Marrone® Bio Innovations

Bernard Blum Award | *smart. natural. solutions.* | **October, 2018 • NASDAQ: MBII**

Boost yield and quality | Manage resistance | Harvest flexibility | Worker-friendly

Safe Harbor

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this press release regarding strategy, future operations and plans, including assumptions underlying such statements, are forward-looking statements, and should not be relied upon as representing the Company's views as of any subsequent date. Such forward-looking statements are based on information available to the Company as of the date of this presentation and involve a number of risks and uncertainties, some beyond the Company's control, that could cause actual results to differ materially from those anticipated by these forward-looking statements, including any difficulty in developing, manufacturing, marketing or selling the Company's products, any failure to maintain and further establish relationships with distributors, competition in the market for pest management products, lack of understanding of bio-based pest management products by customers and growers, adverse decisions by regulatory agencies, and the impact of negative publicity and perceptions around the company's financial restatement. Additional information that could lead to material changes in the Company's performance is contained in its filings with the SEC. The Company is under no obligation to, and expressly disclaims any responsibility to, update or alter forward-looking statements contained in this presentation, whether as a result of new information, future events or otherwise.

This presentation references product shipments, a measure used by the Company that is not defined by, or presented in accordance with, generally accepted accounting principles ("GAAP"), to evaluate various aspects of its business. Product shipments is a non-GAAP financial measure and should be considered in addition to, not as a substitute for, product revenues reported in accordance with GAAP. Product shipments as used in this presentation is defined as product revenues, plus related party product revenues, plus the incremental amount of deferred revenues accrued during the applicable period from product shipments. This calculation specifically excludes changes in deferred revenue related to license revenues and customer deposits, and is intended to approximate the total value of products sold and under contract for sale in a given period. Please refer to the Company's filings with the SEC, including its earnings releases, for a reconciliation of product shipments to product shipments and further discussion of this metric.

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One Bacterium: Three Products

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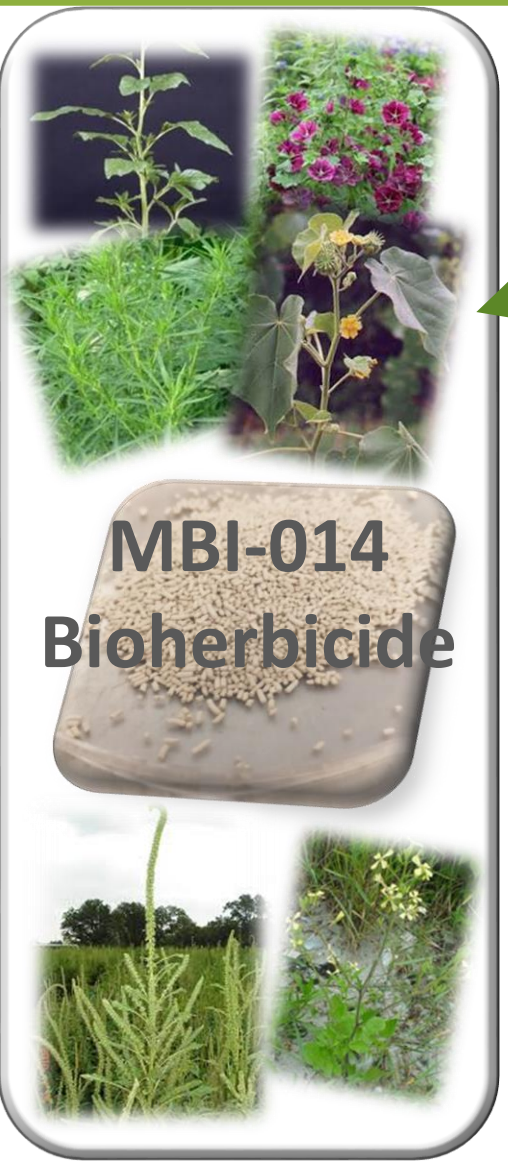
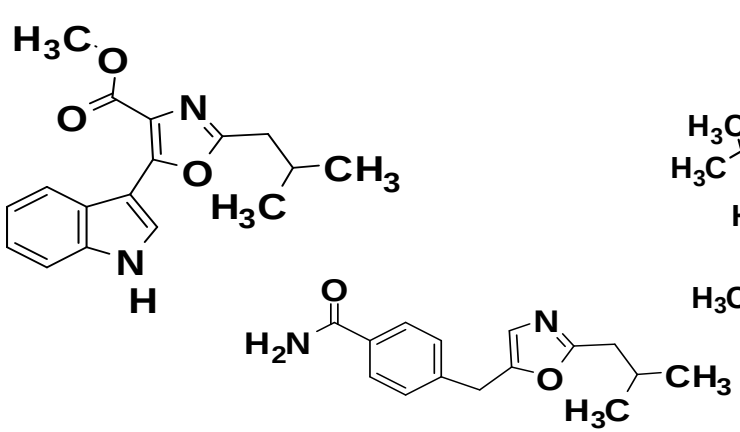
***Burkholderia rinojensis* A396**



