Why We Are Relying on a New Generation of Microorganisms

As of August 31, 2026

To ensure we can continue to reliably meet legal quality requirements while simultaneously improving the product's biological performance, we decided to use new, scientifically well-studied lactic acid bacteria.

Why did we choose Lactobacillus strains?

With the four selected lactic acid bacteria
- **Lactobacillus plantarum**
- **Lactobacillus rhamnosus**
- **Lactobacillus fermentum**
- **Lactobacillus brevis**

we rely on microorganisms that have been extensively researched worldwide and are characterized by high metabolic activity, excellent fermentation capacity, and a broad spectrum of activity.

In addition to the positive properties of these microorganisms, the following factors were also taken into account during the selection process: availability, safety/non-toxicity, and the achievement of the highest possible CFU/g content (the higher this value, the higher the concentration of microorganisms) in the final product.

These bacteria are characterized in particular by:

- **high stability and reproductive capacity,**
- **production of valuable organic acids,**
- **formation of antimicrobial metabolites (bacteriocins),**
- **promotion of a stable and diverse soil microbiome,**
- **suppression of undesirable decay-causing organisms and pathogens**

This makes them ideal as a biological additive in a modern soil conditioner or plant growth aid.

Why are these cultures ideal for a KOMBI product (rock meal + microorganisms)?

The new KOMBI concept combines two complementary modes of action:
The rock dust provides, among other things,

- **silicon**
- **alumina**
- **iron**
- **potassium**
- **phosphorus**
- **Calcium**
- **Magnesium**
- **many important trace elements, as well as**
- **a large mineral surface area for colonization by microorganisms**

Lactic acid bacteria complement this effect by:
- form organic acids, thereby making minerals from rock meal more readily available to plants
- promoting microbial colonization of soil particles
- support the breakdown of organic matter
- reducing undesirable decay processes
- sustainably increasing the soil's biological activity. This creates a natural synergy between mineral supply and soil biology.

Benefits for Soil and Plants
The Lactobacillus cultures used support numerous processes in the soil, such as:

Improvement of soil biology
- Promotion of a diverse microflora
- Suppression of pathogenic microorganisms
- Stabilizing the microbial balance

Promoting nutrient availability
- Mobilization of mineral nutrients
- Improved utilization of phosphorus and trace elements
- More efficient conversion of organic matter

Improvement of soil structure
- Promotion of humus formation
- Stabilization of soil aggregates
- Improved soil structure and water and air balance

Positive effect on the plant
- Promotion of root development
- Improved nutrient uptake
- Increased plant vitality
- Support for natural resistance to stress

Summary:

By switching to selected Lactobacillus cultures, we are not merely replacing a previous mixture of microorganisms, but are instead relying on a scientifically well-documented, regulatory-compliant, and biologically highly active solution.

Combined with high-quality rock flour, this creates an innovative combination product that intelligently integrates mineral supply with soil microbiology. The goal is to achieve a permanently active soil, improved nutrient availability, and vigorous, resilient plants—all in line with the principles of sustainable and regenerative agriculture.