

# PhosBac 45

The next generation bacterial  
inoculant for increased phosphorus  
mobilization and healthy plant growth



**Andermatt**

• • • • • Canada

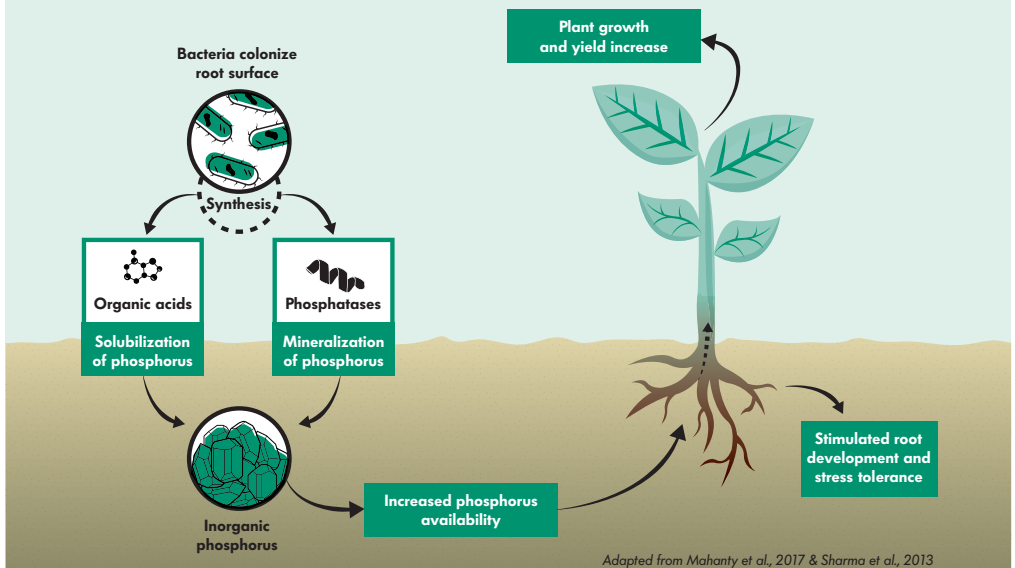
## PhosBac 45 – naturally increasing P-availability

PhosBac 45 is a biostimulant containing spores of the soil bacterium *Bacillus velezensis* (synonym *B. amyloliquefaciens* spp. *plantarum*) FZB45 ( $>2.5 \times 10^{10}$  cfu/ml). After application, the spores germinate and colonize the young growing roots. The bacteria release enzymes and further compounds which stimulate plant growth and mobilize plant nutrients.

- ✓ *Bacillus amyloliquefaciens* FZB45
- ✓ High concentration:  $2.5 \times 10^{10}$  cfu/ml
- ✓ Easy storage: 2 years at  $< 25^\circ\text{C}$
- ✓ Highly compatible with plant protection products and fertilizers

## Ensures that your plants grow strong and healthy

**PhosBac 45** has been specifically selected for increased phytase production, favoring phosphorus mobilization. This results in PhosBac 45 helping the plant to build a healthy and strong root system and to improve its tolerance towards abiotic stress, such as water deficiency, salinity, etc. Consequently, application of PhosBac 45 can result in increased plant growth and higher yields. **PhosBac 45 is your insurance** to overcome and cope better with unfavorable conditions and therefore has to be applied as early as possible.



## Application

PhosBac 45 can be applied together with almost all plant protection products and fertilizers and through a wide range of application methods. The residue free, well-storable and highly concentrated liquid formulation provides a user-friendly solution for integrated and organic production strategies. Treatments in an early plant development stage are essential to ensure an effective colonization of the rhizosphere and consequent mobilization of nutrients. A first application at sowing or planting is highly recommended for any crop. In combination with fertilizers, fungicides or conventional seed treatments, synergistic yield effects can be achieved.

## Horticulture

PhosBac 45 can be applied as a seed treatment, by watering or spraying before or just after planting or sowing. PhosBac 45 can also be directly injected into fertigation or hydroponic systems.

### Tomatoes

Yield increase



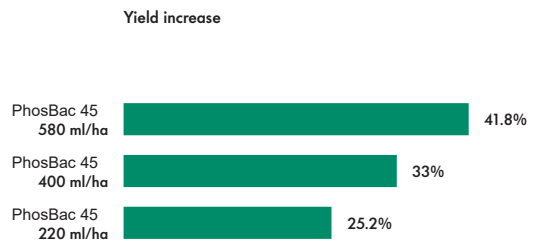
Yield increase after directed band treatment at sowing with PhosBac 45 compared to untreated control. (Source: UEPG, Brazil, 2017)

## Potatoes

Apply PhosBac 45 on seed potatoes by dipping, spraying, or directly as an in-furrow application during planting.

- Improved nutrient mobilization and plant emergence
- Improved root development and tuber formation
- Increased yield

## Potatoes



Yield increase after directed band treatment at sowing with PhosBac 45 compared to untreated control. Average of 4 trials. (Source: UEPG, Paraná, Brasil, 2017)



PhosBac 45
























untreated

## Application methods

- Seed treatment or in-furrow spray
- Watering or spraying on soil surface
- Injection into fertigation or hydroponic systems
- Root dipping
- Mixing into soils and substrates
- In combination with plant protection products or fertilizers

## Application rates

Crop	Application rate*	Application method
Potato	0.5–1 l/ha or 0.1 l/500 kg tubers	 / 
Tomato, cucumber, others	1–2 l/ha	2 ×  / 
Lettuce	0.5 l/ha	 / 
Carrots, turnip, cabbage, others	0.5 l/ha	 + 
Strawberry	1 l/ha	2 ×  / 
Cereals (maize, grains, rice)	0.2 l/100 kg seeds	
Seeds (ornamentals, vegetables etc.)	0.2–0.5 l/100 kg seeds	
Herbs	1 l/ha	 / 
Bulbs	1–2 l/ha	 / 
Ornamentals	1–2 l/ha	2 ×  / 
Turf	1 l/ha	2 ×  / 
In hydroponics	1–2 l/ha	

Depending on the crop, re-application is recommended after 4 to 6 weeks

 Seed treatment    Dipping    Watering    Spraying    hydroponics

\* All indications given for liquid formulation

### Formulation

The formulation is liquid which is produced in a modern production facility that meets food grade standards.

# PhosBac 45

- ✓ **Increases nutrient mobilization**
- ✓ **Improves root growth and stress tolerance**
- ✓ **Increases profit and marketable yield**
- ✓ **Well mixable with fertilizers and plant protection products**
- ✓ **Easy to store and apply**
- ✓ **Fully compatible with organic and residue-free production**



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