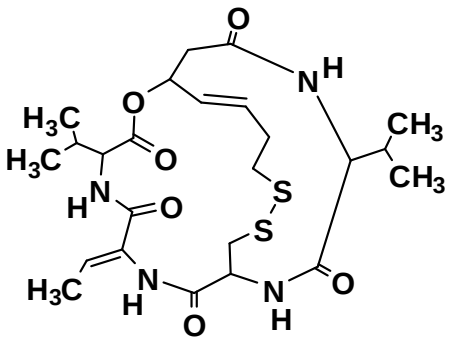
Photos courtesy of: *Pepper weevil* Alton N Sparks, Univ of GA, Boxwood.org; *Beet armyworm* Clemson Univ. USDA Cooperative Extension Slide Series Bugwood.org; *Western flower thrip* Frank Peairs, CO St. Univ. Bugwood.org; *Cabbage Looper* RJ Reynolds Tobacco Company, Bugwood.org; *Twospotted spider mite* Clemson EDU

Burkholderia rinojensis A396

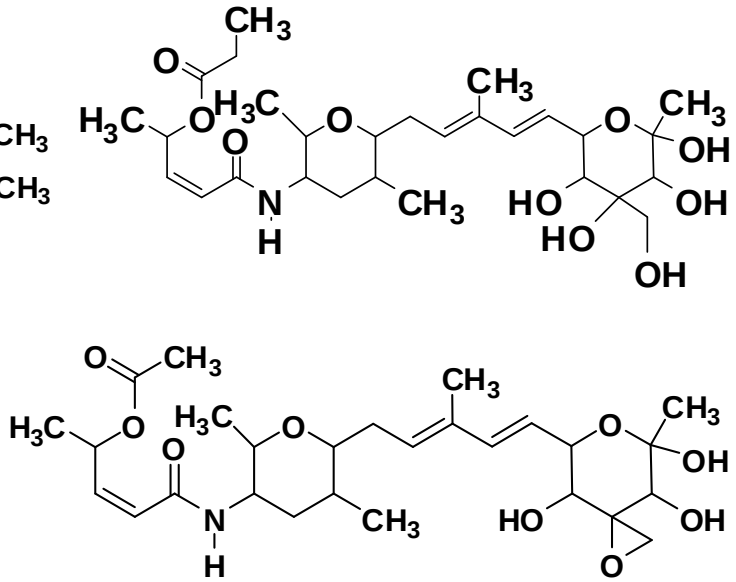
- Efficacy is due to multiple compounds synergizing each other



Herbicide



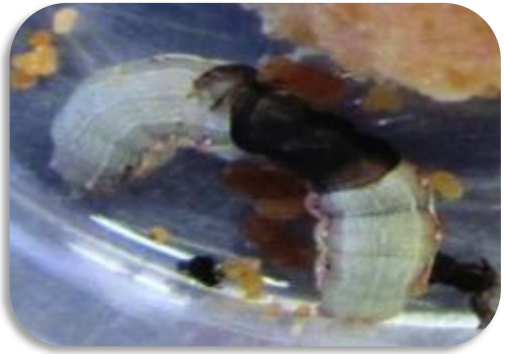
Nematicide



Insecticide

VENERATE® Unique Mode of Action

- Multiple modes of action (slow kill: 5+days)
  - Exoskeleton degradation
  - Molting interference
  - Stunting
- Controls through both contact and ingestion
- Active against adults, larvae and nymphs
- Easy on pollinators and beneficials; no effect on pollination and fruit set
- Recent data show high efficacy against varroa mites with no effect on any part of the honeybee life cycle



Venerate Reduced *Diabrotica* Root Damage as well as Commercial Chemical Standard

