LACA

Brandt Product Update

Clay Atkins- Territorial Manager

February 15, 2018

Smart System

- BRANDT SMART QUATRO (3% Zn, 3% Mn, 2% B, 1.5% S, .1% Mo)

Approved Tank Mix Partner for **Enlist Duo®** with Colex-D® Technology and **Engenia®** Herbicides

- BRANDT SMART TRIO (3% Zn, 3% Mn, .25% B, 3% S, 4% N)
- BRANDT SMART ZN (6% Zn, 6% N, 3% S)
- BRANDT SMART MN (6% Mn, 3.5% S, 6% N)
- BRANDT SMART CU (6% Cu, 3% S, 5% N)
- BRANDT SMART B (5% B)
- BRANDT SMART B-MO (5% B, .5% Mo)

Boron Deficiencies

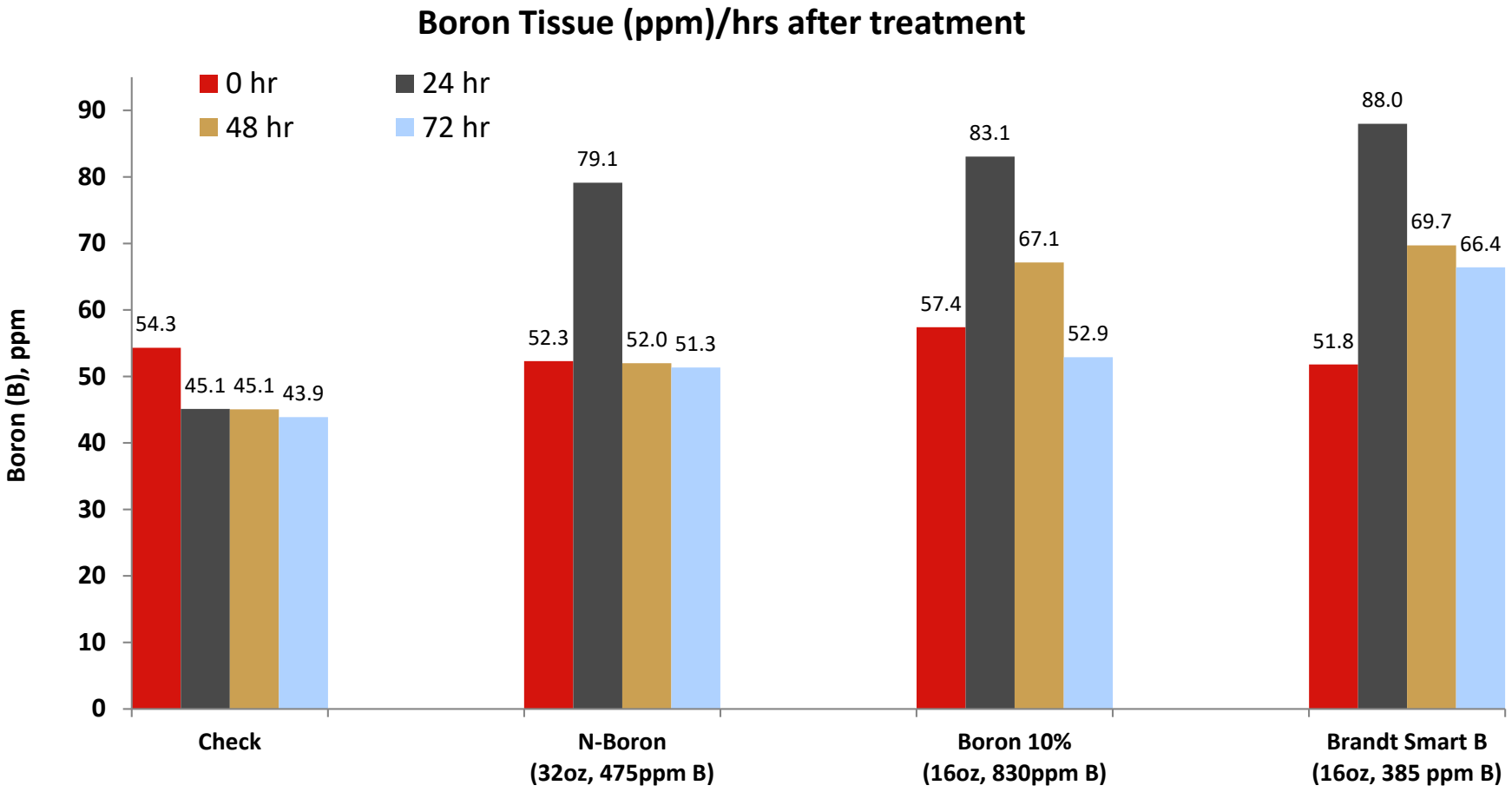
- Diminish root and shoot growth. (Roots can be brownish in color) and shoot development is decelerated, due to the dying off of apical meristems.

- Leaves are very hairy, rigid, dark green, small and interveinal necrosis appears. The inclination of the leaves are abnormal. They grow vertical and leaf tips point downwards. Moreover, alterations in the surface morphology.

- Less branching and flowering

- Reduce seed development.

