

# Biofertilizers vs. Biostimulants

Market Perspective

Mariola Kopcinski Ph.D.  
Intrinsyx Bio

# Biostimulant

## BPIA supported working definition

Plant biostimulant means a substance, micro-organism, or mixture thereof, that, when applied to seeds, plants, the rhizosphere, soil, or other growth media, act to support a plant's natural processes independently of the biostimulant's nutrient content, including by improving nutrient availability, uptake or use efficiency, tolerance to abiotic stress, and consequent growth, development, quality, or yield.

# Biofertilizer

No clear global definition of biofertilizer

DunhamTrimmer® defines biofertilizers narrower than BPIA, as products

- Whose value is predominantly based upon microbial activity and exclude products whose main activity comes from other natural components
- With the main function and purpose of Nutrient Use Efficiency (NUE)
- With effects more directly identifiable as Plant Growth Promotion (PGP)

# Biofertilizer vs. Biostimulant Market Perception

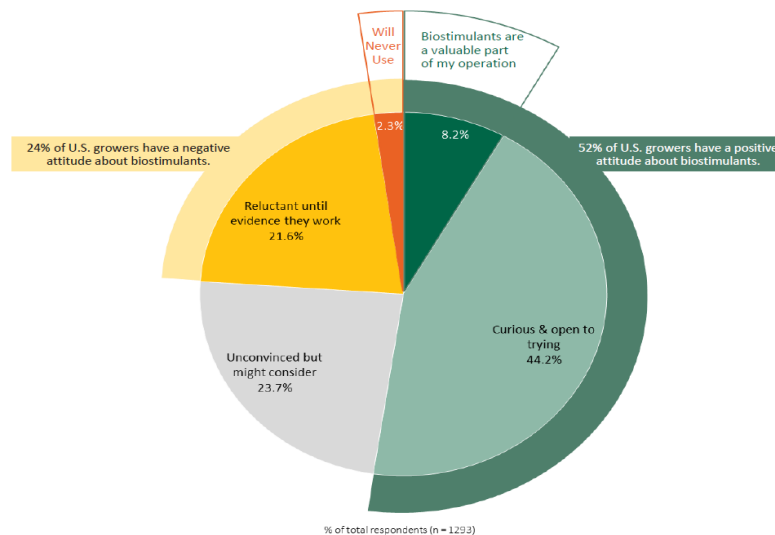
- Currently several market research studies already include Biofertilizers as part of Biostimulants analysis and from growers' perspective Biofertilizers are part of Biostimulants
- From regulatory perspective Biofertilizers may become in the future defined as a subset of Biostimulants

# Biostimulants/Biofertilizer US Growers Perception

In 2023 52% of U.S. growers have a positive attitude about biostimulants with the most positive segments of large farms and younger growers intending to grow usage in their operation



Attitudinal Segments

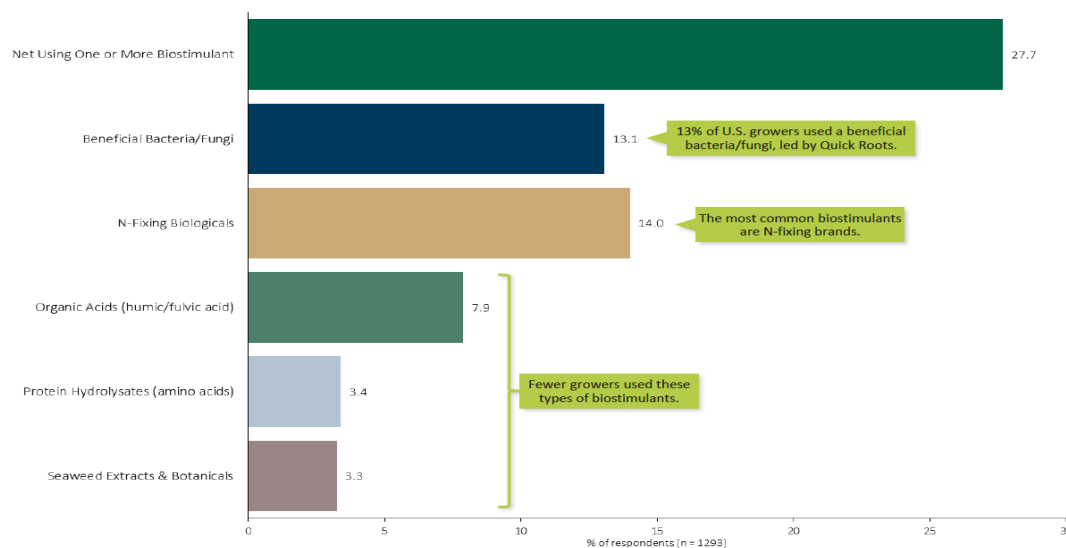


# Biostimulants/Biofertilizer US Growers Usage

27% of U.S. growers reported USING one or more biostimulants in 2023 with biofertilizer the most common (N-Fixing products and beneficial bacteria/fungi)



