

bpia

BIOPESTICIDE INDUSTRY ALLIANCE



Introduction to BPIA

6th Annual Biocontrol Industry Meeting

Lucerne, Switzerland

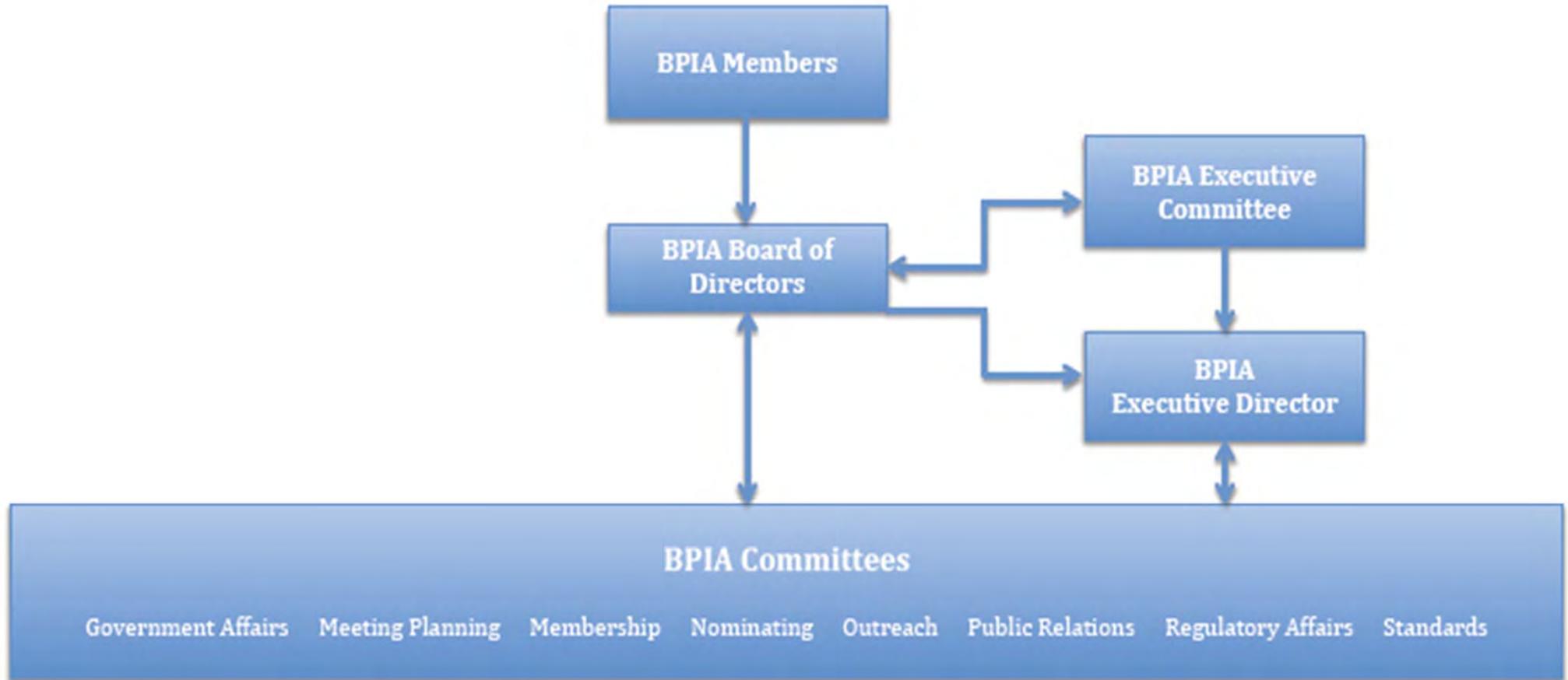
October 24th-26th 2011



BIOPESTICIDE INDUSTRY ALLIANCE



BPIA Organization



Our mission

I. Improve the global acceptance of biopesticides as having a strong value proposition.

II. Facilitate the successful development, commercialization, and adoption of biopesticides.



Our purpose

- I. Promote industry standards for biopesticides.
- II. Communicate the value of biopesticides in agriculture, forestry, turf and ornamental, public health, consumer, and other target markets.
- III. Develop collaborative working relationships with the authorities that regulate biopesticides **and** become a resource to these authorities in order to ensure timely, predictable, transparent, and appropriate registration and regulatory requirements.
- IV. Become a leading source of information to key influencers who impact acceptance, commercialization, and adoption of biopesticides.



