



# NextGen Bio-Fertilizer for Soil Health, Yield & Sustainability

## What is Bloom Bio™?

Bloom Bio™ is a high-performance, liquid organo mineral bio-fertilizer powered by a proprietary blend of microbial agents, enzymes, and organic nutrients. Designed to revitalize soil biology, boost plant vitality, and reduce reliance on chemical inputs, BloomBio works in harmony with nature to improve both yields and soil regeneration.

**It's more than a fertilizer, it's a regenerative engine for your farm.**

## KEY BENEFITS

- Reduces Chemical Fertilizer Use by up to 30%
- Boosts Yield, Fruit Size & Uniformity
- Accelerates Root & Shoot Growth
- Enhances Soil Microbial Activity & Organic Matter
- Improves Water Retention & Drought Resilience
- Strengthens Natural Plant Immunity & Disease Resistance
- Reduces Crop Stress from Transplanting, Frost & Hail
- Improves Fruit Firmness, Shelf Life & Transport Tolerance
- Compatible with Most Herbicides & Pesticides (Non Alkaline)

## HOW IT WORKS

Bloom Bio™ activates the rhizosphere the vital root zone by introducing beneficial bacteria, amino acids, and carbon based molecules that:

- Convert locked nutrients into available plant food
- Restore humus and detoxify exhausted soils
- Stimulate enzymatic processes and photosynthesis
- Build robust capillary root systems for optimal uptake

## RECOMMENDED FOR ALL CROPS

- Row crops (maize, soy, barley, wheat)
- Orchards & fruit trees (citrus, apples, avocados)
- Vegetables (tomato, pepper, cucumber, lettuce)
- High value crops (grapes, berries, herbs, cannabis)
- Regenerative & organic systems

## SCIENTIFICALLY VALIDATED

Independently tested by

- Tecnova (Spain) in greenhouse trials:  
*Up to 30% fertilizer reduction with increased yield and biomass*
- SGS-verified carbon sequestration:  
*Over 80 tons CO<sub>2</sub>e captured per hectare annually*



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bloom bio  
for sugarcane

# Microbial Bio-Fertilizer for Higher Yield, Sweeter Cane & Healthier Soil

## Why Bloom Bio™ for sugarcane?

Sugarcane farming faces critical challenges: declining soil health, rising fertilizer costs, and increased vulnerability to pests and disease. Bloom Bio™ offers a regenerative solution that boosts yields, restores the soil microbiome, and reduces chemical dependency all while increasing sugar content.



SUGAR CANE



## KEY BENEFITS

- Reduces fertilizer needs by up to 30%
- Increases photosynthesis and chlorophyll efficiency
- Improves sugar content and BRIX
- Accelerates decomposition of harvest residues into humus
- Boosts root health and rhizosphere microbial activity
- Improves resistance to Fusarium, Verticillium, Pythium & Phytophthora
- Strengthens natural plant immunity to pest and insect pressure
- Prevents and reverses soil fatigue in monoculture operations
- Turns vinasse waste into regenerative fertility for healthier soil and better yields

## FIELD APPLICATION PROTOCOL

### 1. Post-Harvest Soil Restoration

- Apply BloomStart™
- Apply with water (1:50 ratio) to convert crop residue into humus and activate microbial populations.

### 2. Growth Stage Application

- Apply Bloom Bio™ alongside regular fertilizer (which can be reduced 25–30%)  
Dilute 1:200 with water for even fertigation or field application.

Connect with our agronomists to define your optimal application timing, dosage, and dilution rates.

## FIELD RESULTS

- Enhanced early cane growth and stem thickness
- Increased resistance to rot and vascular diseases
- Improved extraction efficiency and juice quality
- Greater biomass per hectare and ratoon cycle resilience

## A REGENERATIVE ADVANTAGE

Bloom Bio™ does more than feed plants, it revitalizes soil biology, enhances carbon sequestration, and supports regenerative cane operations aligned with climate smart agriculture.



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# bloom bio for sugarcane + vinasse

## Turn Sugar Mill Waste into Sustainable Fertility and Higher Yields



SUGARCANE  
+ VINASSE



### Why Bloom Bio™ for sugarcane and vinasse?

Vinasse the effluent by product of ethanol production from sugarcane is an ecological and economic burden when untreated, leading to soil suffocation, groundwater pollution, and excessive waste storage. However, when biologically treated with Bloom Bio™, vinasse becomes a high value, soil regenerating biofertilizer.

