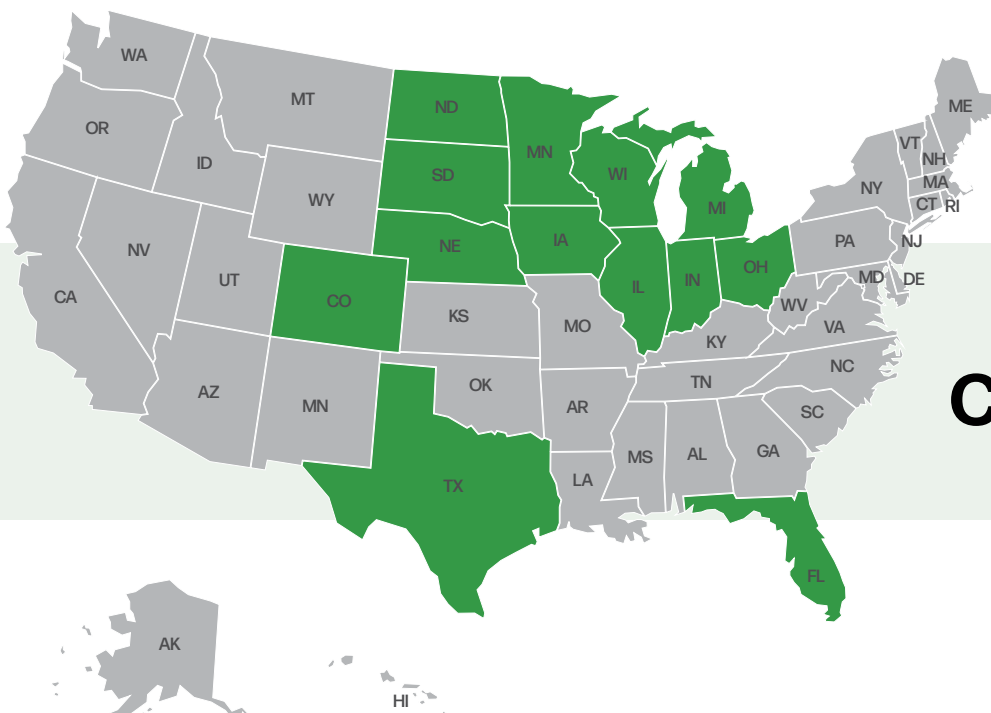
LEADING THE WAY IN YIELD ENHANCING SOLUTIONS

YieldMaster Solutions (YMS) is pleased to offer dealers and growers performance enhancing biological technologies and innovations to improve crop health and increased yield potential. Solutions include products from some of the most cutting-edge biological suppliers in the industry: Azotic North America, Agrovive, AgriGuardian, Lo Mu Tech, Asido, and MycoGold. We offer a robust product portfolio for multiple crop types to meet specific operation and application needs including: seed coat, foliar, and in furrow applications.

UNBIASED INDEPENDENCE

DEVOTED TO INTEGRITY.

- In our approach to promote biotechnology, YMS is a rare marketing company. Our discovery process is focused on two key factors:
 1. Does it work?
 2. Does it enhance the grower's ROI?
- As a fiercely independent organization, we choose to identify and ground truth rather than manufacture.
- All environmentally sound products that have shown the ability to improve plant health or function must earn their way into our elite portfolio through our Proof of Concept Trials.
- YMS is equally selective about the technology partners we choose to align with. Partners must align with the YMS model for innovation and performance.



**2021
PROOF OF
CONCEPT TRIAL
LOCATIONS**

TABLE OF CONTENTS



CORN

2021 Corn Data	5
Multi-Year Corn Data	6
Claire City, SD	7
Delmont, SD	8
Lake Preston, SD	9
Lake Preston, SD	10
Baldwin, WI	11
Ellsworth, WI	12
Ellsworth, WI	13

SOYBEANS

2021 Soybean Data	15
Multi-Year Soybean Data	16
Osakis, MN	17
Osakis, MN	18
Delmont, SD	19

MULTI-CROP

Alfalfa Data	21
North Logan, UT	22
Wisconsin	23
Wheat Data	24
Potato Data	25
Rupert, ID	26
Stanton, MI	27
Plover, WI	28
Sugar Beets Data	29
Rupert, ID	30
Gilford, MI	31
Sunflower Data	32
Berwick, ND	33

This is an interactive Table of Contents. Click to jump to your desired section or page.



2021 Soy_{fx} Data	35
Multi-Year Soy_{fx} Data	36
Canby, MN	37
Storden, MN	38
Harvey, ND	39
Baldwin, WI	40
Hager City, WI	41
Winchester, WI	42



2021 ION_{fx} Data	44
Multi-Year ION_{fx} Data	45
Fairfax, MN	46
Colfax, ND	47
Harvey, ND	48
Claire City, SD	49
Claire City, SD	50

Lake Preston, SD	51
Lake Preston, SD	52
Baldwin, WI	53
Dodgeville, WI	54
Plateville, WI	55
Silage Data	56

CORN



DATA RESULTS • ENVITA

CORN 2021 DATA



CORN

20

DATA POINTS

90%

POSITIVE RESPONSE

4

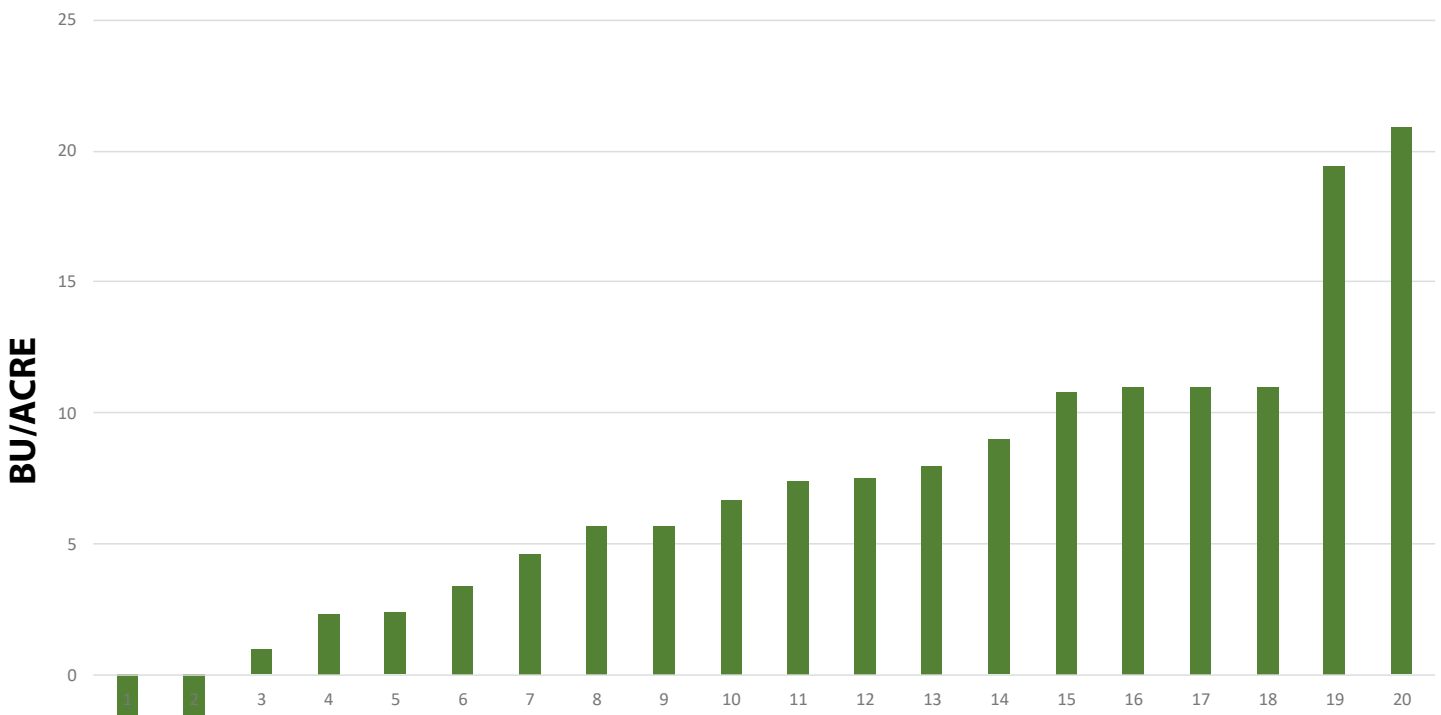
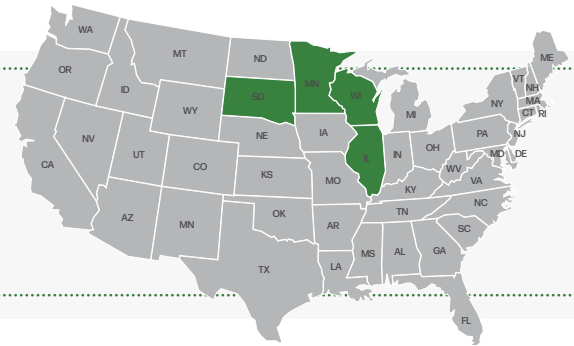
STATES

7.2 BU/ACRE

AVERAGE INCREASE

7

LOCATIONS



8.2

BU/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

The Envita win rate was approximately 9% above our 3-year average in 2021. This is likely due to the dry conditions that persisted across much of the upper Midwest. Dry conditions made below ground nitrogen mineralization more difficult. Envita's ability to capture nitrogen from the atmosphere above ground and deliver it directly to the leaf tissue makes it virtually non-weather dependent.

DATA RESULTS • ENVITA

CORN MULTI-YEAR DATA

envita

CORN

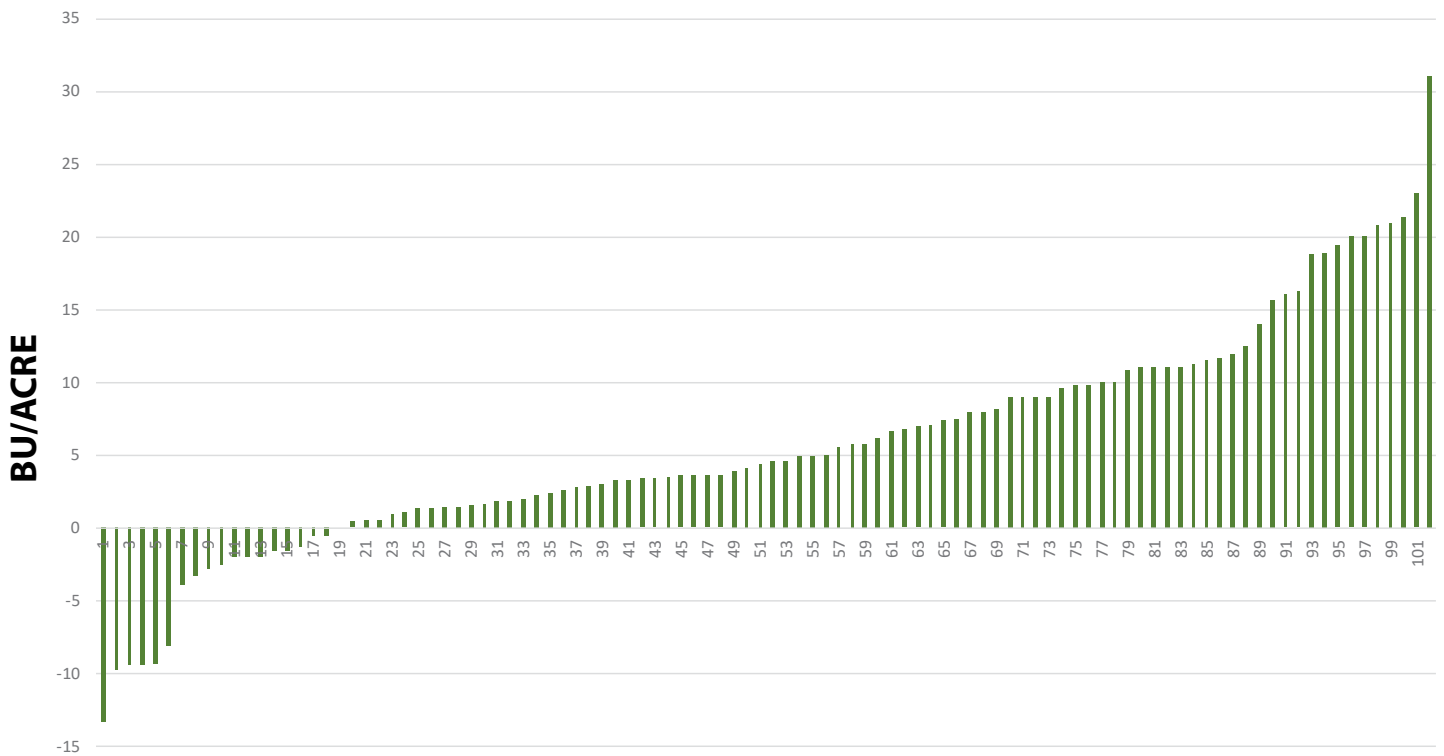
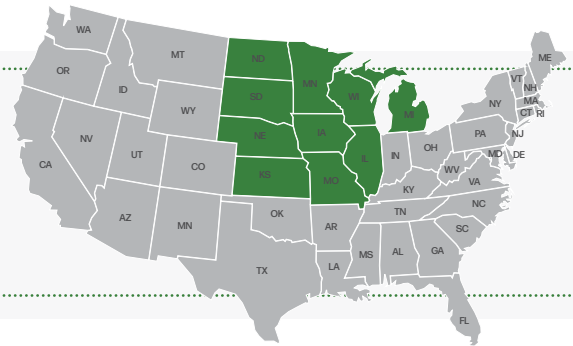
102
DATA POINTS

81%
POSITIVE RESPONSE

10
STATES

5.7 BU/ACRE
AVERAGE INCREASE

38
LOCATIONS



8.0
BU/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

Envita has proven to be an extremely consistent product over the 3-year testing period. With a win rate of over 80% and a yield advantage of over 8 bu/acre during those wins this product gives growers a significant ROI opportunity.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