Biostimulant Categories 2023



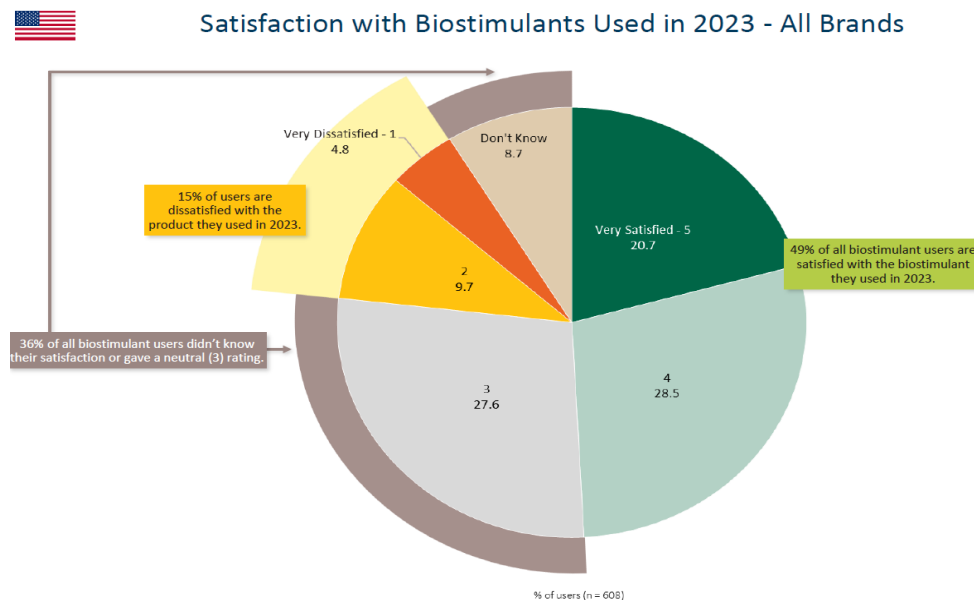
13% of U.S. growers used a beneficial bacteria/fungi, led by Quick Roots.

The most common biostimulants are N-fixing brands.

Fewer growers used these types of biostimulants.

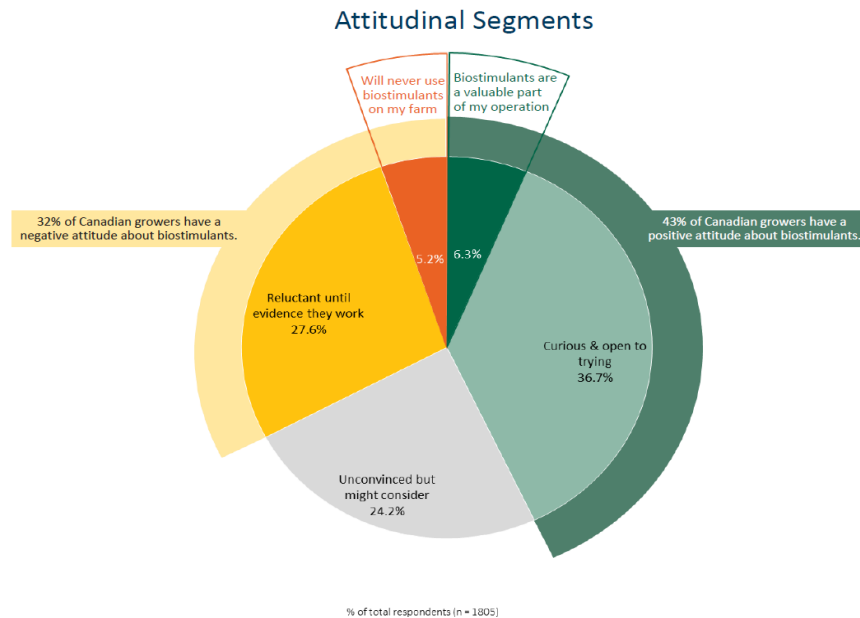
# Biostimulants/Biofertilizer US Growers Satisfaction

