



FIRST DEFENSE BIO-CAPSULE

TuneUp+ First Defense* is a plant growth-promoting rhizobacteria (PGPR) that activates plants induced systemic resistance (ISR) defense/immune system. TuneUp+ First Defense stimulates healthier roots and improves nutrient uptake providing both anti-fungal and anti-bacterial activity. It is a broad-spectrum biological fungicide for prevention, control or suppression of many soil-borne diseases.

MODES OF ACTION

TuneUp+ First Defense has multiple modes of action in preventing, controlling or suppressing plant diseases. Its active ingredient, bacillus amyloliquefaciens strain ENV503, produces broad-spectrum antibiotic lipopeptides (iturin) that disrupt pathogen cell-wall formation and is competitive, fast-colonizing rhizosphere bacterium that occupies the plant's root hairs and leaves. It also prevents the growth and antagonistic effects of soilborne and foliar pathogens. Bacillus amyloliquefaciens strain ENV503 is known to stimulate phytohormones, which trigger the plant's systemic resistance to disease (ISR), the defense mechanisms of the plant for prolonged periods of time.

SOYBEAN DISEASES

Damping-off fungus control

- Rhizoctonia spp.
- Pythium spp.

Fusarium seedling blight control

- Fusarium spp.

BENEFITS INCLUDE

- Improved control of soil-borne diseases
- Directly attacks pathogens
- Stimulates plants natural defenses
- Promotes plant growth and overall yield
- Forms protective barrier around roots
- No resistance potential

USE AND PACKAGING

Available in Bio-Capsule™ Technology to be used in TuneUp+ Soybeans or TuneUp+ Soybeans with Ether. Must be used in conjunction with Metalaxyl ST. Please consult the product label for more details.

* Pending EPA name approval