



LATMC





Brandt Product Update

Clay Atkins

February 13, 2019

BRANDT

SMART FORMULATIONS

- BRANDT Smart Quatro®  S, B, Mn, Mo, Zn
- BRANDT Smart Quatro® Plus  N, S, B, Mn, Mo, Zn
- BRANDT Smart Trio®
- BRANDT Smart B
- BRANDT Smart B-Mo
- BRANDT Smart Cu
- BRANDT Smart Fe
- BRANDT Smart K B  N, K, B
- BRANDT Smart Mg
- BRANDT Smart Mn
- BRANDT Smart P
- BRANDT Smart Sulfur Plus  N, S, B, Mn, Mo, Zn
- BRANDT Smart Zn

SMART KEY FACTS

- Proprietary molecules are formulated for rapid nutrient uptake and delivery to plant growing points
- Ready to use formulations tank mix with herbicides, fungicides and insecticides
- Formulated to deliver micronutrient combinations that are in high demand in row crops and will improve crop health, stress and yield
- Nutrients are protected so that they will not bind with the herbicide or other nutrients
- Nutrients assist herbicide metabolism and help mitigate crop stress

Overview of N-Boost® 5

- N-Boost 5 is a unique formulation comprised of:

5 % urea nitrogen

+

Patented sugarcane extract

- The formulation helps stimulate chloroplast and mitochondria activity, which in turn helps boost plant energy, growth, nutrient utilization and yield.

N-Boost® 5

Foliar Nutrient Supplement

5-0-0

Information regarding the contents and levels of metals in this product is available on the Internet at <http://www.zespco.org/metals.htm>. Information about the components of this lot of fertilizer may be obtained by writing to Donaghy's Industries Ltd. and giving the lot number which is found on the label.

WARNING: Causes skin and eye irritation. May cause respiratory irritation.

Precautionary Statements: Wear protective gloves, protective clothing and eye/face protection. Use only in a well-ventilated area. Do not breathe mist/vapors. Wash thoroughly after handling. **First Aid:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. Take off contaminated clothing and wash before reuse. If on skin: Wash with plenty of water. If skin irritation occurs, get medical attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell. **Storage and Disposal:** Do not contaminate water, food or feed by storage or disposal. Keep out of reach of children. Store container tightly closed in a cool/well ventilated place. Store locked up. Dispose of contents/container in accordance with local authority requirements.

CONDITIONS OF SALE: Acceptance and use of this product will be deemed to be acceptance of these conditions of sale. Results from the use of this product may be affected by factors beyond Donaghy's control. These factors include but are not limited to timing, use, time of application, weather, soil moisture, crop, crop life cycle and even though the product is fit for its stated purpose and label directions have been followed. Donaghy's will replace any defective product free of charge, but to the extent permitted by law all other warranties, representation conditions or obligations whether imposed or implied by law or otherwise, and the manufacturer's and supplier's liability for any indirect special or consequential losses or damages of any kind arising out of the supply and/or use of this product, including where it arises out of negligence, are expressly excluded. In any event, to the extent permitted by law, the manufacturer's and supplier's liability arising out of the supply and use of this product is limited to the amount paid for the specific product.

N-Boost is a registered trademark of Donaghy's Industries Ltd.

BRANDT. **DONAGHYS**

Exclusively Distributed By:
Brandt Consolidated, Inc.
2035 South Koko Mill Road
Springfield, Illinois 62711 USA
www.brandt.co 800 300 6550

Guaranteed By:
Donaghy's Industries Ltd.
63 Bradshaw Street
Dunedin, New Zealand

Guaranteed Analysis

Total Nitrogen (N).....	5.0%
5.0% Urea Nitrogen	

Derived from urea F2245

ALSO CONTAINS NONPLANT FOOD INGREDIENTS:

3% Fermentation extracts
(Derived from fermentation of sugarcane using mixed yeast and lactic acid bacteria culture is not a viable culture.)

General Information

N-BOOST 5 is recommended for use on field, row and vegetable crops listed below as part of a balanced fertility program.

Rate Recommendations

Root and Tuber Vegetables: (Including potatoes, sugar beet, sweet potatoes, carrots, etc.): Apply 2-3 qt/A at tuber initiation and repeat 3 weeks later.

Leafy Vegetables: (Including spinach, lettuce, Brassica): Apply 1-2 qt/A 2 weeks prior to first cut.

Bulb Vegetables: (Including onions, garlic, leeks): Apply 1-2 qt/A at first true leaf and repeat 4 weeks later.

Cucurbit Vegetables: (Including melons, squash, cucumbers): Apply 1-2 qt/A during vegetative growth and repeat as needed.

Fruiting Vegetables: (Including tomatoes, peppers) and **Legume Vegetables:** (Including peas, green beans, sweet peas): Apply 2-3 qt/A at first flowering and repeat 4 weeks later.

Corn and Soybeans: Apply 2-3 qt/A between V4 and V9.

Cereal Grains: (Including rice, wheat): Apply 2-3 qt/A at end of tillering or at early stem extension.

Cotton: Apply 2-3 qt/A at first flowering and repeat 2 weeks later.

Pasture: (grass and legumes): Apply 1X-2 qt/A 3-5 days after each cutting and/or grazing.

Sugarcane: Apply 1X-2 qt/A at 20 inch cane height and repeat 30 days later.