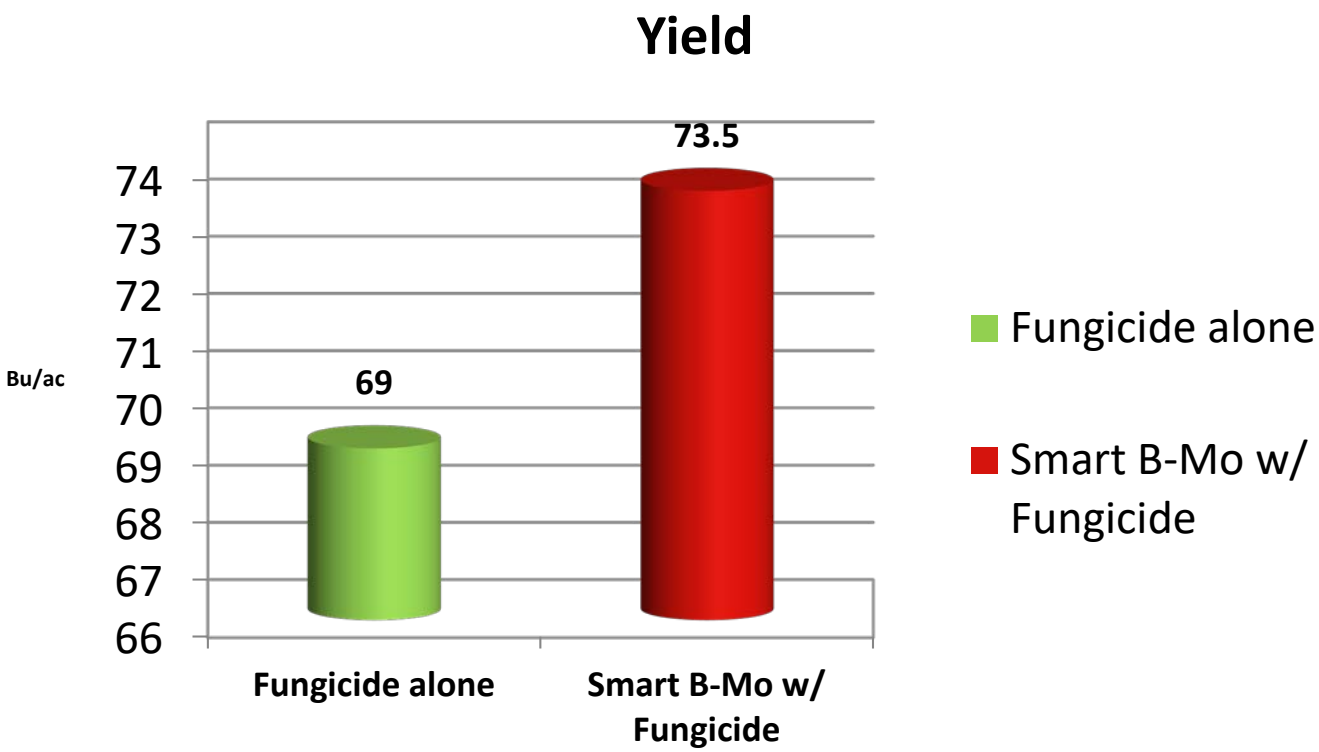
Brandt Smart B
Soybeans - Quitman, GA – Tissue Test



BRANDT

BRANDT Smart B-Mo on Ensz Farm- Transylvania, LA

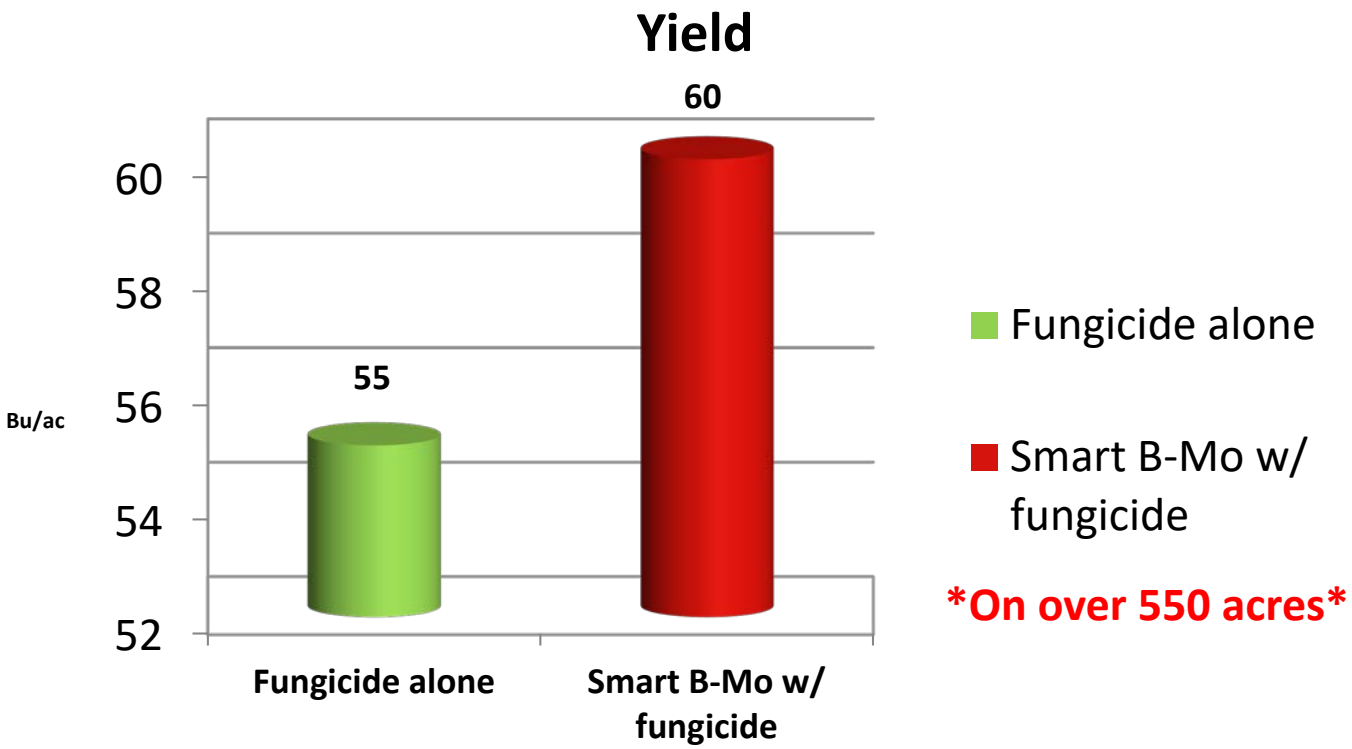
Soybean Treatments at (R4)



