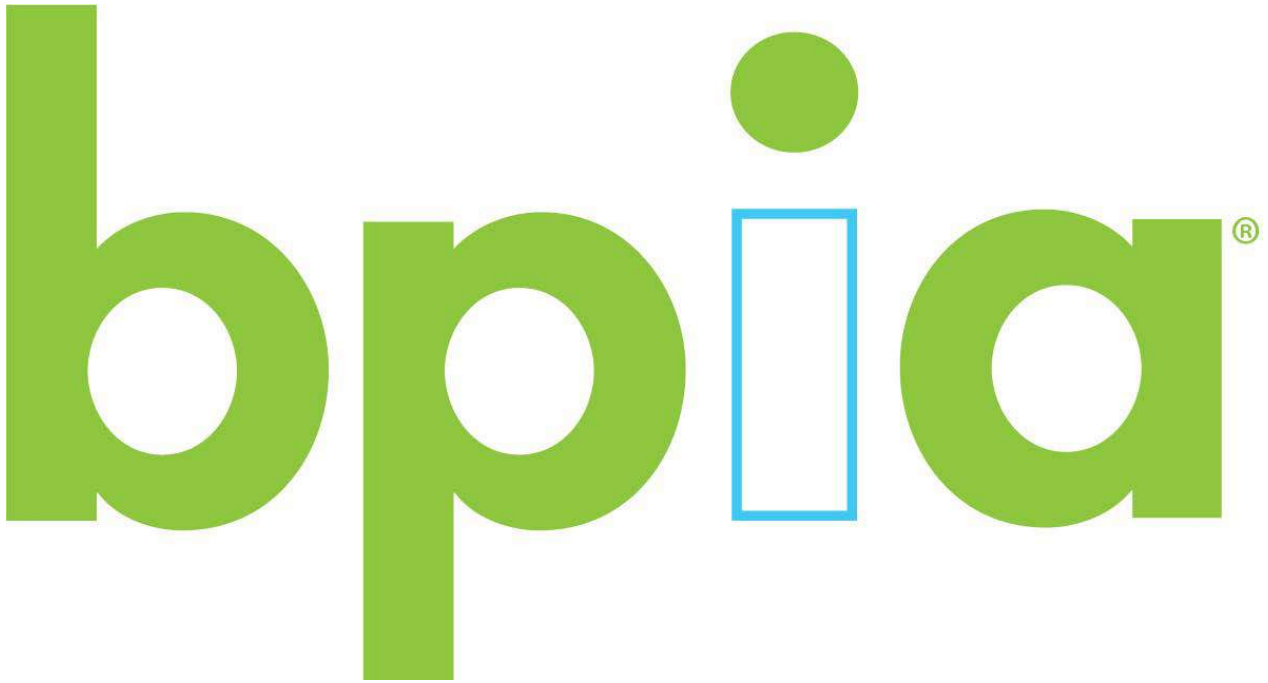
PPDC – Introduction to the Biological Product Industry Alliance (BPIA)