BIOPESTICIDE INDUSTRY ALLIANCE



Our guiding principles

(Standards)

- I. Products that are supported have appropriate EPA, PMRA, EU or other equivalent registrations.

- II. Proper product stewardship at all levels of the value chain:
 - a. Processes for maintaining product quality integrity and resolving product complaints
 - b. Scientifically valid efficacy tests supporting claims and promotions
 - c. Commercially acceptable product efficacy levels in target geography with minimal field trial variability
 - d. Testimonials from customers and key influencers attesting to efficacy claims and satisfaction with product



Our guiding principles

(Standards)

* These guiding principles are expected to be followed by all members of BPIA and are a condition of membership. Signed initial membership applications include these guiding principles as will all membership renewals subsequent to the adoption of this new 5-year strategic plan.



BIOPESTICIDE INDUSTRY ALLIANCE



Our Outreach Presentation



BIOPESTICIDE INDUSTRY ALLIANCE



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Biopesticide Industry Alliance



Feeding 9 Billion People Sustainably:

The Role of Biopesticides

Presenters:

Bill Stoneman

BPIA, Executive Director

&

Marcus Meadows-Smith

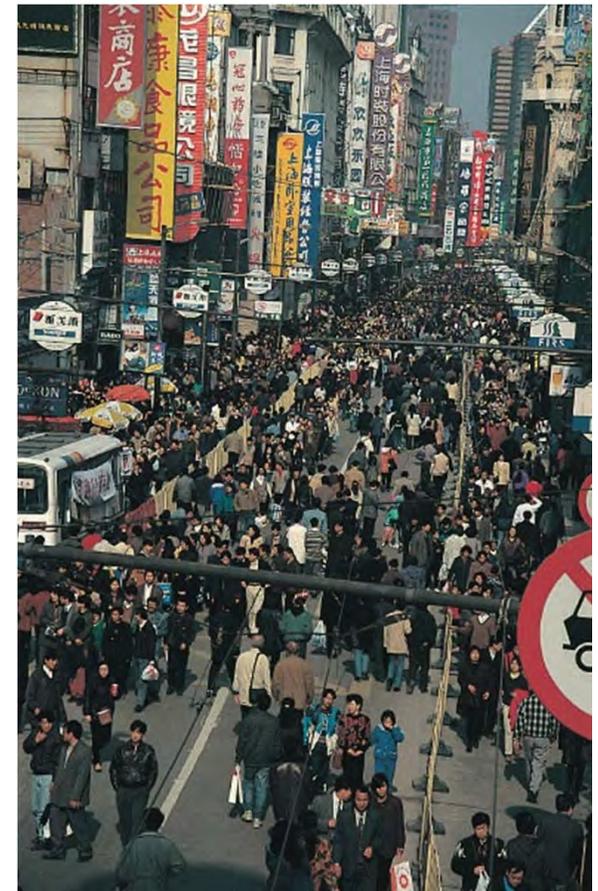
BPIA, Chairman of Outreach Committee

CEO, AgraQuest Inc

World Population is expected to reach
9 billion people by **2050***

What are the challenges to meet to
sustainably feed 9 billion people?