BRANDT

BRANDT Smart B-Mo on Dantzler Farm- Artesia, MS

Soybean Treatments at (R3) "Best crop of beans I have seen in 35 years, solid, big, heavy beans. There will not be an acre without it next year…



Cost= $4.00 - $5.00 an acre 5bu x $9.00 = $45.00 - $5.00 = $40.00 profit

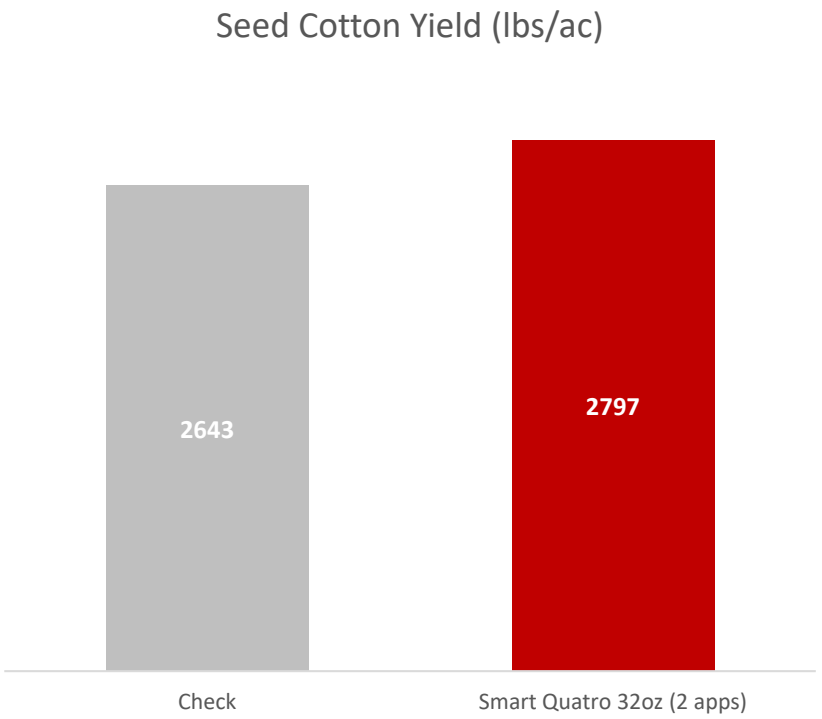
2017 BRANDT Smart Quatro® on Cotton

- Starkville, MS
- Population: 45,000 seeds/ac
- 38” row spacing
- Small plot trial (506.8ft^2)
- 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 **154**lbs/ac- a **5.8%** increase over the check- that's an **ROI** of around **$85** per acre!

*ROI estimate was made assuming $0.65/lb cotton price

Brandt® Smart K B

2-0-16

Guaranteed Analysis

Nitrogen (N)	2 .0% 2 .0% Urea nitrogen
Soluble Potash (K_2O)	16 .0%
Boron (B)	2 .5%

Derived from urea and potassium borate. F76

General Information

BRANDT SMART K B is specifically formulated for foliar delivery of potassium and boron.

Rate Recommendations

Field, Row, Vegetable and Vine Crops: Apply 1-2 quarts per acre per application throughout the growing season . More frequent applications at 1 pint per acre may be needed to correct deficiencies once they occur.

Optimum rate of application will vary depending on soil prop- erties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and general health .For best results, follow soil/tissue test recommendation.

Mixing and Handling Instructions

Fill mix tank with half of required water volume and begin agitation . Add products in this order, mixing thoroughly after each addition: adjuvants, pesticides, then fertilizers . Fill tank with remainder of water and continue agitation until solution is completely mixed . Check chemical mixture compatibility using a jar test prior to application.

1.65 pounds per Gal

Net Contents: 2.5 gallons (9 .46 liters)
Density: 10 .3 lb/gal @68ºF
Net Weight: 25 .5 lb (11 .5 kg)
Packaged: 2 x 2.5 gallons (9 .46 liters)

29016BRN100
2018-02

ATTENTION: This product contains boron; use on any crops other than those recommended may result in serious injury to the crops.

Information regarding the contents and levels of metals in this product is available on the Internet at http://www .aapfco .org/metals .html Information about the components of this lot of fertilizer may be obtained by writing to Brandt Consolidated, Inc . and giving the lot number which is found on the container or label.

DANGER: Causes serious eye irritation . Causes skin irritation . May cause respiratory irritation . May damage fertility or the unborn child.

