



C5 Tundrabac®



Soil amendment for a thriving start in cold soils



A member of the
Andermatt Group

C5 Tundrabac® – for a good start in cold soils

- C5 Tundrabac® is a soil amendment that contains spores of the soil bacterium *Bacillus atrophaeus* ABi05.
- This beneficial, naturally occurring bacterium thrives even in low-temperature soils.
- Upon application, the spores germinate and colonize young plant roots, forming a protective biofilm.
- The bacteria then release enzymes and other compounds that stimulate plant growth and mobilize essential nutrients from the soil.



Bacillus atrophaeus ABi05 – the cold-tolerant *Bacillus* strain for agriculture:

- high concentration: 2.5×10^{10} cfu/ml
- active from 8 °C soil temperature
- easy storage: 2 years at < 25 °C
- high compatibility (with plant protection products and fertilizers)

Key Benefits:

- **Enhanced plant vitality:**
C5 Tundrabac® promotes stronger and healthier plants by stimulating root development and nutrient uptake.
- **Early growth and root development:**
The beneficial bacteria in C5 Tundrabac® encourage early plant growth and root development, even in cooler soil temperatures as low as 8°C. This supports vigorous plant development even during cold periods.



- **Improved soil activity:**
C5 Tundrabac® enhances soil activity by promoting the breakdown of organic matter, improving soil structure, and increasing nutrient availability.
- **Stress tolerance:**
The bacteria in C5 Tundrabac® help plants better withstand abiotic stresses such as water scarcity, salinity, and sudden temperature fluctuations..
- **Higher yields:**
By improving nutrient uptake and enhancing plant growth, C5 Tundrabac® contributes to increased crop yields.

C5 Tundrabac® – easy to use

Type of application:

- liquid formulation for application in row and vegetable crops
- early application, preferably at sowing or shortly thereafter
- very well tolerated; synergistic effects in combination with fertilizers, fungicides or conventional seed treatments
- flexible mixing with plant protection products and Fertilizers

Application methods:

- seed treatment or in-furrow application
- Irrigation or surface spraying
- Injection into irrigation or hydroponic systems
- Root dip treatment before transplanting

Application quantities:

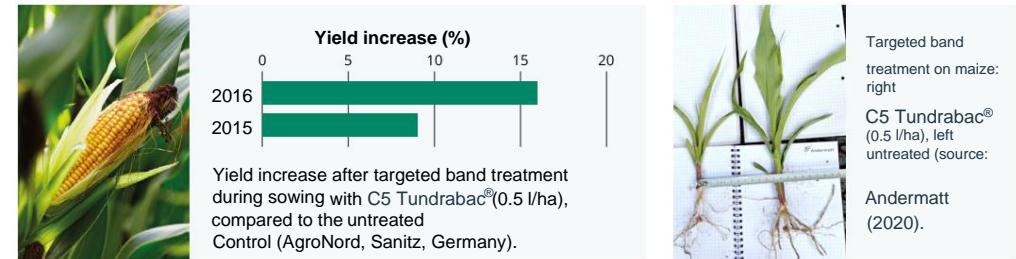
Depending on the culture, repeated application after 4 to 6 weeks is recommended.

Plant variety	Application quantity	Application method
Cereals (corn, wheat, barley, etc.)	0.5 – 1.5 l/ha or 100 kg seed	
Seeds (ornamental plants, vegetables, etc.)	0.2 – 0.5 l/100 kg seeds	
Vegetable crops, protected (tomato, cucumber, etc.)	1 – 2 l/ha	/
Vegetable crops, open field (carrots, beets, cabbage, etc.)	1 – 2 l/ha	2x
Herbs	1 litre/ha	/
Onions	0.5 – 1 l/ha	/
Strawberries	1 litre/ha	/
Grass & turf	1 litre/ha	2x
In hydroponic systems	1 – 2 l/ha	

seed treatment
 dip
 irrigation
 spray application
 hydroponic system

C5 Tundrabac® – Results from the field

Example corn:



C5 Tundrabac® – Your benefits at a glance

- ✓ Increased crop yield
- ✓ Enhanced root growth and nutrient mobilization
- ✓ Improved plant emergence
- ✓ Easy mixing and compatibility
- ✓ Effortless application and storage
- ✓ Efficacy in cool temperatures
- ✓ Suitability for organic farming
- ✓ Environmentally friendly and sustainable
- ✓ No residue concerns



There are an estimated 50,000,000,000,000,000,000,000,000,000 Bacteria on Earth.

We see immense potential in the microbial world for sustainable solutions. We are dedicated to identifying the most promising bacteria for effective bio-applications, guided by ecological responsibility.



Healthy food and a Healthy Environment for All

- **Our Commitment to Science and Quality**

We are driven by the vision of cultivating strong plants in a thriving environment, providing a foundation for healthy food and a healthy lifestyle.

Our product development and manufacturing processes are firmly rooted in scientific research. We believe that most biological processes can be harnessed within a technical framework.

Our teams strive deliver high-quality, effective products and support our customers and partners with comprehensive service to ensure optimal product utilization.

- **Embracing Microbiological Solutions**

We champion the power of microbiological science and microbial additives for agricultural applications, as an alternative to genetic engineering and conventional chemical-synthetic methods.

We support both organic and conventional farming practices, promoting environmentally friendly plant cultivation, enhanced yields, sustainable soil management, and efficient fertilization, empowering farmers to meet the challenges of the future.

- **Our Mission: A Global Commitment**

We are dedicated to providing healthy food and preserving a healthy environment for everyone, everywhere.

We believe in the transformative power of science and innovation to address global challenges and create a sustainable future for all.



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