CLAIRE CITY, SD
LOCATION

CORN
CROP TYPE

9193 VIP3220A EZREF
SEED HYBRID/VARIETY

FOLIAR
APPLICATION METHOD

MAY 4, 2021
PLANTED

NOV. 2, 2021
HARVESTED

en^oita

-VS-

CONTROL

17.5%

TREATED MOISTURE

-VS-

17.5%

CONTROL MOISTURE

214.9

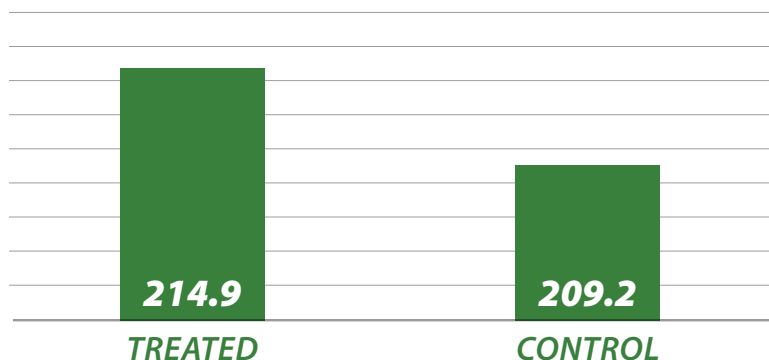
TREATED BU/ACRE

-VS-

209.2

CONTROL BU/ACRE

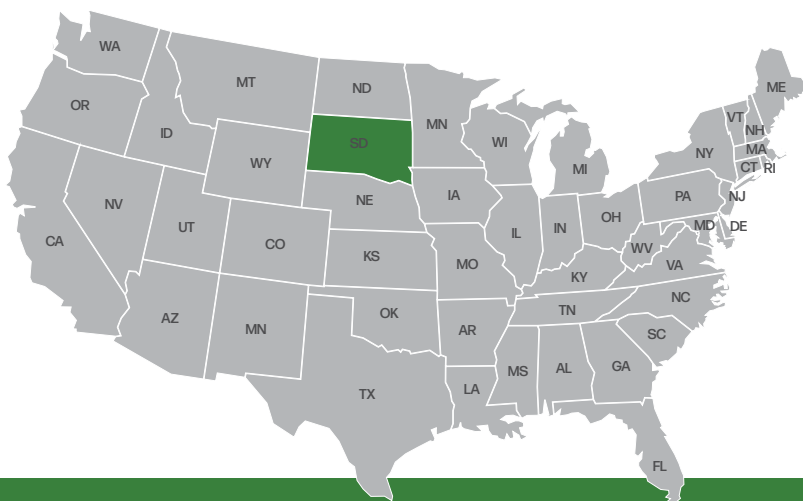
BU/ACRE



5.7

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS



DELMONT, SD
LOCATION

CORN
CROP TYPE

DKC55-85
SEED HYBRID/VARIETY

IN FURROW
APPLICATION METHOD

MAY 1, 2021
PLANTED

OCT. 18, 2021
HARVESTED

en^oita

-vs-

CONTROL

13.3%

TREATED MOISTURE

-vs-

13.3%

CONTROL MOISTURE

143.0

TREATED BU/ACRE

-vs-

134.0

CONTROL BU/ACRE

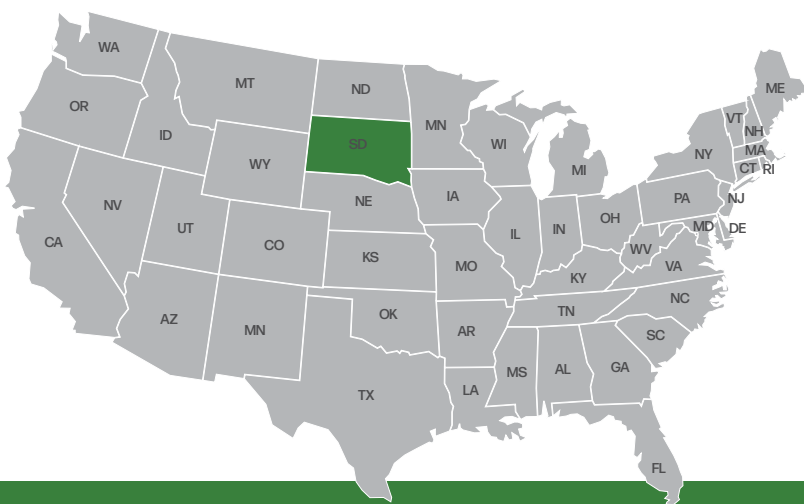
BU/ACRE



9.0

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

LAKE PRESTON, SD
LOCATION

CORN
CROP TYPE

LR 9102 DC5222 EZREF
SEED HYBRID/VARIETY

IN FURROW
APPLICATION METHOD

APR. 3, 2021
PLANTED

SEPT. 28, 2021
HARVESTED

envita

-vs-

CONTROL

19.2%

TREATED MOISTURE

-vs-

19.0%

CONTROL MOISTURE

207

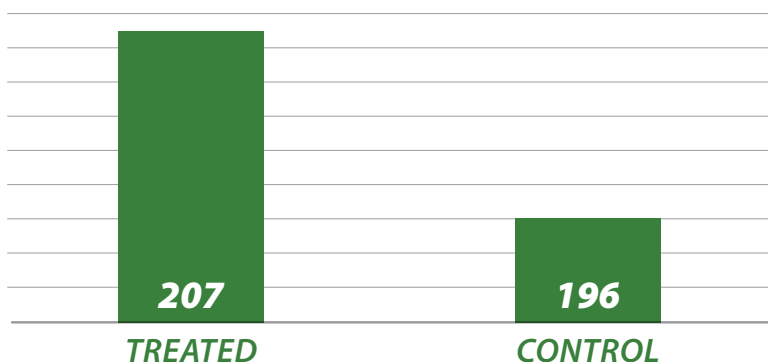
TREATED BU/ACRE

-vs-

196

CONTROL BU/ACRE

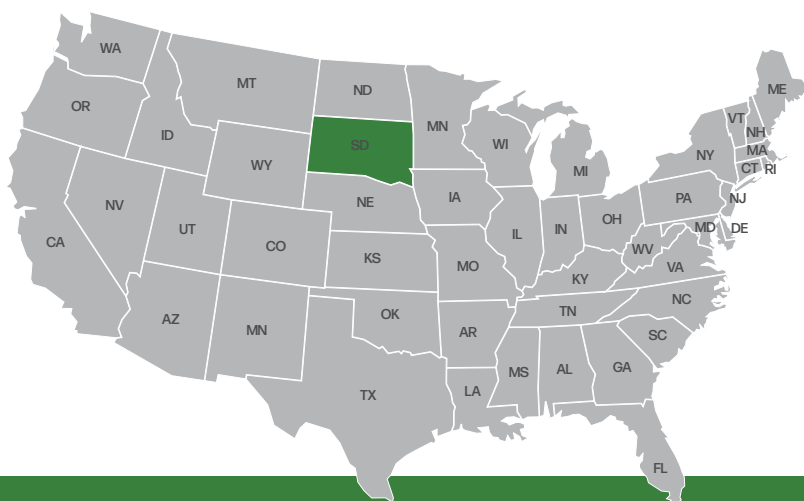
BU/ACRE



11.0

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

LAKE PRESTON, SD
LOCATION

CORN
CROP TYPE

2
HYBRIDS
TESTED

IN FURROW
APPLICATION METHOD

APR. 30, 2021
PLANTED

SEPT. 28, 2021
HARVESTED

envita

-vs-

CONTROL

20.4%
TREATED MOISTURE

-vs-

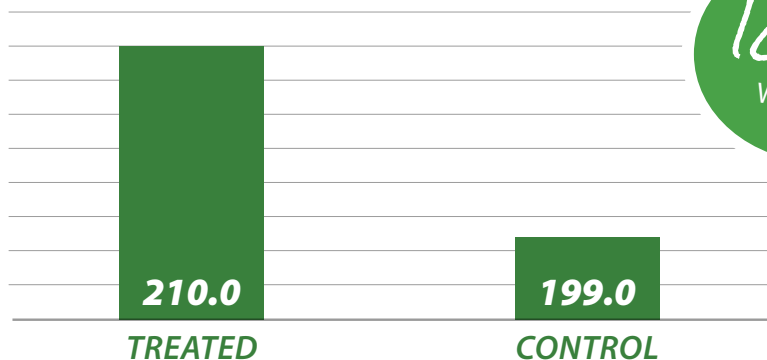
17.7%
CONTROL MOISTURE

210.0
TREATED BU/ACRE

-vs-

199.0
CONTROL BU/ACRE

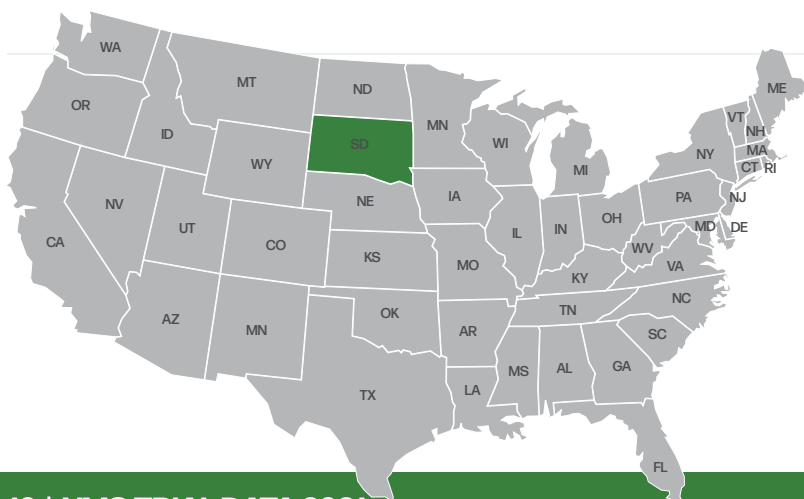
BU/ACRE



100%
WIN RATE

11.0
BU/ACRE

**AVERAGE
ADVANTAGE**



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

BALDWIN, WI
LOCATION

CORN
CROP TYPE

2
HYBRIDS
TESTED

FOLIAR
APPLICATION METHOD

MAY 14, 2021
PLANTED

OCT. 26, 2021
HARVESTED

en^oita

-vs-

CONTROL

20.4%

TREATED MOISTURE

-vs-

17.7%

CONTROL MOISTURE

199.1

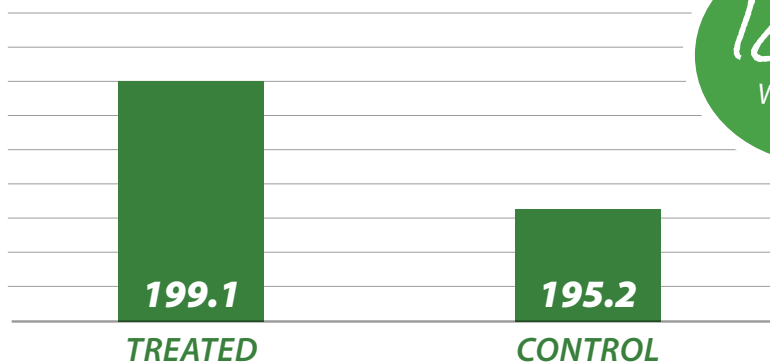
TREATED BU/ACRE

-vs-

195.2

CONTROL BU/ACRE

BU/ACRE

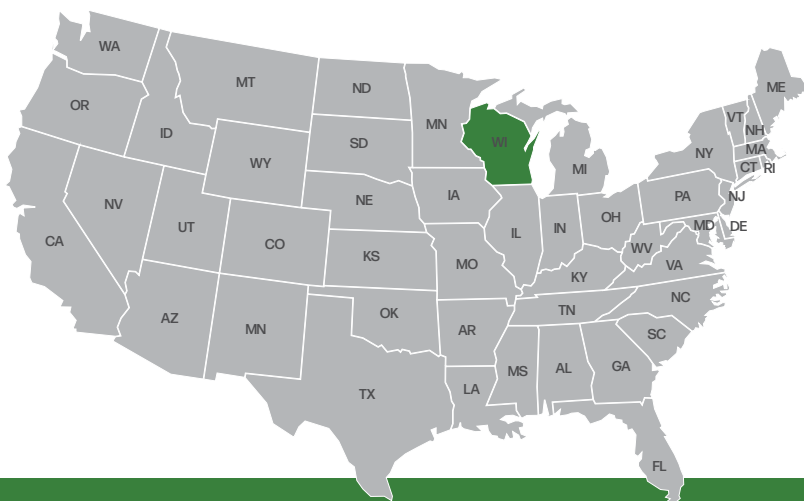


100%
WIN RATE

3.8

BU/ACRE

**AVERAGE
ADVANTAGE**



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS



ELLSWORTH, WI
LOCATION

CORN
CROP TYPE

47J9185VIP3110
SEED HYBRID/VARIETY

FOLIAR
APPLICATION METHOD

MAY 17, 2021
PLANTED

OCT. 13, 2021
HARVESTED

en^oita

-VS-

CONTROL

19.5%

TREATED MOISTURE

-VS-

19.3%

CONTROL MOISTURE

162.1

TREATED BU/ACRE

-VS-

157.5

CONTROL BU/ACRE

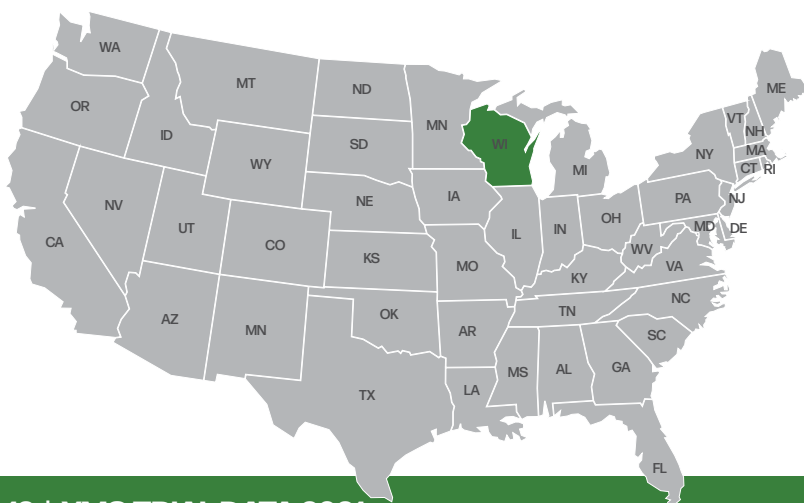
BU/ACRE



4.6

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

ELLSWORTH, WI
LOCATION

CORN
CROP TYPE

9
HYBRIDS
TESTED

FOLIAR
APPLICATION METHOD

MAY 17, 2021
PLANTED

OCT. 13, 2021
HARVESTED

envita

-VS-

CONTROL

19.2%

TREATED MOISTURE

-VS-

19.3%

CONTROL MOISTURE

191.4

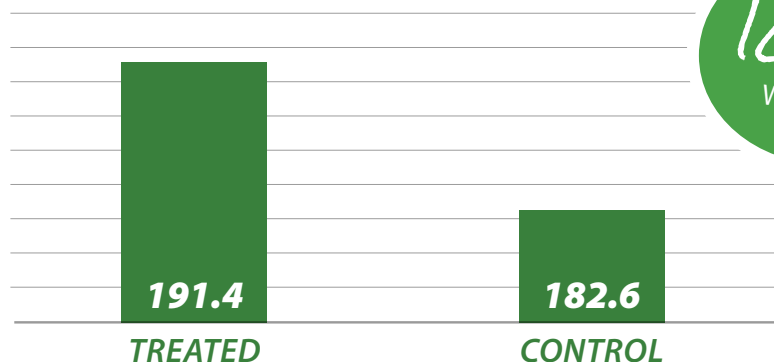
TREATED BU/ACRE

-VS-

182.6

CONTROL BU/ACRE

BU/ACRE

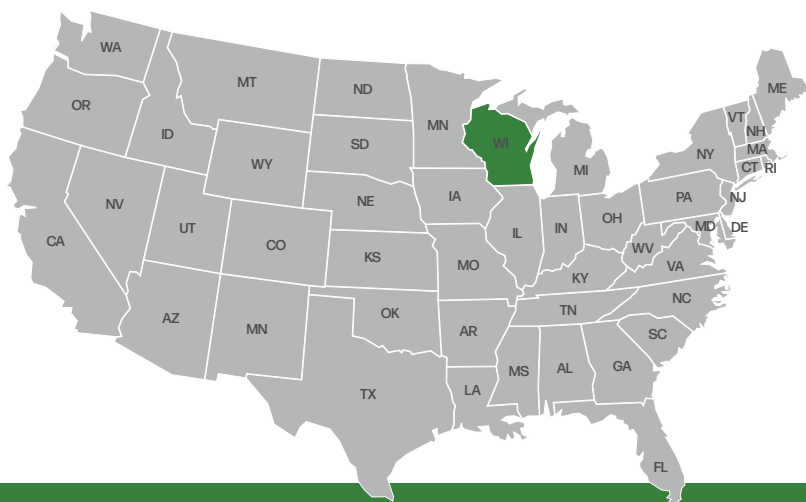


100%
WIN RATE

8.8

BU/ACRE

**AVERAGE
ADVANTAGE**



SOYBEANS



DATA RESULTS • ENVITA

SOYBEAN 2021 DATA

envita

SOYBEAN

4

DATA POINTS

100%

POSITIVE RESPONSE

2

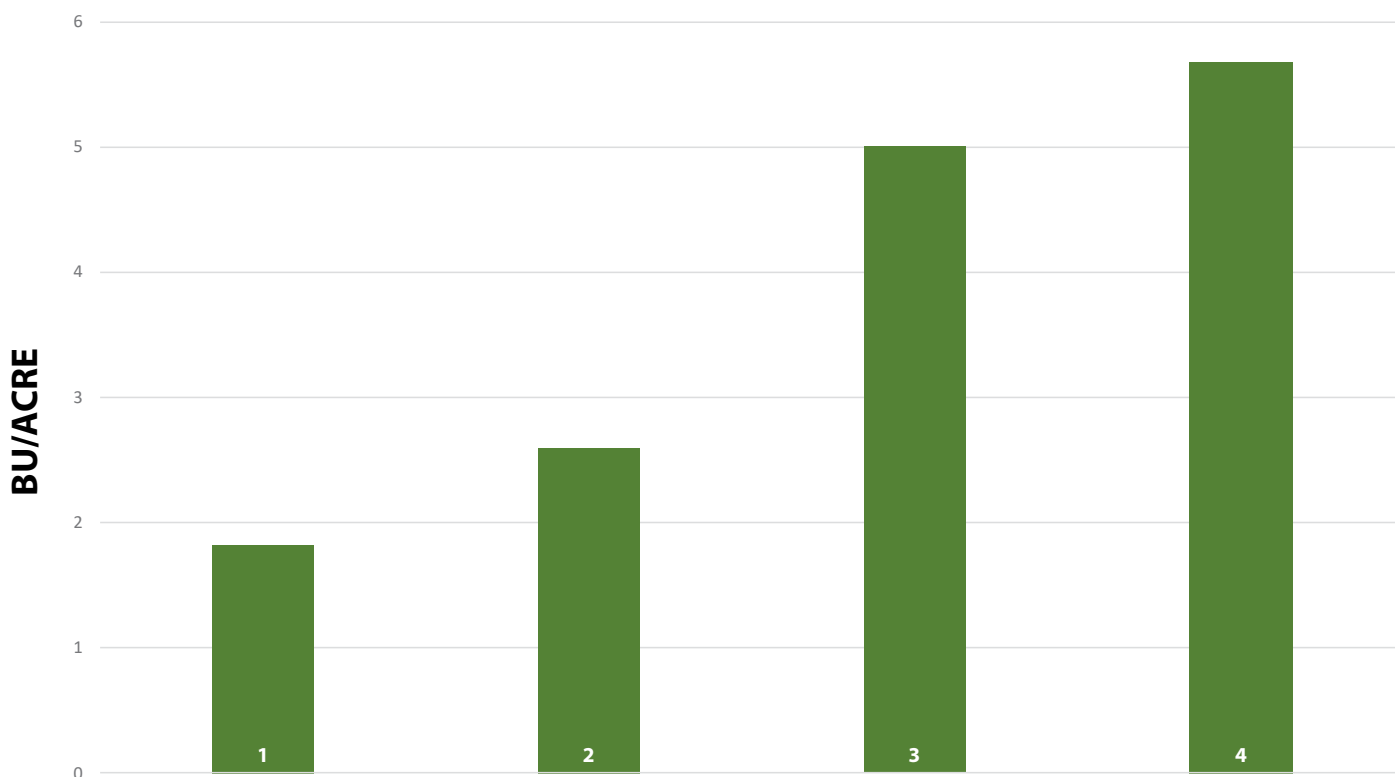
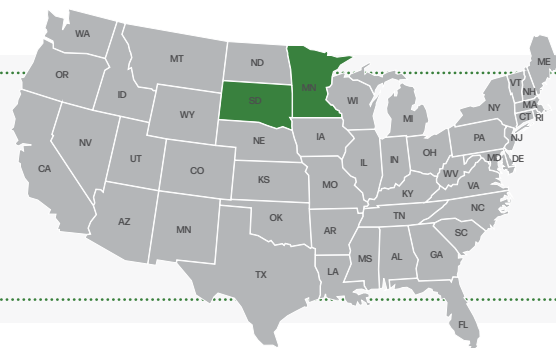
STATES

3.8 BU/ACRE

AVERAGE INCREASE

2

LOCATIONS



3.8

BU/ACRE

AVERAGE INCREASE
WHEN POSITIVE

COMMENTS

All four trials showed consistent yield responses in 2021. Soybeans are late users of nitrogen with most of their nitrogen being used at the reproductive time. It is for this reason Envita can be a great option to help enhance the yield of soybeans.