Precautionary Statements: Obtain special instructions before use . Do not handle until all safety precautions have been read and understood . Wear protective gloves/clothing and eye/face protection . Avoid breathing mist or vapor . Use only outdoors in a well-ventilated area . 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 . *If on skin:* Wash with plenty of water . Take off contaminated clothing and wash before reuse . 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 . If exposed or concerned, get medical attention . Storage and Disposal: Do not contaminate water, food or feed by storage or disposal . Keep out of reach of children . Keep container tightly closed . Store locked up in a well-ventilated place . Dispose of contents/container in accordance with local regulations .

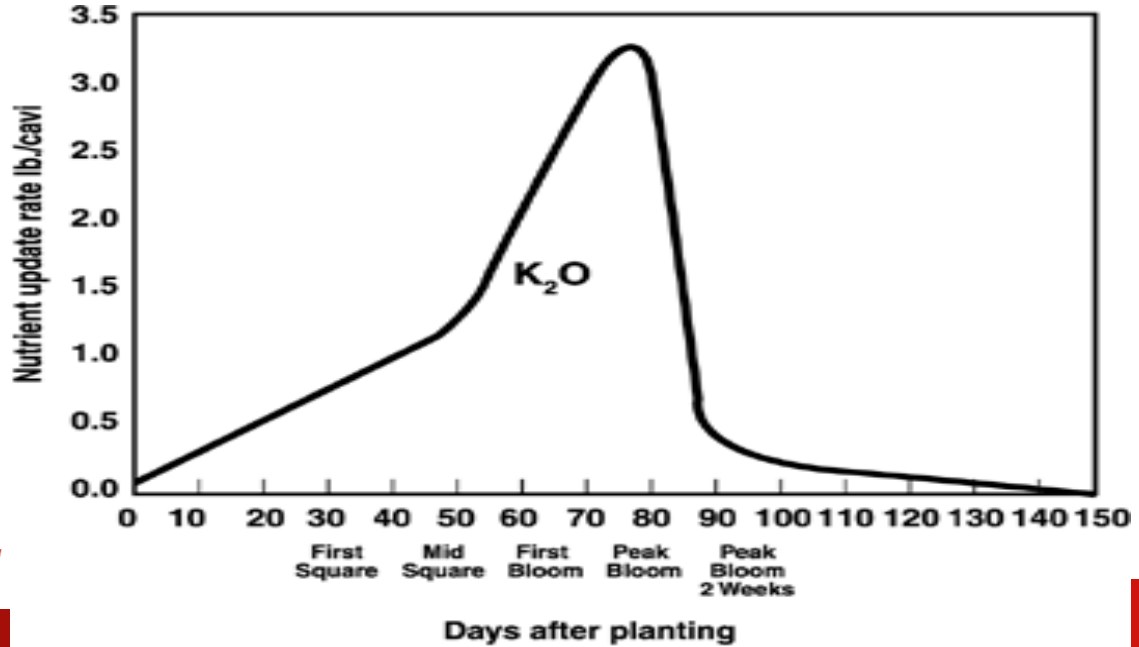
⚠ WARNING: Cancer and Reproductive Harm-www .P65Warnings .ca.gov

LIMITED WARRANTY: Brandt Consolidated Inc . ("BCI") warrants that the Product conforms to the chemical description given on this label and is reasonably fit for the purpose stated when used in accordance with label directions under normal conditions of use . BCI and Seller make no other warranties, express or implied, including warranty of merchantability or fitness for a particular purpose . Buyer and User accept all risks arising from any use of this Product . To the extent allowed by law, BCI and the Seller shall not be liable to the Buyer or User of this Product for any consequential, special, incidental or indirect damages.

Guaranteed By:
Brandt Consolidated, Inc .2935
South Koke Mill Road
Springfield, Illinois 62711 USA
www .brandt .co
800 3006559

Smart K- B

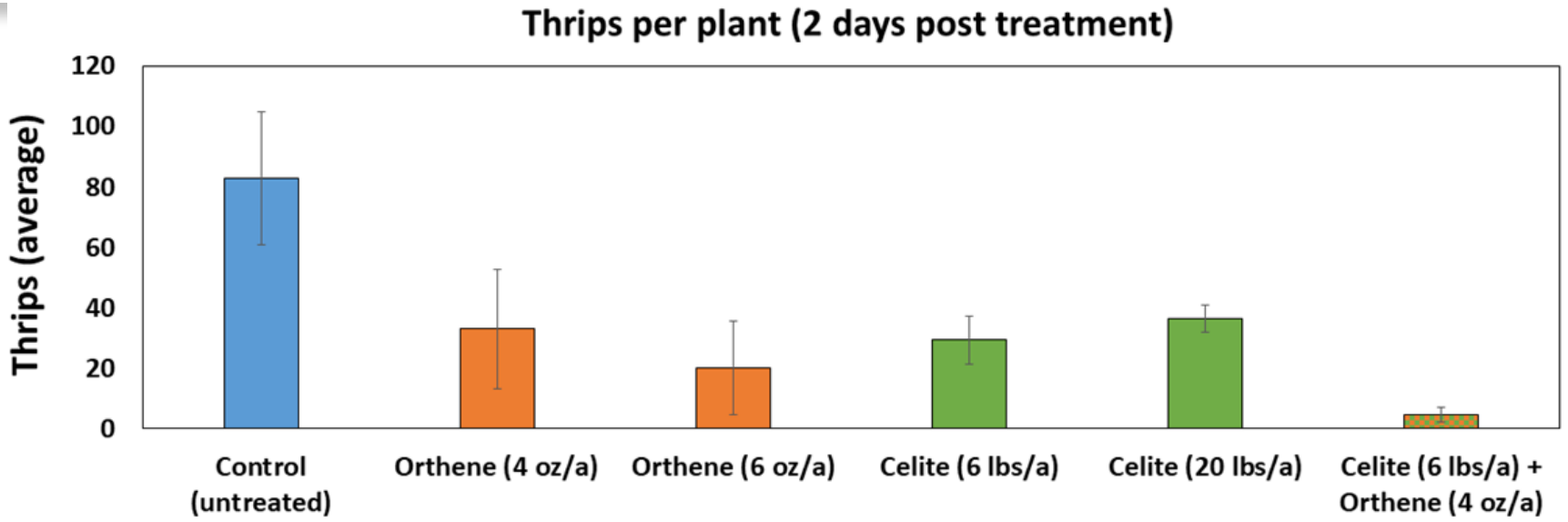
- The recommended growth stages in cotton for foliar-applied K are at square initiation, at flower initiation, and at peak boll development.
- Even a high level of K in the top soil may not be adequate for some of the new **high-yielding cotton varieties**. For example, moisture affects potassium availability. During the critical period of boll filling drought conditions will force the cotton plant to use moisture in the subsoil if roots are deep. If the crop is stressed for moisture and the boll load is heavy, low sub-soil K can result in late season deficiency. Foliar K will go through the plant within 20 hrs.