Mixing and Handling Instructions

Put 1/3 to 2/3 of total desired water volume in tank. Add adjuvant(s) and pesticide(s) if desired and agitate until thoroughly mixed. Add desired amount of N-BOOST 5 and agitate until thoroughly mixed. Fill tank with remainder of desired water. A jar test is a good field practice for evaluating compatibility of multiple chemical mixtures.

Net Contents: 2.5 gal (9.46 L)
Density: 87.5 lb/gal @ 65°F
Net Weight: 21.6 lb (9.79 kg)
Packaged 2x 2.5 gal (9.46 L)

4001500N100
2015-08 (GH5)

ATS

Brandt Sulfur

Premium Liquid Fertilizer

GENERAL INFORMATION

BRANDT SULFUR is an excellent source of ammoniacal nitrogen and sulfur that is quickly absorbed by the plant. BRANDT SULFUR is a neutral to slightly basic pH, clear liquid solution, containing 12% nitrogen and 26% sulfur. BRANDT SULFUR is compatible with most liquid fertilizer materials. Nitrogen and sulfur are important components of proteins. Sulfur deficiency can affect the plant's ability to utilize nitrogen for protein synthesis.

APPLICATION RATE	LBS. NUTRIENT PER ACRE PER GAL					
Nutrient	0.5	1.0	1.5	2.0	2.5	3.0
Nitrogen (N)	0.7	1.3	1.9	2.6	3.3	3.9
Sulfur (S)	1.3	2.8	4.2	5.7	7.1	8.6

APPLICATION RATE	LBS. NUTRIENT PER 1000 SQ FT PER FL OZ					
Nutrient	3	6	9	12	15	18
Nitrogen (N)	0.03	0.06	0.09	0.12	0.16	0.18
Sulfur (S)	0.07	0.13	0.20	0.27	0.34	0.40

Information concerning the raw materials composing the product in this container can be obtained by writing to Brandt Consolidated, Inc. and referring to the product name, or visit our web site: www.brandtconsolidated.com

BRANDT

Guaranteed By:
Brandt Consolidated, Inc.
2935 South Koke Mill Road
Springfield, Illinois 62711 USA
www.brandtconsolidated.com
800.300.6559

12-0-0

Guaranteed Analysis

Total Nitrogen (N)	12.0%
12.0% Ammoniacal Nitrogen	
Sulfur (S)	26.0%
26.0% Combined Sulfur	

Derived from Ammonium Thiosulfate.

F76

Mixing Instructions

Put 1/3 to 2/3 of total desired water volume in tank. Add adjuvant(s) if desired and agitate until thoroughly mixed. Add pesticide(s) if desired and agitate until thoroughly mixed. Add desired amount of BRANDT SULFUR and agitate until thoroughly mixed. Fill tank with remainder of desired water. A jar test is a good field practice for evaluating compatibility of multiple chemical mixtures. Caution should be used when mixing BRANDT SULFUR with acids or other acidic materials below a pH of 6.

Weight per gallon: 11.0 lbs

Freezing temperature: 32°F

CAUTION: KEEP OUT OF REACH OF CHILDREN

CAUTION: Harmful if swallowed. Avoid contact with skin, eyes and clothing. Causes eye irritation. Avoid breathing spray mist. Wash hands after using thoroughly after using. In case of eye contact, flush eyes with water for at least 10 minutes and get medical attention.

STORAGE AND DISPOSAL: Do not contaminate water, food, or feed by storage or disposal. Store in a cool, dry, locked area out of reach of children. Protect from excessive heat or cold. Triple rinse (or equivalent) and dispose of container in accordance with local, state and federal regulations.

Warranty: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use; but neither this warranty nor any other warranty of merchantability or fitness of a particular product expressed or implied, extends to the use of this product contrary to label conditions, or under conditions not reasonably foreseeable to the seller; and buyer assumes the risk of any such use.



1023-01-100

Net Contents:
2.5 Gal. per bottle
Packaged 2 x 2.5 gal
Net Weight: 27.5 lbs.

BRANDT

2017 BRANDT Smart Quatro[®] on Cotton

- Brooksville, MS
- Population: 45,000 seeds/ac
- 38" row spacing
- Small plot trial (506.8ft²)
- 4 replicates
- Applications made with with backpack sprayer
- Adjuvant: BRANDT Ultra 90 (16oz/100gal)
- *trial location was very wet in the spring, and seedbed was rough

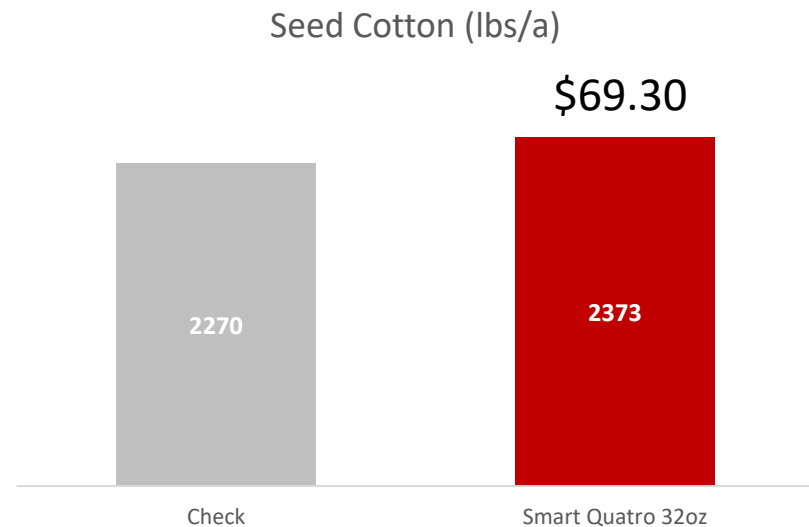


- Crop: Cotton
- Location: Mississippi
- Dates:
 - Planting: May 9, 2017
 - Application: June 26, 2017
 - Harvest: October 27, 2017