#### Bloom Bio™ is the only microbial solution proven to:

- Transform vinasse into a safe, nutrient rich liquid fertilizer
- Improve sugarcane Brix, recovery, and POL metrics
- Enable safe application of 50+ tons of vinasse per hectare
- Restore soil biology and eliminate root suffocation

#### Nutritional Value of Vinasse +Bloom Bio™ (per Ha)

- Potassium Oxide (K<sub>2</sub>O): 180 kg
- Organic Nitrogen (N): 23 kg (bio-available equivalent: 69 kg)
- Phosphorus (P<sub>2</sub>O<sub>5</sub>): 12 kg
- Calcium Oxide (CaO): 59 kg
- Magnesium (Mg): 26 kg
- Fresh Organic Matter: 1,630 kg

### FIELD APPLICATION PROTOCOL

- Per hectare per year:  
*50 tons vinasse + 2.5 kg Bloom Bio™*
- Dilution/mix: Blend before flood or fertigation application
- Add trace nutrients as needed based on soil analysis

For composting, combine vinasse with ash, bagasse medulla, and filter cake using the Bloom Bio™ composting protocol for a complete regenerative fertilizer blend.

### FIELD RESULTS

Application: 50 tons of vinasse per hectare + 1 kg Bloom Bio™

Parameter	Untreated	Treated	Improvement
Recovery	7.75	8.65	+11.6%
Brix	17.14	19.90	+16.1%
POL	13.50	15.38	+13.9%

On a low-yield field, treated parcels outperformed the best untreated plots.

### TURN A WASTE BURDEN INTO A PROFIT CENTER

With Bloom Bio™, sugar mills and growers can:

- Reduce or eliminate synthetic fertilizers
- Solve the vinasse disposal crisis legally and sustainably
- Enhance yield quality and profit margins
- Regenerate soil while reducing pollution.



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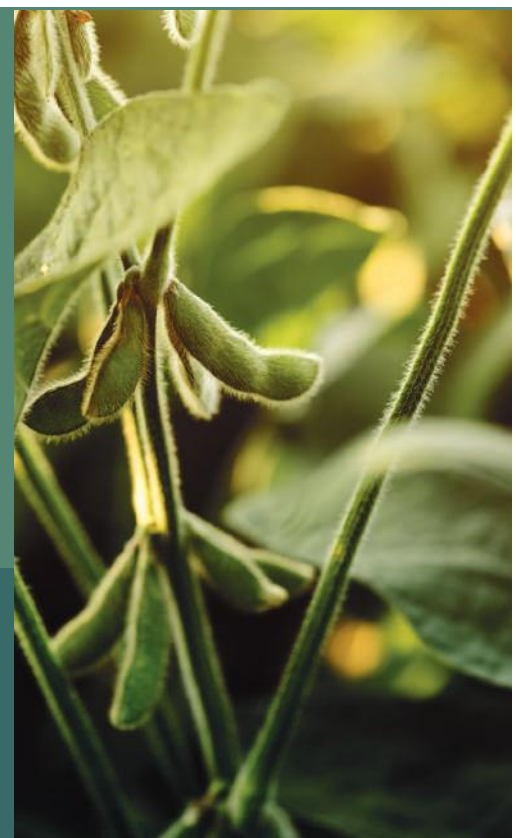
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# bloom bio for soybeans

## Microbial Bio-Fertilizer for Stronger Roots, Nitrogen Fixation, and High Protein Harvests

### Why Bloom Bio™ for soybeans?

Soybean performance depends on an active, balanced rhizosphere to unlock the plant's natural nitrogen-fixing potential. Without proper microbial support, soy plants cannot develop the nodules required to fix up to 40 kg of nitrogen per hectare equivalent to producing 240 kg of protein/Ha. Bloom Bio™ jump starts this system from the start, stimulating critical microbes and unlocking key nutrients for protein-rich yields.



SOYBEANS



## KEY BENEFITS

- Activates symbiotic bacteria like Rhizobium for nitrogen-fixing root nodules
- Converts residue into stable humus to restore tired soils
- Enhances root growth and nutrient uptake
- Boosts protein content in harvested grain
- Improves disease and pest resistance
- Increases fertilizer efficiency and reduces chemical needs
- Supports uniform, vigorous germination

## FIELD APPLICATION PROTOCOL

### 1. Soil Restoration (Optional but Recommended)

- *15 days before planting.*
- Promotes microbial balance and root zone decompaction.

### 2. Seed Preparation

- *Moisten seed with Bloom Bio™ solution prior to sowing.*

### 3. Planting or Early Growth Stage

- *Apply Bloom Bio™*
- Compatible with drip, pivot, or foliar spray systems.

Connect with our agronomists to define your optimal application timing, dosage, and dilution rates.

## FIELD RESULTS

- Uniform, stress-resilient stands with strong emergence
- Increased pod counts and grain weight per plant
- Faster vegetative recovery after stress events
- Significant reduction in root and foliar disease pressure

## A REGENERATIVE ADVANTAGE

Bloom Bio™ transforms exhausted soils into living biological systems, enabling soybeans to express their full genetic potential.

It bridges soil biology with agronomic strategy to do more with less.