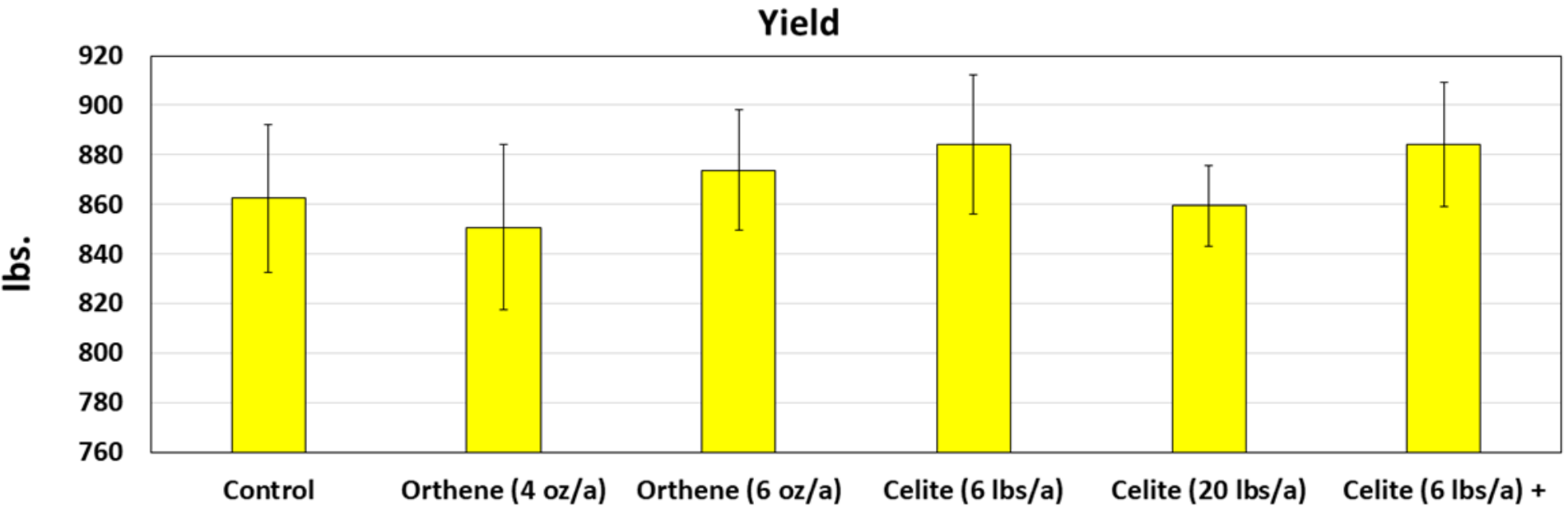


Celite 610 Insecticide

- 100% pure, natural diatomaceous earth
- Federal EPA registered
- Registered in all 50 states
- Labeled for all field crops and for stored grain applications
- Controls a wide variety of insect pests
- OMRI Listed for organic production
- Use as a stand alone or in a tank mix