May 12, 2021/4:00-4:30 pm

Biological Products Stakeholders and Industry

Presenters: **Keith Jones**, Executive Director BPIA

Nina Wilson, Gowan Company, BPIA Board Member, PPDC Member

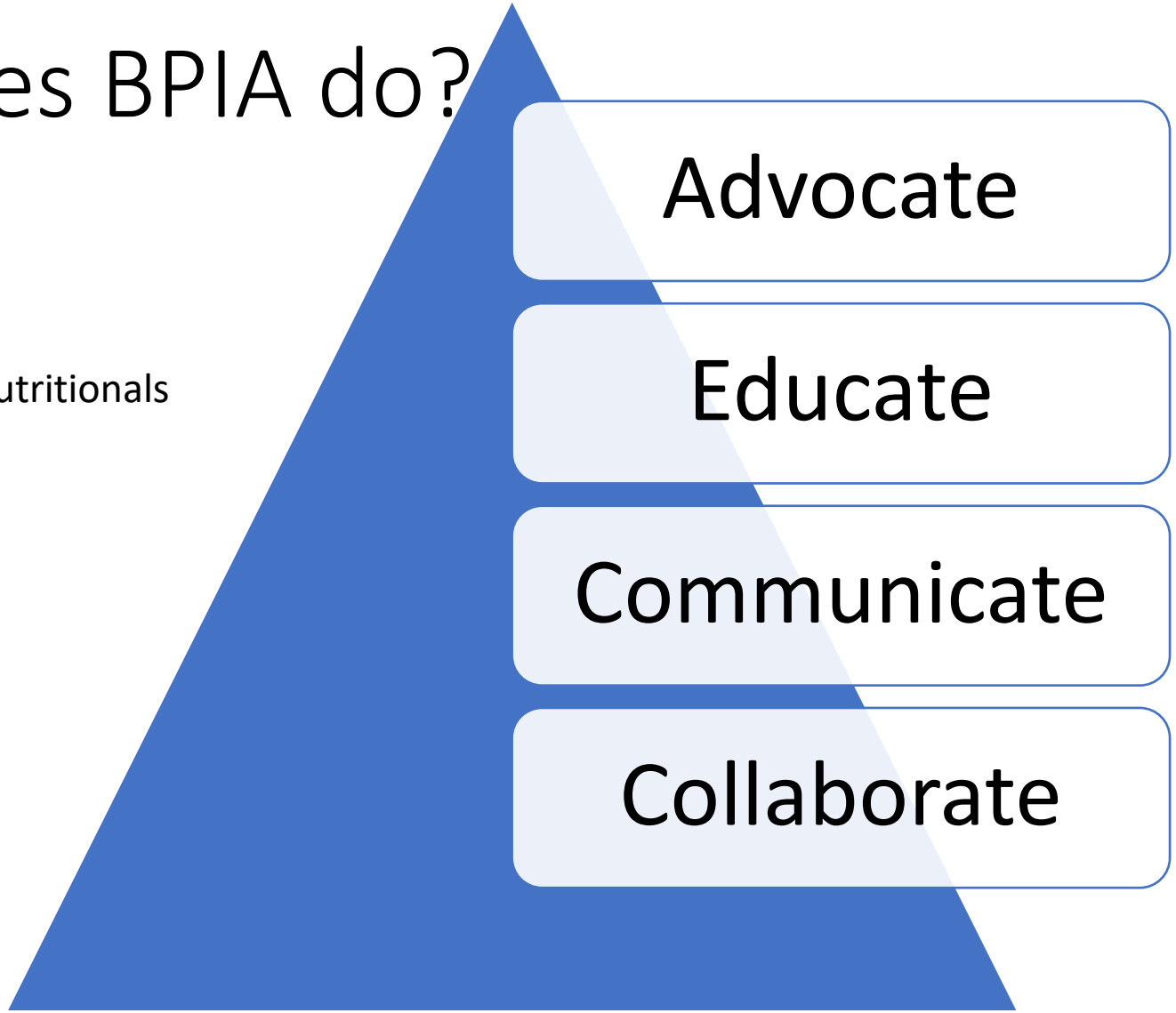
Who is BPIA

- Washington, DC area-based Trade Association
- Started in 2003 with 5 members companies
- Today: over 137 members companies
- Manufactures, Marketers, Distributors and Service Provider
  Member range from sole proprietors to multinational companies of Biopesticides, biostimulants and biofertilizers
- Cooperation with governmental agencies & universities

Expanding to includes food companies and growers

What does BPIA do?

Biological control & nutritionals
Sustainability
IPM



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Member-Driven Committees & Meetings

Committees

Biostimulant
Canadian
Regulatory
Specialty Markets
Communications
Finance
Government Affairs
Membership
Nominating

Meetings

Annual Meetings
Capitol Hill “Fly-Ins”
Symposiums
Workshops
Now Webinars!

