

**FDA FOOD SAFETY  
MODERNIZATION ACT**

The logo features a stylized blue wave or swoosh shape below the text, with a horizontal bar underneath it.

**Is there an impact on microbial pesticide use or imports of  
treated commodities ?**

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# Basics of the Food Safety Modernization Act (FSMA)

- First major overhaul of US food safety practices since 1938.
- Response to rise in major outbreaks of foodborne illnesses and concerns about bioterrorism post-9/11.
- Previous regulations focused on processing, food handling and manufacturing sectors.
- New regulations for farms that grow fresh produce (fruits and veg) and for facilities that process food.
- FSMA gives FDA broad new powers to:
  - Prevent food safety problems
  - Detect and respond to food safety issues
  - Improve the safety of imported foods



# 5 Key Areas

- ▲ **Preventative controls** – food safety plans for farms and facilities
- ▲ **Inspection and Compliance**
- ▲ **Imported Food Safety**
- ▲ **Response** - mandatory recalls
- ▲ **Enhanced Partnerships** among all food safety agencies – federal, state, local, tribal and foreign

No registration fees, except for facility reinspections, recalls or importer reinspections related to non-compliance.

## More on basics



- Regulations focus on food safety risks from microbial human *pathogen* contamination
- **FSMA does NOT address food safety risks from genetically engineered crops, pesticide use or antimicrobial resistance.**
- New standards for produce production and food safety measures for facilities that process food for human consumption.
- Became law on January 4, 2011. Lengthy implementation process. Compliance dates for some businesses began in September 2016.

# More basics

## ▲ Rules do not apply to:

- △ Produce that is not a raw agricultural commodity.
- △ Produce commodities that are rarely consumed raw.
- △ Food grains.
- △ Produced that is used for personal or on-farm consumption.
- △ Farms with an average annual value of produce sold during previous 3 years of \$25K or less.
- △ Restaurants and food retailers.

# Will FSMA impact microbial pesticides?

Focuses on conditions and practices identified as potential contributing factors for microbial contamination of **human pathogens** (e.g. *E. coli*, *Salmonella* spp., fecal coliforms, *Listeria monocytogenes*)

- Agricultural water
- Biological soil amendments of animal origin (raw manure and stabilized compost)
- Worker health and hygiene
- Equipment, tools, buildings and sanitation
- Domesticated and wild animals
- Growing, harvesting, packing and holding activities
- Sprouts requirements

# Foreign Supplier Verification Programs (FSVP)

- ▲ 15% of US food supply is imported
- ▲ Importers must verify that foreign suppliers have adequate preventative controls in place to ensure food safety. So the scope is *beyond* US farms and food processing facilities.
- ▲ FDA able to accredit qualified 3<sup>rd</sup> party auditors to certify foreign food facilities are in compliance.



# Sprouts – An opportunity for registrants?

- Standards for sprout production, including treatment of seed before sprouting and testing of spent irrigation water for human pathogens.
- Sprouts are especially vulnerable to microbial contamination from human pathogens because of their warm, moist and nutrient rich conditions for growth.

The logo for the Sprout Safety Alliance features the word "Sprout" in a large, green, sans-serif font. A stylized green sprout with three leaves is positioned above the letter 'o'. Below "Sprout", the words "Safety Alliance" are written in a smaller, green, sans-serif font.





# Sprout Production



- ▲ Measures to prevent the introduction of microbial pathogens into or onto seeds or beans that will be used for sprouting.
- ▲ Treatment of seeds or beans that will be used to grow sprouts to reduce microorganisms of public health significance.
- ▲ Testing of spent sprout irrigation water from each production batch of sprouts for certain pathogens. Sprouts cannot enter commerce until confirmed free of pathogens.
- ▲ Testing of growing, packing and harvesting environment for presence of *Listeria* species.

# Sprout Seed Treatment Options

- ▲ Hot water
- ▲ Irradiation
- ▲ Biocides/Chemicals, such as:
  - △ Calcium hypochlorite (but not EPA registrations to treat seeds for human pathogens)
  - △ PAA and H<sub>2</sub>O<sub>2</sub> (registered for use on seeds and sprouts, but no public health claims) - **Tsunami<sup>®</sup> 100**
  - △ Studies published on others like calcium hydroxide, chlorine dioxide, gaseous acetic acid, organic acids, but no registrations (Ding et al, J. Food Sci, 78:R495-R501).



# Registrants are encouraged to

- ▲ Seek EPA approval of existing sprout seed treatment chemicals or ingredients.
- ▲ Develop *new* seed treatment methods – especially ones acceptable for *organic production*.
- ▲ FDA is looking to partner with registrants –

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