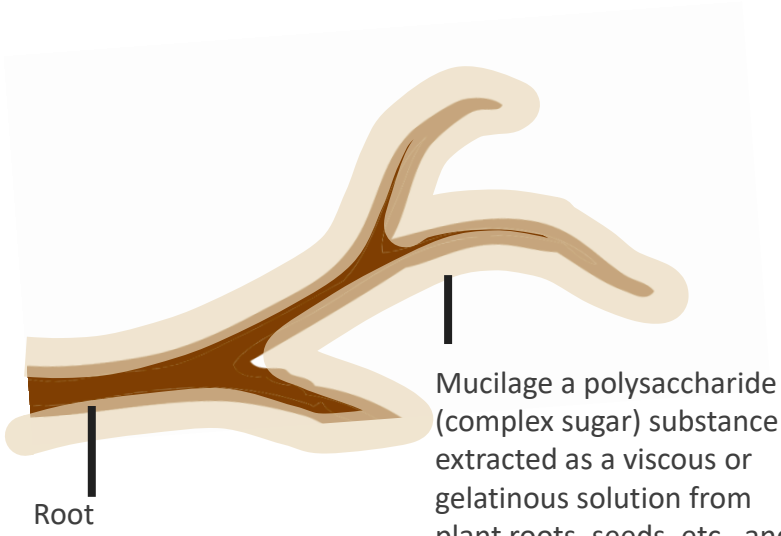
Celite 610 Data



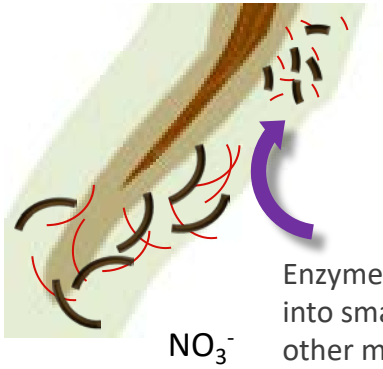


BRANDT® EnzUp™ Zn: Concentrated Liquid Enzyme and Nutrient Solution

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



Mucilage a polysaccharide (complex sugar) substance extracted as a viscous or gelatinous solution from plant roots, seeds, etc., and used in medicines and adhesives.

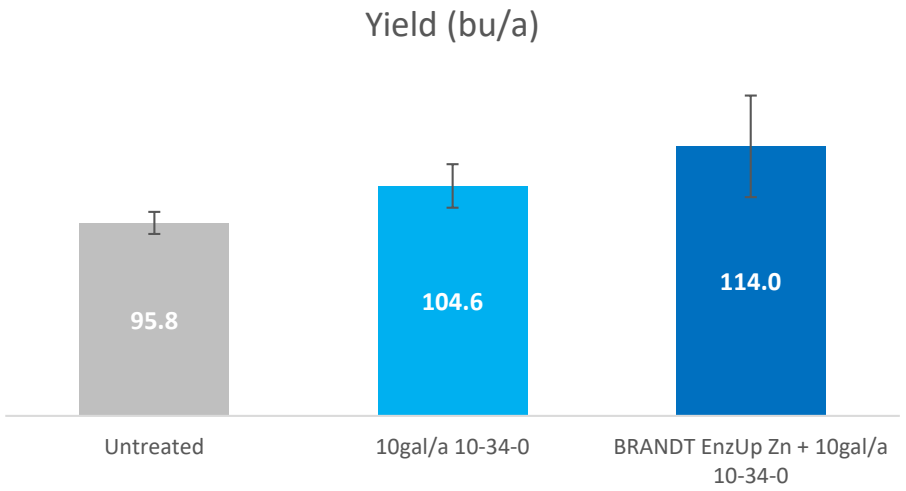


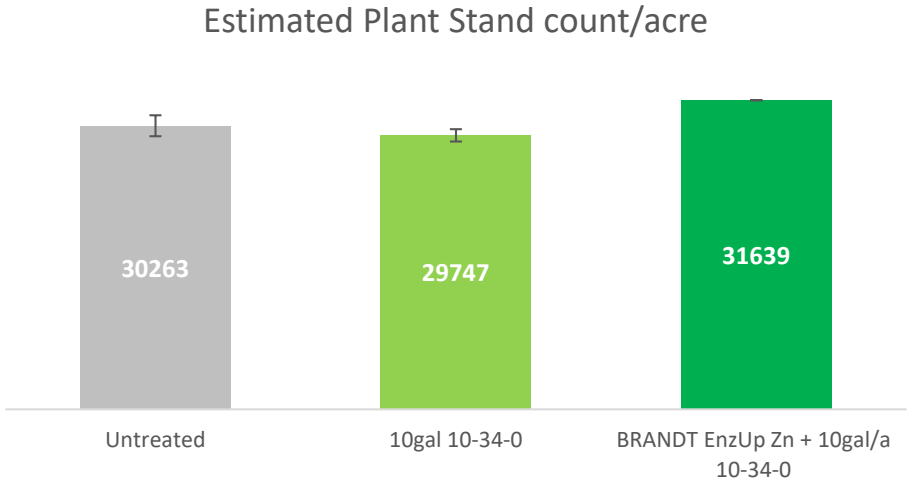
Enzyme breaks down the complex into smaller pieces creating a draw for other molecules towards the plant.