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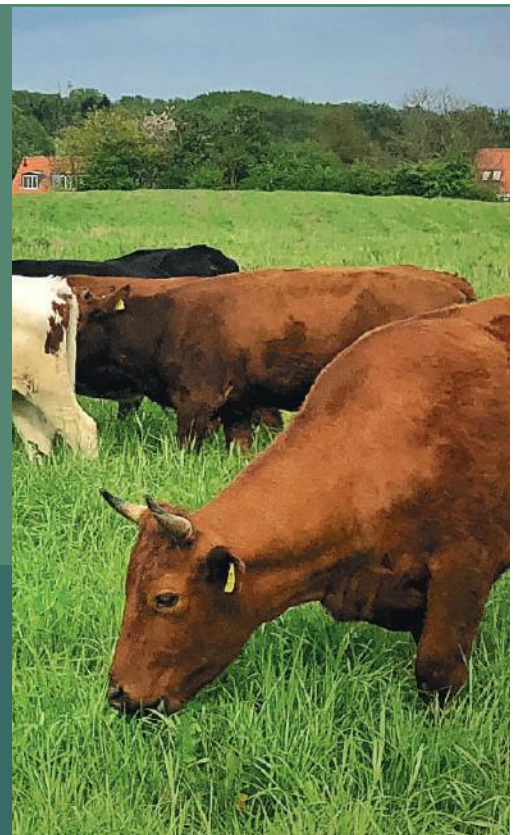
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bloom bio  
for pastures

## Microbial Bio-Fertilizer for Regenerative Grazing, Soil Health, and Superior Forage Quality

### Why Bloom Bio™ for pastures?

Overuse of synthetic nitrogen on pastures has led to declining soil health, low sugar content in forage, reduced milk and meat yields, and environmental damage. Bloom Bio™ addresses these challenges by restoring the microbial balance in the rhizosphere, improving nutrient uptake efficiency, and increasing the nutritional value of pasture crops.



PASTURES



## KEY BENEFITS

- Reduces fertilizer use by up to 30% while maintaining yield
- Restores humus and activates rhizosphere biology
- Enhances Brix and non-structural carbohydrates (NSC) in forage for better energy supply
- Reduces excessive milk urea nitrogen (MUN) linked to liver strain and fertility loss in cows
- Improves pasture palatability and feed intake
- Minimizes soil acidification caused by synthetic nitrogen
- Increases water retention and root density, especially feeder roots
- Enables more sustainable, nutrient-efficient rotational grazing

## FIELD APPLICATION PROTOCOL

### 1. Annual Program

- Reduce all synthetic fertilization by 30%
- Apply Bloom Bio™ post-grazing or off-season (optional but recommended)
- Apply Bloom Bio™ early in the growth phase, diluted 1:200 in water

### 2. For High-Use or Feed Pastures (e.g., Alfalfa, Ryegrass)

- Repeat Bloom Bio™ after each cut or grazing
- Maintain reduced fertilization schedule

Connect with our agronomists to define your optimal application timing, dosage, and dilution rates.

## FIELD RESULTS

- Higher Brix and protein content in grass and hay
- Improved rumen energy-to-protein ratios in livestock feed
- Reduced risk of over-fertilization and nitrate leaching
- Longer-lasting pasture cycles and improved soil structure
- Greater animal carrying capacity and increases in milk/meat output

## A REGENERATIVE ADVANTAGE

With Bloom Bio™, pastures become more than grazing ground they become living systems.

By nourishing the soil first, you strengthen every link in the productivity chain: from roots to rumen, to revenue.



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## Crop Benefits Summary

Bloom Bio is a natural soil restoration solution that rebuilds microbial life, enhances nutrient efficiency, and improves crop performance from the ground up. **Proven Across Crops. Powerful Across Conditions.**

### FIELD CROPS

(Wheat, Maize, Sorghum, Barley, Soy & Others)

- 25%+ Yield Increase in Maize (via root feeder growth)
- 500% more feeder roots = higher nutrient/water uptake
- Fertilizer savings up to 30%
- Reduces plant loss in drought and waterlogged conditions
- Improves nutrient use efficiency ideal for nitrogen intensive crop

### VEGETABLES & HORTICULTURE

(Cucumber, Tomato, Lettuce, Peppers & Others)

- Tecnova Trial: +Yield with 30% less NPK
- Increased flower, fruit count, and biomass
- Better fruit uniformity and commercial grade
- Boosts photosynthesis and reduces rot, mildew, Pythium

### FRUIT & NUT TREES

(Citrus, Apple, Almonds, Grapes & Others)

- Improved Brix, firmness, and shelf life
- Stronger bark, root, and fruit integrity
- Soil detox and microbial restoration in tired orchards

### PASTURES & FORAGE

(Lucerne, Grazing Crops)

- Healthier regrowth after cutting
- Enhanced root structure = water efficiency
- Compatible with rotational grazing systems
- Reduces input costs for sustainable ranching

### REGENERATIVE USES

(Soil Recovery, Romposting, Vinasse Conversion)

- Converts ethanol waste (vinasse) into safe fertilizer
- Compost accelerator for ag waste (straw, bagasse, etc.)
- Detoxifies salt affected and compacted soils
- Enables 5-10X carbon Sequestration & Insetting

