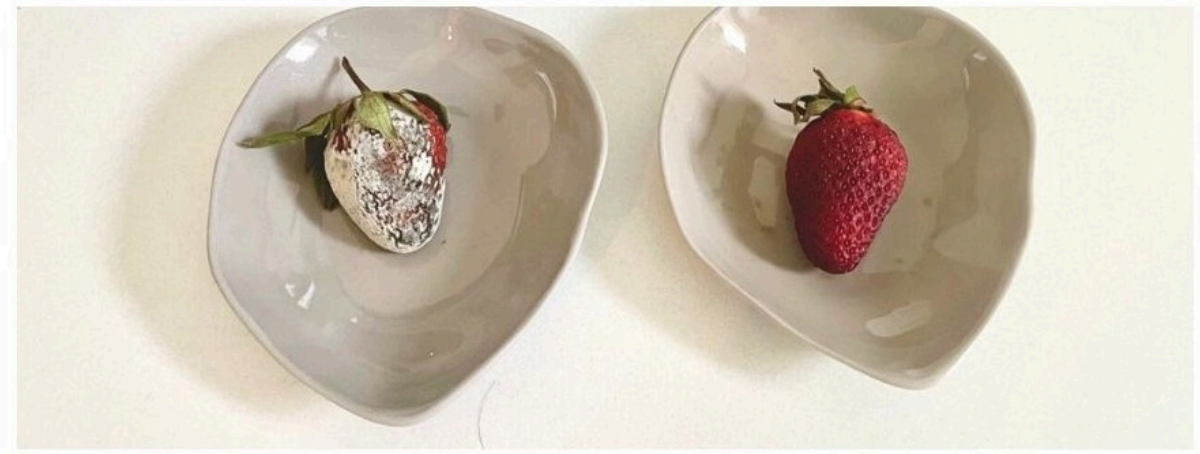
TECH OFFER

Revolutionizing Crop Growth & Post-Harvest Freshness

TRIED & TESTED TO WORK



KEY INFORMATION

TECHNOLOGY CATEGORY:
Sustainability - Food Security
Waste Management & Recycling - Food & Agriculture Waste Management
Foods - Quality & Safety
Life Sciences - Agriculture & Aquaculture
Chemicals - Agrochemicals

TECHNOLOGY READINESS LEVEL (TRL): **TRL9**
COUNTRY: **SINGAPORE**
ID NUMBER: **TO175314**

OVERVIEW

With increasing regulatory pressure to reduce synthetic agrochemicals and growing consumer demand for pesticide free and longer lasting produce, there is a gap in the agriculture industry for a robust solution. The technology featured is a proprietary bioflavonoid blend, a key bio-active agent formulated into two unique solutions that can be applied across the entire food supply chain—from farm to table. These organic solutions are designed to enhance agricultural productivity while extending the shelf life of fresh produce.

Benefits include:

- Nutrient Optimization – Rapidly addresses deficiencies, ensuring crops reach their full potential
- Soil Regeneration – Stimulates beneficial soil biology, enhancing long-term fertility
- Accelerated Early Growth – Strengthens root development and speeds up early-stage crop growth
- Harvest Efficiency – Enhances flowering, improves bud retention, and promotes even ripening, reducing labor and processing costs

TECHNOLOGY FEATURES & SPECIFICATIONS

Organic Growth Enhancer

This formulation works by activating the plant's natural nutrient cycling mechanisms, which results in

- Nutrient Optimization – Rapidly addresses deficiencies, ensuring crops reach their full potential
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Based on the various applications in farms, this growth enhancer has resulted in:

- Up to 20% increase in leaf BRIX measurements
- Up to 38% improvement in Crop Yield
- Up to 20% improvement in Soil Biology
- Up to 42% increase in Fruit Sets
- Up to 40% increase in Yeast Assimilated Nitrogren (Grapes)
- Up to 20% increase seen across Total Phenolics
- Up to 11% increase in Digestible Protein (Wheat)
- Up to 46% increase in Fat Content (Soy beans)
- Up to 21% increase in Marketable Cartons (Citrus)

Organic Shelf Life Enhancer

Fresh produce often spoils due to microbial growth, enzymatic activity, and moisture loss. This formulation is a powerful blend of botanical extracts that extends the freshness of fruits and vegetables naturally by:

- Inhibiting Microbial Growth – Reduces spoilage by preventing bacteria and mold from proliferating
- Slowing Oxidation & Decay – Bioflavonoids help delay enzymatic degradation, keeping produce firm and fresh

POTENTIAL APPLICATIONS

This **Organic Growth Enhancer** has shown great potential in a wide range of farming systems and crops.

- Conventional Farms – Enhances nutrient absorption and yield in large-scale farming operations
- Vertical & Hydroponic Farms – Optimizes plant health in soil-less and controlled environments
- Diverse Crop Compatibility – Proven effectiveness in leafy greens, berries, cherries, sugarcane, rice, vineyards, cotton, and more

This **Organic Shelf Life Enhancer** also has the potential to be applied along the post-harvest supply chain.

- Post-Harvest Treatment – Applied immediately after harvest to maintain quality and extend storage life
- Produce Processors – Reduces spoilage during handling, packaging, and transportation
- Retail & Grocery Stores – Keeps fruits and vegetables fresher for longer on store shelves

MARKET TRENDS & OPPORTUNITIES

The global agricultural biostimulants market is projected to reach $6.2 billion by 2030, driven by increasing demand for sustainable farming solutions. Similarly, the fresh produce shelf-life extension market is expected to grow rapidly, with food waste reduction initiatives fueling demand for natural preservation technologies. Given the widespread use across farms, food processors, and retailers, our solutions tap into two high-growth and high-impact industries.

UNIQUE VALUE PROPOSITION

This technology has shown significant effect on the health of plants and soils. Key differentiators include:

- Certified Organic and 100% free of synthetic chemicals
- Providing an effective solution along the entire value chain from pre- to post-harvest
- Trialed on a variety of different soil-grown crops