DATA RESULTS • ENVITA

SOYBEAN MULTI-YEAR DATA

envita

SOYBEAN

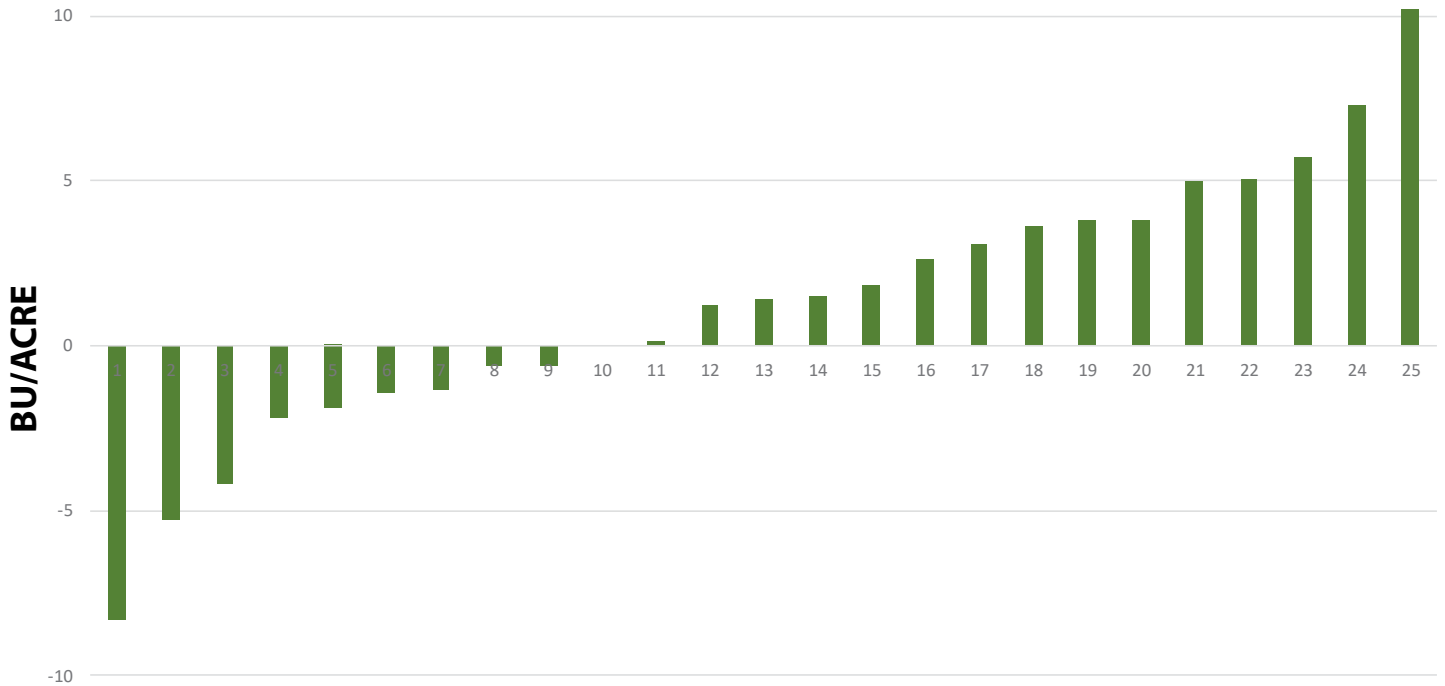
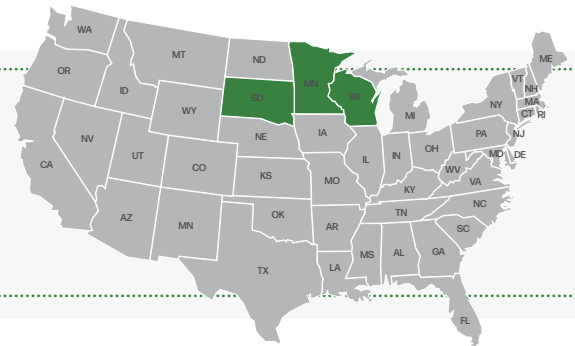
25
DATA POINTS

60%
POSITIVE RESPONSE

3
STATES

1.2 BU/ACRE
AVERAGE INCREASE

11
LOCATIONS



3.7
BU/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

While results have varied over the past two years with the use of Envita on soybeans, the one thing that has stayed consistent is the top end potential. Through both our 2021 testing and our 2-year testing Envita has shown an advantage of over 3.5 bu/acre when conditions are favorable. Most soybean yield enhancing products are reliant upon moisture during pod fill and Envita is no exception. Ultimately, if a field is treated with Envita and has adequate rain fall during the pod fill stage a significant yield enhancement can be achieved.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

OSAKIS, MN
LOCATION

SOYBEANS
CROP TYPE

2
VARIETIES
TESTED

IN FURROW
APPLICATION METHOD

MAY 5, 2021
PLANTED

OCT. 6, 2021
HARVESTED

en^oita

-vs-

CONTROL

14.2%

TREATED MOISTURE

-vs-

14.0%

CONTROL MOISTURE

65.4

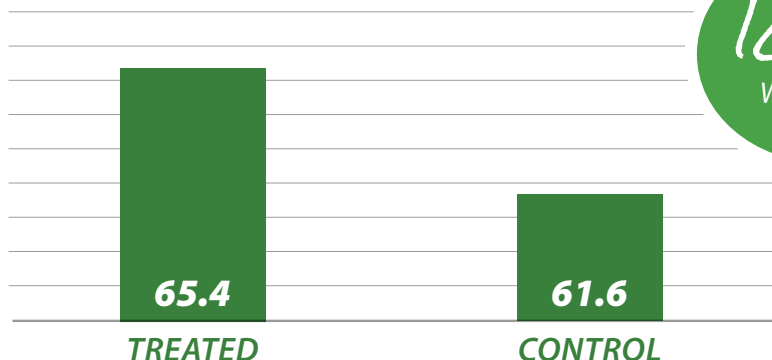
TREATED BU/ACRE

-vs-

61.6

CONTROL BU/ACRE

BU/ACRE

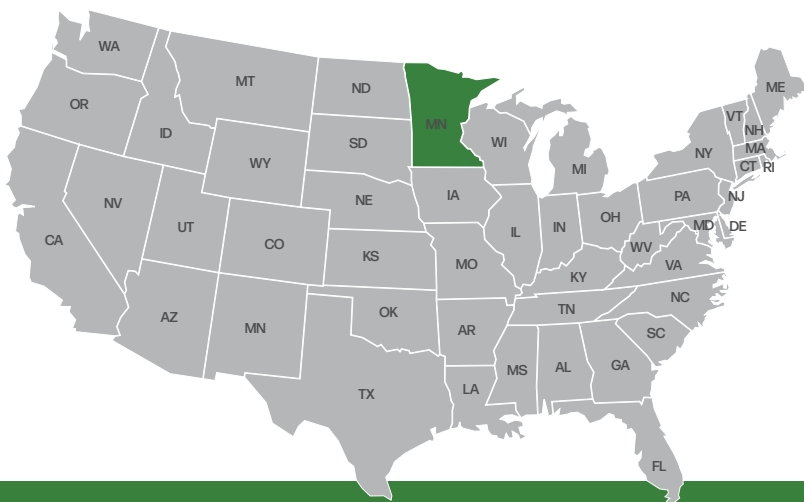


100%
WIN RATE

3.8

BU/ACRE

**AVERAGE
ADVANTAGE**



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

OSAKIS, MN
LOCATION

SOYBEANS
CROP TYPE

10E125N
SEED HYBRID/VARIETY

FOLIAR
APPLICATION METHOD

MAY 9, 2021
PLANTED

SEPT. 26, 2021
HARVESTED

en^oita

-VS-

CONTROL

10.0%

TREATED MOISTURE

-VS-

10.0%

CONTROL MOISTURE

51.0

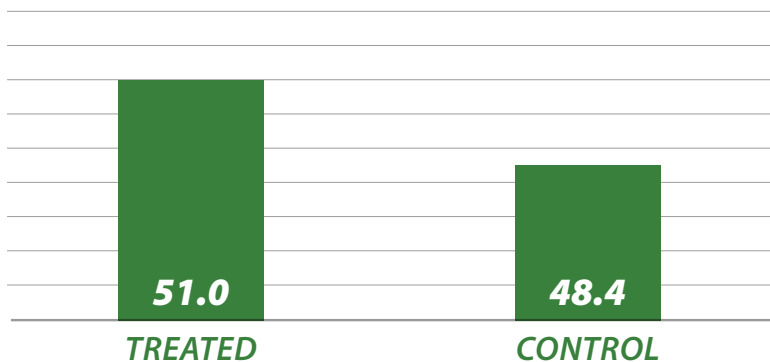
TREATED BU/ACRE

-VS-

48.4

CONTROL BU/ACRE

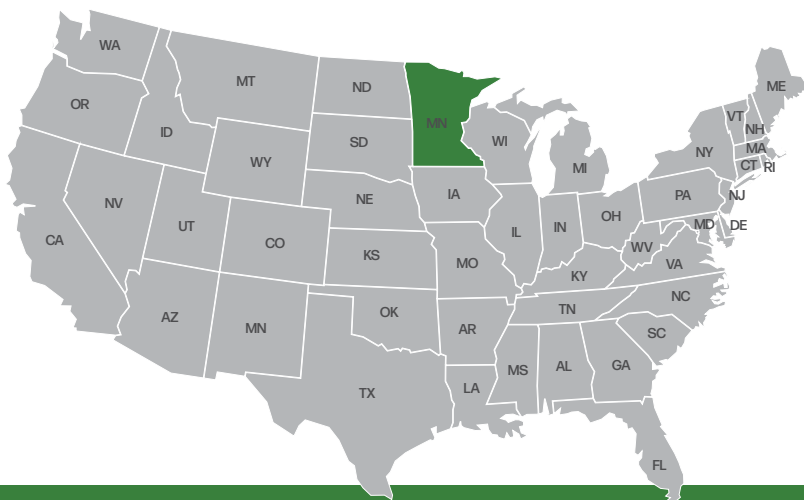
BU/ACRE



2.6

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

DELMONT, SD
LOCATION

SOYBEANS
CROP TYPE

AG27X0
SEED HYBRID/VARIETY

IN FURROW
APPLICATION METHOD

MAY 11, 2021
PLANTED

OCT. 1, 2021
HARVESTED

envita

-vs-

CONTROL

11.5%

TREATED MOISTURE

-vs-

11.5%

CONTROL MOISTURE

61.0

TREATED BU/ACRE

-vs-

56.0

CONTROL BU/ACRE

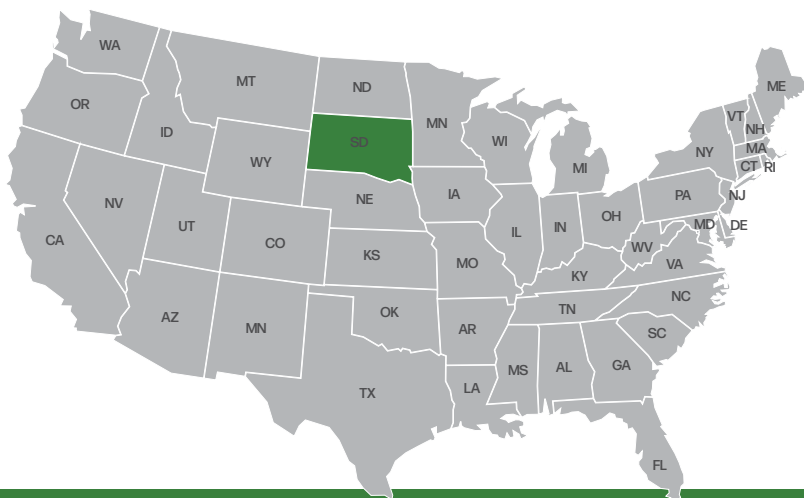
BU/ACRE



5.0

BU/ACRE

ADVANTAGE



ALFALEA
WHEAT
POTATO
SUGAR BEETS
SUNFLOWER



DATA RESULTS • ENVITA

ALFALFA

2021 DATA

envita

ALFALFA

5
DATA POINTS

4%
YIELD INCREASE*

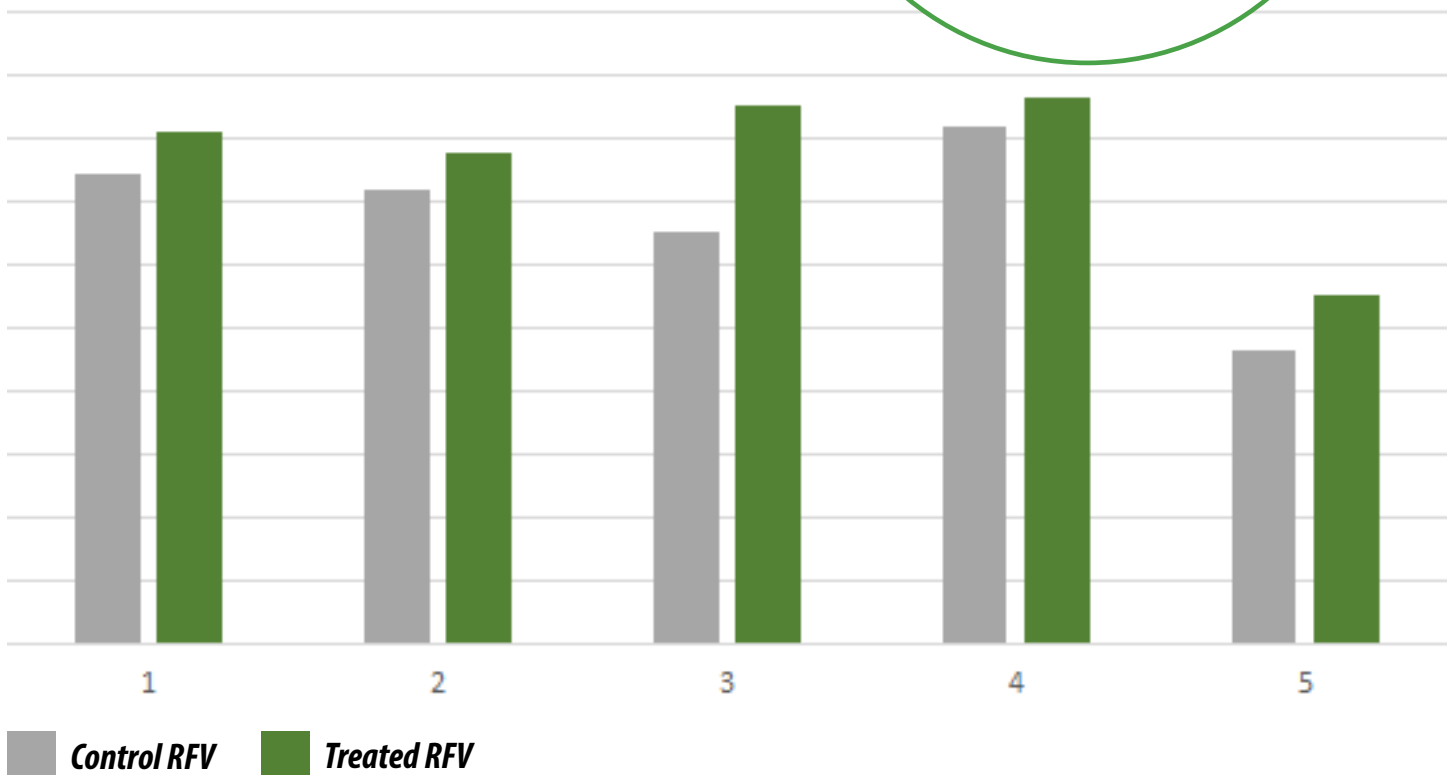
2
STATES

1.6%
INCREASE IN PROTEIN

2
LOCATIONS

13.5%

INCREASE IN RFV



COMMENTS

Alfalfa is one of the most exciting crops we conducted trials on with Envita this year. We have seen quality increases with other crops treated with Envita, such as wheat, and were hoping to see similar results in Alfalfa. The yield enhancement of 4% is more than enough to pay for the product, but the real benefit came with the enhanced Relative Feed Value(RFV). Nitrogen is a building block for protein and the 1.6% increase was in line with our expectations. The 13.5% increase in RFV was consistent across multiple trials in multiple locations giving us a high level of confidence that Envita will improve Alfalfa quality. Within this data set are replicated trials from Utah State University and grower trials from Wisconsin. It also appears that Envita can be applied one time after first cutting and have the ability to regrow with each additional crop allowing a grower to spread the cost of the product over multiple harvests.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS



