# **JumpStart**<sup>®</sup>

All Crops

## Product Overview Phosphate Fertilizer Use Efficiency

Up to 90% of applied phosphate fertilizer goes unused in the year of application as it gets tied (bound) to soil particles and other elements, making it unavailable to the crop. Some of this is used over subsequent years, but at least 25% never becomes available.<sup>1</sup> It is crucial to make the most efficient use of fertilizer phosphate to maximize yield potential.

## Factors Affecting Phosphate Availability<sup>2</sup>

#### Phosphate Is Less Available

- In soils containing high levels of cations, such as calcium, magnesium, iron or aluminum.
- In soils with high clay content.
- At colder soil temperatures.
- To crops with a tap root system.
- In dry soils.

# How It Works

Naturally occurring soil fungus to release bound mineral forms of soil and fertilizer phosphate.

## **Freeing Phosphate**

Penicillium bilaiae releases bound mineral forms of soil and fertilizer phosphate, making it more available to the plant to use.



1 Source: Phosphorous for Agriculture, International Plant Nutrition Institute (formerly: Potash and Phosphate Institute). NexusBioAg



2 Source: *Penicillium bilaiae* inoculation increases root-hair production in field pea. Robert H. Gulden and J. Kevin Vessey. May 17, 2000.

# Features & Benefits



Improved phosphate availability



Active in cool soil temps helping to enhance early-season vigour



Earlier, more uniform maturity

- JumpStart results are greatest in soils with lower levels of available phosphate and high to medium levels of bound/ unavailable phosphate.
- JumpStart works at low soil temperatures when phosphate availability is normally limited.
- JumpStart can work in soils within a wide pH range. It is the level of available phosphate, not the pH, that determines the benefit of JumpStart.

## Application

JumpStart is not crop specific. JumpStart colonizes (grows along) the root system rather than infecting the root, so you do not have to purchase a specific type of JumpStart for a specific crop.

JumpStart can be applied to bare seed up to 60 days prior to seeding (depending on seed type) and can be used with many different seed treatments. Visit nexusbioag.com for the most up-to-date information on seed treatment compatibility.

Please read the label before application for complete use instructions.

#### JumpStart Wettable Powder Application

JumpStart is available as a wettable powder that is mixed into water and applied to the seed as a liquid. Once JumpStart is mixed into water, apply to seed within 24 hours.

	400 g container		
Сгор	Seed treate	d/container	Water (litres)
Alfalfa/sweetclover	-	1,100 lb	10
Canola/mustard	-	1,000 lb	10
Chickpea	400 bu	24,000 lb	30
Corn	70 bags* (5,60	0,000 kernels)	19.6
Dry bean	300 bu	18,000 lb	25
Lentil	300 bu	18,000 lb	25
Pea	500 bu	30,000 lb	40
Soybean	300 bu	18,000 lb	25
Wheat	300 bu	18,000 lb	50

\*80,000 kernels per bag.

	57 g (2.0 oz) container			
Crop	Seed treated/container	Approximate water volume		
Soybean	50 units (1,135 kg, 2,500 lb, 42 bu)	3.5 litres (3.9 US quarts)		

#### JumpStart Granular Application Rates

JumpStart is available in a granular formulation for canola, barley, flax, mustard, oat, pea, lentil, soybean, wheat and canary seed. Application rates will vary according to row spacing; please refer to the table below for details.

18 kg (39.68) lb bag				
Row spacing	lb/ac	ac/bag		
6 in	5.5	7.2		
8 in	4.1	9.7		
9 in	3.6	11.0		
10 in	3.3	12.0		
12 in	2.7	14.7		

Note: The bulk density for JumpStart granular is approximately 0.6 g/cm $^3$  (37 lb/ft $^3$ ).

If you would like more information or have questions, contact your local NexusBioAg Representative or visit nexusbioag.com



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