



# BADGER COMMON'TATER

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THE VOICE OF WISCONSIN'S POTATO & VEGETABLE INDUSTRY

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### **THE POTATO D.C. FLY-IN**

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### **INTERVIEW:**

## **Scott Polzin**

North Central Irrigation



A Valley 7000 series center pivot system from North Central Irrigation waters a cornfield in late June 2016.



# BIO-PESTICIDES & BIO-STIMULANTS HELP CONTROL PESTS AND DISEASES

## Successes are mounting in implementing sustainable crop protection practices

By Joe Kertzman, managing editor, *Badger Common'Tater*

There is no denying it. The sustainable production wave has captured the attention of potato growers. Whether you are a conventional producer of process potatoes or an organic fresh market specialty producer, there have been some incredible successes with implementing sustainable crop protection practices.

A major component in this growing trend is the successful and strategic use of natural or biological products including bio-pesticides and bio-stimulants to help complement traditional crop management programs.

These innovative tools have been proven to overcome unique challenges such as mutational

resistance to synthetic chemistries and an ever-growing list of maximum residue limits.

Back in 2000, the United States was limited to only about 5,500 acres of organic potatoes. At that time, there were very few tools available to organic producers.

Then, bio-pesticide manufacturers invested time and resources to help address consumer demand for sustainably grown potatoes. They even formed an organization in Texas, BPIA (Biological Products Industry Alliance), with just five member companies to help spread the word about biological products and their effectiveness.

Jump forward to 2017. There are now more than 15,000 acres of

organic potatoes grown in the United States alone. There has been steady growth supported by a commitment of the biological products industry encouraging companies to continue developing effective, consistent and economical tools to help growers maximize the demand for sustainably grown fresh and process potatoes.

The BPIA is now a Washington, D.C. area-based trade association with almost 120 member companies

**Above:** A research and development team at BPIA member company BioConsortia gather around a high-powered microscope to see the latest microbial discovery.

**Opposite Page:** BPIA Executive Director Keith Jones says the biological products industry is experiencing unprecedented growth as a result of consumer demand and increasing regulatory pressures.

ranging from small, innovative sole proprietors to large, international companies. Keith Jones serves as BPIA's current executive director.

"The biological products industry is experiencing unprecedented growth as a result of consumer demand and increasing regulatory pressures," explains Jones. "Our member companies have developed dependable, pioneering products for commercial agriculture, especially for potato growers."

## NEW TOOLS IN THE TOOLBOX

It's not only organic producers who are seeing the immense value and versatility that bio-pesticides and bio-stimulants offer, but also conventional growers who have turned to the new tools as insects and other pests become more and more challenging to overcome because of mutational resistance build-up to a limited number of

traditional products.

One example is LifeGard Biological Activator recently introduced by Certis USA at the 2017 Potato Expo in San Francisco. LifeGard triggers the plant's natural defense mechanism to ward off early blight, late blight and white mold.

Research results conducted over the past 20 years indicate that LifeGard can be used in a rotational program to minimize chemical resistance while delivering equal or better disease control to maximize yields and quality.

"Bio-pesticide sales are surging and what was once old is new again," says Tim Damico, BPIA Board member and co-chair of the association's Specialty Markets Committee. According to Damico, Certis USA is offering Trident Bioinsecticide (*Bacillus thuringiensis* var. *tenebrionis*) specifically for Colorado potato beetle control.



"Bio-pesticides like Trident offer complex modes of actions for resistance management and improved environmental profiles for pollinator health," explains Damico. "Trident once was replaced by new chemistries; today its biological value

*continued on pg. 22*



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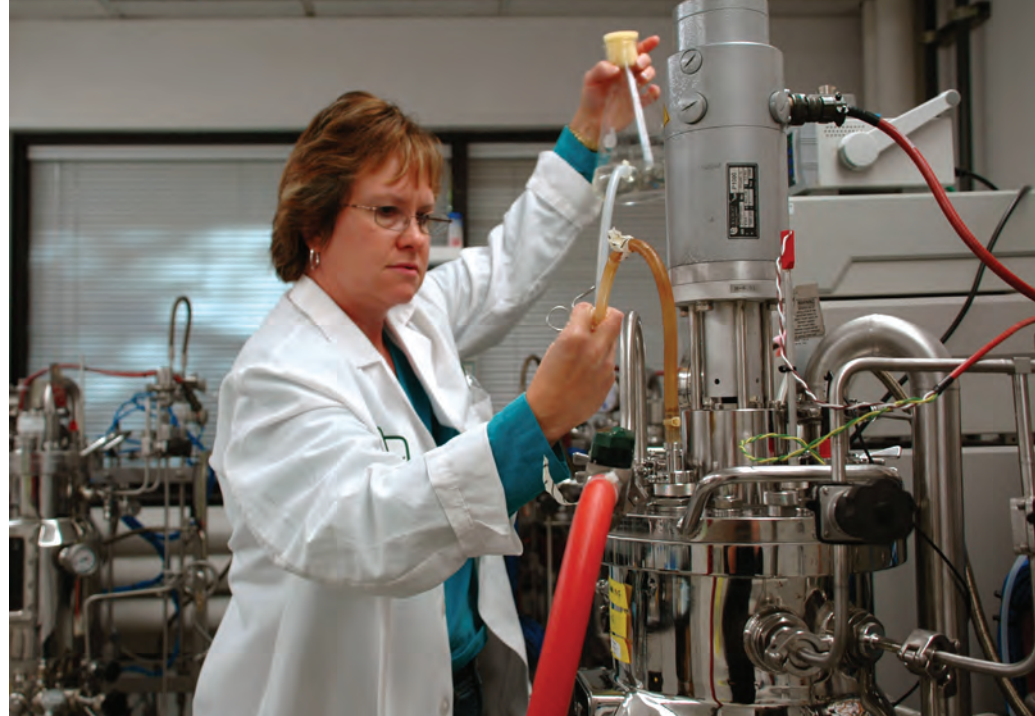
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makes it new again."