- Objective: Evaluate the ability of BRANDT Smart Quatro to increase cotton yield compared to the check

- Treatments:

1. Untreated
2. 1 application- BRANDT Smart Quatro® (32oz/ac) @ match head square



BRANDT Smart Quatro increased cotton yield by an average of **103lbs/ac**- a **4.5%** increase compared to the standard grower practice. **ROI @ \$.75**

2017 BRANDT Smart Quatro® on Cotton

- Starkville, MS
- Population: 45,000 seeds/ac
- 38" row spacing
- Small plot trial (506.8ft²)
- 4 replicates
- Applications made with with backpack sprayer
- Adjuvant: BRANDT Ultra 90 (16oz/100gal)
- *trial location was very wet in the spring

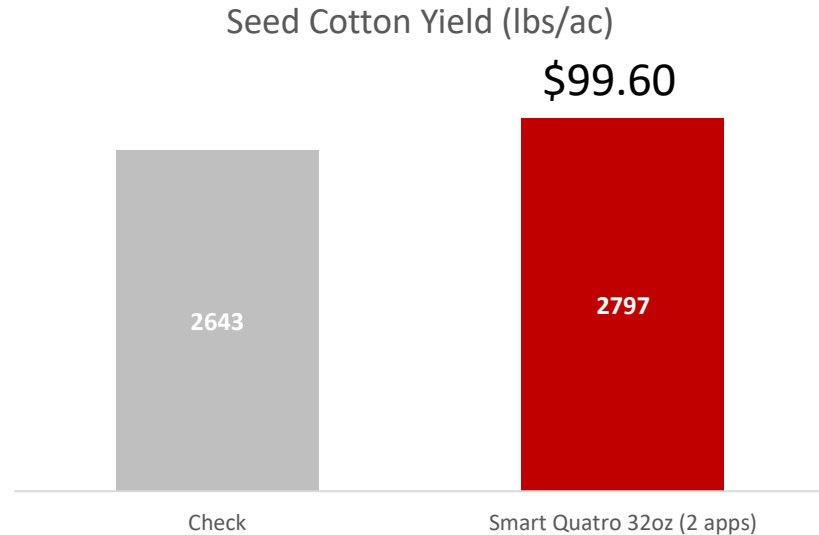


- Crop: Cotton
- Location: Mississippi
- Dates:
 - Planting: April 25, 2017
 - Application: June 26, 2017
 - Harvest: October 6, 2017

- Objective: Evaluate the ability of BRANDT Smart Quatro to increase cotton yield compared to the check

- Treatments:

1. Untreated
2. 2 applications- BRANDT Smart Quatro[®] (32oz/ac + 32oz/ac) @ match head square + early bloom



BRANDT Smart Quatro increased cotton yield by an average of **154lbs/ac**- a **5.8%** increase over the check **ROI @ \$.75**

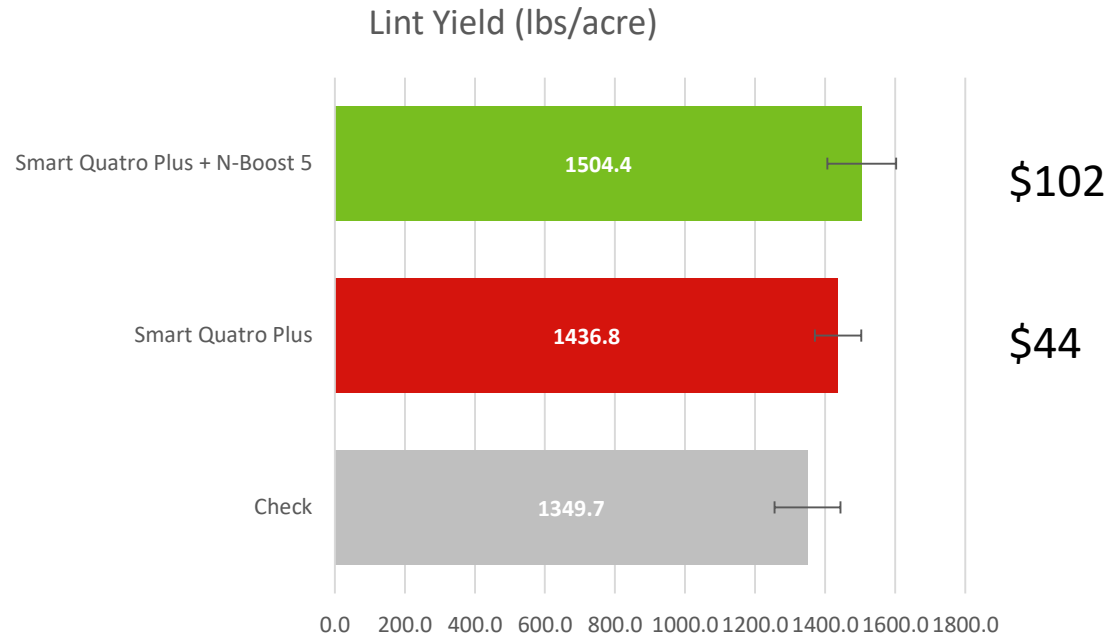
2018 N-Boost 5 on Cotton

- Jackson, TN
- 5 replicates
- Small plot trial
- 2 foliar applications made
- Application timings:
 - 1st app: Match Head Square
 - 2nd app: Early Bloom

- Crop: Cotton
- Location: Jackson, TN

▪ **Objective:** Evaluate the ability of N-Boost 5 use in a foliar fertilizer program to increase cotton yield compared to the foliar program alone and the untreated check.