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



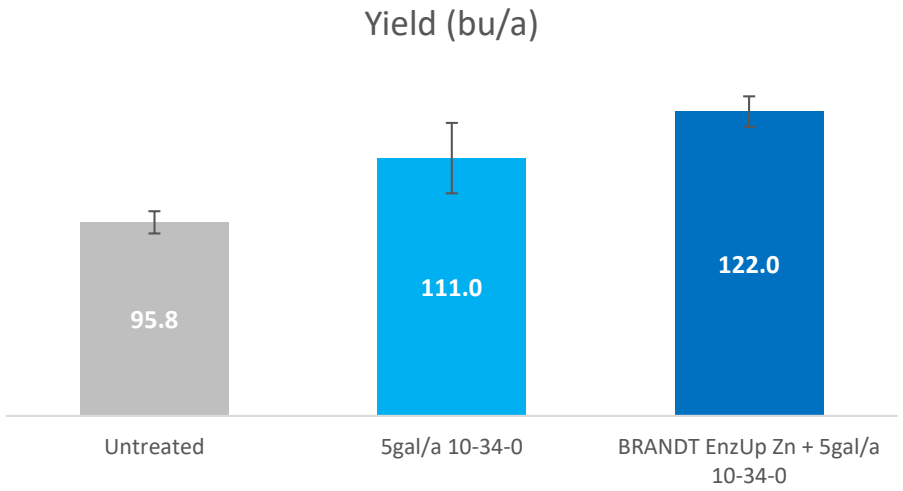


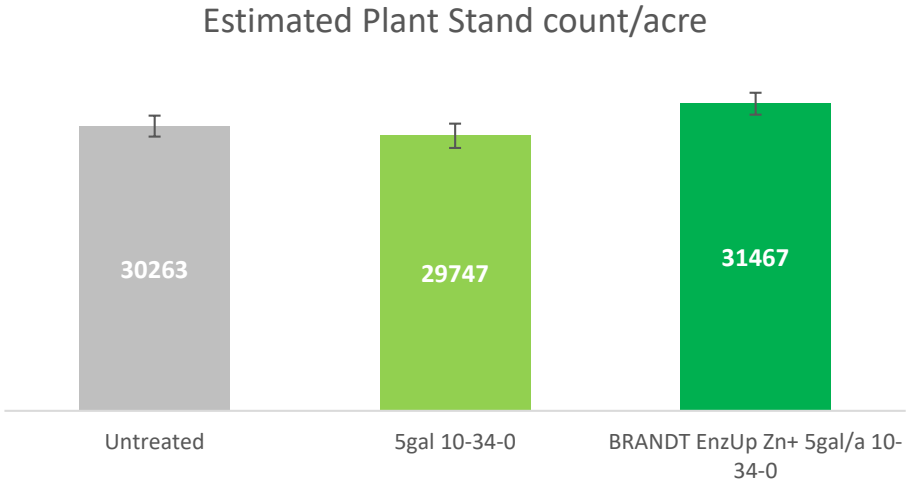
BRANDT EnzUp Zn increased yield by 18.2 bu/a over the check and 9.4 bu/a over the plots treated with 10 gal/a 10-34-0 alone. Also, nine days after emergence corn plants treated with **BRANDT EnzUp Zn** showed an increase in plant stand count compared to the check and a statistically significant increase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

BRANDT

- 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.

Overview of N-Boost® 5

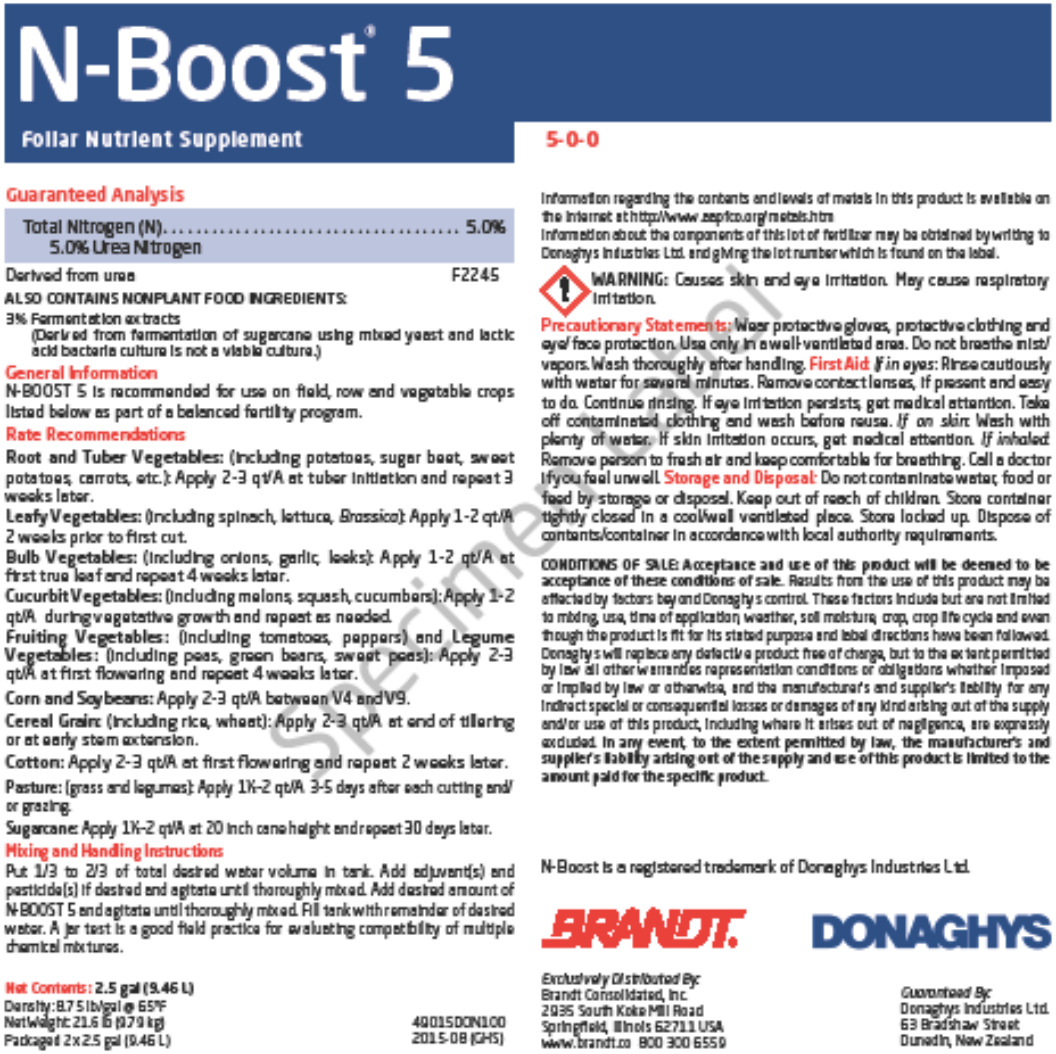
- N-Boost 5 is a unique formulation comprised of:

  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

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 1½-2 qt/A 3-5 days after each cutting and/or grazing.