49% are satisfied with the biostimulant brand they used in 2023 with 28% of growers who used a brand in 2023 committed to continuing to use the brand for the next two or three years



# Biostimulants/Biofertilizer Canadian Growers Perception

43% of Canadian growers have a positive attitude about biostimulants,  
up from 37% in 2022



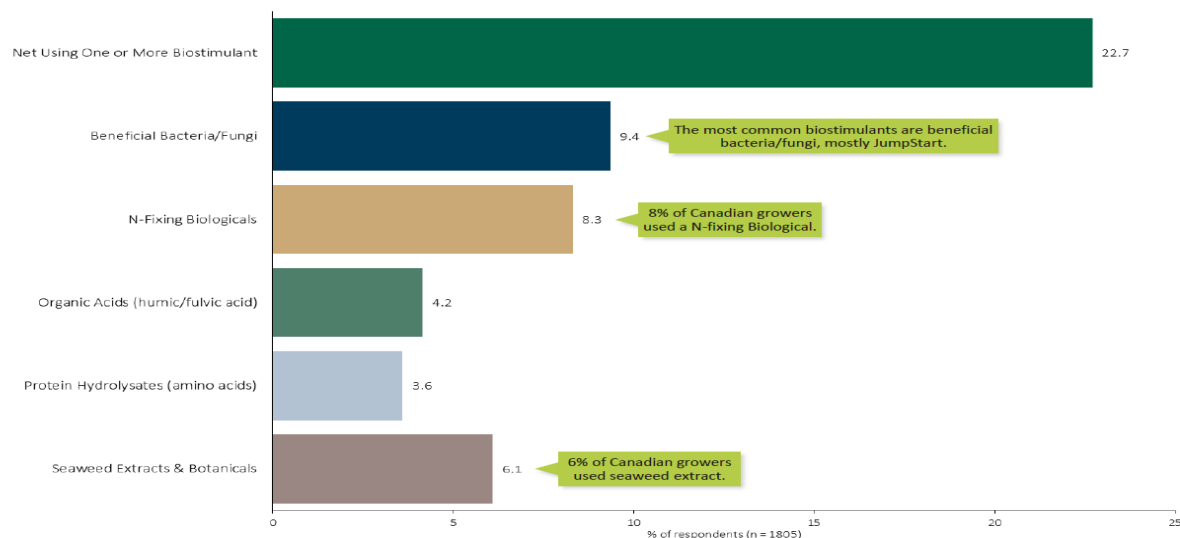


# Biostimulants/Biofertilizer Canadian Growers Usage

23% of Canadian growers reported USING one or more biostimulants in 2023 with use much higher in the West (26% of growers) than in the East (18%) and biofertilizer the most common (N-Fixing products and beneficial bacteria/fungi)



Biostimulant Categories 2023

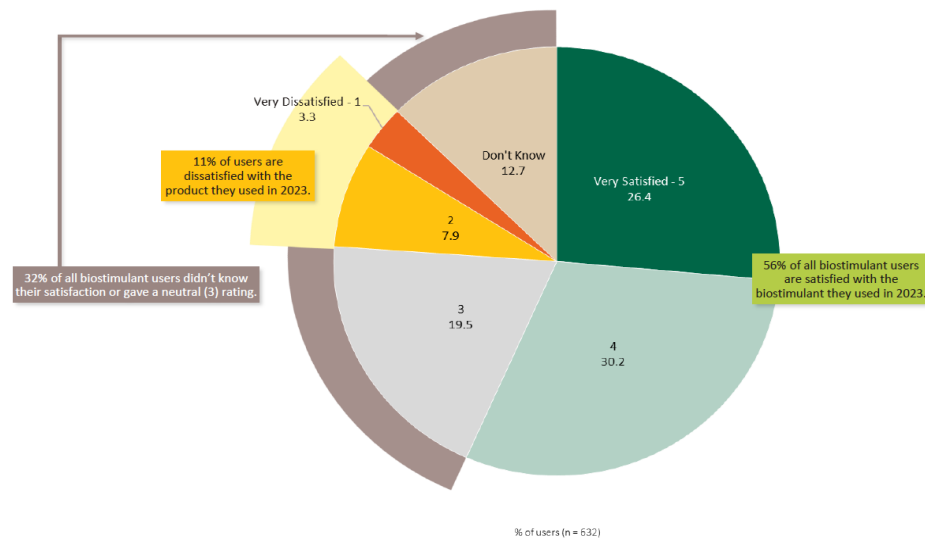


# Biostimulants/Biofertilizer Canadian Growers Satisfaction

56% are satisfied with the biostimulant brand they used in 2023 with 37% of growers who used a brand in 2023 committed to continuing to use the brand for the next two or three years

