

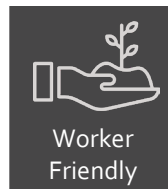


IR-4 Food-Use Product Updates Industry Technology Session

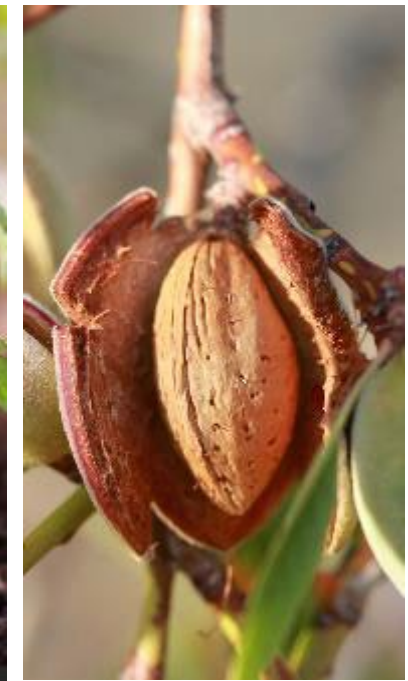
New Products

Maryna Serdani – Sr. PD Manager PNW

July 21, 2022 • NASDAQ: MBII



On July 12, 2022 Marrone Bio Innovations merged with Bioceres Crop Solutions Corp. Moving forward, MBI will be operating in the US under the name Pro Farm Group, Inc.





OVERVIEW

- What is MBI-015?
- Target spectrum and selectivity
- Field data: 2019-present
- Need for IR-4 studies





What is MBI-015?

- AI: Inactivated *Burkholderia rinojensis* strain A396 cells
- New mode of action
- Product Type: post-emergence weed control
- Target weeds: annual broadleaves, including Amaranthaceae, Asteraceae, Brassicaceae, ?
- Status: Undergoing development of formulations and art of use





MBI-015 activity

- The microbe in this herbicide develops a significant amount of enzymes, proteins, and secondary metabolites during the fermentation process
- MBI continues to characterize and investigate multiple sources of herbicidal activity
- R&D has made significant progress with metabolites like Spliceostatin C (<https://pubmed.ncbi.nlm.nih.gov/30941861/>)





MBI-015: Spectrum

Family	Common Name	≥ 90% Control in Lab	≥ 90% Control in Field*
Amaranthaceae	Palmer amaranth	✓	✓
	Redroot pigweed	✓	✓
	Waterhemp	✓	✓
	Lambsquarters	✓	?
	Kochia	✓	?
Asteraceae	English daisy	✓	?
	Prickly lettuce	✓	?
Brassicaceae	Clasping pepperweed	✓	✓
	Wild radish	✓	?
	Wild mustard	✓	?
Malvaceae	Velvetleaf	✓	?
	High mallow	✓	?
Fabaceae	Black medic	✓	?
Onagraceae	Fireweed	✓	?
Plantaginaceae	Buckhorn plantain	✓	?