Sugarcane: Apply 1½-2 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: 8.7 5 lb/gal @ 65°F
Net Weight: 21.6 6 (9.79 kg)
Packaged 2 x 2.5 gal (9.46 L)

40015DON100
2015-08 (GHS)

Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm
Information about the components of this lot of fertilizer may be obtained by writing to Donaghys 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 effected by factors beyond Donaghys control. These factors include but are not limited to mixing, 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. Donaghys 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 Donaghys Industries Ltd.

BRANDT

DONAGHYS

Exclusively Distributed By:
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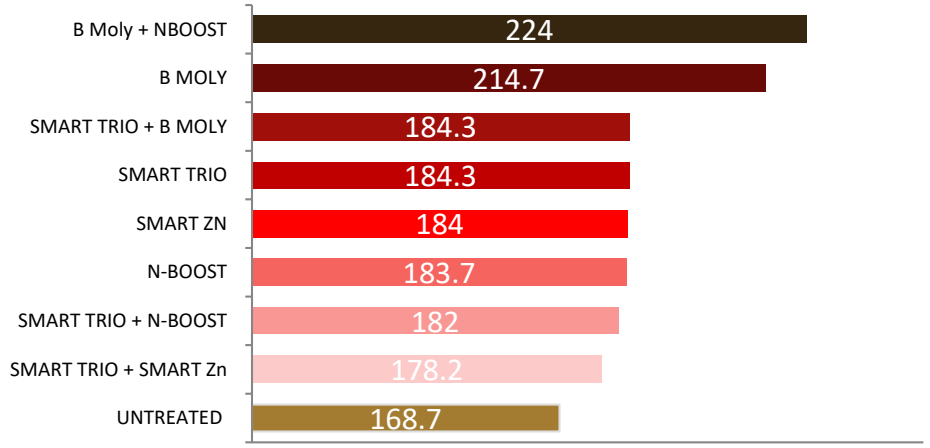
Springfield, Illinois 62711 USA
www.brandt.co 800 300 6559

Guaranteed By:
Donaghys Industries Ltd.
69 Bradshaw Street
Dunedin, New Zealand

Winchester, AR 2013 Rice

- 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)*

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

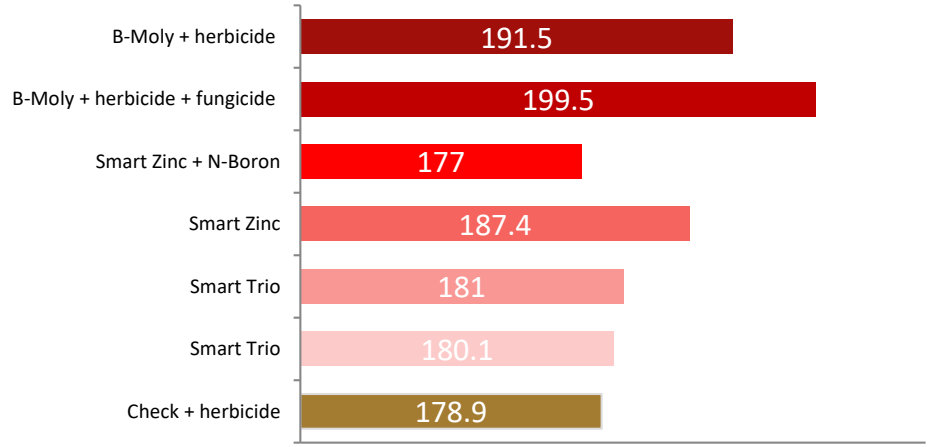


BRANDT **Smart System®, Manni-Plex B Moly®, and N-Boost®** increased rice yields by 5-9% when applied at V5 tillering, and increased rice yields by +27% when applied at flag leaf.

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.

Approved Tank Mix with Engenia, Xtendi Max, and Enlist

- Brandt Smart P - 4% N 24% P XtendiMax
- Brandt Smart Mn Plus - 5.0% Urea nitrogen (S) 2.0% (Mn) 4.0% Engenia
- Brandt Smart S Micro Mix - 5.0% Urea nitrogen (S) 5.0% (B) 0.5% (Mn) 1.5% (Mo) 0.05% (Zn) 1.5% Engenia, XtendiMax
- Brandt Smart Fe - (S) 2.0% (Fe) 4.0% Engenia, XtendiMax
- Brandt Smart K B - 2.0% Urea nitrogen (K^2O) 16.0% (B) 2.5% Engenia
- Brandt Smart Quatro - (3% Zn, 3% Mn, 2% B, 1.5% S, .1% Mo) Enlist, Engenia

2018 Goals

- Work directly with Sugar Cane growers on new products
- Work through LSU Ag for soybean yield data
- Work directly with Consultants in strip trials

Come by the booth for further questions and interests

Thank you for your time,

Clay Atkins
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Clay.atkins@brandt.co
www.brandt.co