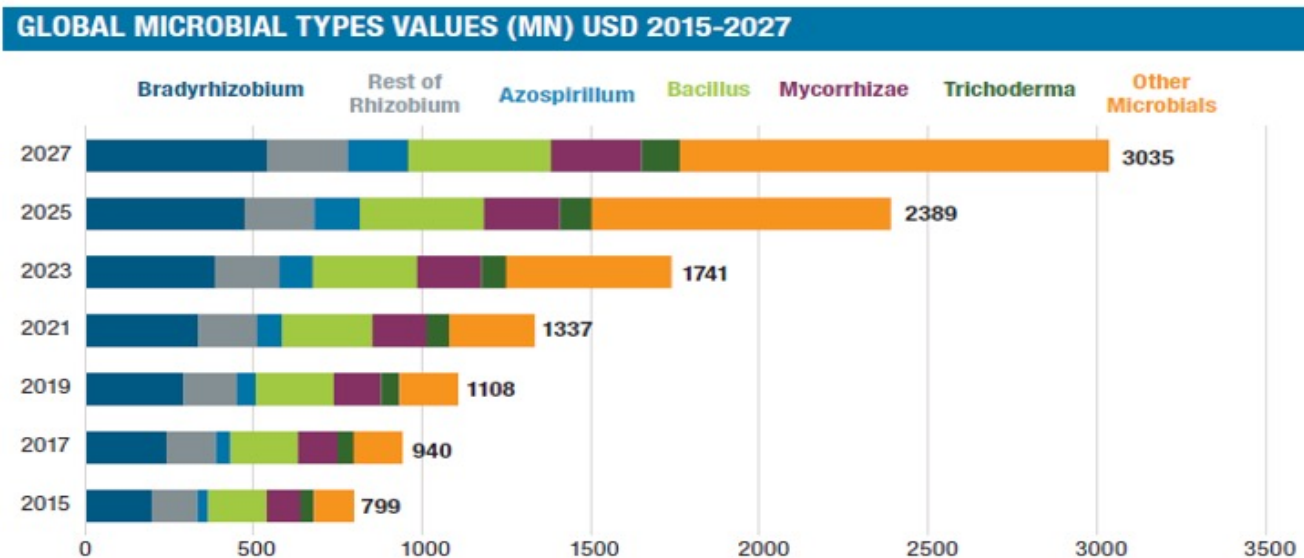


Satisfaction with Biostimulants Used in 2023 - All Brands



# N Fixing Microbials Driving Growth of Biofertilizer Market

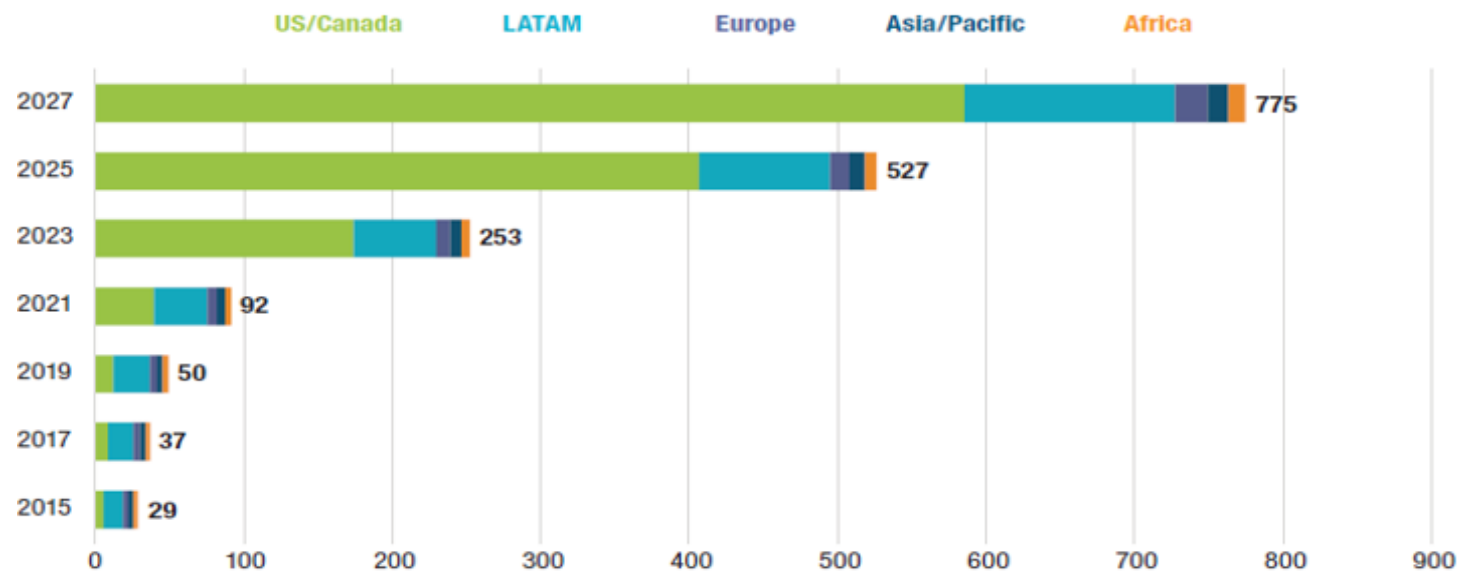
With *Rhizobia*, *Bacillus*, and Mycorrhizae markets maturing, N fixing microbes and other NUE (Nutrient Use Efficiency) products for non Leguminosae crops drive growth of the biofertilizer/biostimulants market