NORTH LOGAN, UT
LOCATION

ALFALFA
CROP TYPE

FOLIAR
APPLICATION METHOD

AFTER 1ST CUTTING
APPLICATION TIMELINE

en^{vi}ta

-vs-

CONTROL

22.2

TREATED PROTIEIN %

-vs-

21.0

CONTROL PROTIEIN %

162

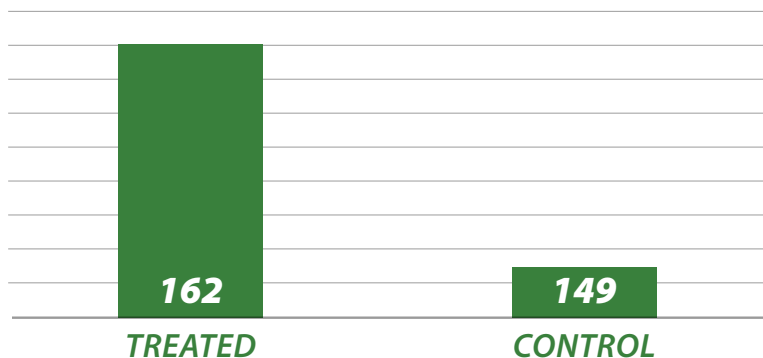
TREATED RFV

-vs-

149

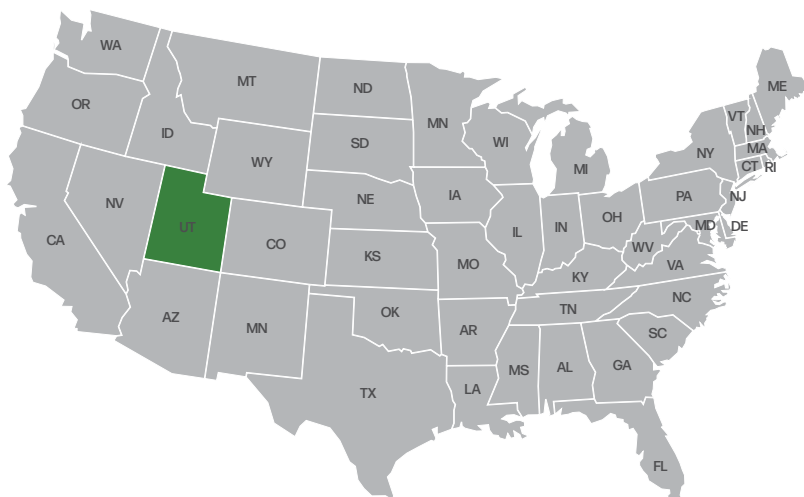
CONTROL RFV

RFV



13.0
RFV

ADVANTAGE



BIOLOGICAL FIELD TRIAL RESULTS

WISCONSIN
LOCATION

ALFALFA
CROP TYPE

4
VARIETIES
TESTED

FOLIAR
APPLICATION METHOD

AFTER 2ND CUTTING
APPLICATION TIMELINE

en^oita

-vs-

CONTROL

20.47

TREATED PROTIEIN %

-vs-

18.82

CONTROL PROTIEIN %

152.37

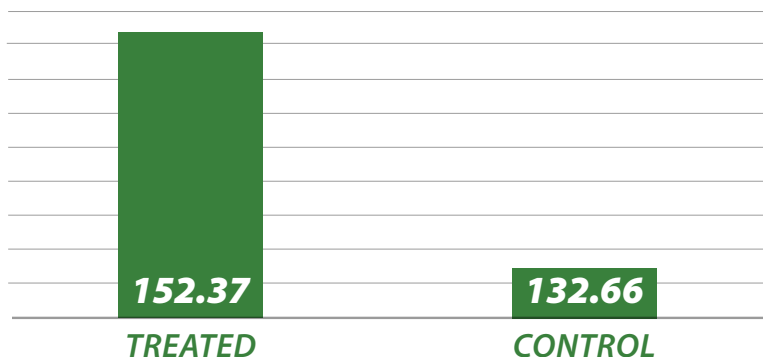
TREATED RFV

-vs-

132.66

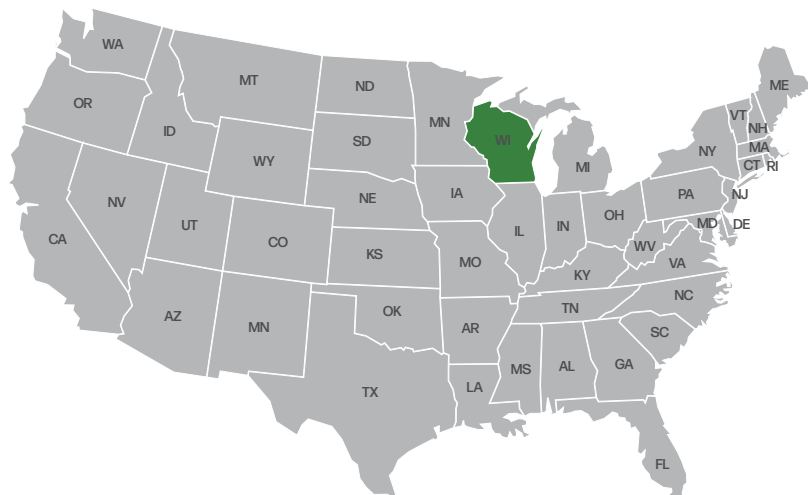
CONTROL RFV

RFV



19.71
RFV

**AVERAGE
ADVANTAGE**



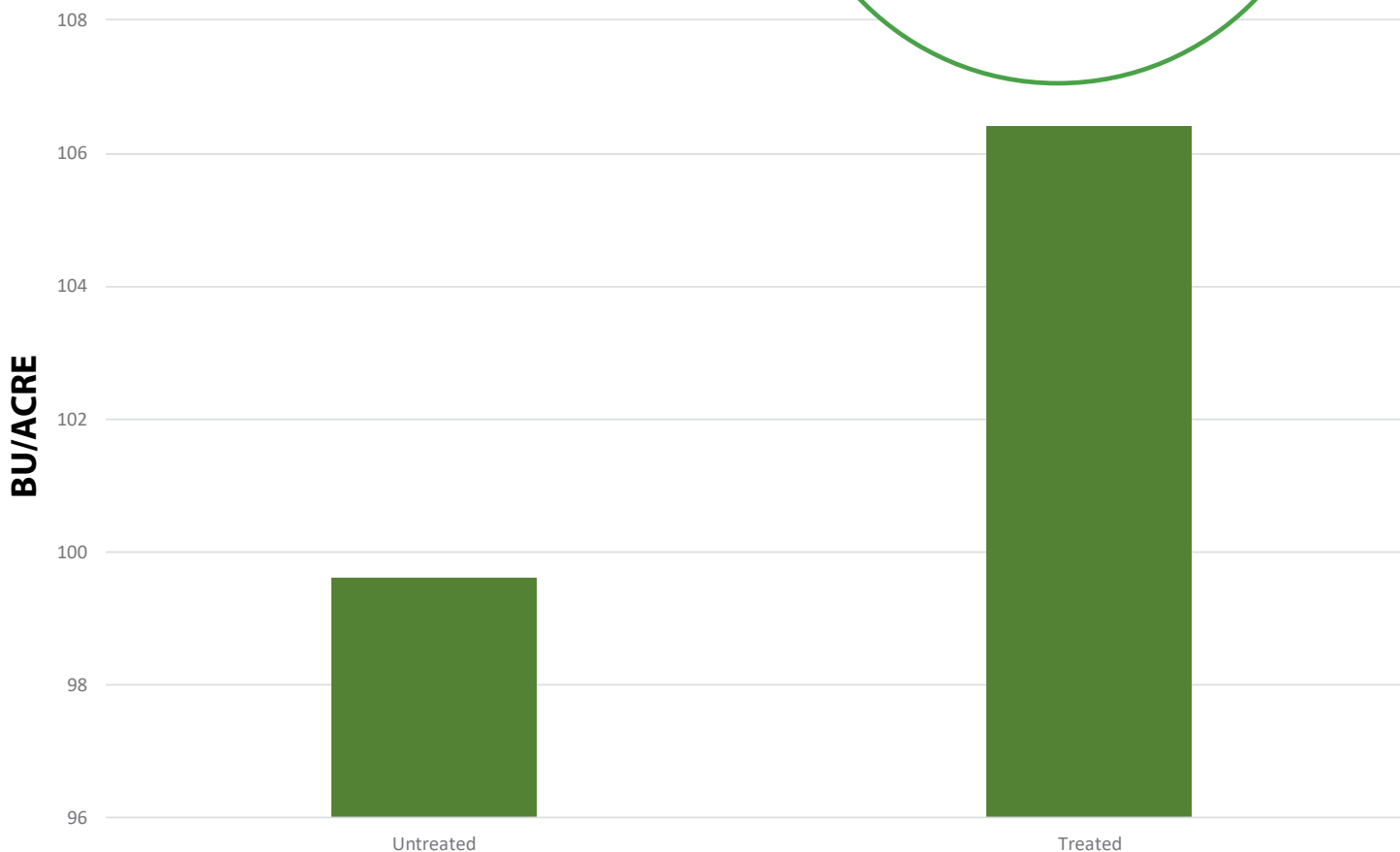
WHEAT 2021 DATA

**99.6 BU/ACRE**

UNTREATED

106.4 BU/ACRE

TREATED

6.8**ADVANTAGE**

COMMENTS

Although our data on wheat has been limited, the early results have been extremely encouraging. We are seeing consistent increases in protein levels due to the late season availability of nitrogen. Typically, wheat utilizes early season nitrogen for yield and late season nitrogen for quality. This season Envita did show some great increases in yield. The key to success with increasing yield on wheat seems to be early colonization of the bacteria.

DATA RESULTS • ENVITA

POTATO 2021 DATA

envita

POTATO

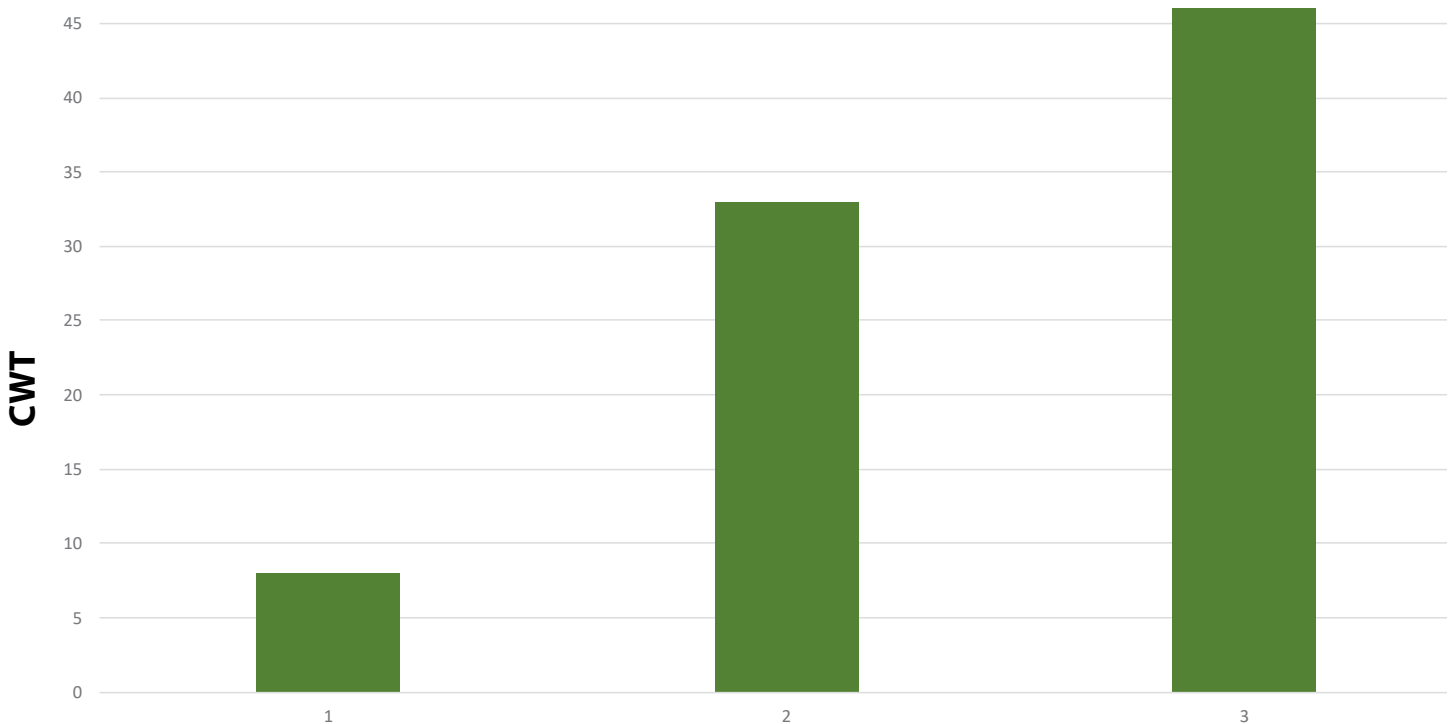
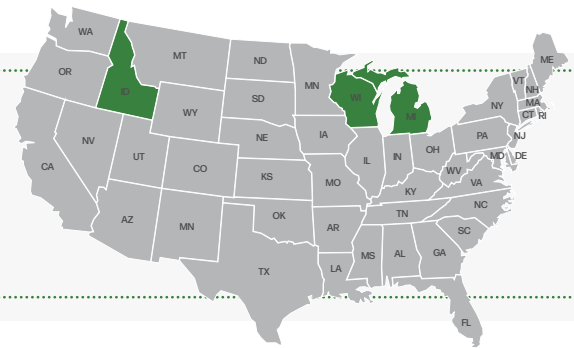
3
DATA POINTS

100%
POSITIVE RESPONSE

3
STATES

29 CWT/ACRE
AVERAGE INCREASE

3
LOCATIONS



29
CWT/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

Envita proved successful in its ability to colonize potatoes and impact yield. Michigan State University found through its trials that Envita had an impact of 8 cwt/acre on a 5-replication trial. This was the lowest yielding trial of the 2021 data set but still shows a large ROI potential on the product.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

RUPERT, ID
LOCATION

POTATOES
CROP TYPE

FOLIAR
APPLICATION METHOD

JUN. 10, 2021
DATE APPLIED

SEPT. 9, 2021
HARVESTED

en^{vi}ta

-VS-

CONTROL

613

TREATED CWT/ACRE

-VS-

580

CONTROL CWT/ACRE

CWT/ACRE



33

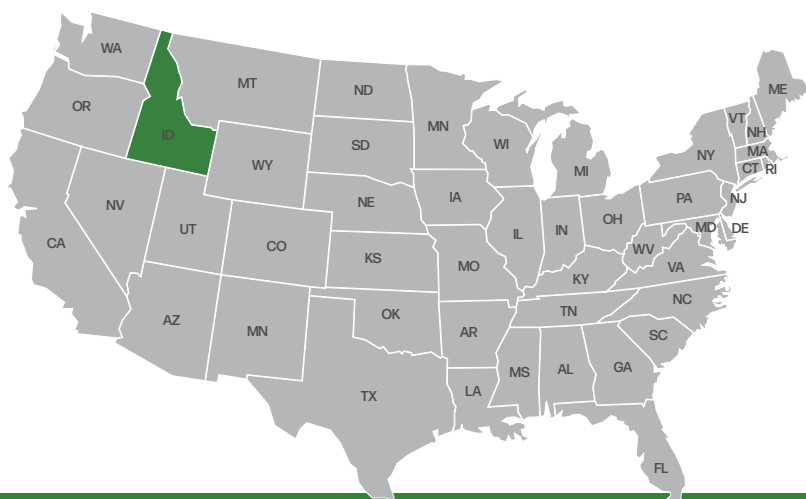
CWT/ACRE

ADVANTAGE

ADDITIONAL ROI ADVANTAGE:

\$165.00 PER ACRE

Based on \$5.00/bag market value



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

STANTON, MI
LOCATION

POTATOES
CROP TYPE

IN FURROW
APPLICATION METHOD

JUL. 6, 2021
DATE APPLIED

SEPT. 15, 2021
HARVESTED

envita

-vs-

CONTROL

244

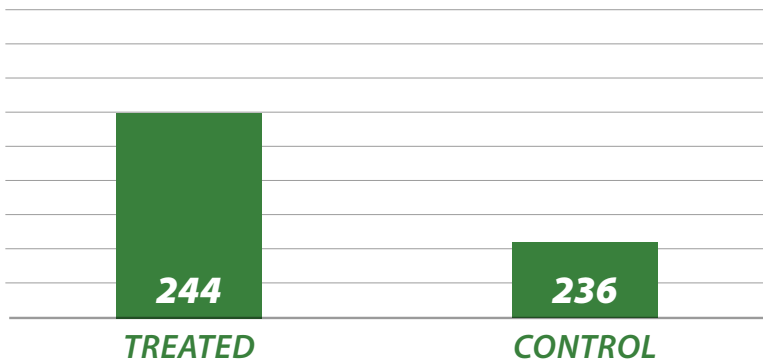
TREATED BAGS/ACRE

-vs-

236

CONTROL BAGS/ACRE

BAGS/ACRE



8

BAGS/ACRE

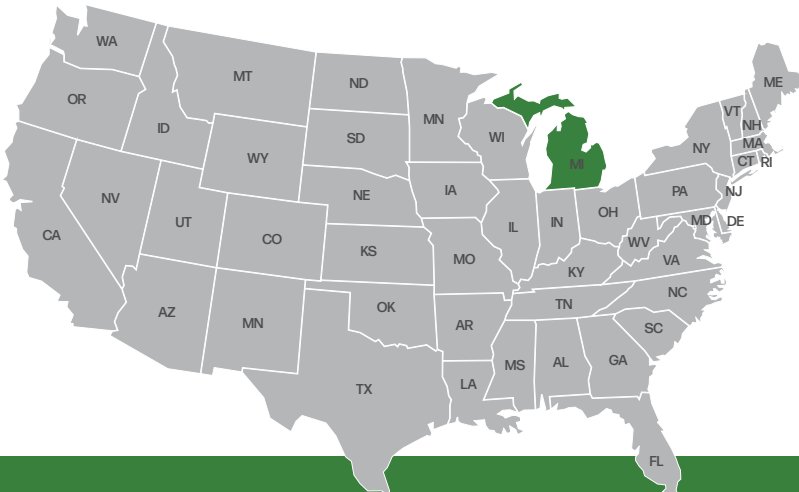
ADVANTAGE

ADDITIONAL ROI ADVANTAGE:

* Data retrieved from Michigan State University's trial data.

\$40.00 PER ACRE

Based on \$5.00/bag market value



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

PLOVER, WI
LOCATION

POTATOES
CROP TYPE

FOLIAR
APPLICATION METHOD

JUL. 29, 2021
DATE APPLIED

SEPT. 1, 2021
HARVESTED

en^{vi}ta

-vs-

CONTROL

500

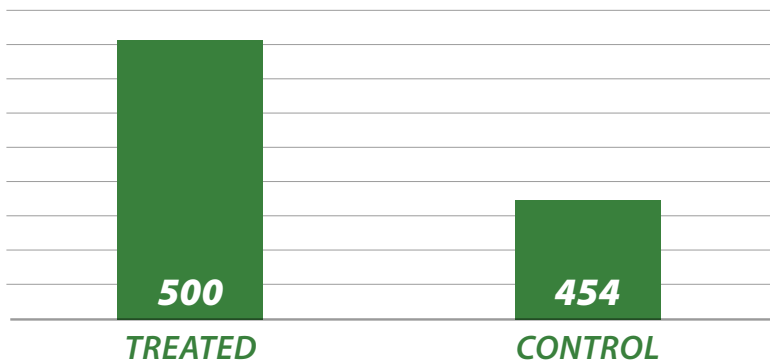
TREATED BAGS/ACRE

-vs-

454

CONTROL BAGS/ACRE

BAGS/ACRE



46

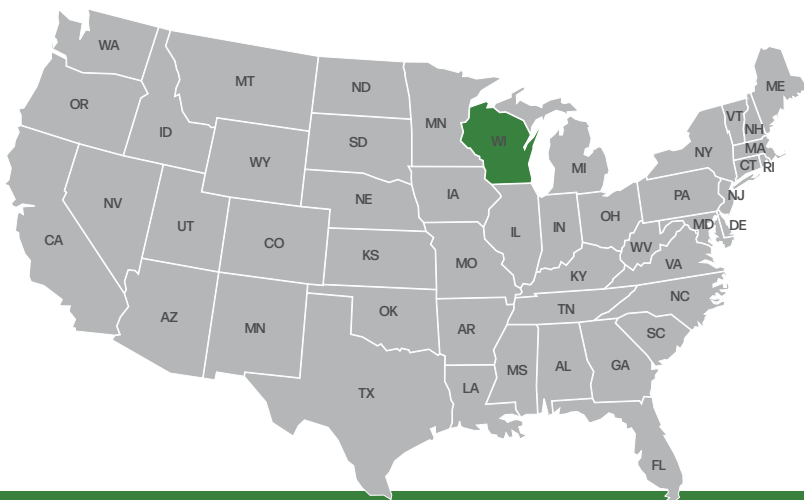
BAGS/ACRE

ADVANTAGE

ADDITIONAL ROI ADVANTAGE:

\$230.00 PER ACRE

Based on \$5.00/bag market value



DATA RESULTS • ENVITA

SUGAR BEETS envita 2021 DATA

SUGAR BEETS

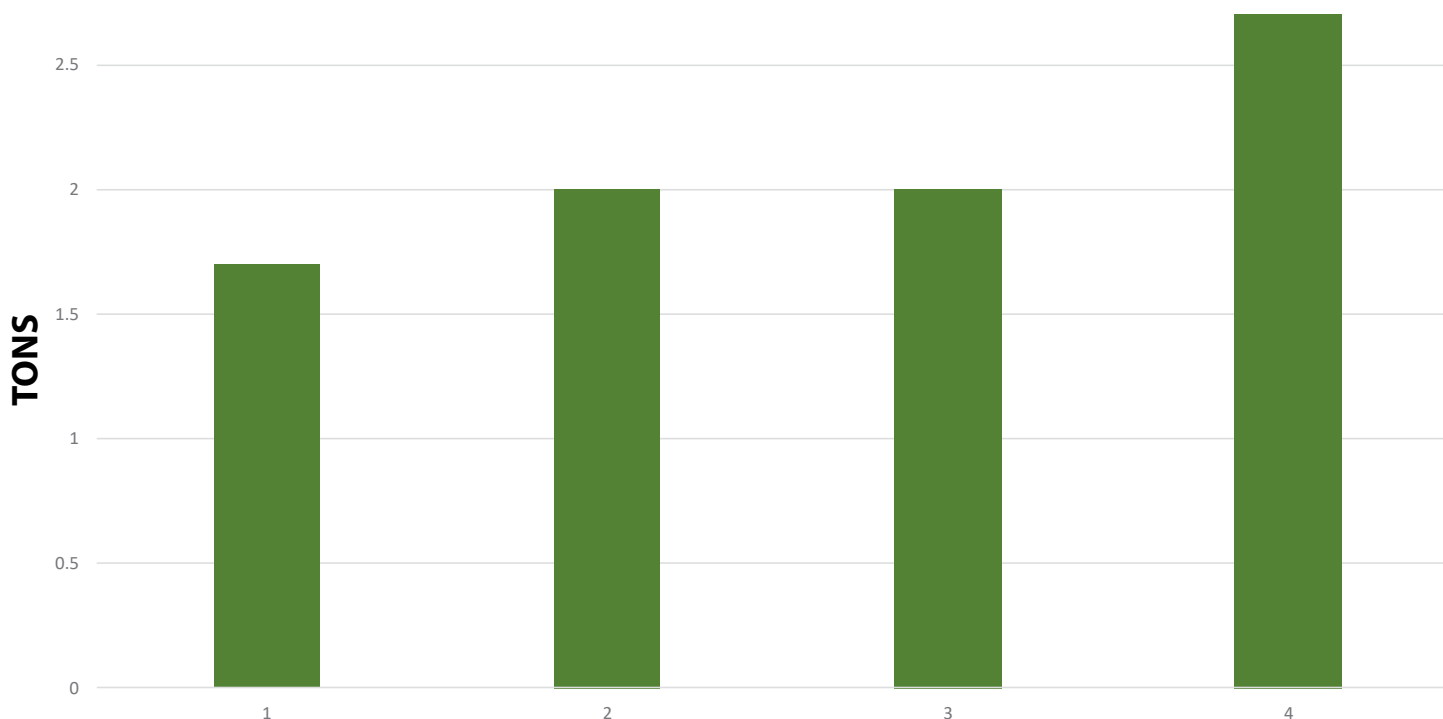
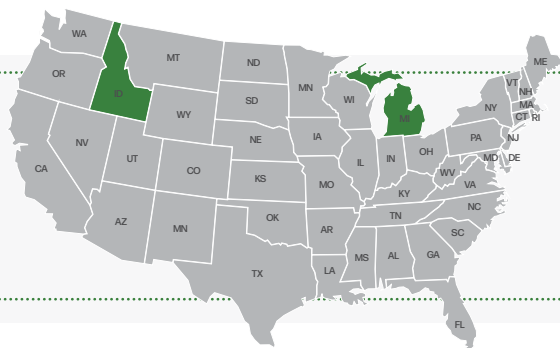
4
DATA POINTS

