

Boron in oil palm

What boron deficiency looks like



Crinkled leaf



Immature palms



Parthenocarpy

Adequate boron fertilizer and balanced nutrients produce good fruit set



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.

BROCHURE: BORON IN OIL PALM

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 | 50 | 75 | 100 | 125 | 150 | >150-250* |



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

Solubor® concentration at seeding

| | |
|--------|-------------|
| 13.6 g | 100 L water |
|--------|-------------|



Ideal for dry blends for soil application



For isolated soil applications and supplemental auxiliary application



Flexible product that can be dissolved alone in water, in liquid fertilizer, or pesticides then applied to the soil or directly onto the palms

About U.S. Borax

U.S. Borax, part of Rio Tinto, is a global leader in the supply and science of borates—naturally-occurring minerals containing boron and other elements. We are 1,000 people serving 650 customers with more than 1,800 delivery locations globally. We supply around 30% of the world's need for refined borates from our worldclass mine in Boron, California, about 100 miles northeast of Los Angeles.

Our local agriculture experts understand the uses and benefits of boron on crops. In addition to a global sales team, we have a number of agronomists on staff to help fertilizer distributors maximize the benefits of borates in agriculture applications. Our ag team can answer individual growers' questions and concerns about their particular crop.

High quality, high reliability, high performance borate products. It's what we're known for.



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