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Trait not working

Treatment	Type	Trial 1	Trial 2	Trial 3	Trial 4	Average
No. of Traits in Seed		0	1	0	2	
Untreated Check		2.24	0.32	2.25	2.12	1.73b
Venerate low rate	In-furrow	0.81	0.27	0.56	0.72	0.59a
Venerate high rate	In-furrow	1.15	0.21	1.05	0.67	0.77a
Venerate low rate	Seed treatment	1.06	0.22	0.82	0.72	0.71a
Venerate high rate	Seed treatment	1.18	0.25	0.69	0.56	0.67a
Commercial Standard	In-furrow	0.19	0.23	0.88	0.44	0.44a

The lower the number the better the control

Majestene® and Zelto™ Bionematicides

- Potatoes
- Sweet Potatoes
- Carrots
- Tobacco
- Berries
- Cucurbits
- Peppers, Tomatoes
- Bananas
- Corn, Soy, Wheat, Cotton

Permanent crops in progress

ZELTO™

Before Zelto

Leading Competitor= Lower Yield, Lower Grades

Higher Yield, Better Grades: More As, no Cs

MAJESTENE™

Untreated

Venerate® XC in Albaugh LLC's BIO*ST* Seed Treatment

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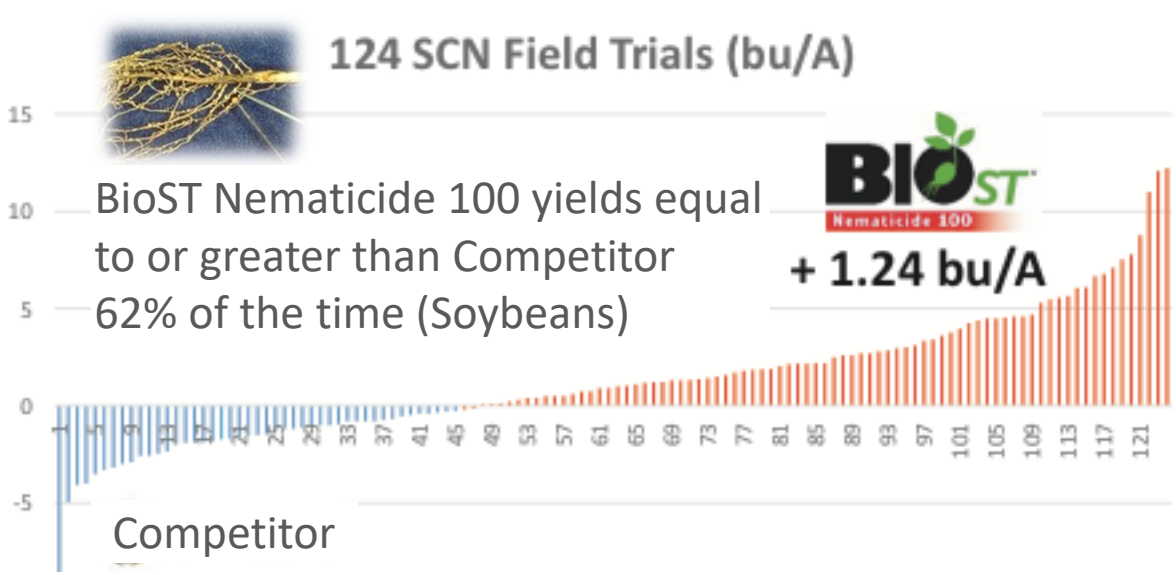
SOY