100%
POSITIVE RESPONSE

2
STATES

2.1 TONS/ACRE
AVERAGE INCREASE

4
LOCATIONS



2.1
TONS/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

We saw tremendous success using Envita on sugar beets this season. Independent testing through The Michigan Sugar Company was able to prove by a significant difference the ability of Envita to increase yield by up to 2.7 tons per acre. This testing also suggested that a double application of Envita, once during in furrow and once during foliar application, may yield the highest response.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

RUPERT, ID
LOCATION

SUGAR BEETS
CROP TYPE

FOLIAR
APPLICATION METHOD

JUN. 10, 2021
DATE APPLIED

SEPT. 3, 2021
HARVESTED

en^{vi}ta

-vs-

CONTROL

39.7

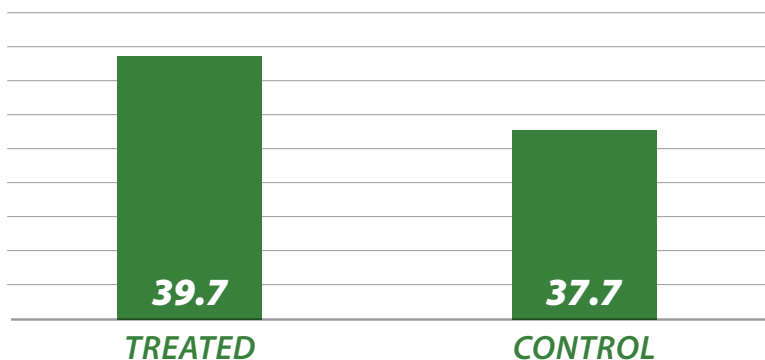
TREATED TONS/ACRE

-vs-

37.7

CONTROL TONS/ACRE

TONS/ACRE



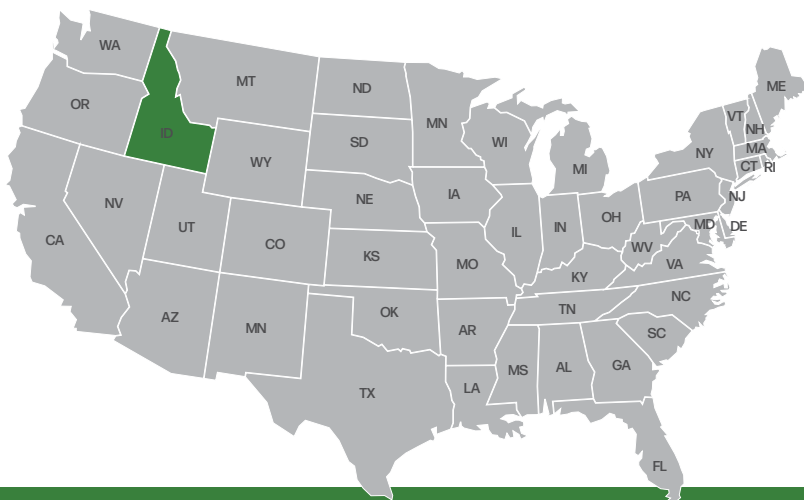
2.0
TONS/ACRE

ADVANTAGE

POTENTIAL ROI:

\$70.00

Based on \$35.00/ton market value



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

GILFORD, MI
LOCATION

SUGAR BEETS
CROP TYPE

3
VARIETIES
TESTED

FOLIAR & IN FURROW
APPLICATION METHOD

NA
DATE APPLIED

NA
HARVESTED

envita

-vs-

CONTROL

46.0

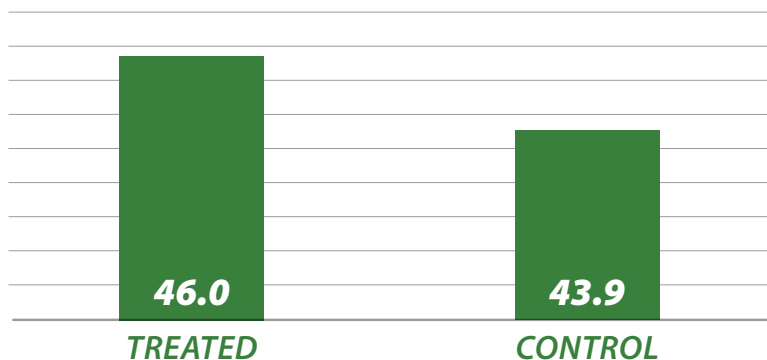
TREATED TONS/ACRE

-vs-

43.9

CONTROL TONS/ACRE

TONS/ACRE



2.1

TONS/ACRE

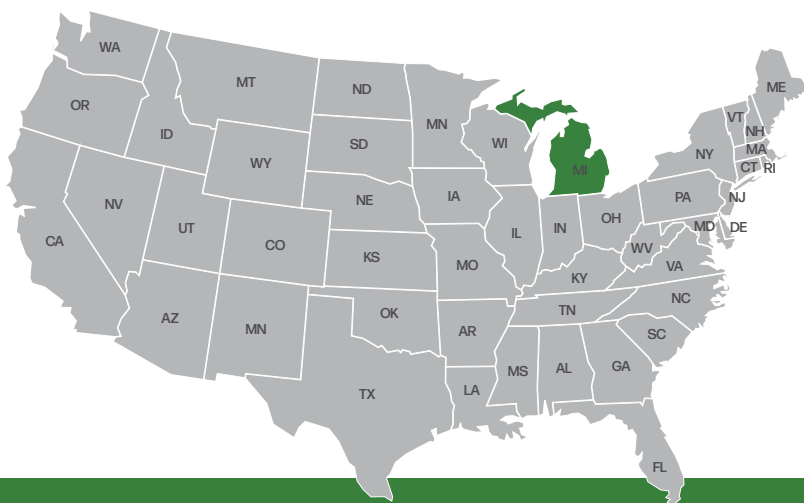
ADVANTAGE

ADDITIONAL ROI ADVANTAGE:

\$73.50 PER ACRE

*Data Collected from Michigan Sugar Company Trials

Based on \$35.00/ton market value



DATA RESULTS • ENVITA

SUNFLOWER

2021 DATA



SUNFLOWER

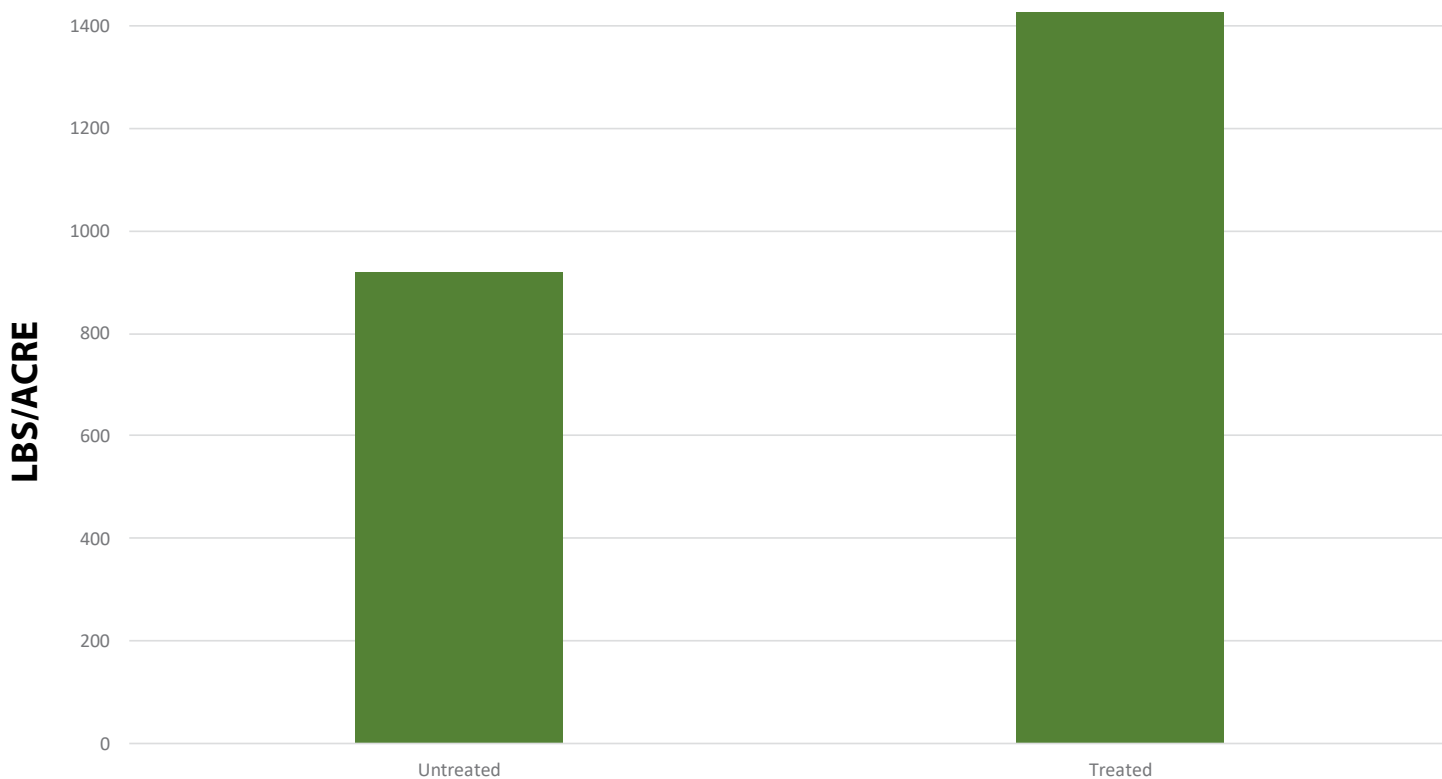
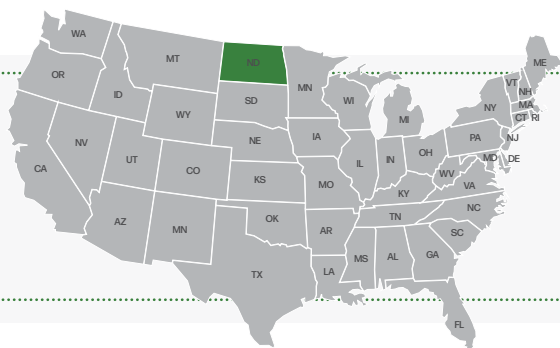
1
DATA POINTS

1
STATES

1,428.4 LBS/ACRE
TREATED

918.8 LBS/ACRE
UNTREATED

1
LOCATIONS



509.6
LBS/ACRE

ADVANTAGE

AVERAGE INCREASE

COMMENTS

One grower trial was conducted this year using Envita on Sunflowers. The initial data is encouraging and suggests the need for more trials in 2022. There was a large increase in the lbs per acre and future trials will look at any improvements in oil.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

BERWICK, ND
LOCATION

SUNFLOWERS
CROP TYPE

N4H470 CLP
SEED HYBRID/VARIETY

IN FURROW
APPLICATION METHOD

N/A
PLANTED

OCT. 25, 2021
HARVESTED

envita

-vs-

CONTROL

11.8%

TREATED MOISTURE

-vs-

10.9%

CONTROL MOISTURE

1428.4

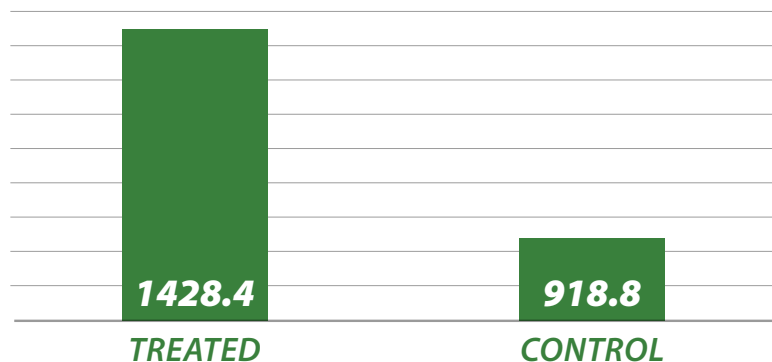
TREATED LBS/ACRE

-vs-

918.8

CONTROL LBS/ACRE

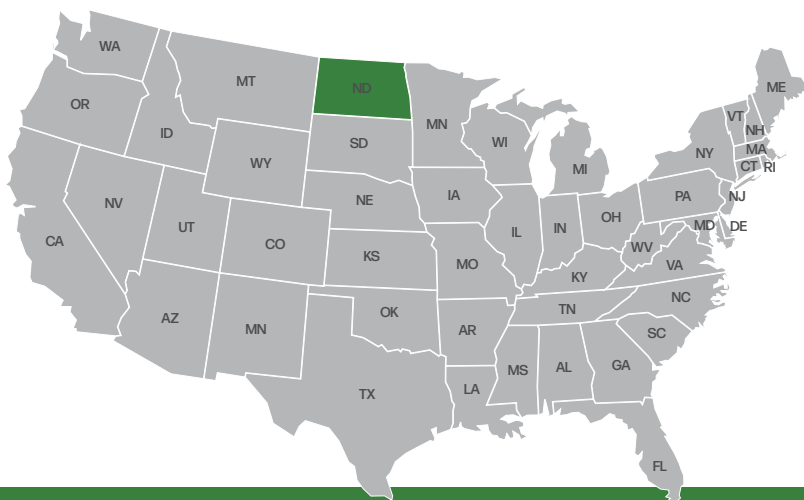
LBS/ACRE



509.6

LBS/ACRE

ADVANTAGE



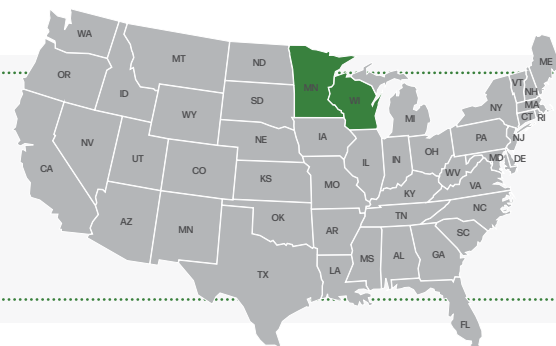
SOY_{FX}



DATA RESULTS • SOY_{FX}

2021 SOY_{FX} DATA

Soy_{fx}TM



12

DATA POINTS

50%

POSITIVE RESPONSE

2

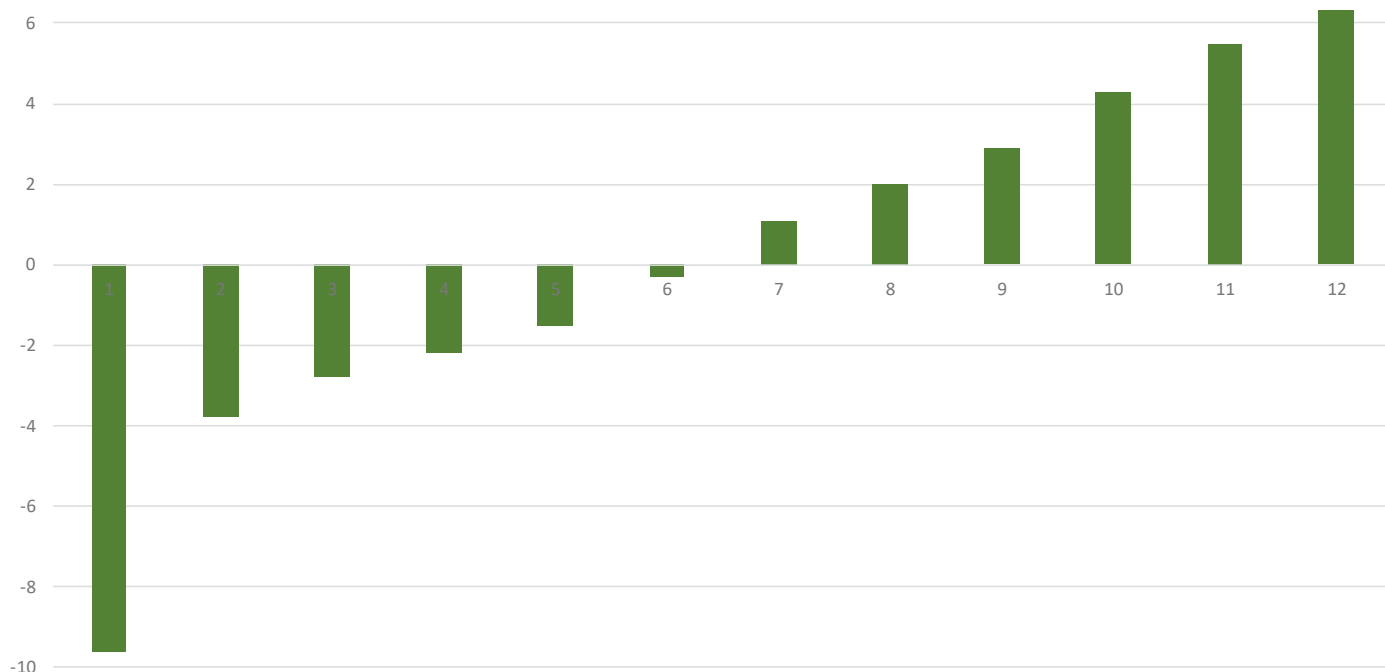
STATES

0.2 BU/ACRE

AVERAGE INCREASE

8

LOCATIONS



3.7

BU/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

The drought of 2021 had a major impact on the Soy_{fx} trials. We know that Soy_{fx} will create more branching and in turn more pods and in order to take advantage of that yield potential, moisture in July and August during pod fill is critical. The plots that received the later season rains tended to have a higher performance than the plots that did not receive adequate moisture.