# Corn in the US Driving Growth of Biofertilizer Market

Growth driven by adoption of products for NUE

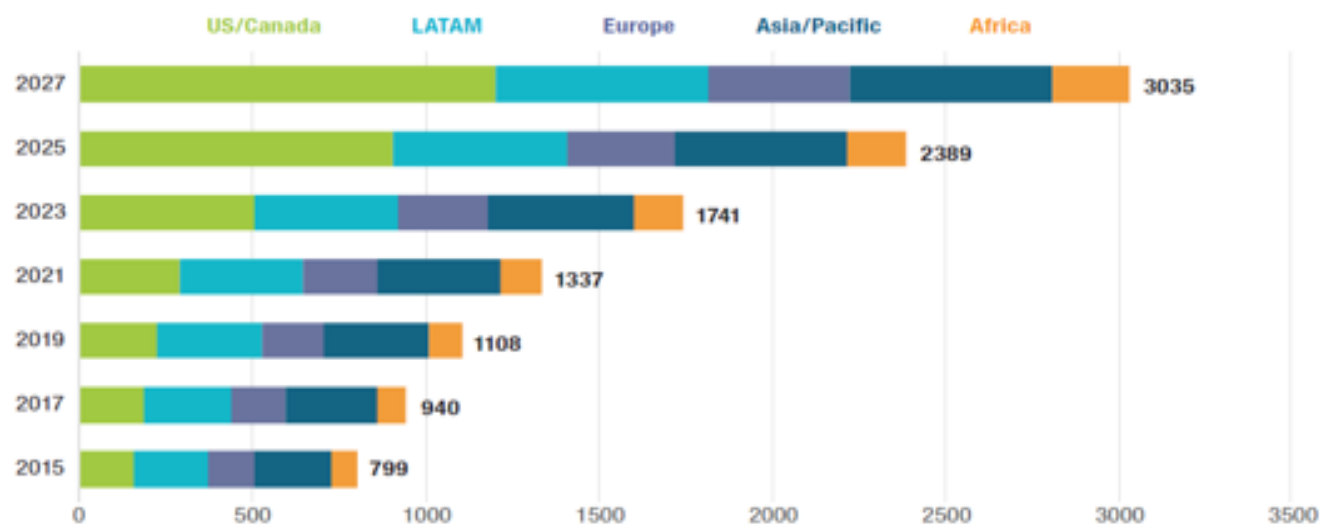
REGIONAL MAIZE MARKET VALUES (MN) USD 2015-2027



# US and LATAM Driving Growth of Biofertilizer Market

Strong adoption rate in row crops in the US and Brazil may slow down if growers' satisfaction with current NUE products declines

REGIONAL MARKET VALUES (MN) USD 2015-2027



# Biofertilizer/Biostimulants Market Interest is Growing

- Nitrogen fixation
- Phosphate solubilization
- Micro and macro nutrients assimilation
- Production of other compounds that stimulate growth
- Enhancement of plant's health through abiotic stress resistance (e.g. drought, salinity, heat)
- Booster of soil organic matter and soil restoration
- Increased production sustainability
- Reduction of soil and water pollution



# Questions?