COTTON

Reniform nematode; 25 pounds more lint with BIO*ST*

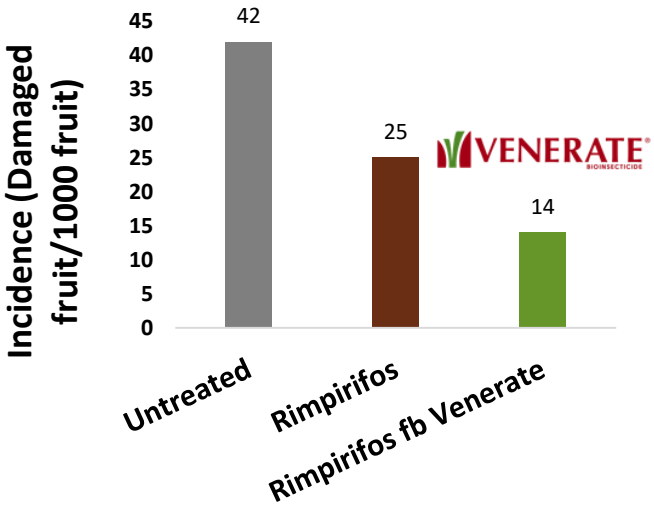
Rootknot nematode
Black Oak, AR USA

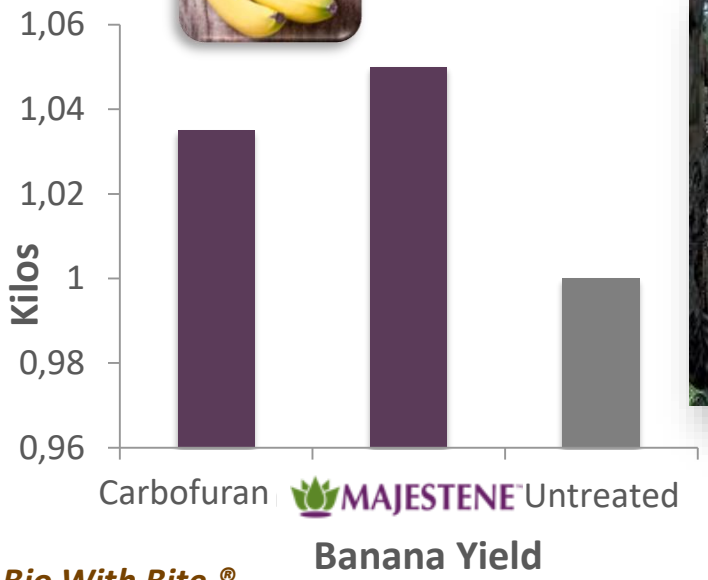
On millions of acres of large-acre crops (corn, soy, cotton, wheat)

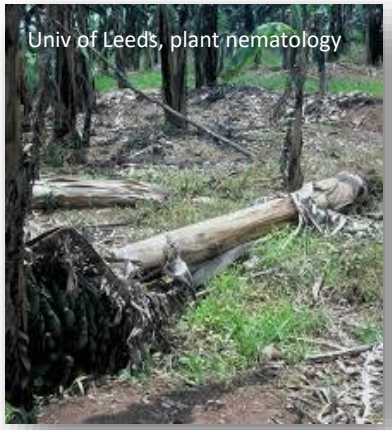
International Markets With Large Need for Effective Biologicals

Sources: Specialty Coffee Association of America, US AID; Ambrosiasymbiosis.org

Coffee berry borer ("Broca")can cause up to 20% crop loss & reduce grower price by 30-40%.







Burrowing nematode destroys roots, causing 30-60% yield loss

Sources: Pestnet.org, American Phytopathological Society

Majestene® Can Act at Every Stage of Life Cycle

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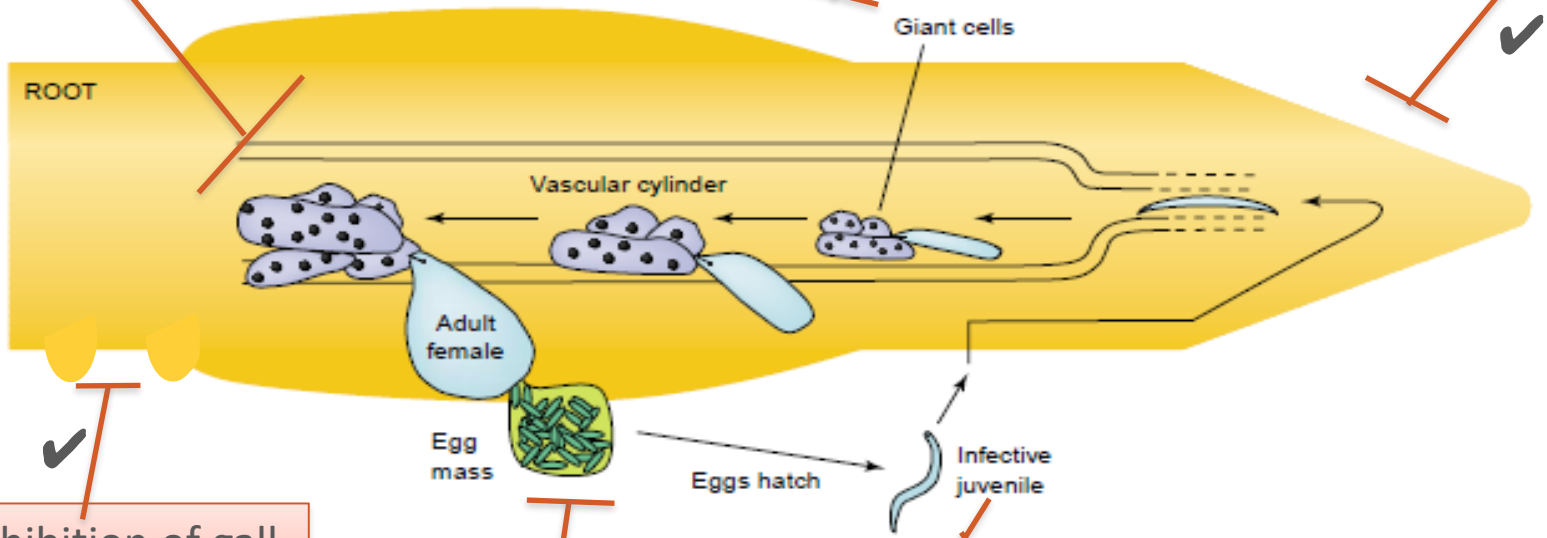
2. Inhibition of nematode reproduction

