

BIOSTIMULANTS: STATE FERTILIZER AND PESTICIDE PERSPECTIVE

AAPCO Annual Spring Meeting 2019

Eddie Simons

Washington State Department of Agriculture

AAPFCO Board Member

AAPFCO Biostimulant Task Force Chair

What is a “BIOSTIMULANT”?

- 2018 US Farm Bill Description

- *(c) Plant biostimulant.—For the purposes of the report under subsection (a), the Secretary—*
- *(1) shall consider “plant biostimulant” to be a substance or micro-organism that, when applied to seeds, plants, or the rhizosphere, stimulates natural processes to enhance or benefit nutrient uptake, nutrient efficiency, tolerance to abiotic stress, or crop quality and yield; and*
- *(2) may modify the description of plant biostimulant, as appropriate.*

Functions

- Crop Quality
 - *Silicon for cut flowers to last longer*
- Nutrient Uptake and Efficiency
 - *Mycorrhizae to extend hyphae into soil and bring nutrients back to plant*
- Crop Quality
 - *Using a **known pesticide** to stimulate a plant to produce resin*
- Nutrient Uptake and Efficiency
 - *Kelp using **hormones** to promote root growth and intercept more nutrients in soil*
- Resistance to Abiotic Stress
 - “Abiotic stresses may be prevented by optimizing plant growth conditions and through provision of water and nutrients and **plant growth regulators** (PGRs—auxins, cytokinins, gibberellins, strigolactones, brassinosteroids).”*

* <https://www.frontiersin.org/articles/10.3389/fpls.2016.02049/full>

Ingredients

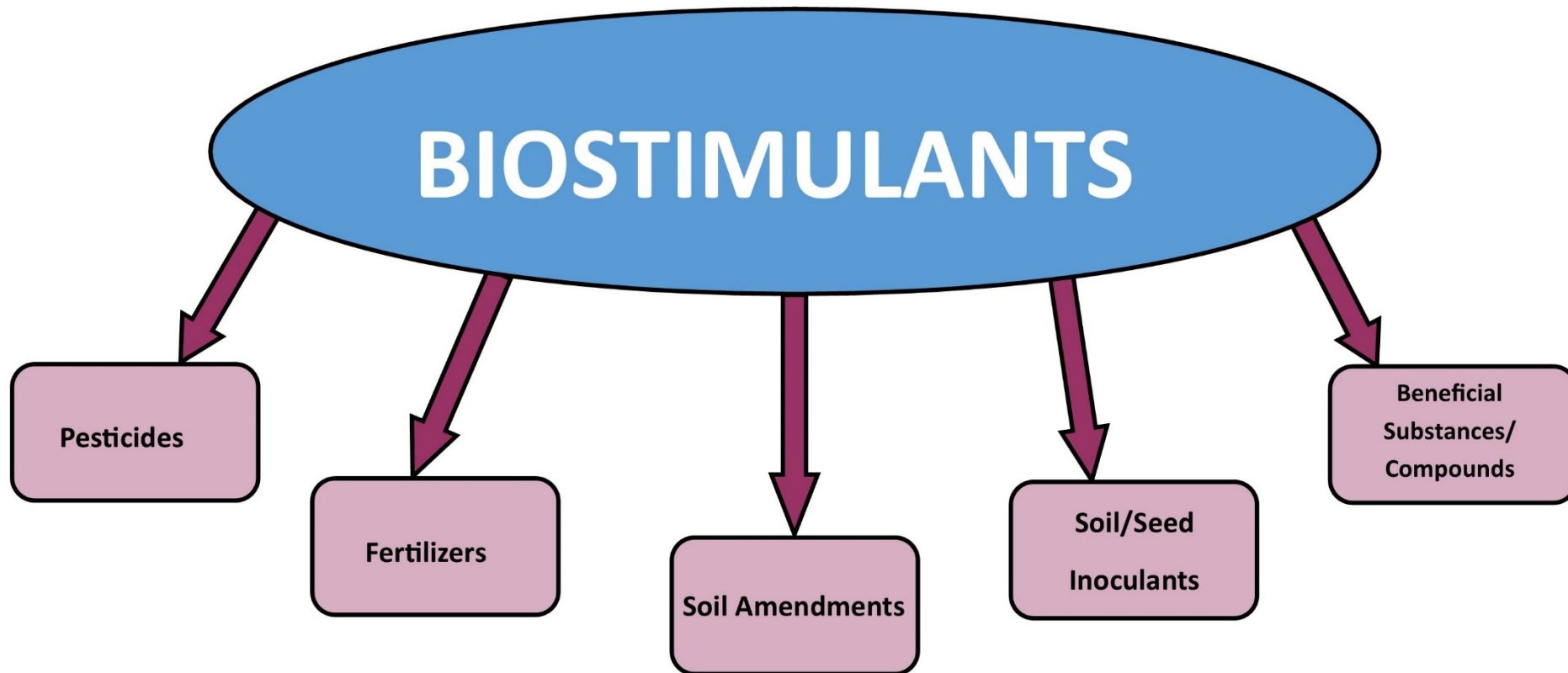
Label Claim

- Kelp Extract
- Willowbark extract
- Crab Shell Meal
- Bacillus Subtilis

More Specifically

- Auxin, cytokinins, gibberilins
- Salicylic Acid
- Chitin/chitosan
- Bacillus subtilis GB03
- Bacillus subtilis strain QST 713
- Bacillus subtilis var.
amyloliquefaciens strain FZB24

Regulatory Buckets



AAPFCO Definitions

- **T-73 Beneficial Substances or Compounds**
 - *Means any substance or compound other than primary, secondary, and micro plant nutrients that can be demonstrated by scientific research to be beneficial to one or more species of plants, when applied exogenously. (Official 2007)*

Does it Fit into a Bucket?

Biostimulant

- Substance or micro-organism
- Applied to seeds, plant, or rhizosphere
- stimulates natural processes to enhance or benefit nutrient uptake, nutrient efficiency, tolerance to abiotic stress, or crop quality and yield

Beneficial Substance/Compound

- Substance or compound
- Applied exogenously (to the plant)
- Beneficial to one or more species of plants

What are the Issues?

- **Confusion**
 - *Distributors/Applicators*
 - *Consumers*
 - *Waste “pesticide” disposal*
 - *Registration and Compliance*
- **Safety**
- **Pesticide Tolerance Issues**
 - *Domestic and International*
- **Unplanned Results**
 - *Off-label applications*
- **Even Playing Field**

STEPS FORWARD

- WORK WITH FERTILIZER PROGRAM
 - *HELP IDENTIFY PRODUCTS THAT MAY ACTUALLY BE PESTICIDAL*
- STAY ACTIVE IN THE USDA BIOSTIMULANT WORKGROUP
- WORK WITH AAPFCO BIOSTIMULANT TASK FORCE TO PRESENT A UNIFIED OPINION TO USDA SECRETARY

DISCUSSION?

Eddie Simons

WA State Department of Agriculture

esimons@agr.wa.gov