

# Biostimulants

## Introduction

Biostimulants are a new and growing category of agricultural products. Derived from naturally occurring substances, its synthetic equivalents and organisms. They can be used to stimulate plant growth via improved nutrients/water use efficiency, protection from antibiotic stress, and/or plant regulator activity. Biostimulants act using different mechanisms to conventional fertilizers.

The US Agriculture Improvement Act passed in 2018 presented the first official US definition of a plant biostimulant. Defining a plant stimulant as:

“A substance or micro-organism that, when applied to seed, plants, or the rhizosphere, stimulates natural processes to enhance or benefit nutrient uptake, nutrient efficiency, tolerance to abiotic stress, or crop quality and yield.”

## Biostimulant Products

Biostimulant products typically include ingredients from one or more from the following general categories:

1. Seaweed Extracts and Botanicals
2. Beneficial Fungi and Bacteria – Biofertilizers
3. Humic and Fulvic Acids
4. Protein Hydrolysates and other N-containing compounds
5. Chitosan and other biopolymers
6. Inorganic Compounds
7. Phytohormones e.g., Auxins, Gibberellins, Cytokinins, Ethylene, and Abscisic acid.

## Legislation

With the introduction of Group 3(M) registrations, plant biostimulants are now at the same legal footing as other fertilizer products, must meet the same standards and compete on equal footing.