- **Treatments:**
 1. Untreated Check
 2. 1qt BRANDT® Smart Quatro Plus
 3. 1qt BRANDT® Smart Quatro Plus + 1qt N-Boost 5



Both BRANDT foliar fertilizer treatments showed increased lint yield over the check. Cotton treated with **Smart Quatro Plus and N-Boost 5** showed a yield increase of **154.7lbs/a** over the check, and **67.6lbs/a** over cotton treated with Smart Quatro Plus alone. **ROI @ \$.75**



2018 BRANDT® Smart System on Cotton

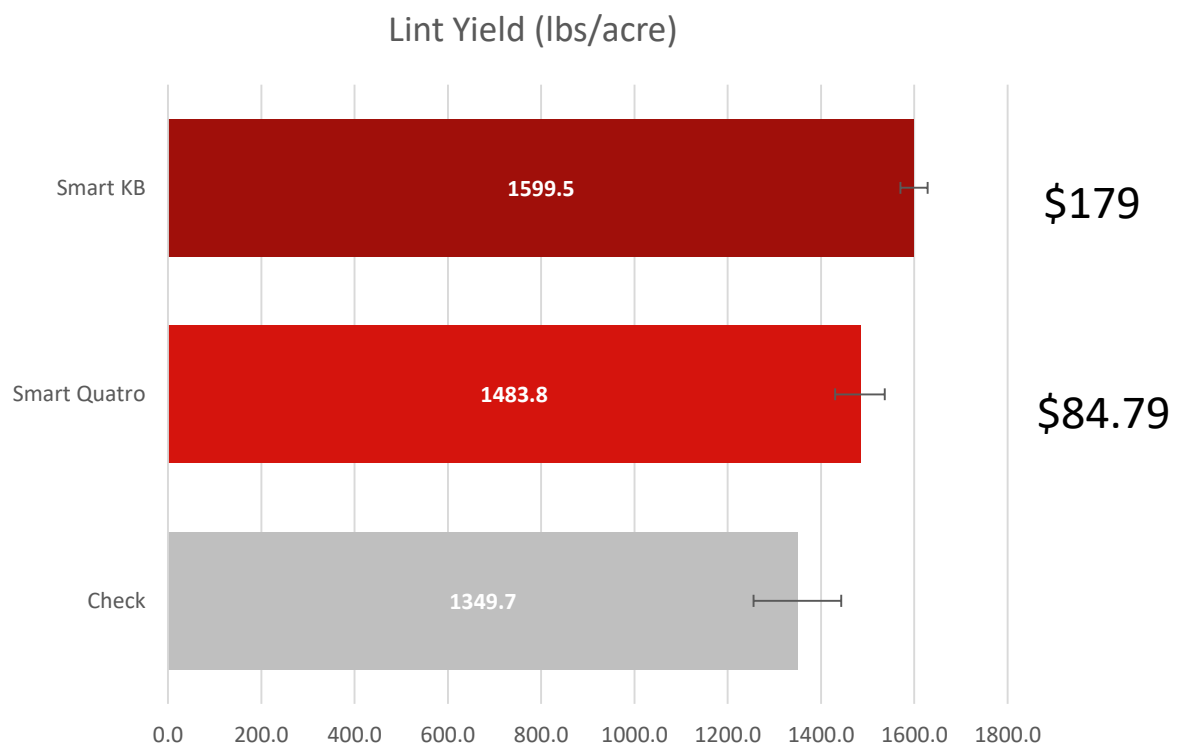
- Jackson, TN
- 5 replicates
- Small plot trial
- 2 foliar applications
- Application timings:
 - Match Head Square
 - Early Bloom
 - 2 weeks later



- Crop: Cotton
- Location: Jackson, TN

▪ Objective: Evaluate the ability of BRANDT Smart System foliar fertilizer products to increase cotton yield compared to the untreated check.

- Treatments:
 1. Untreated Check
 2. 1qt BRANDT® Smart Quatro-2apps (MHS + early bloom)
 3. 1qt BRANDT® Smart KB-2apps (early bloom + 2 weeks later)



Both BRANDT foliar fertilizer treatments showed increased lint yield over the check. Cotton treated with **BRANDT Smart Quatro** showed a **9.9%** yield increase of **134.2lbs/a** over the check. Cotton treated with **BRANDT Smart KB** showed a statistically significant **18.5%** yield increase of **249.9lbs/a** over the check. **ROI @ \$.75**



2018 N-Boost 5 on Cotton

- Starkville, MS
- Small plot trial; 12.67ft x 40ft
- 4 replicates
- 38" rows
- 45,000 seeds/acre
- 1 foliar applications made
- Application timings:
 - 1st app: Match Head Square



- Crop: Cotton
- Location: Starkville, MS
- Dates:
 - Planting: May 7, 2018
 - Harvest: October 9, 2018

▪ Objective: Evaluate the ability of N-Boost 5 use in a foliar fertilizer program to increase cotton yield compared to the foliar program alone and the untreated check.