*2022 trial results are arriving and to be expected in Fall 2022





MBI-015: Systemic activity



43 fl oz/A

14 fl oz/A



MBI-015: Selectivity

Rely®

64 fl oz
/acre

32 fl oz
/acre

UTC



Pistachio
apical bud
sprayed at
32 fl oz/A,
100 GPA



Before ↑ After 32 oz →



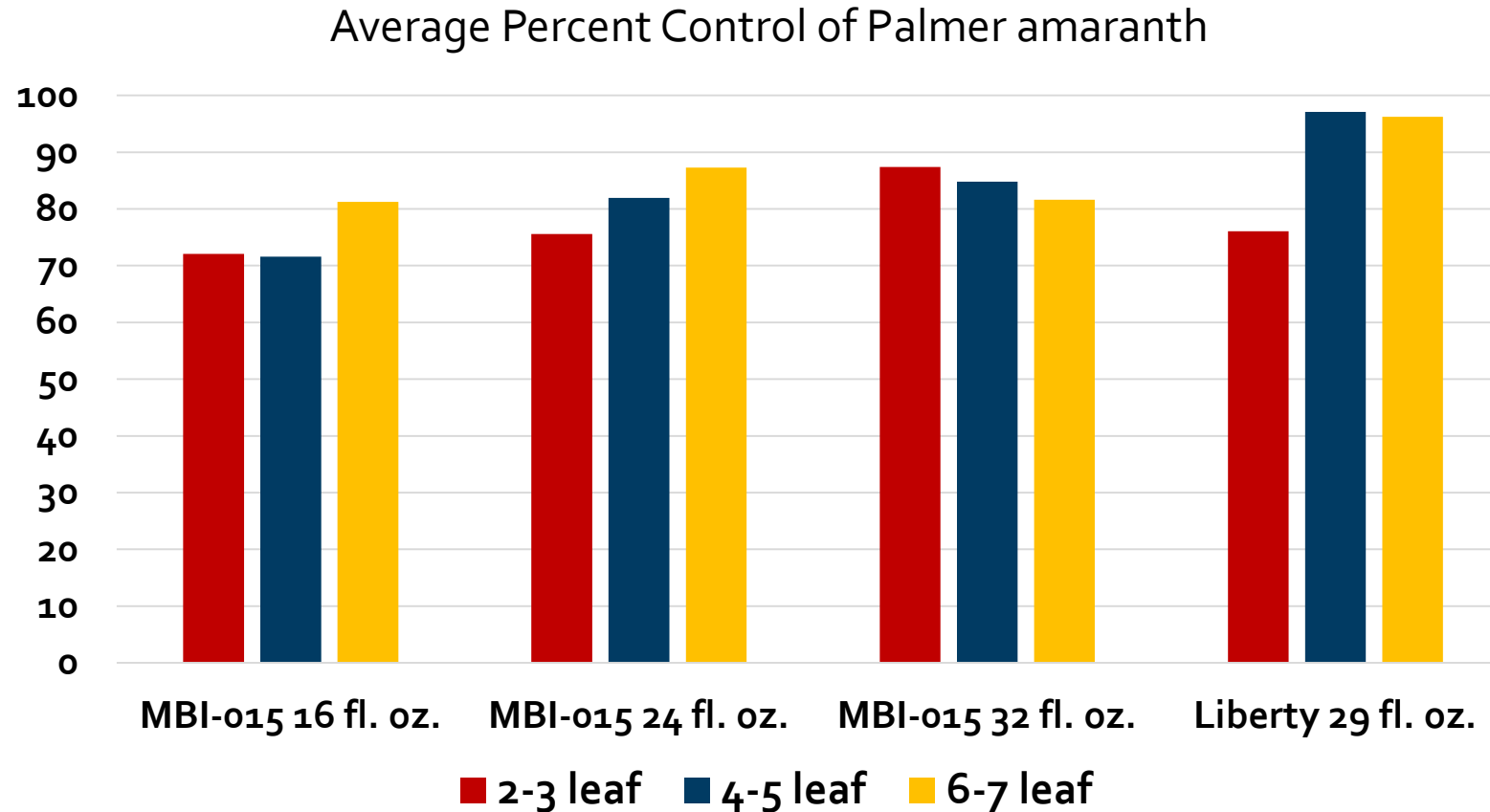
- Tree Nut & Vine
 - Unopened buds
 - Bark
- Sweet Potato
- Grains
- Turf

After 32 oz at 2 lfs →





MBI-015 Herbicide Efficacy over Multiple Locations



Each bar represents 2-3 locations, data taken 7-10 days after application. Applications in 40 GPA plus 0.5% v/v Dyne-Amic and 1 gram sodium lauryl sulfate per liter of water. Liberty® (glufosinate-ammonium) is a trademark of Bayer.



MBI-015 on Palmer Amaranth: NC, 2019

Untreated



MBI – 24 oz/acre



Glufosinate – 32 oz/acre



7 DAT + SLS + Dyne-Amic

PALMER AMARANTH

Agricenter International,
Memphis TN



Non-
treated



MBI-015 @ 32 fl. oz.
12DAT





MBI-015 39 fl oz/acre AB – stunted and necrotic kochia 10 DAT B



22-028MS

NASDAQ: MBII





MBI-015 78 fl oz/acre AB provided excellent suppression of kochia 10 DAT B





One application of MBI-015 at 1 qt/A killed clasping pepperweed
(*Lepidium perfoliatum*, Brassicaceae) 14 DAA





IR-4 Needs for 2023 and beyond

- Additional field testing of MBI-015 on wide range of annual broadleaves
- Crop safety data
- Application rates*: 39 fl oz/A and 78 fl oz/A

*subject to change depending on final concentration of AI



THANK YOU



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