



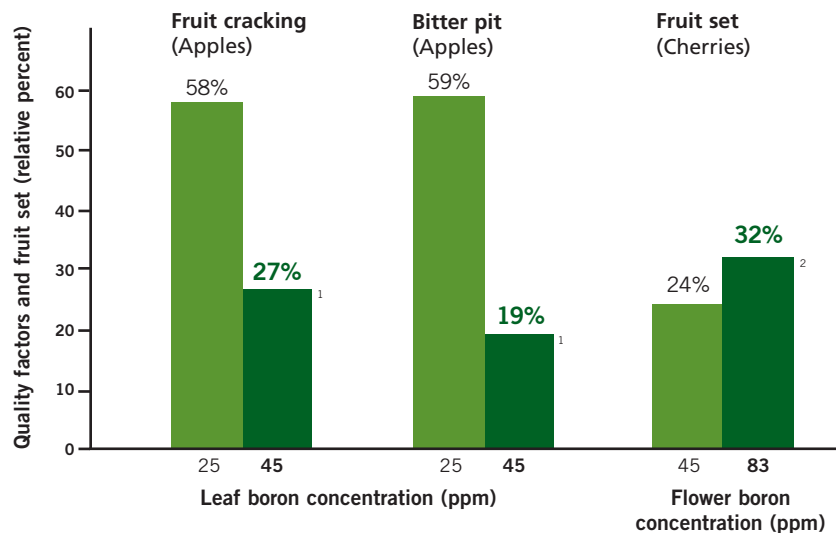
Bⁱⁿ tree fruit & nut crops

Profitability is based on high yields of quality fruits and nuts that store and ship well. Nutrition plays a vital role. Boron is the key nutrient for flowering, fruiting, and internal and external fruit quality. Data has related boron concentration in leaves to fruit quality and fruit set.

Boron is essential to all plant growth. Fruit and nut crops need a constant supply of boron during all growth stages, especially during flowering, and nut and fruit development. Making sure that the crop has adequate boron will:

- Increase flowering, pollination and fruit set
- Reduce losses from internal and external corking, fruit cracking, pitting, deformation and discoloration
- Lessen bitter pit and gum spots
- Help move sugars and nutrients from the leaves to the fruit
- Ensure nut fill, and reduce premature nut and fruit drop

Boron improves quality and fruit set



1. Dunlap, D.B., and A.H. Thompson. 1959. Effect of boron sprays on the development of bitter-pit in the York Imperial Apple, University of Maryland Agriculture Experiment Station. Bull. A-102.
2. Hanson, E.J. 1991. Sour cherry trees respond to foliar boron applications. HortScience 26 (9): 1142 – 1145.

Tree fruit and nut crops

Recommended lbs. of boron per acre per year

Fruit or nut crop	Typical range of boron fertilization by method		Normal range of leaf boron
	Broadcast soil application	Foliar	
	(Pounds of boron per acre)		(Parts per million)
Almonds	2.5-5.0	0.1-0.2	80+ (hulls)
Apples	1-3	0.1-1.6	30-50
Apricots	1-3	0.1-0.2	20-70
Cherries	1-2	0.1-0.2	35-80
Citrus	1-2	0.25-0.75	30-100
Figs	0.75-1.5	0.1-0.2	35-80
Filberts	1-1.2	0.1-0.2	36-200
Peaches	0.5	0.1-0.2	30-60
Pears	1-2	0.2-1.6	30-50
Pecans	0.5-1	0.1-0.2	20-45
Pistachio	*	0.4-1.0	120-190
Plums	1-3	0.1-0.2	30-60
Prunes	1-3	0.1-0.2	30-80
Walnuts	2-4	0.1-0.2	40-200

*Soil application results are not as effective as foliar application. The most effective application rate is 5 lbs. Solubor in 100 gallons of water, applied late dormant to early bud.

How much boron is enough?

- The amount of boron fertilizer needed for each particular fruit or nut crop depends on the type and variety, the soil and climate in which it is grown, the seasonal growing conditions encountered that year, and the timing and method of boron application.
- Recent research on several fruit and nut crops has shown that the amount of boron needed in the plant for optimum fruit set and quality is higher than previously thought.
- Rates of boron fertilization should be based on soil tests and/or plant analyses, previous experience, yield and quality goals, timing and application methods. Standard ranges of boron fertilization are normally suggested to meet specific tree fruit and nut crop needs under average local conditions.

Your boron fertilizer options

- *Granubor*[®] 2 is an ideal material for dry blends broadcast applied to the soil.
- *Fertibor*[®] works best in fertilizer suspensions for all soil broadcast applications.
- *Solubor*[®] allows you the best flexibility for applying boron. It can be dissolved alone in water or in liquid fertilizers, and/or along with pesticides. It can be applied to the soil or directly onto the crop.*

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

*The total amount of boron added in foliar sprays or split applications should not exceed the total broadcast recommendations.

For more information

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

Fertibor[®]

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