▪ Treatments:

1. Untreated Check
2. 1qt BRANDT® Smart Sulfur Plus + 1qt N-Boost 5



Although the BRANDT Smart Sulfur treatment alone yielded less than the check addition of **N-Boost 5** in a foliar program with **BRANDT® Smart Sulfur** showed an increased lint yield of **394lbs/a**, an **11.9%** yield increase over the check.

ROI @ \$.75

2018 BRANDT Smart System on Cotton

- Starkville, MS
- Small plot trial; 12.67ft x 40ft
- 4 replicates
- 38" rows
- 45,000 seeds/acre
- 2 foliar applications made
- Application timings:
 - Match Head Square
 - Early Bloom
 - 2 weeks later

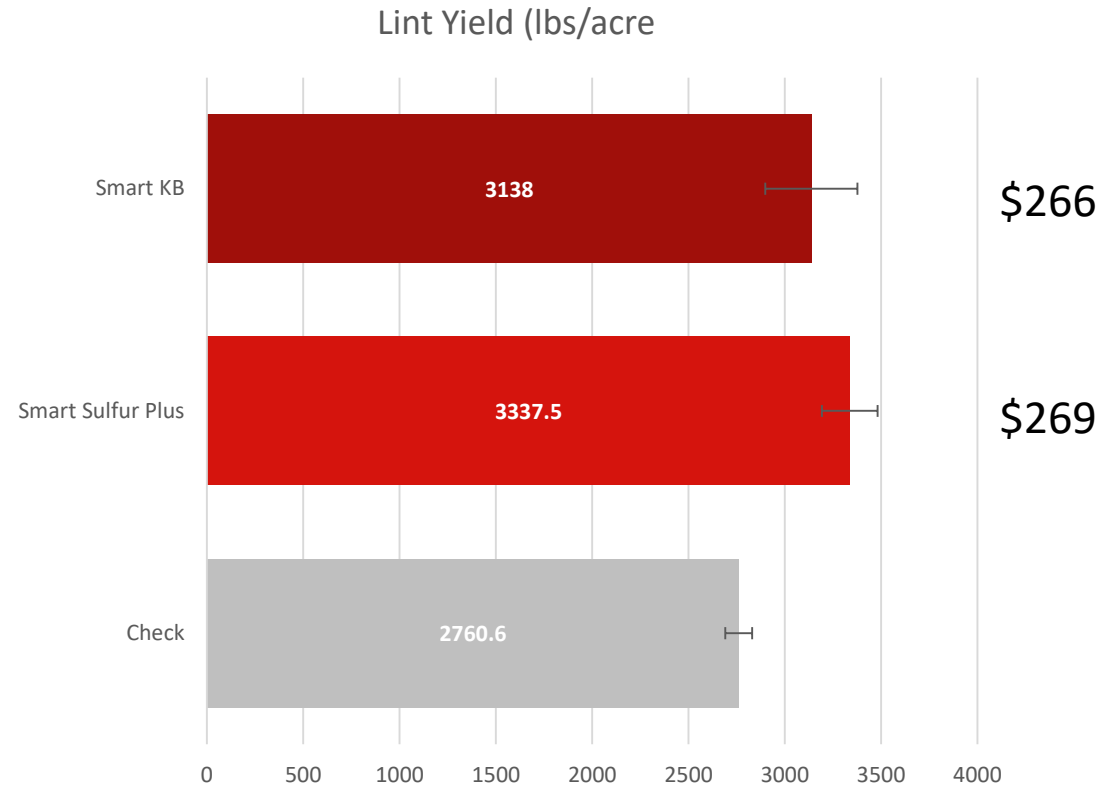


- Crop: Cotton
- Location: Starkville, MS
- Dates:
 - Planting: May 7, 2018
 - Harvest: October 9, 2018

▪ Objective: Evaluate the ability of BRANDT Smart System foliar fertilizer products to increase cotton yield compared to the untreated check.

▪ Treatments:

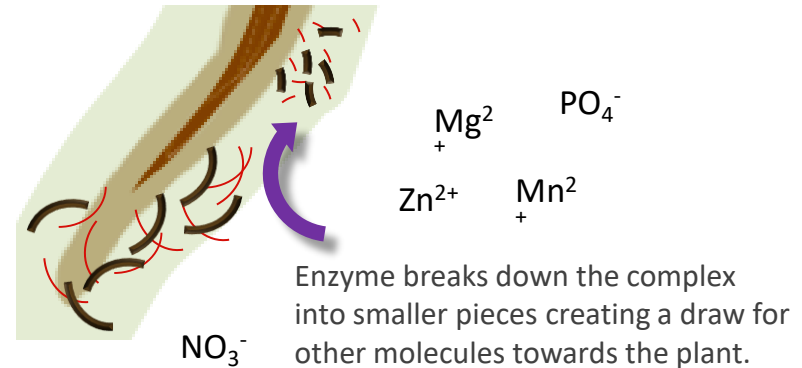
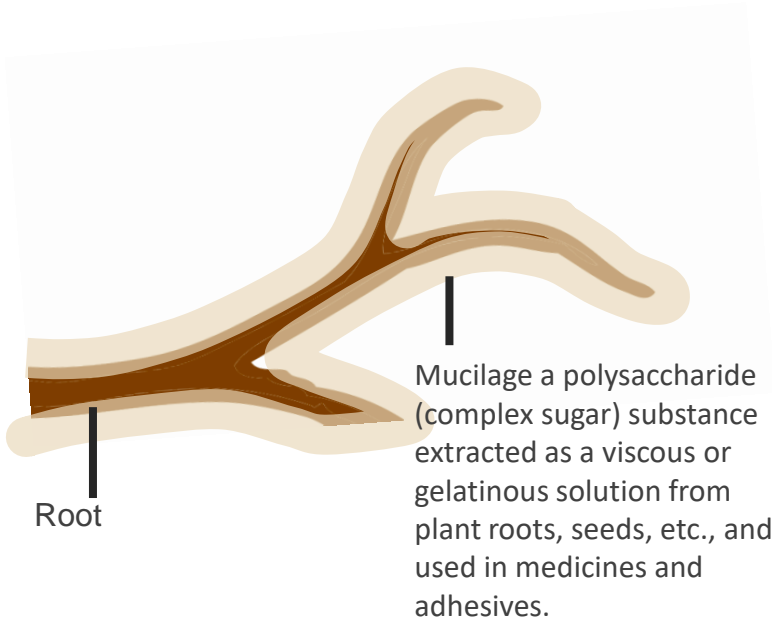
1. Untreated Check
2. 1qt BRANDT® Smart Sulfur Plus- 2apps (MHS + early bloom)
3. 1qt BRANDT® Smart KB- 2apps (early bloom + 2 weeks later)



Both BRANDT foliar fertilizer treatments showed increased lint yield over the check. Cotton treated with **BRANDT Smart Sulfur Plus** showed a statistically significant yield increase of **20.9% or 576.9lbs/a** over the check. Cotton treated with **BRANDT Smart KB** showed an **13.7%** yield increase of **377.4lbs/a** over the check. **ROI @ \$.75**

BRANDT® EnzUp™ Zn: Concentrated Liquid Enzyme and Nutrient Solution

- Contains two distinct enzymes that cleaves the mucilage layer around the roots, which creates a draw and leads to increased water and nutrient uptake.



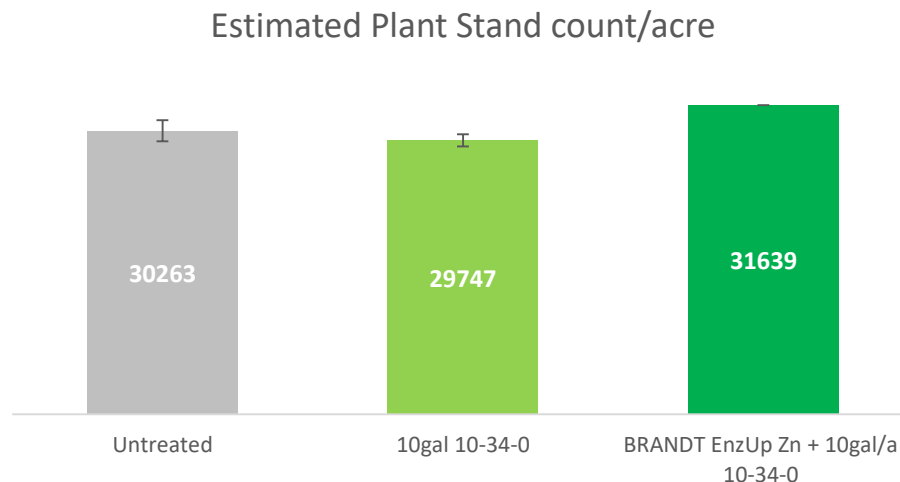
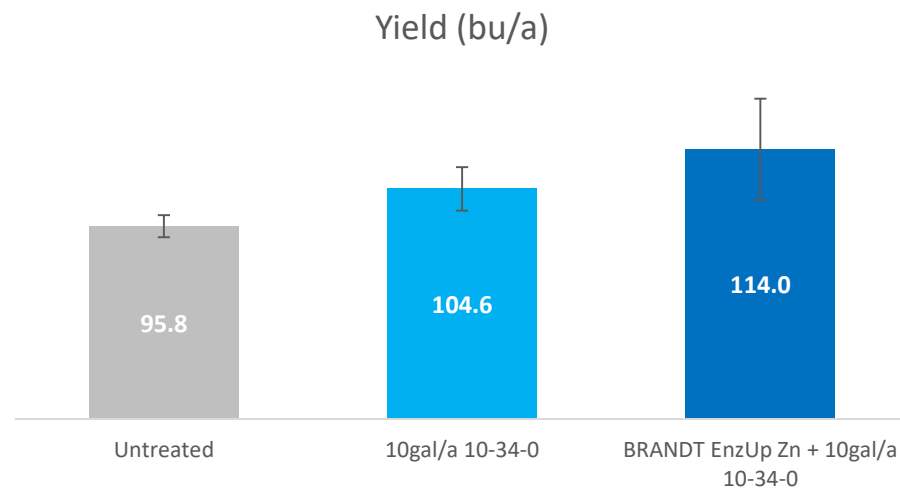
BRANDT® EnzUp™ Zn provides the right amount of enzyme right where you need it and when you need it most by continuing to breakdown plant