* FAO projection



Presentation Overview

1. Definitions
2. Challenges and Solutions
3. IPM – Integrated Pest Management
4. Additional Benefits
5. What You Can Do

Definitions

Sustainability

Has a triple bottom line

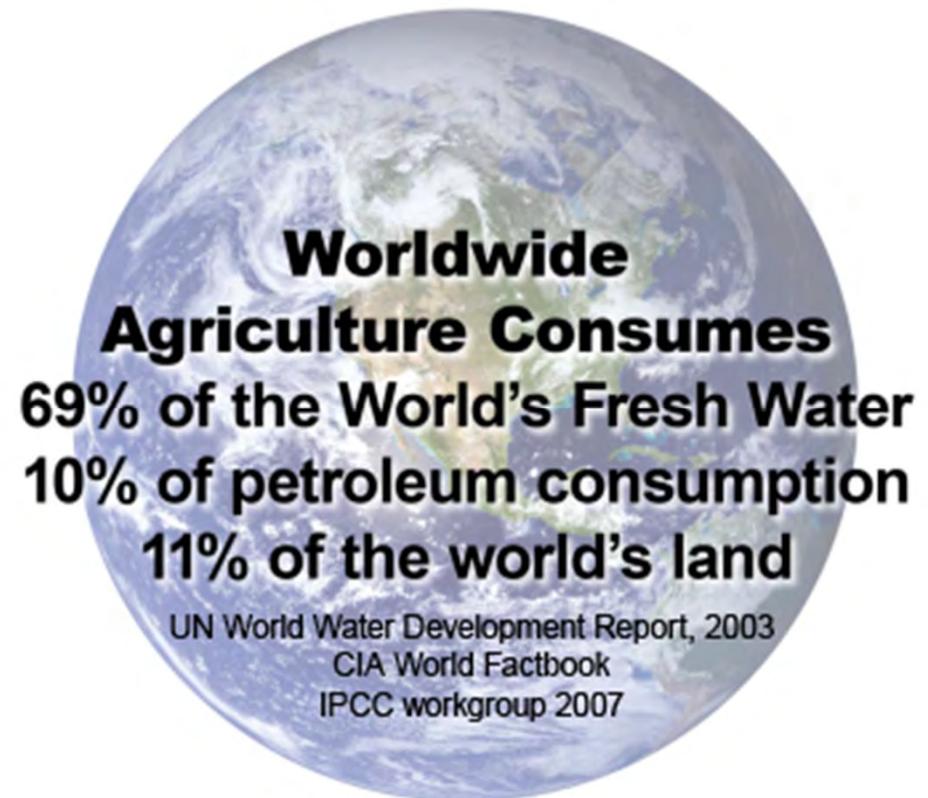
People
Prosperity
Planet



Sustainable Farming

Has 3 key challenges:

Productivity
Food Quality
Reduced Impact



What are biopesticides?

Biopesticides are naturally occurring products derived from materials such as plants, bacteria, viruses, minerals

Key benefits of biopesticides*

- Are usually less toxic than conventional pesticides
- Generally affect only the target pest and closely related organisms
- Often are effective in very small quantities and decompose quickly
- Can greatly decrease the use of conventional pesticides while crop yields remain high

•As defined by EPA

Registered by international regulatory agencies like US-EPA, and conform to FIFRA and MRL restrictions.



Challenges and Solutions

Sustainable farming has 3 key **challenges**:

Productivity

Population growth means we must produce more food from finite natural resources.

Farm productivity must double*

People: affordable & plentiful food

Prosperity: for food value chain, improved farm income

Planet: within available arable land

* World Bank, FAO & IFPRI



Solution: Biopesticides improve sustainability

Increase Productivity

Biopesticides used alone and in combination with conventional crop protection products have been shown to:

- improve efficacy
- enhance yield
- be cost effective.



Sustainable farming has 3 key **challenges**:

Food Quality

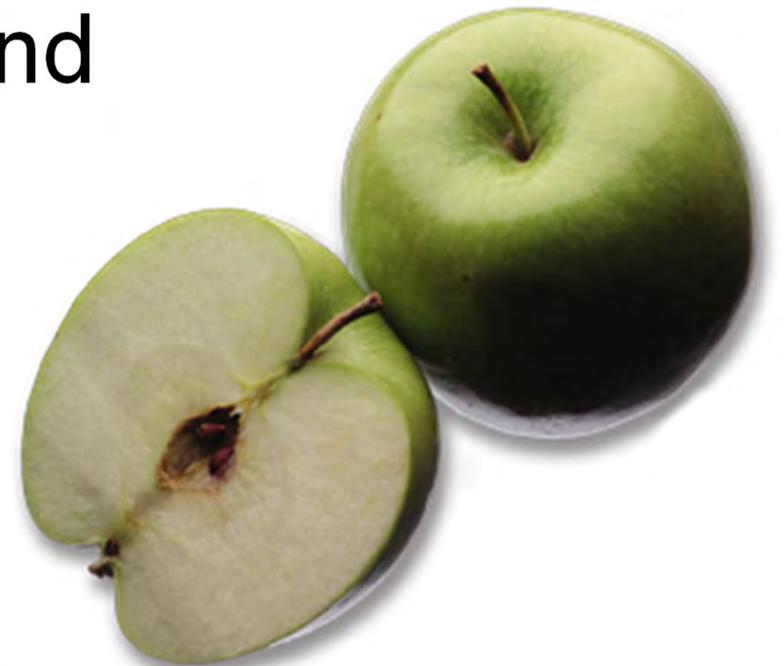
This expanding population needs a productive and sustainable system that delivers food that is:

High quality, Nutritious, and Safe to Eat

People: Healthy & clean food

Prosperity: Marketable, attractive food

Planet: Less waste



Solution: Biopesticides improve sustainability

Promote Food Quality

Biopesticides can be used to improve packout, shipability, and shelf-life. Typically they:

- are less toxic than conventional pesticides*
- have no regulated residues, increasing grower access to profitable export markets
- promote plant health for more attractive, healthy food.