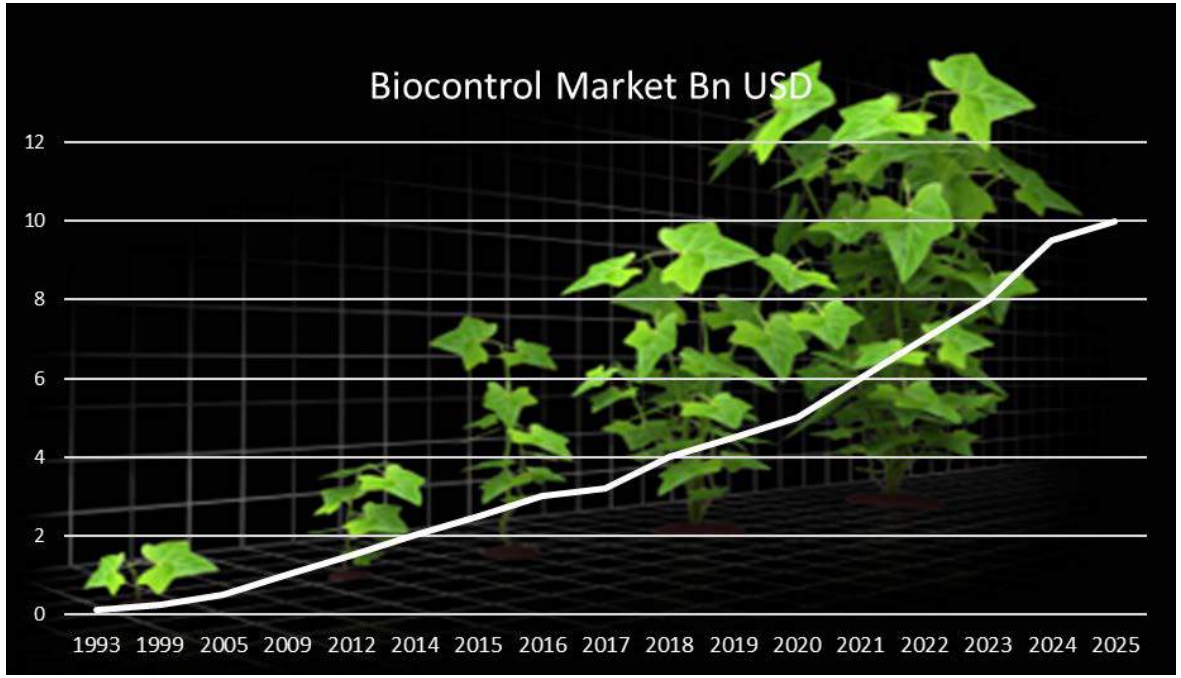
Industry Collaboration

While BPIA member companies hold membership in multiple industry trade groups that represent diverse commercial interests, BPIA itself has joint initiatives with industry associations to collaborate on common goals.

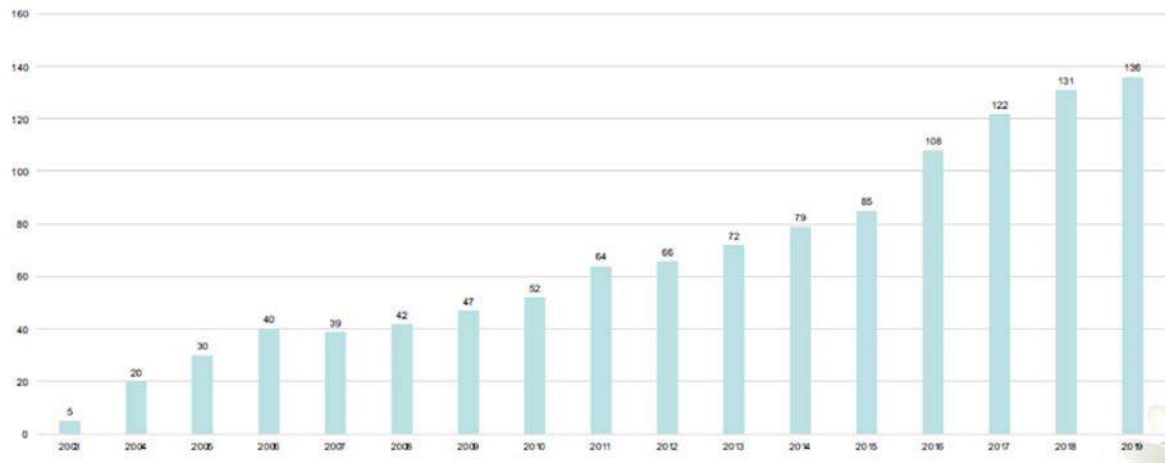
- ASTA (American Seed Trade Association)
- BIO (Biotechnology Innovation Organization)
- CLA (Crop Life America)
- EBIC (European Biostimulant Industry Council)
- IBMA (International Biocontrol Manufacturers Association)
- TFI (The Fertilizer Institute)

