

# B in canola

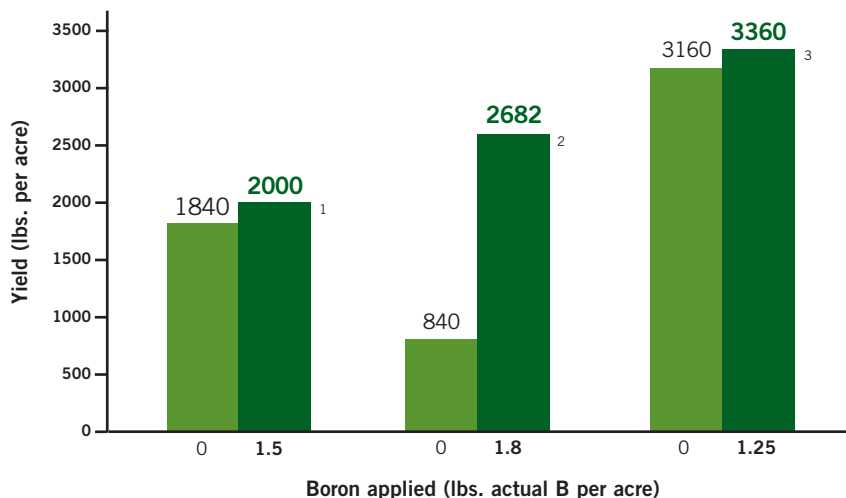


Canola (oil seed rape), like all its relatives in the Brassica family, has a very high boron requirement and is severely affected by boron deficiency. Canola seed production is critically dependent on boron – so much so, that grain yields have been doubled when 2 lbs. of boron per acre were applied to canola fields that showed no visual abnormalities.

Canola needs more boron through all growth stages – vegetative and flowering – than most other crops. Ensuring that canola has adequate boron will:

- Stimulate root growth and early establishment
- Enhance vegetative growth and speed maturity
- Increase branching and flowering
- Increase flower retention and pollen germination
- Enhance nitrogen utilization to increase oil percentage
- Increase the number of pods that set and fill

## Boron increases canola yields



1. Porter, P.M., C.E. Curtis, J.H. Palmer and L.A. Stanton. 1990. Clemson University Cooperative Extension Service. EC 669. Clemson, South Carolina  
2. Wooding, F.J. 1982. Unpublished data. Agricultural Experiment Station, University of Alaska, Fairbanks, Alaska  
3. Nuttall, W.F., H. Ukrainetz, J.W.B. Stewart, and D.T. Spurr. 1989. Can. J. Soil Sci. 67: 545-559.

# Fertilization of canola

Recommended lbs. of boron per acre per year

	Soil texture	Application methods	Available Boron		
			Low	Medium	High
	Heavy (Clay)	Broadcast preplant <sup>1</sup>	3.0	2.0	1.0
		Foliar <sup>2</sup>	1.0	1.0	0.5
	Medium (Loamy)	Broadcast preplant <sup>1</sup>	2.0	1.5	0.5
		Foliar <sup>2</sup>	1.0	1.0	0.5
	Light (Sandy)	Broadcast preplant <sup>1</sup>	1.5	1.0	0.0
		Foliar <sup>2</sup>	1.0	1.0	0.5

1. For all varieties, and especially fall seeded, it is best to apply only 0.5 to 1.0 lbs. of boron preplant incorporated, with the remainder split-applied with each nitrogen topdressing in the spring and summer. For irrigated fields, it is best to apply only 0.5 lbs. of boron preplant incorporated, with the remainder split-applied with each nitrogen fertigation or topdressing in the spring and summer.

2. Foliar applications are more effective if split and applied at a 0.25 to 0.5 lbs. rate with the final application made just prior to flowering.

## How much boron is enough?

- Canola is grown in all types of soils and in all climates, from Alaska and Canada all the way to Florida. Consequently, boron fertilization needs and practices vary.
- Many growers simply apply boron with their other preplant incorporated fertilizers. This practice may not be effective on fall seeded fields with soils prone to leaching or fixing boron.
- Research and experience show that multiple or preferably, foliar applications made up to flowering consistently result in the highest yields.

Rates of boron fertilization should be based on soil tests and/or plant analyses, along with field histories, yield goals and application methods.

## Your boron fertilizer options

- *Granubor*<sup>®</sup> 2 is an ideal material for dry blends if N, P and K are applied broadcast preplant incorporated.
- *Fertibor*<sup>®</sup> works best in fertilizer suspensions for preplant broadcast.
- *Solubor*<sup>®</sup> allows you the most flexibility for applying boron. It can be dissolved alone in water or in liquid fertilizers and/or pesticides, and then applied to the soil or directly onto the foliage.\*

\*Foliar sprays should not exceed 0.5 lbs./acre boron per application.

## For more information

- Call US Borax at 1 (800) 699 9005
- Visit our website at [www.borax.com/agriculture](http://www.borax.com/agriculture)