* EPA definition



Sustainable farming has 3 key **challenges**:

Reduced Impact

While increasing productivity, farming practices have to improve efficiency for **consumers**, our **neighbors**, and our **planet**.

This means **low impact, high yield** solutions

People: Safer for workers, neighbors & consumers

Prosperity: Green jobs

Planet: Preserving natural resources & less reliance on non-renewable resources.



Solution: Biopesticides improve sustainability

Minimize Impact

Used in as part of an effective IPM program, biopesticides are highly targeted to particular pests and have a low environmental impact. Typically they:

- do not persist in environment
- are from renewable sources
- are safe for workers, neighbors & consumers
- are soft on beneficial insects.



IPM

Integrated Pest Management

Biopesticides improve sustainability of conventional programs

IPM

Biopesticides can be effectively used as part of an IPM program or a conventional spray program. Biopesticides can either substitute for conventional crop protection products or be added to the spray program to increase yields from the same acreage.

Biopesticides

+

**conventional crop
protection products**

=

**Increased efficacy, higher yield,
lower chemical load.**



Additional Benefits of Biopesticides

Additional benefits of biopesticides

Resistance Management Tools

Multiple modes of action mean biopesticides can, in season-long control programs, preserve the effectiveness of conventional pesticides.



Additional benefits of biopesticides

Residue Management

Biopesticides are generally exempt from tolerance, and therefore help growers to manage residues:

- to meet MRLs in domestic US food market
- to meet MRLs of lucrative export markets
- to grow to organic food standards
- to market “residue free” food

* MRLs – are maximum residue limits set by governments and regulators as safe for consumers



Additional benefits of biopesticides

Harvest and Labor Management Benefits

Biopesticides are safe to workers, provide short Re-entry Intervals and short Pre-harvest Intervals.



Additional benefits of biopesticides

Cutting Edge Technology

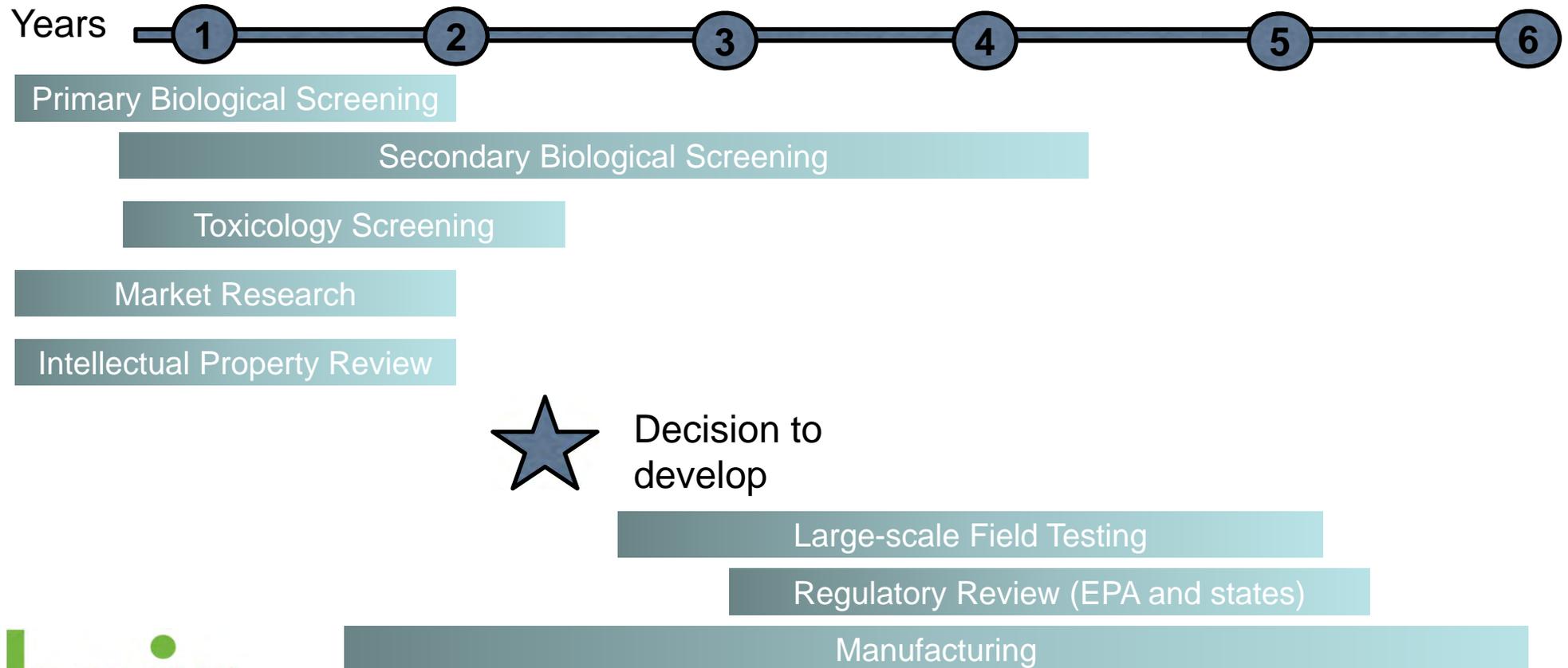
Using the same natural products chemistry approaches as pharmaceuticals, agriculture exploits these types of sources for developing new, environmentally responsible active ingredients.