DATA RESULTS • SOY_{FX}

MULTI-YEAR SOY_{FX} DATA

Soy_{fx}TM

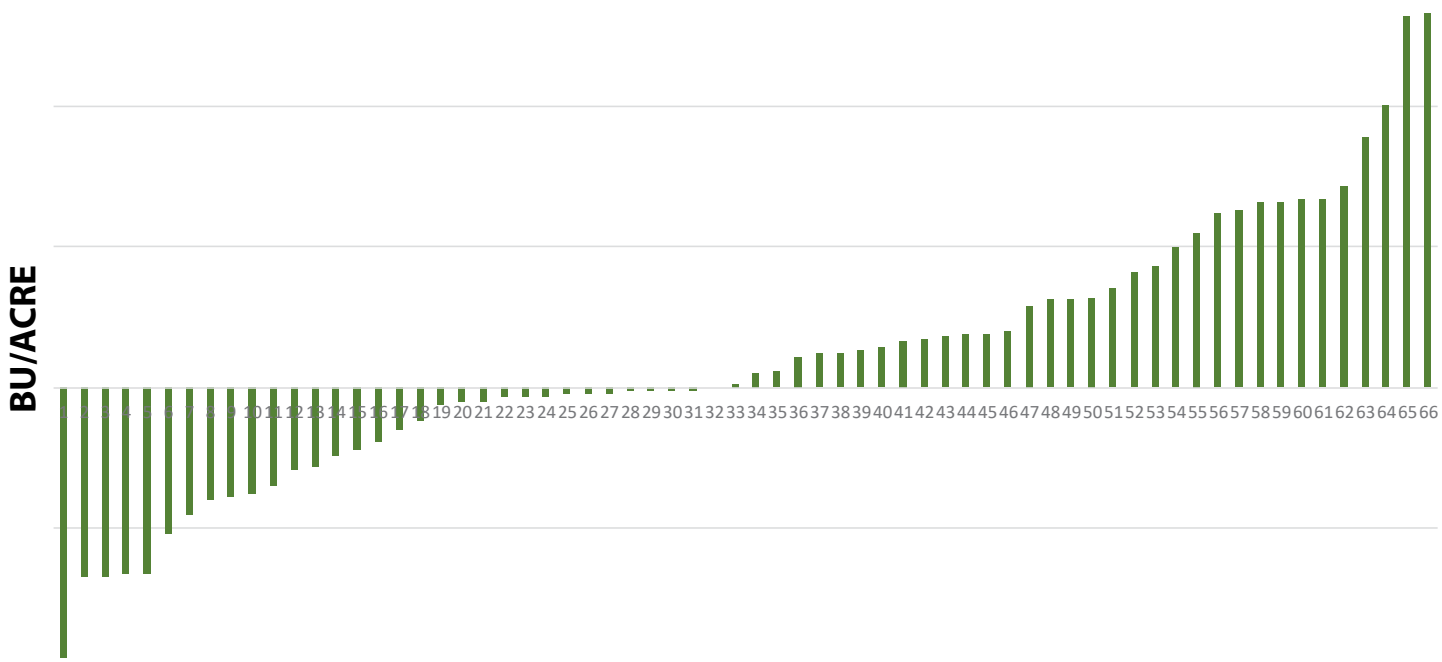
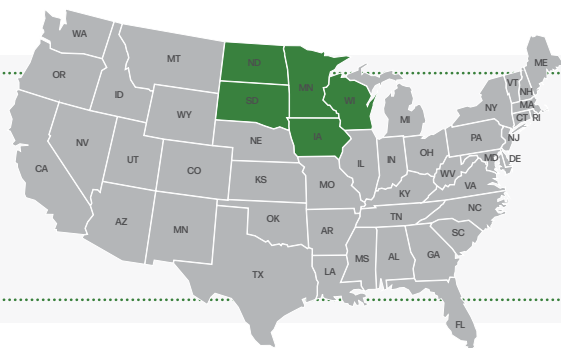
66
DATA POINTS

52%
POSITIVE RESPONSE

5
STATES

1.0 BU/ACRE
AVERAGE INCREASE

29
LOCATIONS



4.3

BU/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

The multi-year data set for Soy_{fx} continues to reinforce the notion that for success Soy_{fx} needs adequate moisture during pod fill. When this moisture is received the top end potential of Soy_{fx} is extremely rewarding.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

