

# JumpStart®



CANOLA

## Phosphate fertility in canola

Ensuring phosphate is plant available throughout the growing season is important for high-yielding canola crops. Canola seedlings require phosphate to advance from germination through to the three and four-leaf stage. As a consequence of their small seed size, the phosphate concentration in the seed can only support seedling growth for approximately one week.

Factors limiting phosphate availability in canola:

- Up to 90% of applied phosphate (P) fertilizer goes unused in the year of application as it gets tied up/bound to soil particles and other elements, making it unavailable to the crop<sup>1</sup>
- Phosphate is relatively immobile in the soil. This means phosphate must be placed within or near the seed row to be available for emerging seedlings
- Canola is sensitive to seed-placed fertilizer. With good to excellent soil moisture no more than 20 to 25 pounds of P<sub>2</sub>O<sub>5</sub> per acre should be seed placed<sup>2</sup>

## How JumpStart works

JumpStart is a phosphate inoculant containing the naturally occurring soil fungus *Penicillium bilaii*. It colonizes (grows along) plant roots, releasing compounds that release the bound mineral forms of soil and fertilizer phosphate, making it more available for the crop to use. JumpStart does not eliminate the need for phosphate fertilizer, but rather improves the availability of phosphate to the plant making the fertilizer application more efficient.

## Benefits of JumpStart on canola

### Increased phosphate access leads to earlier maturity

Phosphate fertility is directly related to crop maturity. JumpStart helps improve access to phosphate, leading to earlier, more even maturity.

### Increased availability of soil and fertilizer phosphate

Enhanced phosphate availability results in increased root growth and increased leaf surface area. Canola inoculated with JumpStart may flower earlier, have an increased number of pods and pod-bearing branches, and have earlier, more uniform maturity meaning less green seed. Ultimately, you can help your canola crop reach its full potential.

### Earlier access to more phosphate without affecting seedling safety

Top-yielding canola varieties require significant amounts of nitrogen and phosphate fertility to achieve their yield potential. Inoculating canola with JumpStart will help to address phosphate needs without causing seed safety concerns.

### JumpStart is available centrally treated on over 50 canola varieties

When canola is centrally treated by a seed company, our labs certify that the seed company is using the proper protocol to retain the viability of JumpStart on the treated seed. The seed companies provide samples of seed treated with JumpStart, which are tested in our lab over a period of time to develop planting windows specific to that seed company.

Using their sophisticated equipment and proprietary polymers, seed companies that pre-treat seed are able to get planting windows that can extend beyond the standard 30-day planting window we recommend for most seed treatments sold separately for on-farm or locally treated farmer-owned seed.

When you purchase a bag of centrally treated seed, the bag should contain a JumpStart bag tag printed with an expiry date that is based on the planting window determined by our labs. The seed should be planted by the date on the tag to ensure the number of *P. bilaii* CFUs (colony-forming units of the active ingredient) are at beneficial levels.

JumpStart is available on the following canola varieties for 2015

## InVigor®

InVigor L120	InVigor 5440	InVigor L160S
InVigor L130	InVigor L140P	InVigor L252
InVigor L154	InVigor L156H	InVigor L261
InVigor L159	InVigor L135C	



45H29 RR	45S52 RR	43E02 RR
45H31 RR	45S54 RR	43E03 RR
45H33 RR	45S56 RR	D3153 RR
45H73 CL	46S53 RR	D3154S RR
45H76 CL	46H75 CL	D3155C RR



V12-1	V12-2	V22-1
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74-44 BL	73-75 RR	74-54 RR
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1012 RR	2012 CL	2020 CL
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VR 9562 GC	PV 530 G	PV 531 G
VR 9560 CL		



CANTERRA 1990
CANTERRA 1970



6060 RR	6044 RR	5535 CL
6056 CR	6040 RR	5525 CL
6050 RR		



SY4135	SY4114	SY4157
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### Storage of seed treated with JumpStart – the cooler the better

The active ingredient in JumpStart is a living organism and requires specific storage conditions to ensure viability and product performance. To maintain product viability:

- Store seed inoculated with JumpStart under cool conditions < 20°C (68°F), away from sunlight and direct heat sources
- Minimize fluctuations in temperature
- Avoid freeze/thaw cycles

If you need more information or have questions about JumpStart, contact Monsanto BioAg toll-free at 1-888-744-5662 or visit [usejumpstart.ca](http://usejumpstart.ca).

<sup>1</sup>Source: Better Crops Vol. 86 (2002, No. 4), International Plant Nutrition Institute (formerly: Potash and Phosphate Institute).

<sup>2</sup>Source: Guidelines for Safe Rates of Fertilizer Placed with Seed, Saskatchewan Ministry of Agriculture.