Global Biocontrol Market

DunhamTrimmer
International Bio Intelligence



bpia Membership Growth




Nina Wilson, Gowan Company, BPIA Board Member, PPDC Member
About Biological Product – focus on biopesticides

Categories of Biological Pesticides

Macrobials

Photo 19201880 © Richard Brosseau | Dreamstime.com

Predators, parasites & nematodes

(living organism which protect plants in nature)

Microbials

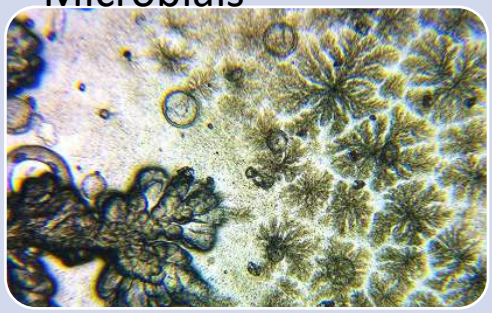


Photo 203045425 © Corinazone | Dreamstime.com

Viruses, bacteria & fungal pathogens

(found in soil and used in food & feeds)

Semiochemicals

Photo ID 55265429 © Neil Letson | Dreamstime.com

Pheromones, plant volatiles

(communication tools found in nature)

Biochemicals

Photo 124237471 © Yana Tatevosian | Dreamstime.com

Botanicals & other natural substances

(products derived or extracted from natural substances)

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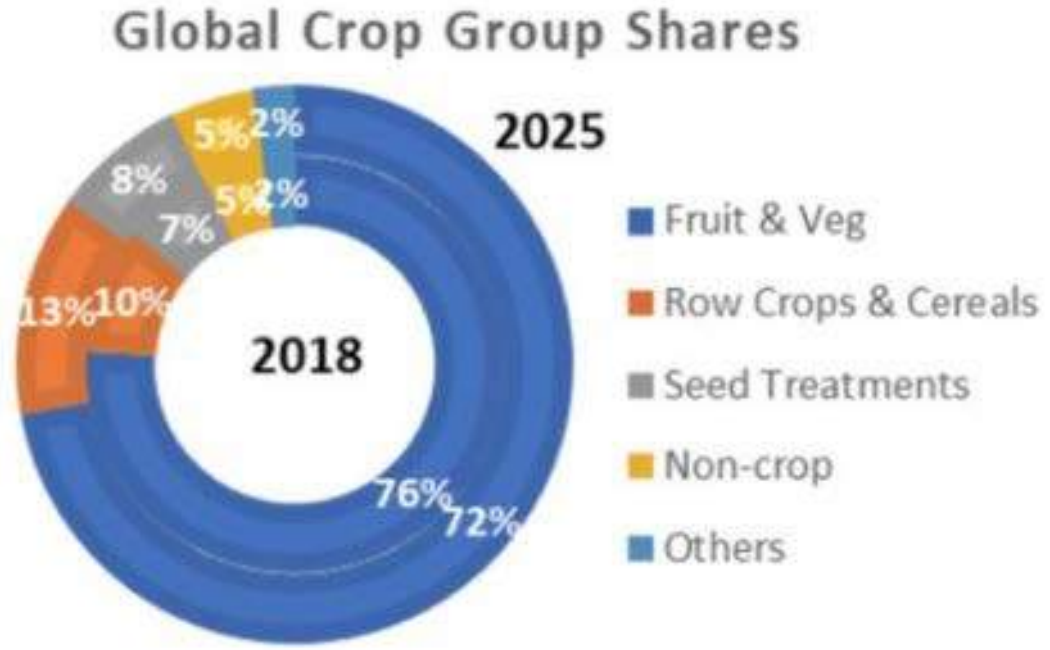
Requires EPA registration