5. Increases root hairs and turns on genes in plant for better plant health

6. Induced Systemic Resistance

✔ Maybe



4. Inhibition of gall formation

1. Inhibition of egg development/hatching

3. Paralysis of the juveniles

MBI-014 Bioherbicide Controls Glyphosate-Resistant Weeds

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We seek to solve a growing problem of weed resistance to conventional solutions and provide better solutions for organic growers

6 Days After Treatment

US Farmers rank Palmer Amaranth & Lambsquarters as #1 & #2 worst weeds

Amaranthus palmeri, Chenopodium album

Source: Weed Science Society of America

MBI-014 Efficacy Spectrum at Commercial Dose

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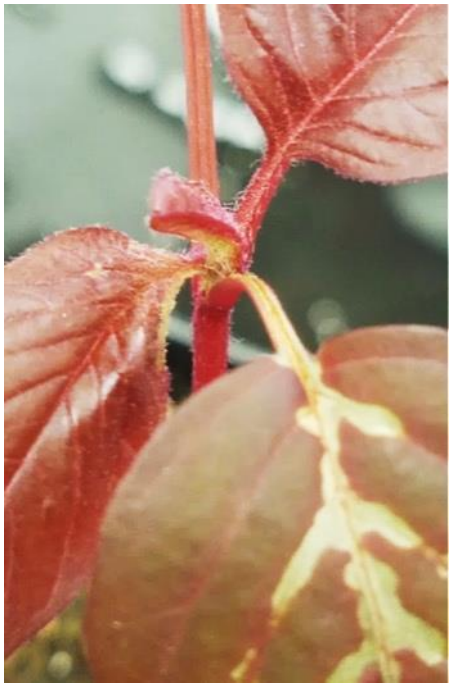
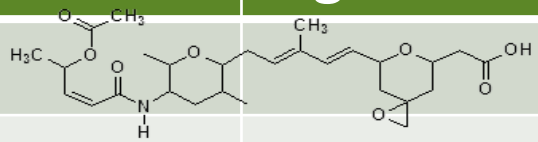
Species	% Control
Abutilon theophrasti	98
Amaranthus palmeri	100
Amaranthus powellii	100
Amaranthus retroflexus	98
Amaranthus rudis	100
Amaranthus spinosus	96
Bellis perennis	86
Kochia scoparia	98
Lactuca serriola	94
Malva sylvestris	90
Medicago lupulina	93
Plantago lanceolata	88
Raphanus raphanistrum	96
Sinapis arvensis	84
Chenopodium album	70
Digitaria sanguinalis	68
Echinocloa crus-galli	60
Ipomoea purpurea	68
Medicago polymorpha	68
Portulaca oleracea	68
Stellaria media	64
Trifolium pratense	72
Trifolium repens	64

Over time, we expect to broaden the spectrum as we learn the "art of use"

MBI-014: Systemic Activity – Moves Both Directions



Potency of Spliceostatin C Molecule

Product	Grams per Acre of Active Ingredient
MBI-014 (spliceostatin C)* 	0.2
Raptor (imazamox)	16.2
Roundup (glyphosate)	109
Sethoxydim	182
Prowl (pendimethalin)	299
Rely (glufosinate)	348
Atrazine	907
2,4-Db	971
Suppress (caprylic & capric acids)	4486 (ml)

*There are other secondary compounds contributing

Contact Us

Company Contact:

Pamela (Pam) Marrone
Founder & CEO
Main: 530-750-2800
pmarrone@marronebio.com
www.marronebioinnovations.com

Investor Relations Contact:

Greg Falesnik
Managing Director – MZ North America
Main: 949-385-6449
MBII@mzgroup.us
www.mzgroup.us