One area of the biological market that has really developed over the last decade is the use of beneficial soil inoculants that aid in soil structure, better utilization of soil fertilizer and nutrients, and preventing soil-borne pathogens throughout the growing season.

For example, TerraGrow Soil Inoculant, a new product from BioSafe Systems, provides potato growers with a unique seven-strain soil inoculant infused with a powerful growth stimulant package that has provided potato growers with strong plant response translating into



healthier yields and quality.

Another example of biologicals in the potato industry has been the entry of Majestene from Marrone Bio Innovations out of Davis, California. Majestene is a nematicide that has proven effective in the control of nematodes in the potato fields of the Pacific Northwest.

#### ALTERNATIVE PRODUCTS

In the spring of 2016, this biological nematicide entered the market

just as another key nematicide was lost to users due to manufacturing challenges. With potato farmers seeking alternative products, Majestene was incorporated into a couple of large potato farms and shanked in at planting and then run through the center pivot irrigation systems.

Potato farmers in the area have been pleased with the results, now adding this biological to their programs this spring.

"With an industry under fire from environmental groups insisting that farmers work harder to reduce the chemical residues on their products, Marrone Bio Innovations is one of many companies in the bio-pesticide industry that is working to resolve these issues," says Pam Marrone, Ph.D., CEO and founder of Marrone Bio Innovations.

Not only are growers utilizing these new technologies in the field, but food processors are also starting to see more and more promise in the use of biological products in post-

**Left:** LifeGuard Biological Activator triggers a plant's natural defense mechanism to ward off early blight, late blight and white mold.

**Right:** Bio-pesticides undergo the fermentation process in the BPIA research and development laboratory.



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harvest and storage applications.

Consequently, BPIA recently expanded its membership categories to now include growers and food processors in addition to its traditional membership comprised of manufacturers, marketers and distributors of biological products.

### SAFE POTATO STORAGE

Biological products, such as 1,4SIGHT, are a safer option for potato storage as opposed to the conventional carbamate chemical Chlorpropham. 1,4SIGHT is one product within a family of biocontrol chemicals produced by 1,4GROUP that enhances dormancy of the potatoes with a naturally occurring molecule.

The demand for gentler chemicals for potato storage has grown so much that 80 percent of the products sold by 1,4GROUP are now bio-controls. The use of biochemicals can also enable large-scale storage facilities to reach their sustainability goals.

In addition, both the fresh and processing markets see the advantage to using bio-controls as a means to meet their customer demands for supplying safer food.

BPIA hosted a week-long program in Reno, Nevada February 27-March 3 to promote biological products and educate growers, food processors and the public about the many benefits of

biological products.

The week of activities included the BPIA 2017 spring meeting, an International Biocontrol Symposium and the Biocontrols USA West 2017 Conference & Expo, which is a trade show geared towards growers, including potato growers.

### VOICE OF THE INDUSTRY

BPIA is the voice of the bio-pesticide, bio-stimulant and biological products industry in the United States. Once associated more with organic farming, biological products have become an integral part of conventional agriculture, applied by growers together with synthetic agrochemicals in rotations or tank mixes.

Driven by consumer and regulatory demand, biological products usage is growing by an average annual rate of 15-20 percent, which is about five times the growth rate of synthetic agrochemicals.

The economics of biological products have also been encouraging manufacturers to invest heavily in this area, as these products can be discovered, approved by regulators and commercialized in a small fraction of the time and cost of synthetic agrochemicals.

One of the primary roles of the BPIA is to represent the biological products



**Above:** Majestene is a nematocide that has proven effective in the control of nematodes in the potato fields of the Pacific Northwest.

industry on Capitol Hill and with the Environmental Protection Agency (EPA).

The industry alliance conducts congressional and EPA visits several times a year for its member companies, and works to educate members of Congress and EPA officials as to the benefits of biological products from an efficacy, environmental and economic point-of-view.

With the new administration coming to Washington, the education role of the BPIA will be increasingly important.

For more information, contact BPIA, 201-394-2476, [jamdursky@aol.com](mailto:jamdursky@aol.com), [www.bpia.org](http://www.bpia.org). **BC'T**



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