- Crop: Corn
- Location: Mississippi
- Dates:
 - Planting: May 3rd, 2017
 - Harvest: August 29, 2017

- Objective: Evaluate the ability of BRANDT EnzUp Zn to improve early plant height and increase corn yield compared to starter alone and check (no starter)

- Treatments:

1. Untreated Check
2. 10gal/ac 10-34-0
3. 1qt/ac BRANDT EnzUp Zn + 10gal/ac 10-34-0

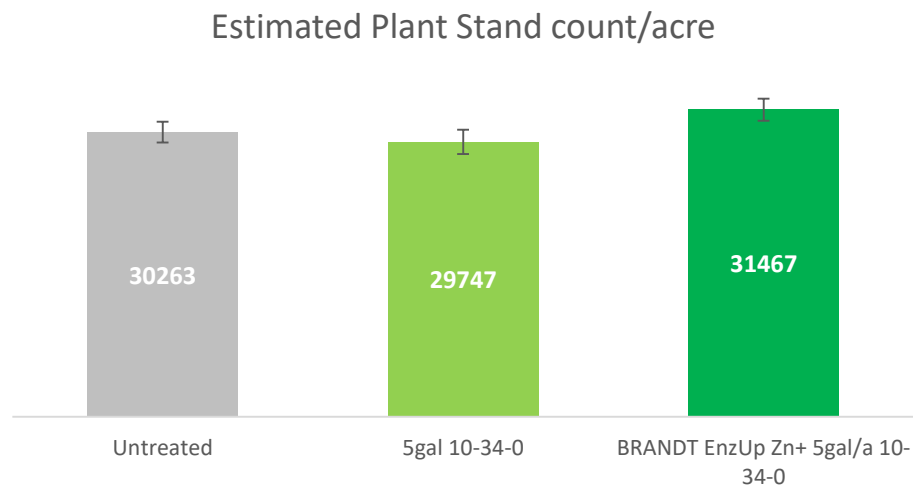
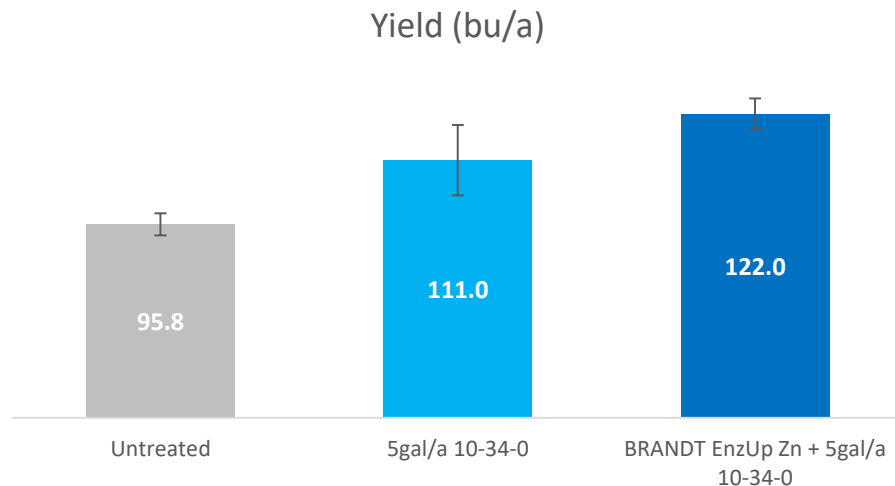


BRANDT EnzUp Zn increased yield by 18.2 bu/a over the check and 9.4 bu/a over the plots treated with 10 gal/a 10-34-0 alone. Also, nine days after emergence corn plants treated with **BRANDT EnzUp Zn** showed an increase in plant stand count compared to the check and a statistically significant increase ($p=0.02$) in plant stand count compared to plots treated with 10 gal/a 10-34-0 alone.

- Crop: Corn
- Location: Mississippi
- Dates:
 - Planting: May 3rd, 2017
 - Harvest: August 29, 2017

- Objective: Evaluate the ability of BRANDT EnzUp Zn to improve early plant height and increase corn yield compared to a reduced rate of starter alone and check (no starter)

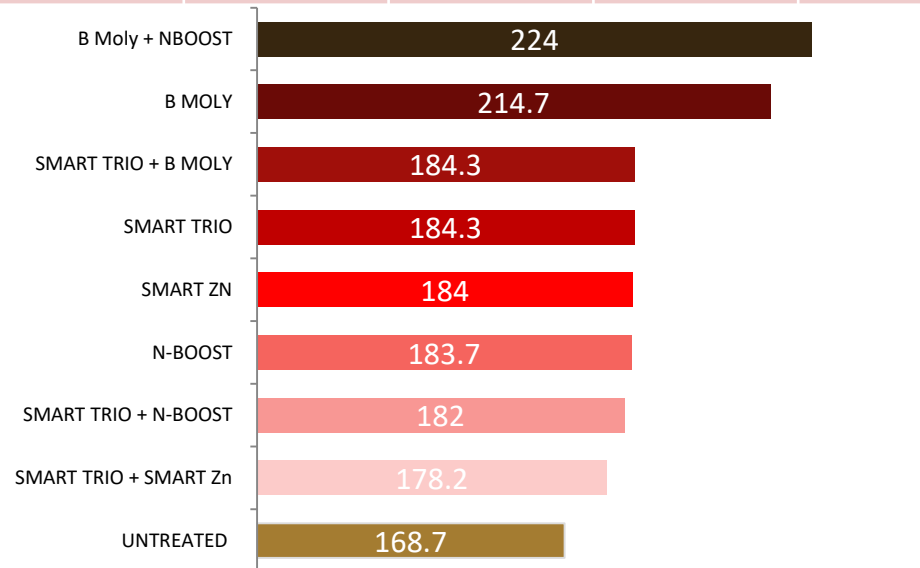
- Treatments:
 1. Untreated Check
 2. 5gal/ac 10-34-0
 3. 1qt/ac BRANDT EnzUp Zn + 5gal/ac 10-34-0



