

NATURAL BENEFICIAL MICROBES THAT BOOST CROP YIELD AND SUPPORT GUT HEALTH

A DUAL-BENEFIT MICROBIAL PRODUCT THAT IMPROVES CROP YIELD AND SUPPORTS GUT HEALTH WHEN PRODUCE IS EATEN RAW

Problem / Market Need

While vegetables are naturally nutritious, diet-related health challenges such as poor gut health and nutrient absorption persist globally. At the same time, food producers face pressure to reduce chemical inputs while maintaining yield and quality. Microbial products used in agriculture typically focus only on improving crop performance, missing an opportunity to deliver added value to the end consumer. There is a growing need for natural solutions that support both plant growth and human well-being through everyday foods.

Description of Solution / Technology

This product contains beneficial microbes found in fruits and vegetables. When applied to crops, these microbes naturally improve growth, nutrient use, and crop quality. When the produce is consumed raw, they also help support digestion and gut health. It is especially well-suited to ready-to-eat fruits and vegetables like lettuce, tomatoes, carrots, and watermelon.

Key Benefits / Advantages

- Safe, natural, and aligned with clean-label food trends
- Reduces the need for chemical fertilisers or treatments
- Helps vegetables grow faster and with higher quality
- Ideal for organic and health-focused food markets
- Contributes to gut health when raw produce is consumed

Applications / Relevant Industries

Leveraging plant growth and health benefits, these beneficial microbes fit diverse applications, including:

- Agriculture: Natural yield and quality booster
- Organic Farming: Sustainable alternative to chemical fertilisers
- Functional Foods: Nutrition-enhancing ingredients
- Health Products: Wellness-promoting supplement components
- Emerging Applications: Soil health, stress resilience, and novel bio-based products

Stage of Development

The beneficial microbes have been validated in greenhouse trials, showing improved crop growth, and in animal studies supporting gut health when raw produce is consumed. NWU is now seeking partners to pilot the use of these microbes in farming environments and to explore applications that add value to consumers through everyday fruits and vegetables.

Intellectual Property Status

A provisional patent has been filed in South Africa (2025). Licensing will be supported by NWU's technical team and includes access to microbial strains, formulation and know-how.

Opportunity

This technology is available for licensing, co-development, or pilot testing. We are seeking partners in the agricultural, organic produce, or functional foods sectors interested in dual benefit bioproducts that support agricultural performance, environmental sustainability, and consumer health.



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