CANBY, MN
LOCATION

SOYBEANS
CROP TYPE

19E173N
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 7, 2021
PLANTED

OCT. 7, 2021
HARVESTED

Soy_{fx}TM

-vs-

**STANDARD
TREATMENT**

13.6%

TREATED MOISTURE

-vs-

13.6%

CONTROL MOISTURE

67.6

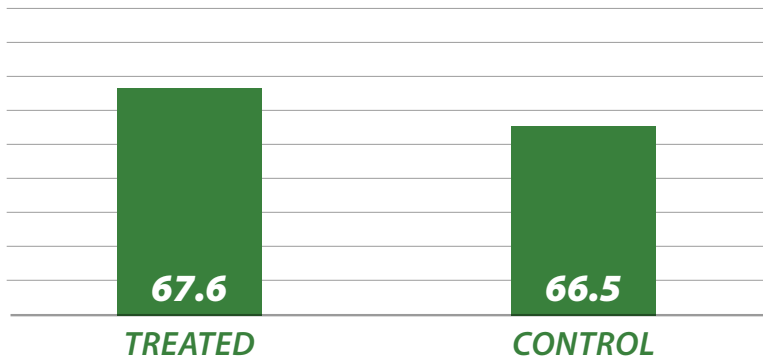
TREATED BU/ACRE

-vs-

66.5

CONTROL BU/ACRE

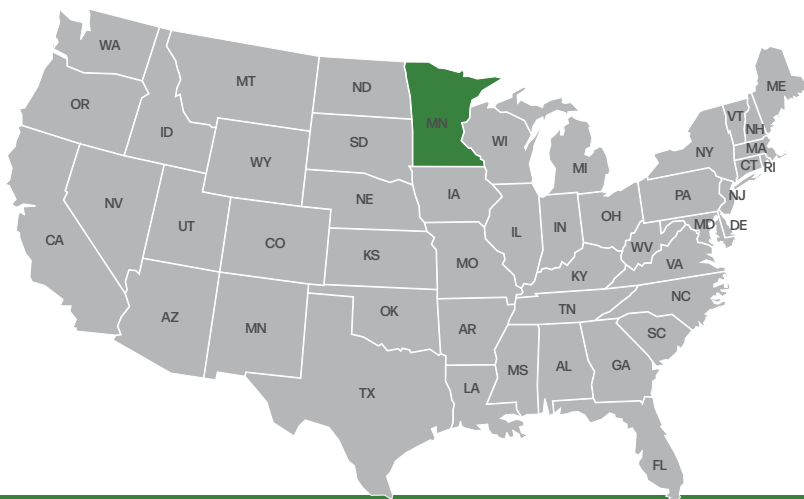
BU/ACRE



1.1

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

STORDEN, MN
LOCATION

SOYBEANS
CROP TYPE

PIONEER 21X0
SEED HYBRID/VARIETY

NA
APPLICATION METHOD

NA
PLANTED

NA
HARVESTED

Soyfx™

-vs-

CONTROL

12.9%

TREATED MOISTURE

-vs-

13.4%

CONTROL MOISTURE

71.1

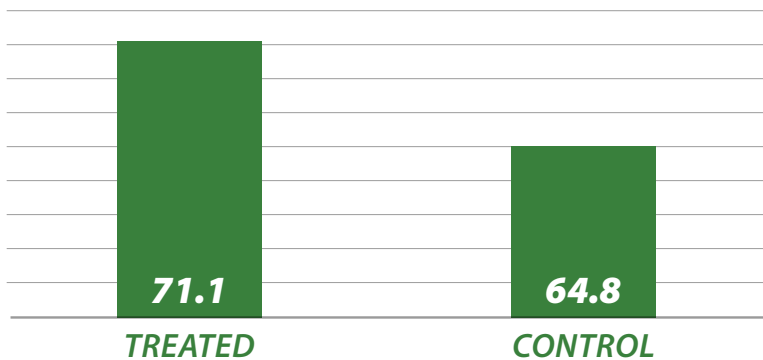
TREATED BU/ACRE

-vs-

64.8

CONTROL BU/ACRE

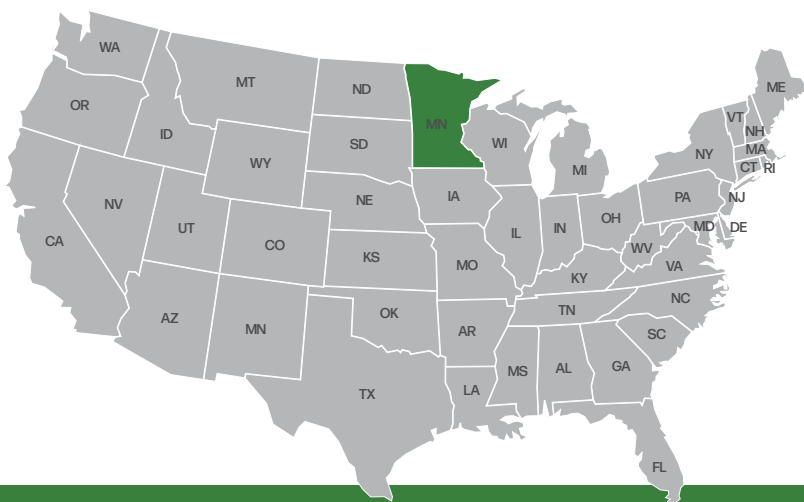
BU/ACRE



6.3

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

HARVEY, ND
LOCATION

SOYBEANS
CROP TYPE

05E256N
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 14, 2021
PLANTED

OCT. 19, 2021
HARVESTED

Soy_{fx}TM

-vs-

**STANDARD
TREATMENT**

15.1%

TREATED MOISTURE

-vs-

15.3%

CONTROL MOISTURE

37.0

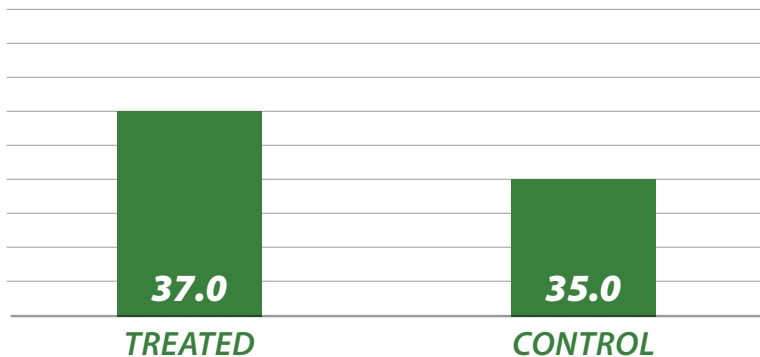
TREATED BU/ACRE

-vs-

35.0

CONTROL BU/ACRE

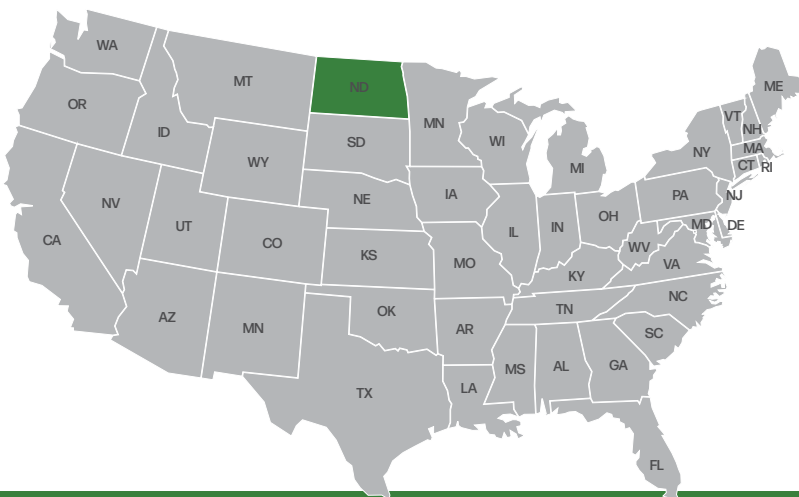
BU/ACRE



2.0

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

BALDWIN, WI
LOCATION

SOYBEANS
CROP TYPE

14E152N
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 15, 2021
PLANTED

OCT. 26, 2021
HARVESTED

Soy_{fx}TM

-vs-

**STANDARD
TREATMENT**

13.3%

TREATED MOISTURE

-vs-

13.7%

CONTROL MOISTURE

60.8

TREATED BU/ACRE

-vs-

56.5

CONTROL BU/ACRE

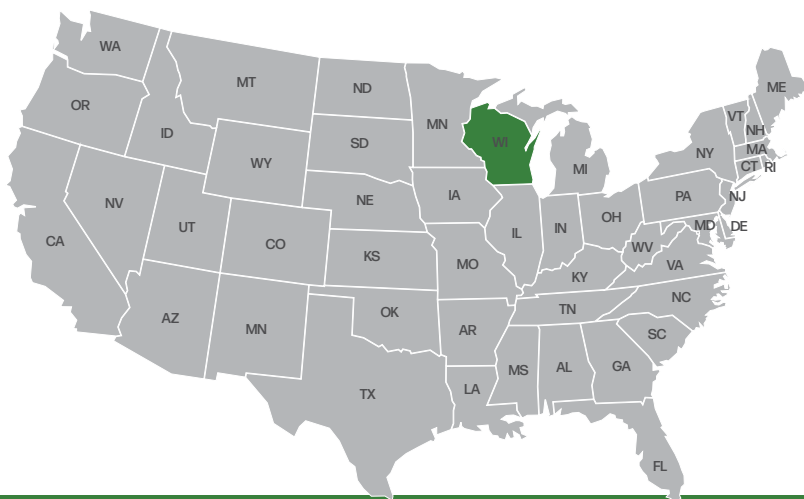
BU/ACRE



4.3

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

HAGER CITY, WI
LOCATION

SOYBEANS
CROP TYPE

19E173N
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

APR. 29, 2021
PLANTED

SEPT. 28, 2021
HARVESTED

Soy_{fx}TM

-vs-

**STANDARD
TREATMENT**

11.8%

TREATED MOISTURE

-vs-

11.9%

CONTROL MOISTURE

65.8

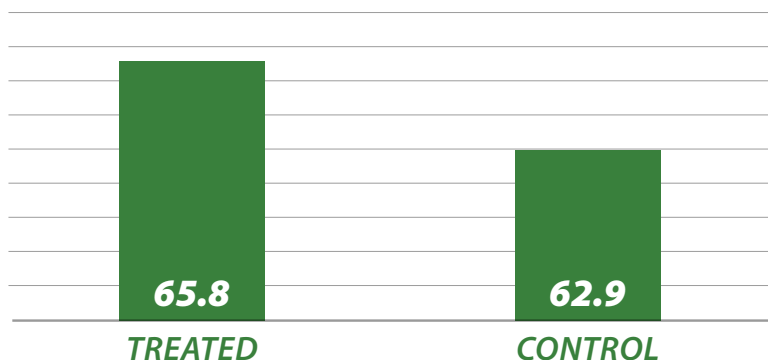
TREATED BU/ACRE

-vs-

62.9

CONTROL BU/ACRE

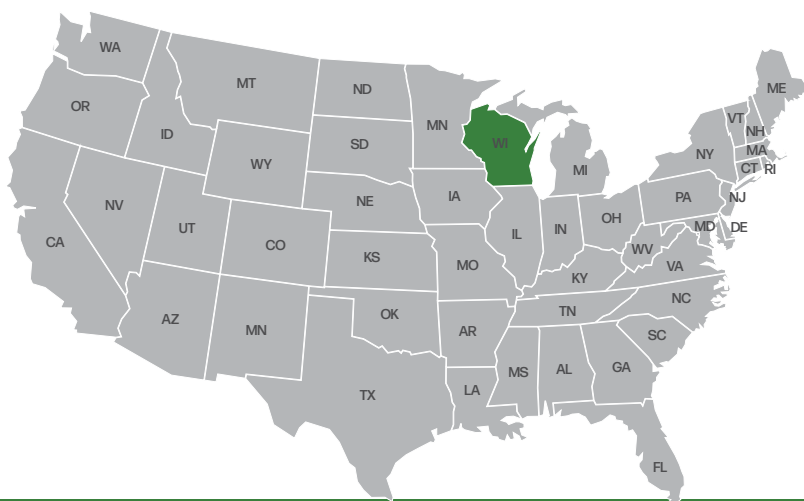
BU/ACRE



2.9

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

WINCHESTER, WI
LOCATION

SOYBEANS
CROP TYPE

14E152N
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 1, 2021
PLANTED

SEPT. 24, 2021
HARVESTED

SoyTM
fx

-vs-

STANDARD
TREATMENT

11.8%

TREATED MOISTURE

-vs-

11.6%

CONTROL MOISTURE

79.4

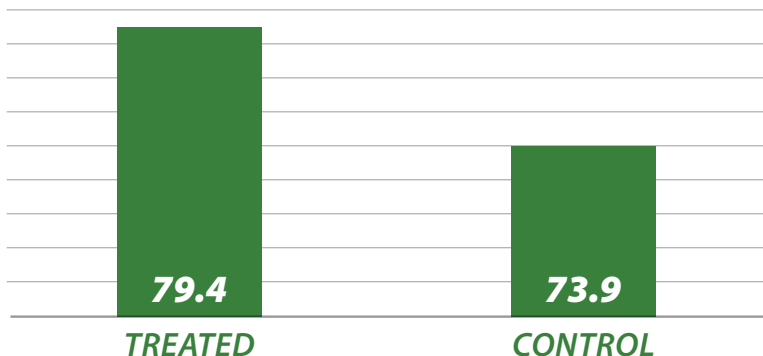
TREATED BU/ACRE

-vs-

73.9

CONTROL BU/ACRE

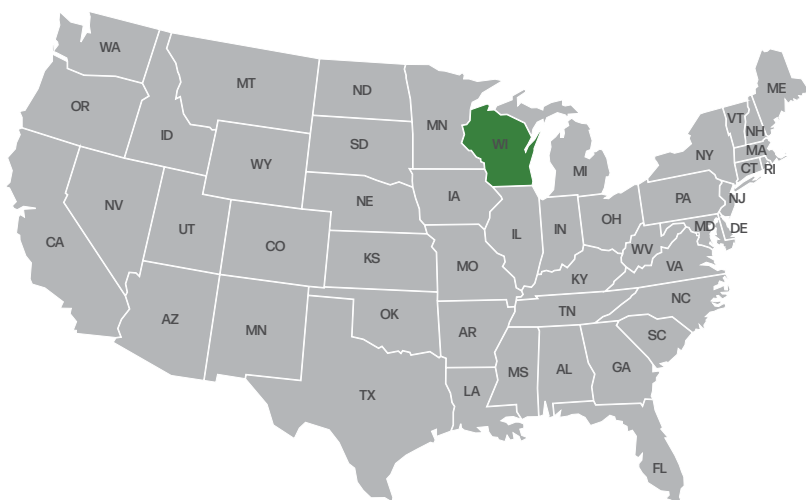
BU/ACRE



5.5

BU/ACRE

ADVANTAGE



ION_{EX}



2021 ION_{FX} DATA



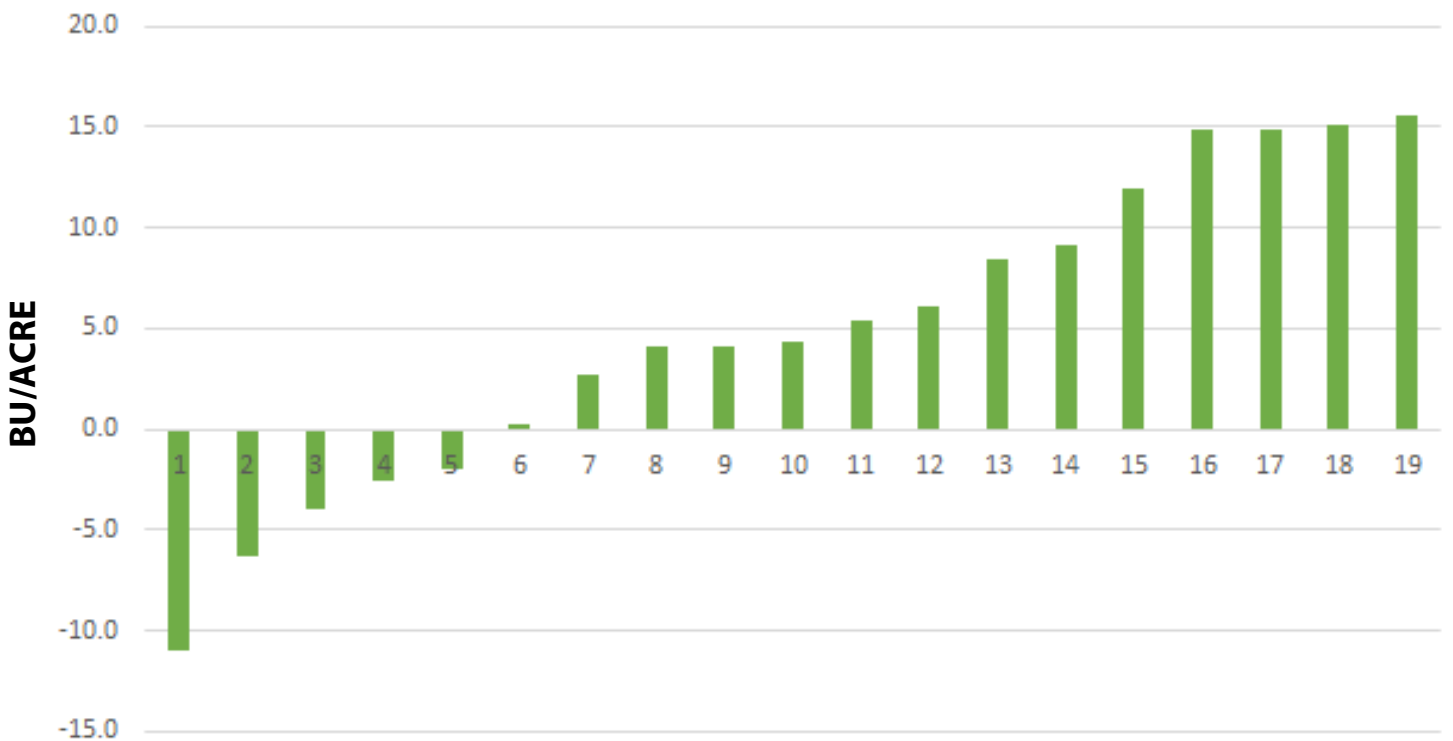
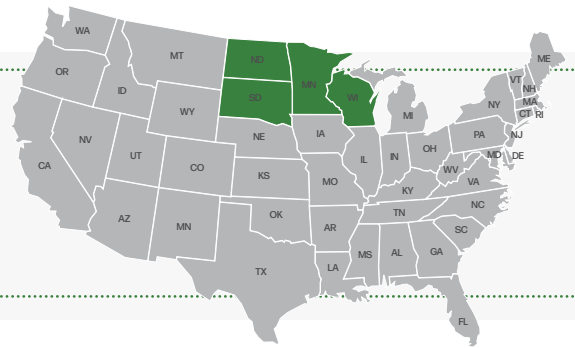
19
DATA POINTS

74%
POSITIVE RESPONSE

4
STATES

4.8 BU/ACRE
AVERAGE INCREASE

13
LOCATIONS



8.4
BU/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

ION_{fx} showed its potential to mitigate heat and drought stress tolerance in 2021. Many of the plots that were feeling the impact of the drought had above average performance from the ION_{fx} treated sections of the field. ION_{fx} is proving its place as a must have stress mitigation tool in corn production.

MULTI-YEAR ION_{FX} DATA



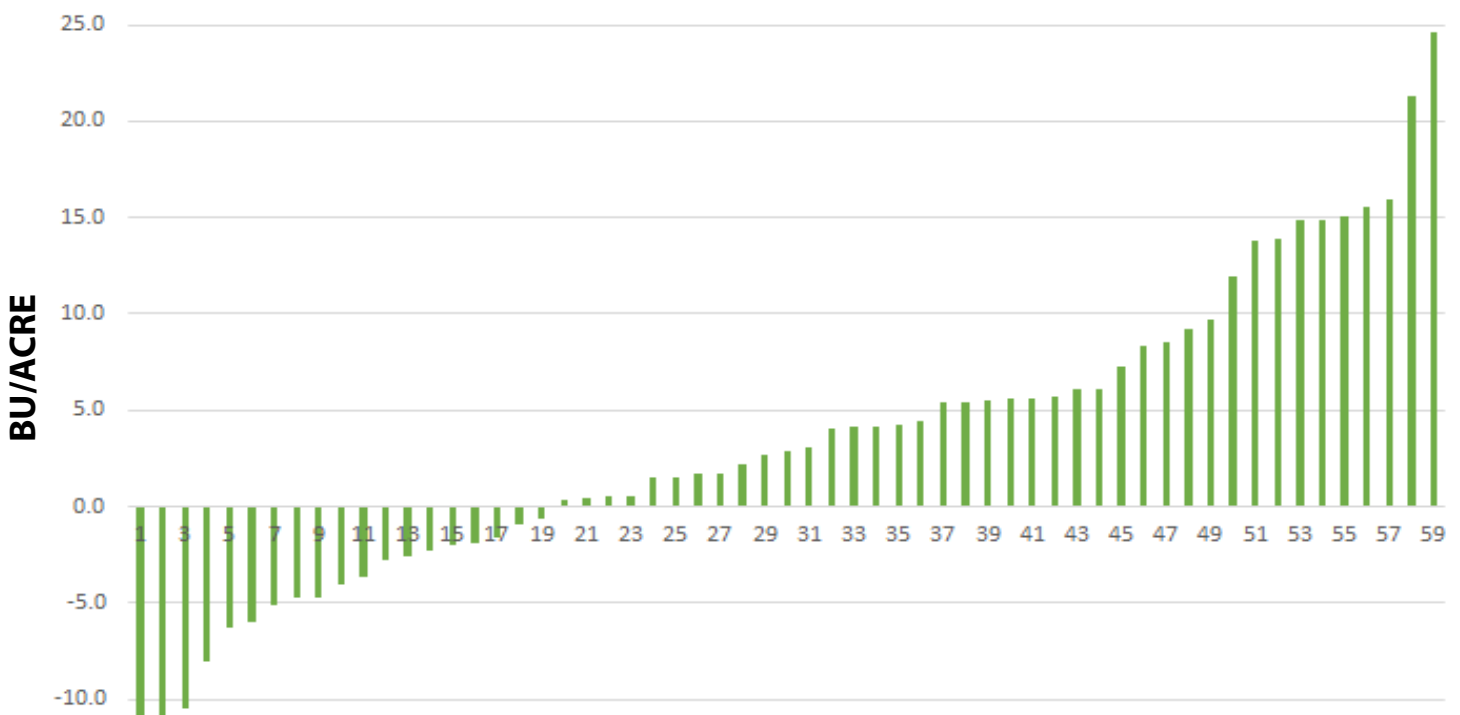
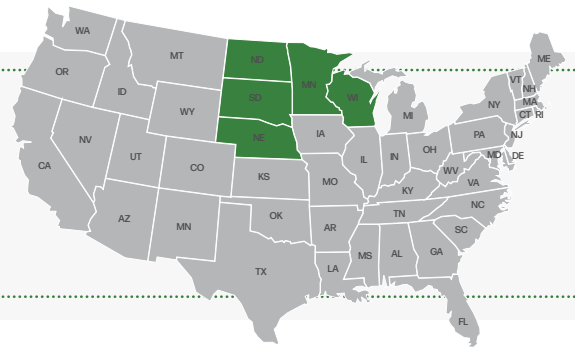
59
DATA POINTS

68%
POSITIVE RESPONSE

5
STATES

3.4 BU/ACRE
AVERAGE INCREASE

23
LOCATIONS



7.3
BU/ACRE

**AVERAGE INCREASE
WHEN POSITIVE**

COMMENTS

ION_{fx} has proven its ability to mitigate plant stress over the past two seasons. One common thing we have seen in the highest performance compared to a control came from the plots that were experiencing the harshest heat and drought stress. The pH modulation ability of ION_{fx} along with its unique ability to open the plant's stoma in high temperatures has resulted in significant yield increases.

2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

FAIRFAX, MN
LOCATION

CORN
CROP TYPE

2
HYBRIDS
TESTED

SEED COAT
APPLICATION METHOD

MAY 3, 2021
PLANTED

OCT. 6, 2021
HARVESTED

ION_{fx}TM

-vs-

CONTROL

17.2%

TREATED MOISTURE

-vs-

17.0%

CONTROL MOISTURE

203.6

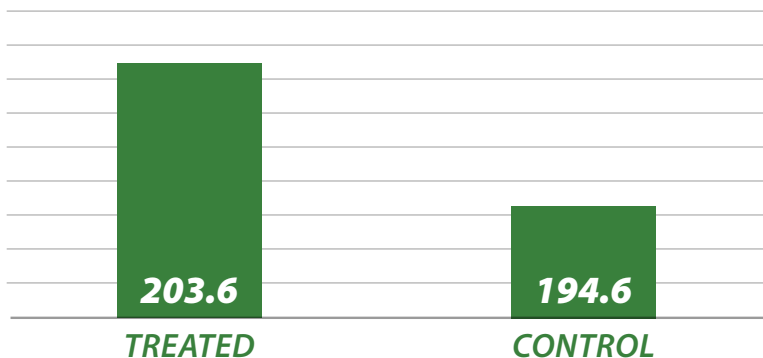
TREATED BU/ACRE

-vs-

194.6

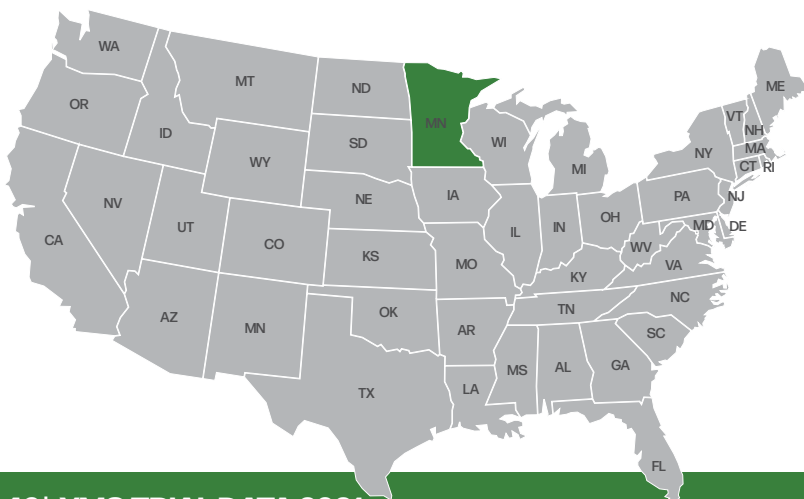
CONTROL BU/ACRE

BU/ACRE



9.0
BU/ACRE

**AVERAGE
ADVANTAGE**



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

COLFAX, ND
LOCATION

CORN
CROP TYPE

LR 9195 DC5122 EZREF
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 12, 2021
PLANTED

OCT. 26, 2021
HARVESTED

ION_{fx}TM

-VS-

CONTROL

11.2%

TREATED MOISTURE

-VS-

11.2%

CONTROL MOISTURE

229.3

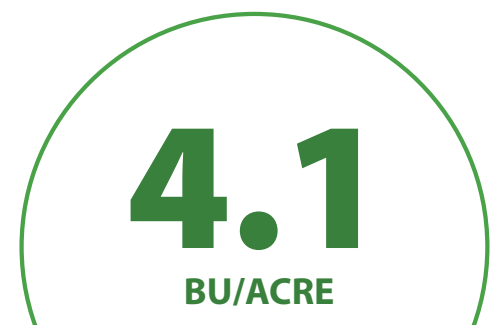
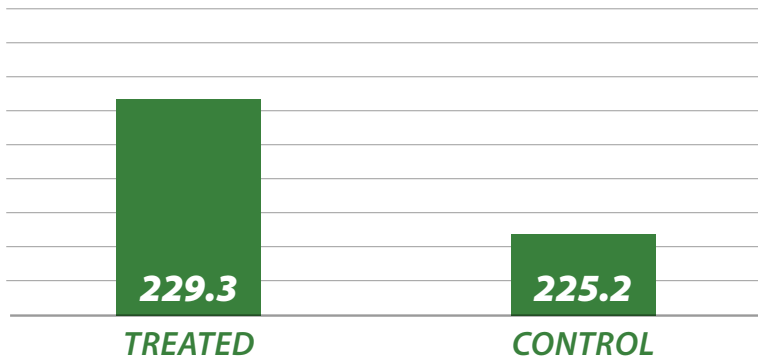
TREATED BU/ACRE

-VS-

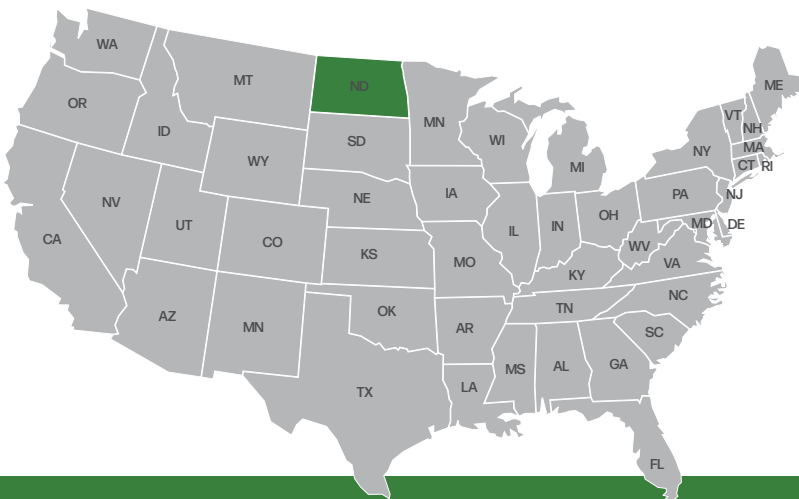
225.2

CONTROL BU/ACRE

BU/ACRE



ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

HARVEY, ND
LOCATION

CORN
CROP TYPE

LR 9181 VIP3220A EZREF
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 14, 2021
PLANTED

OCT. 19, 2021
HARVESTED

ION_{fx}TM

-VS-

CONTROL

17.4%

TREATED MOISTURE

-VS-

17.8%

CONTROL MOISTURE

95.7

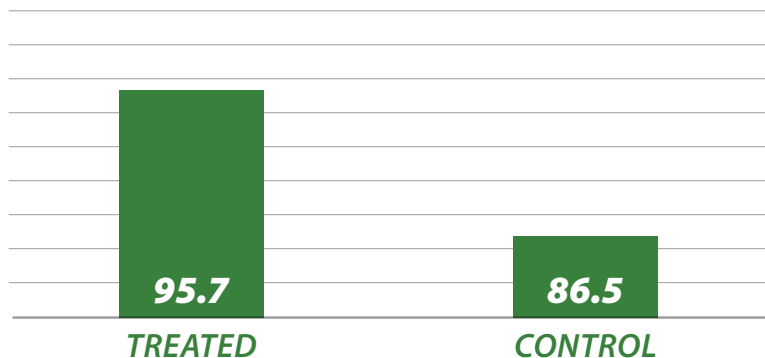
TREATED BU/ACRE

-VS-

86.5

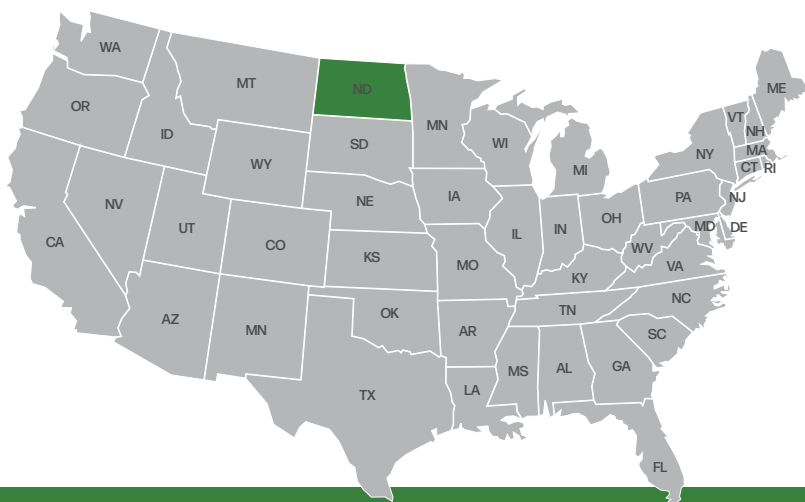
CONTROL BU/ACRE

BU/ACRE



9.2
BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

CLAIRE CITY, SD
LOCATION

CORN
CROP TYPE

LR 9193 VIP3220A EZREF
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 4, 2021
PLANTED