Major Crop Protection companies are now acquiring and adding biopesticides to their portfolios and spray programs because they meet the demands of modern agriculture and represent a new source for technology innovation.

Additional benefits of biopesticides

Science & Innovation

Biopesticide development is a rigorous process driven by market need, innovative technologies and regulatory requirements.



What is the efficacy of Biopesticides?

Registered biopesticides typically fall into one of two broad categories:

1. Developed and targeted as effective for conventional cropping systems
2. Developed and targeted as effective in organic cropping systems

Read label and manufacturers recommendation for efficacy level by crop and disease



Summary: The case for Biopesticides

Biopesticides are effective tools for production, are renewable sustainable, offer an improved impact profile, and reduce pesticide residues.

Meeting the 3 challenges of Sustainable Agriculture

- Increase productivity
- Promote Food Quality
- Minimize Impact

IPM



Additional benefits

- Resistance Management
- Harvest & Labor Management
- Residue Management



What you can do

Who are the **stakeholders**?

All of us.

We are all consumers.
We share one planet.



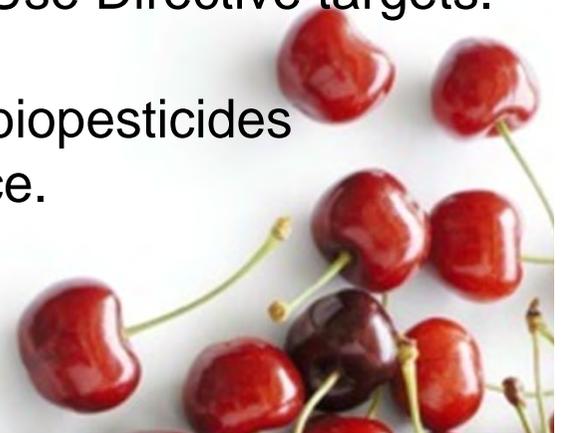
What groups own the responsibility for meeting this demand for food and sustainable farming?

- Growers
- Technology Developers & Researchers
- Food Value Chain: retailers, restaurants, distributors & marketers of food
- Regulators
- Legislators
- NGOs
- Consumers



What can you do to improve sustainability?

- **Sustainable Brand**: Promote benefits of low/no residue brands of food.
- **Biopesticide Use**: Define sustainable agriculture as programs using a significant portion of biopesticides in production. Train/educate people on the benefits of biopesticides for sustainable agriculture.
- **Innovation & Green Jobs**: Support continuing legislation to incentivize research and development of biopesticides with conventional crop protection products and grower low-chem/IPM spray programs (like IR-4).
- **Grower Programs**: Promote biopesticides and IPM programs in existing USDA conservation programs and in meeting the EU Sustainable Use Directive targets.
- **MRL Standards**: Help develop and publicize lists showing biopesticides are exempt from MRL tolerances. Publicize MRL compliance.



Feeding 9 billion people sustainably: The role of Biopesticides

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THANK YOU

biopesticideindustryalliance.org

Role of BPIA

The role of BPIA is to increase knowledge and awareness of the biopesticide category. BPIA does not promote the use of any single active ingredient or brand.