Market

- Sales of biologicals in the fruit and vegetable segment represent about 80% of the global market
- While many biological controls may be organic-compliant, US organic acres make up only 1% of agricultural acres* – therefore, the largest potential market are conventional acres which desire the biological control & nutrition benefits



- Cost
- Multiple harvest timing
- Consumer demands are focused on non-processed foods

*Pew Research Center
https://www.pewresearch.org/fact tank/2019/01/10/organic farming is on the rise in the u s/

Biopesticide Benefits – provides basic agronomic benefits first

- Crop quality and yield
- Beneficials insect preservation
- Labor and harvest flexibility – favorable pre harvest intervals, re-entry timing and PPE
- Integrated Pest Management (IPM) & resistance management program compatibility
- Food chain sustainability goals
- Residue management
- May be used for National Organic Production (NOP) certified land/crop; management complexities for growers

Biological Pesticides – US EPA Definition

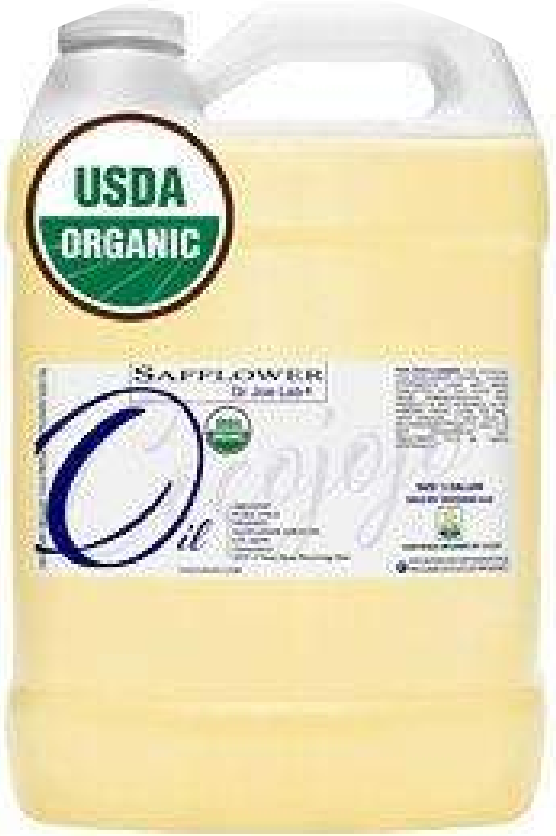
Insecticide, fungicides, herbicides and Plant growth regulators

- “are naturally occurring chemicals or are synthetically derived equivalents;
- have a **history of exposure to humans and the environment demonstrating minimal toxicity**, or in the case of synthetically derived biochemical pesticides, are equivalent to a naturally occurring chemical that has such a history; and
- have a **nontoxic mode of action to the target pest**(s)”

  - May or may not be National Organic Program compliant

Industry Issues – qualitative vs quantitative risk assessments

- Registration standards per FIFRA are the same as conventionals but testing should be commensurate with the risks based on minimal toxicity
  - Qualitative risk assessments using reduced animal testing scenarios to demonstrate minimal toxicity can be complexed



Industry Issues – long development timelines with alternative standards hurdles & non-traditional testing

- Product development timeline can be 7+ years, similar to conventional chemistry & are dependent on PRIA registration timelines to continue innovation
- USDA National Organic Program and other ex US organic or sustainability programs that are not based on EPA's rigorous toxicological assessment limit formulation ingredients and production methods
- Traditional on-farm efficacy testing protocols are not adequate as biological products have a nontoxic mode of action that often work best in a *seasonal* IPM program with conventional tools
  - Seasonal research is vastly more expensive and complicated

Industry Issues – no global regulatory or trade standardization

- US crops treated with biological product, by virtue of their minimal toxicity, are exempt from numeric tolerances/residue definitions
- Tolerances are not harmonized with other countries
- Trade is complexed and unpredictable

Thank You

Please contact us if you have question or need more information:

Keith Jones, Executive Director BPIA –
jones@bpia.org

Nina Wilson, Gowan Company, BPIA Board Member, PPDC Member –
nwilson@gowanco.com