NOV. 2, 2021
HARVESTED

ION_{fx}TM

-VS-

CONTROL

17.7%

TREATED MOISTURE

-VS-

17.1%

CONTROL MOISTURE

204.0

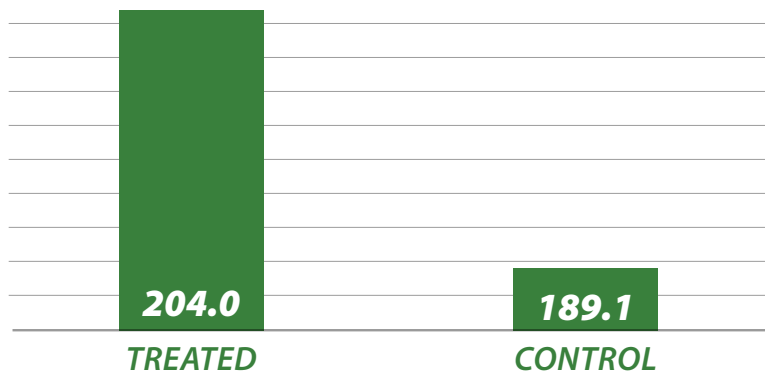
TREATED BU/ACRE

-VS-

189.1

CONTROL BU/ACRE

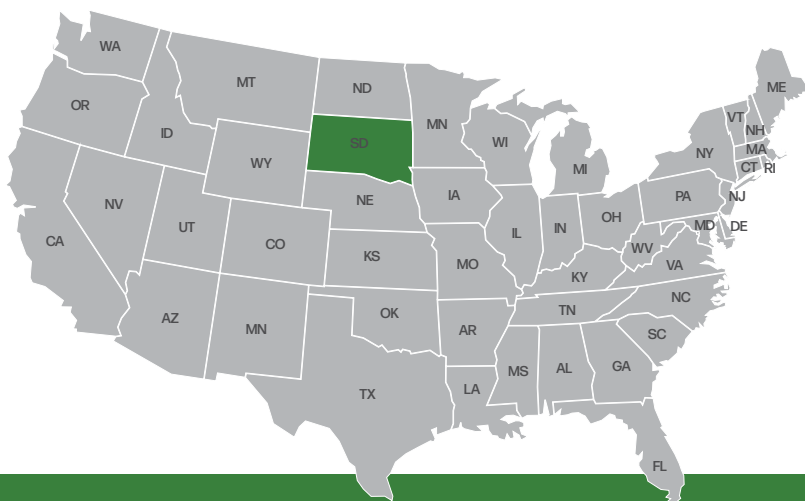
BU/ACRE



14.9

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS



CLAIRE CITY, SD
LOCATION

CORN
CROP TYPE

2
HYBRIDS
TESTED

SEED COAT
APPLICATION METHOD

MAY 13, 2021
PLANTED

NOV. 2, 2021
HARVESTED

IONTM_{fx}

-VS-

CONTROL

18.2%

TREATED MOISTURE

-VS-

18.2%

CONTROL MOISTURE

212.7

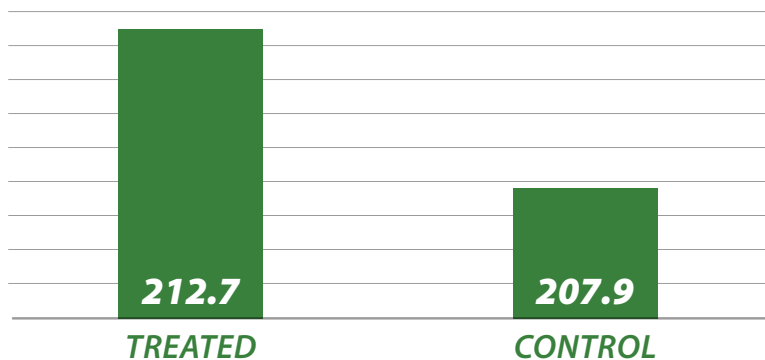
TREATED BU/ACRE

-VS-

207.9

CONTROL BU/ACRE

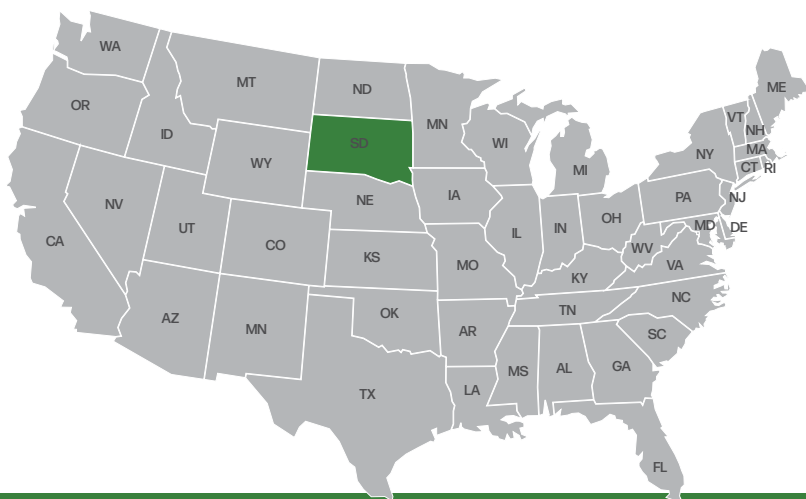
BU/ACRE



4.8

BU/ACRE

AVERAGE
ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

LAKE PRESTON, SD
LOCATION

CORN
CROP TYPE

2
HYBRIDS
TESTED

SEED COAT
APPLICATION METHOD

APR. 30, 2021
PLANTED

SEPT. 28, 2021
HARVESTED

IONTM_{fx}

-VS-

CONTROL

15.2%

TREATED MOISTURE

-VS-

15.0%

CONTROL MOISTURE

189.6

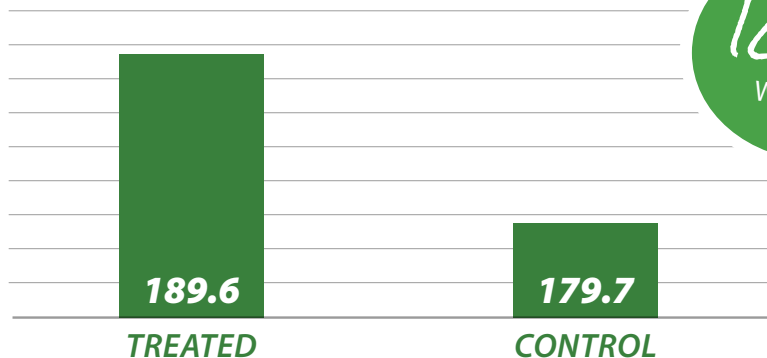
TREATED BU/ACRE

-VS-

179.7

CONTROL BU/ACRE

BU/ACRE

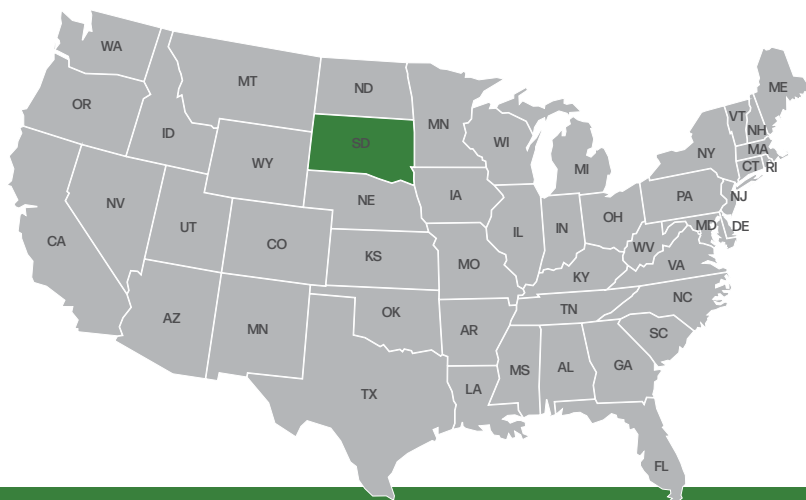


100%
WIN RATE

9.9

BU/ACRE

AVERAGE
ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

LAKE PRESTON, SD
LOCATION

CORN
CROP TYPE

2
HYBRIDS
TESTED

SEED COAT
APPLICATION METHOD

APR. 26, 2021
PLANTED

SEPT. 27, 2021
HARVESTED

IONTM_{fx}

-VS-

CONTROL

15.2%

TREATED MOISTURE

-VS-

15.0%

CONTROL MOISTURE

241.5

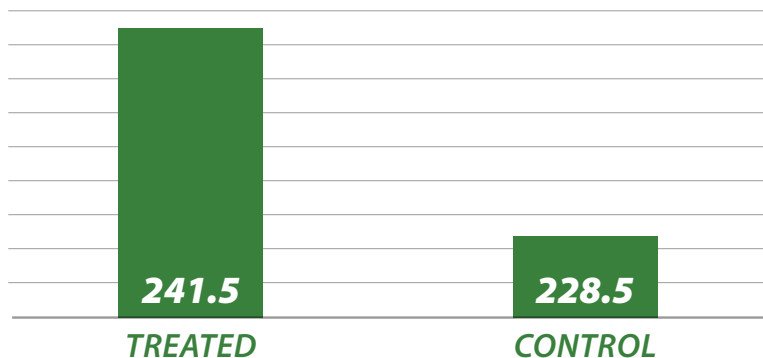
TREATED BU/ACRE

-VS-

228.5

CONTROL BU/ACRE

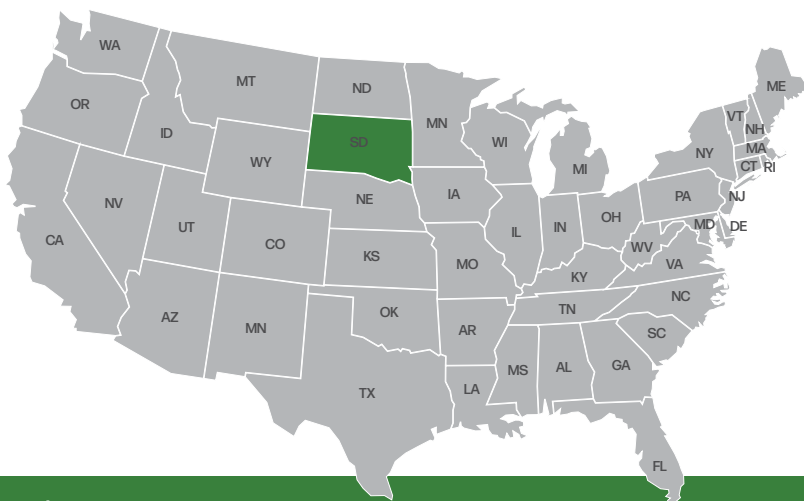
BU/ACRE



13.0

BU/ACRE

AVERAGE
ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

BALDWIN, WI
LOCATION

CORN
CROP TYPE

2
HYBRIDS
TESTED

SEED COAT
APPLICATION METHOD

MAY 14, 2021
PLANTED

OCT. 26, 2021
HARVESTED

ION_{fx}TM

-VS-

CONTROL

19.4%

TREATED MOISTURE

-VS-

19.1%

CONTROL MOISTURE

161.8

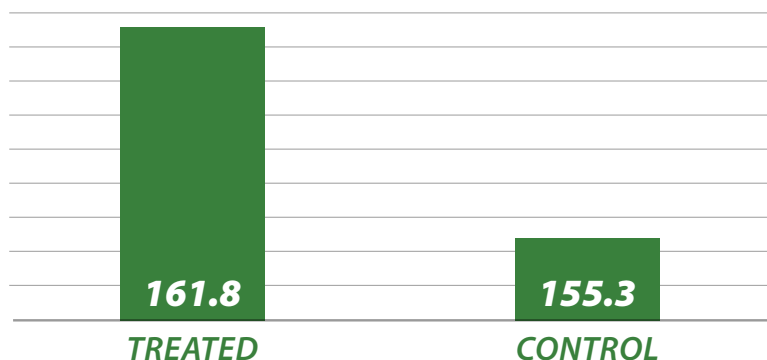
TREATED BU/ACRE

-VS-

155.3

CONTROL BU/ACRE

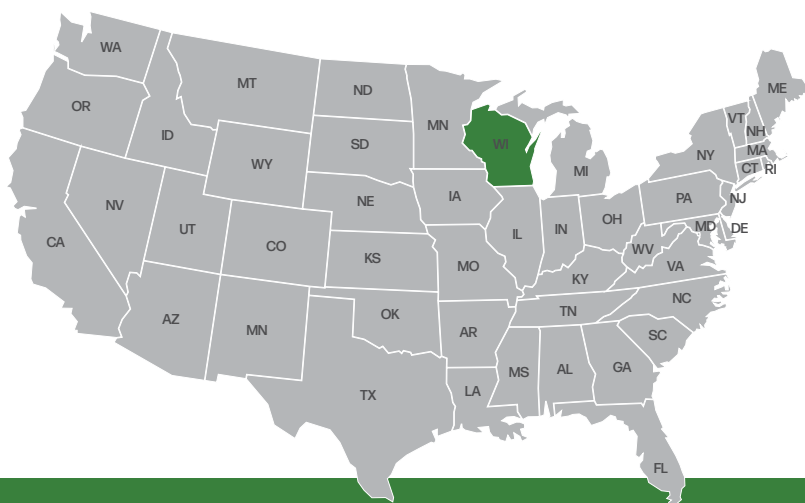
BU/ACRE



6.5

BU/ACRE

**AVERAGE
ADVANTAGE**



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS



DODGEVILLE, WI
LOCATION

CORN
CROP TYPE

LR 9106 PCE
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 11, 2021
PLANTED

NOV. 7, 2021
HARVESTED

ION_{fx}TM

-VS-

CONTROL

14.6%

TREATED MOISTURE

-VS-

15.1%

CONTROL MOISTURE

202.6

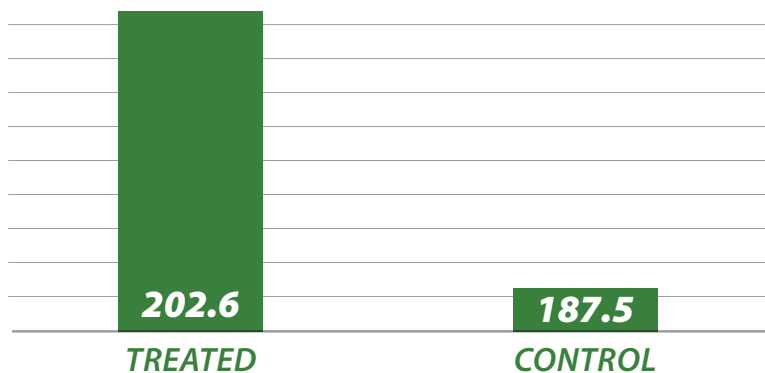
TREATED BU/ACRE

-VS-

187.5

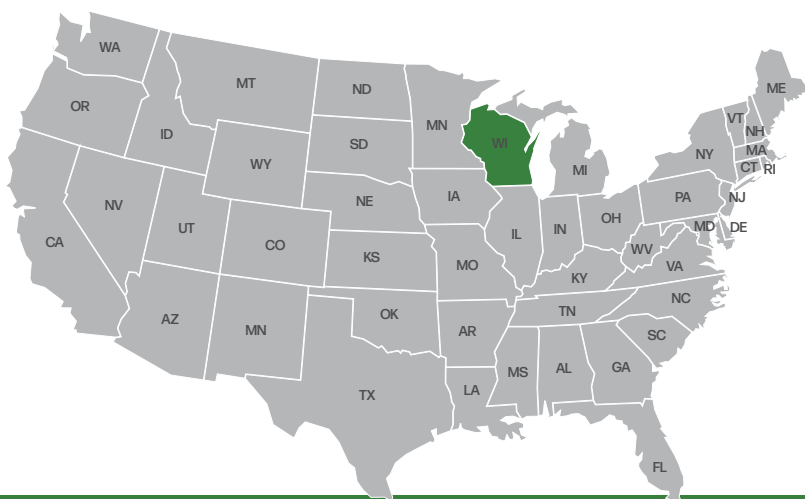
CONTROL BU/ACRE

BU/ACRE



15.1
BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

PLATEVILLE, WI
LOCATION

CORN
CROP TYPE

4296 VT2P RIB
SEED HYBRID/VARIETY

SEED COAT
APPLICATION METHOD

MAY 11, 2021
PLANTED

OCT. 20, 2021
HARVESTED

ION_{fx}TM

-VS-

CONTROL

11.6%

TREATED MOISTURE

-VS-

14.4%

CONTROL MOISTURE

213.6

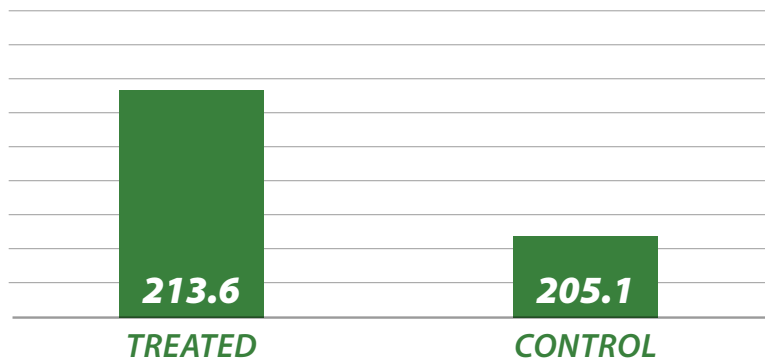
TREATED BU/ACRE

-VS-

205.1

CONTROL BU/ACRE

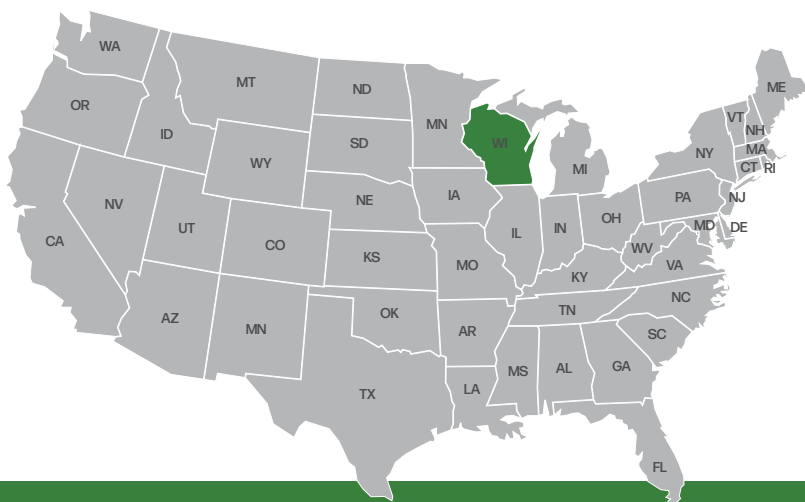
BU/ACRE



8.5

BU/ACRE

ADVANTAGE



2021 YIELDMASTER SOLUTIONS

BIOLOGICAL FIELD TRIAL RESULTS

COLFAX, ND
LOCATION

SILAGE
CROP TYPE

2
HYBRIDS
TESTED

SEED COAT
APPLICATION METHOD

MAY 12, 2021
PLANTED

AUG. 31, 2021
HARVESTED

IONTM_{fx}

-VS-

CONTROL

31.3

TREATED TONS/ACRE @65%

-VS-

28.8

CONTROL TONS/ACRE @65%

35,684.5

TREATED MILK PER/ACRE

-VS-

31,848.5

CONTROL MILK PER/ACRE

3,273 LBS

TREATED MILK PER/TON

-VS-

3,178 LBS

CONTROL MILK PER/TON

2,583.5 LBS

TREATED BEEF PER/ACRE

-VS-

2,337.5 LBS

CONTROL BEEF PER/ACRE



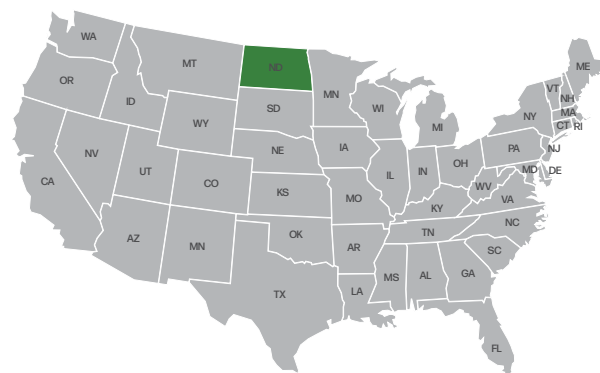
95 LBS
MILK/ACRE
ADVANTAGE



2.5
TONS/ACRE
ADVANTAGE



246 LBS
BEEF/ACRE
ADVANTAGE



PHOTOS FROM THE FIELD

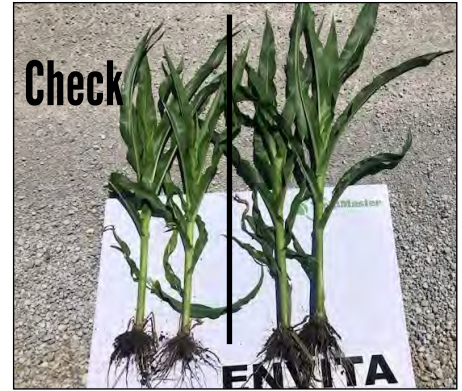
envita



Lake Preston, SD



Grand Forks, ND



Ashkum, IL

IONTM_{fx}



Southwest WI

SoyTM_{fx}



Cannon Falls, MN



Ellsworth, WI



Ortonville, MN

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