

# Boron in Oil Palm



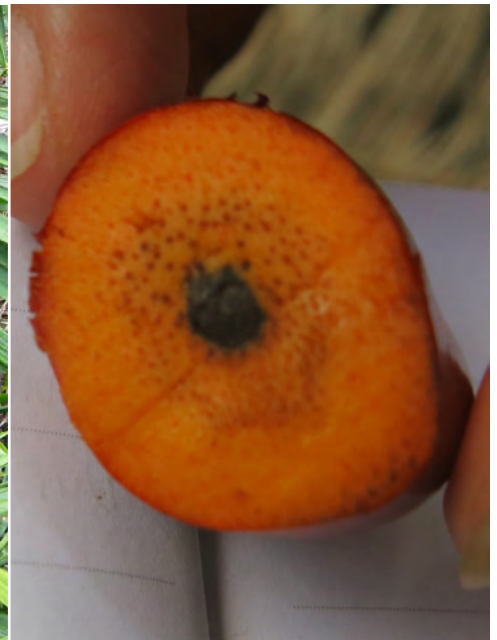
## Boron Deficiency



Crinkled Leaf



Immature Palms



Parthenocarpy

### Boron is necessary for:

- Preventing “fishbone leaf” (the development of extremely small, thin pinnae)
- Preventing “hooked leaf” (a single or double hook on the pinnae near the tip)
- Elimination of white stripe occurrence in leaves
- Preventing seedless fruitlet
- Adequate fresh fruit bunch formation
- Enhanced root growth

### How much boron is enough?

Oil palm removes significant amounts of boron from the soil each year. Dosage rates for young and mature oil palm depend on the soils and yield goals. Always consult a U.S. Borax agronomist for proper dosage.





Adequate boron fertilizer and balanced nutrients produce good fruit set.

## Recommendations

Recommendations are for very low boron level soil (<0.02 ppm). Actual dosage depends on planting materials, soil type, leaf/foliar analysis, and soil analysis.

Fertibor / Granubor in palm							
Palm age	6 months	1 year	1½ years	2 years	2½ years	3 years	3½ years or more
g/palm	25	½	' %	! žž	! " %	! %ž	. ! %ž Ł" %ž/



\* 200-250 g per palm per year if the annual production is above 25 mt per hectare per year or located in a high rainfall area (>3,000mm/year). Split application is recommended for dosage above 250 g per palm per year.

Solubor concentration at seeding	
13.6 g	100 L water

## Your boron fertilizer options

- **Granubor®**: Ideal for dry blends for soil application
- **Fertibor®**: For isolated soil applications and supplemental auxiliary application
- **Solubor®**: Flexible product that can be dissolved alone in water, in liquid fertilizer, or pesticides then applied to the soil or directly onto the palms

