



BIOLOGICAL SOLUTIONS

REGENERATE YOUR SOIL

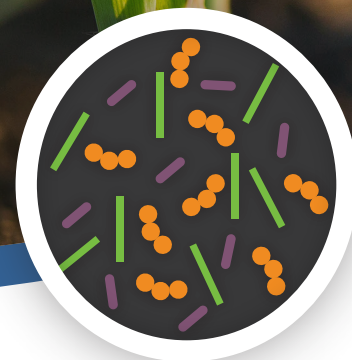


YOUR SOIL IS THE ENGINE OF YOUR AGRICULTURAL SYSTEM.

It is an ecosystem full of life that needs to be carefully managed to maintain its ability to function optimally. When the soil is not functioning at full capacity, future sustainable productivity, environmental quality, and net profits are jeopardized.

Soil microbes are an important key to a healthy functioning soil. These organisms help with cycling nutrients, mineralization of organic matter, and maintaining soil structure.

A healthy soil will have a large and diverse population of beneficial organisms to carry out these functions and help maintain a healthy soil status.



THE ANDERSONS BIOLOGICAL PRODUCT LINE-UP

The Andersons offers three biological products—**Bio Pass**®, **Bio Pass LG**, and **Bio Reverse**™. These products are designed to mix with liquid fertilizers and provide ease-of-use, efficiency, and a positive return on investment (ROI). Each product provides 300 billion colony-forming units (CFUs) per pint. The microbes in these products are naturally occurring and sourced from high performing soils. After the microbes come out of sporulation, they begin reproducing and doubling their populations every 45-60 minutes depending on soil temperature. The Andersons microbial packages use proprietary formulation-stabilizing technology, allowing the products to have a shelf life of two or more years.

FEATURES & BENEFITS

- Formulated with naturally occurring microbes from healthy soils
- Deliver beneficial and viable microbes at time of applications
- May be tank mixed with liquid fertilizers
- Build and maintain healthy soils

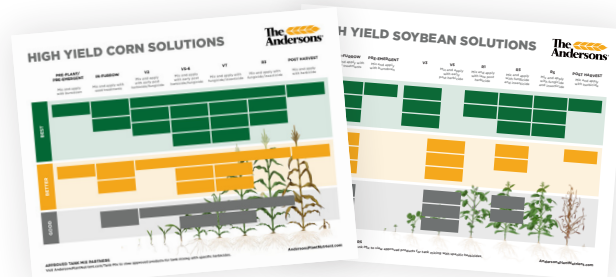
FREQUENTLY ASKED QUESTIONS

Q: Why is there a microbial package for corn and wheat and a different one for legumes?

A: The microbial strains in Bio Pass and Bio Pass LG differ to accommodate the varying needs of these crops. Each product contains eight strains of microbes, with these microbes serving a unique purpose for the specific crop.

Q: Are Bio Pass, Bio Pass LG, and Bio Reverse easy to mix with my liquid applications?

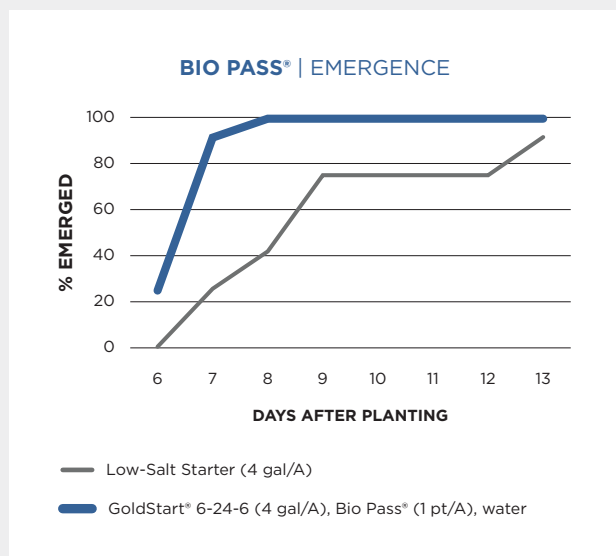
A: Yes, The Andersons scientists spent significant time and resources to design Bio Pass, Bio Pass LG, and Bio Reverse so they would easily mix with liquid applications. The microbes in The Andersons biological products are dispersed equally throughout the liquid solutions to ensure uniform applications from start to finish.



To see how these products fit into The Andersons High Yield Solution programs, visit AndersonsPlantNutrient.com



Bio Pass is a robust microbial package specifically designed to work in synergy with a grower's liquid starter fertilizer program for corn and wheat. Bio Pass' specialized blend of bacteria works together in the soil to help kick-off seedlings' early season growth while enhancing the uptake of nitrogen, phosphorus, potassium and other essential nutrients throughout the season.



In a greenhouse study, the treatment with GoldStart® 6-24-6 liquid fertilizer and Bio Pass emerged 5 days earlier and more uniform than the starter alone.



In this trial, Bio Pass and UltraMate Zn were applied in 2x2 placement in combination with the grower standard starter. Compared to the check, this treatment delivered a 9 bu/A yield advantage at harvest. These products helped develop a larger root system, assisting the crop to pull essential nutrients from the soil. This root system supported the crop through harvest by defending against drought and heat stress.



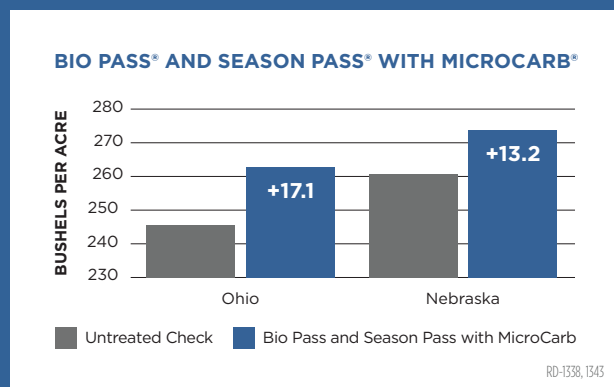
Bio Pass LG is a microbial package specifically designed to support soybean and other legume crops' growth and season-long nutrient needs. It may be broadcast-applied in a tank mix with pre-emergence or burndown herbicide, pre-plant incorporated, in-furrow or 2x2 at planting, or through a pivot irrigation system prior to crop emergence.



Bio Reverse is a specially selected package of soil-borne microbes chosen for their ability to accelerate crop degradation and composting, thereby significantly reducing residue and releasing nutrients back to the soil. The product is a liquid formulation with a significant volume of colony forming units (CFUs) to ensure excellent coverage and performance. It may be applied year-round, whenever there is residue.

INCLUDE A CARBON SOURCE

Carbon is an essential plant nutrient that provides soil microbes with a food source and habitat, stimulating soil microbiology. Our studies show that including a carbon source like The Andersons MicroCarb® with your biological application enhances overall performance and yield results.



This graph shows trials conducted in 2020 in Ohio and Nebraska with Bio Pass added to Season Pass® with MicroCarb. In both trials, Bio Pass was applied at a rate of 1 pint/acre with Season Pass with MicroCarb at 5 gallons/acre. The treatment resulted in a 17.1 and 13.18 bushel/acre increase respectively.



FOR MORE INFORMATION

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