BRANDT EnzUp Zn increased yield by 26.2 bu/a over the check and 11 bu/a over the plots treated with 5 gal/a 10-34-0 alone. Also, nine days after emergence corn plants treated with **BRANDT EnzUp Zn** showed an increase in plant stand count compared to the check and compared to plots treated with 5 gal/a 10-34-0 alone.

Winchester, AR 2013 Rice

Treatment Name	Rate (Ounces per Acre)	Timing	Yield	Percent Increase
UNTREATED			168.7	0
SMART TRIO + SMART Zn	32 + 16	V5- tillering	178.2	5.6
SMART TRIO + N-BOOST	32 + 64	V5 - tillering	182	7.9
N-BOOST	64	V5- tillering	183.7	8.9
SMART ZN	32	V5-Tillering	184	9.1
SMART TRIO	32	V5-Tillering	184.3	9.2
SMART TRIO + B MOLY	32 +16	V5-Tillering	184.3	9.2
B MOLY	32	Flag Leaf	214.7	27.3
B Moly + NBOOST	32 + 64	Flag Leaf	224.0	32.8



Objective: To demonstrate the value and benefits of BRANDT Smart System[®], Manni-Plex B Moly[®], and N-Boost[®] on a high yield rice system in Arkansas.

Treatments:

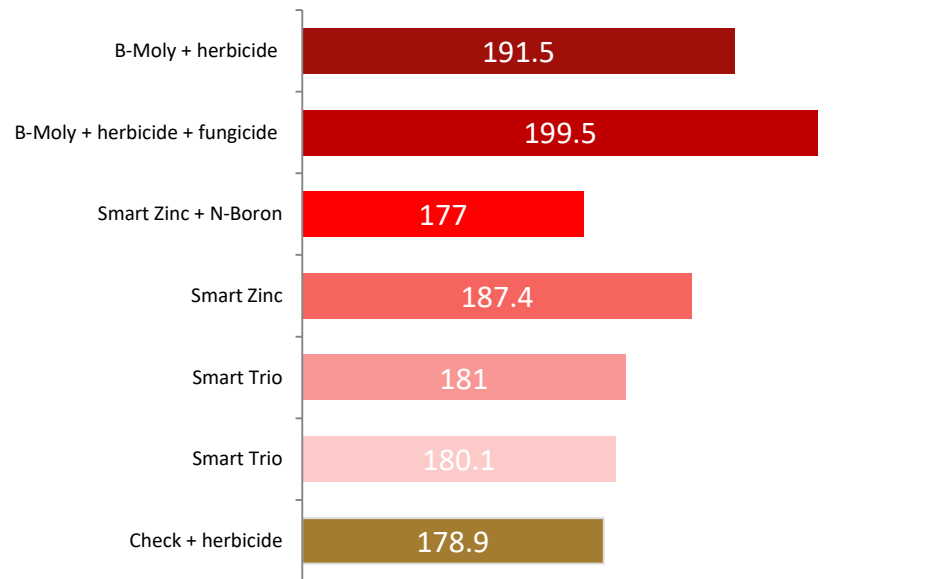
- Products applied at V5 tillering with herbicide (Ricestar HT)
- Products applied at Flag leaf with fungicide(Quilt XL)

BRANDT Smart System[®], Manni-Plex B Moly[®], and N-Boost[®] increased rice yields by 5-9% when applied at V5 tillering, and increased rice yields by +27% when applied at flag leaf.

Winchester, AR 2014 Rice

- **Objective:** *To demonstrate the value and benefits of BRANDT Smart System[®], Manni-Plex B Moly[®], and N-Boron[®] on a high yield rice system in Arkansas.*
- **Treatments:**
 - *Products applied at V5 tillering mixed with herbicide- (1gal/ac Ricebeaux) (including check)*
 - *Products applied at Flag leaf mixed with fungicide (21oz/ac Quilt XL)*

Treatment Name	Rate (Ounces per Acre)	Timing	Yield	Percent difference
Check + herbicide			178.9	0.0%
Smart Trio	32	tillering	180.1	0.7%
Smart Trio	64	tillering	181.0	1.2%
Smart Zinc	32	tillering	187.4	4.8%
Smart Zinc + N-Boron	32 + 32	tillering	177.0	-1.1%
B-Moly + herbicide + fungicide	32	flag leaf	199.5	11.5%
B-Moly + herbicide	48	flag leaf	191.5	7.0%



BRANDT Smart System[®], Manni-Plex B Moly[®], and N-Boron[®] increased rice yields by as much as 4.8% when applied at V5 tillering, and increased rice yields by as much as 11.5% when applied at flag leaf.



Come by the booth for further questions and interests

Thank you for your time

Lazy people want much but get little, but those who work hard will prosper
Proverbs 13:4

BRANDT