

Spraybor: An Effective Solution to Boron Requirements of Mangoes

All actively growing plants have basic nutrient requirements. Certain elements are required in large quantities such as N (nitrogen), P (phosphorus) and K (potassium). These are called macro elements

and are essential for basic growth. Other elements, the so-called micro elements, are required in smaller amounts, but are just as important as the macro elements to achieve optimal yield. Micro element deficiencies are often visualised as yellowing on leaves.

Mangoes are a high value crop in South African agriculture. As with most tree crops, mangoes have specific nutrient requirements for optimal yield. Symptoms of boron deficiency on mangoes are described as follows:

The fruit of mango trees with boron deficiency become brown in colour, and hard. The seeds are also brown, and crack easily. The fruit are hard and lacking in juice, sometimes called "stone fruit". The flesh may be soft and watery, with long cracks down the centre (<http://www.agnet.org/library/bc/51006/>).

According to <http://www.sjbagnutri.com.au/crops/mangoes.htm>:

Mangoes are very sensitive to boron deficiency especially when high levels of nitrogen are applied or trees become moisture stressed. Boron is essential for flowering and fruit set, and deficiencies cause flower and fruit drop as well as misshapen fruit. Boron is required for calcium uptake and movement, and calcium deficiencies can be significantly reduced by boron application. Boron plays a similar role to calcium in cell wall stabilization, which makes it essential for quality factors such as skin strength, fruit firmness and storage life of mangoes.

Scientific evidence has shown for many years that foliar application of boron significantly improves the quality of the fruit:

Foliar application of boric acid, at varying concentrations, to mango cultivar 'Langra' significantly influenced the growth, flowering,



fruiting and fruit quality (C.B.S. Rajput, B.P. Singh and H.P. Mishra, Volume 5, Issue 4, December 1976, Pages 311-313).

Spraybor from Plaaskem contains 165 g/kg Boron and can be used by mango farmers to effectively meet the B requirements of orchard

mangoes. **Spraybor** has the unique ability to maintain the spray pH at around 7.5. **Spraybor** also has unique wetting and penetrating characteristics, making it more easily absorbed by the plants leaves. Therefore less **Spraybor** can be applied to an orchard with the same results as other sources of B.

With farming becoming increasingly scientific, and the demand for higher yields on smaller portions of land, correct plant nutrition is becoming increasingly critical. To maintain the correct level of boron in your mango orchard, use **Spraybor** and reap the reward. **Spraybor** should be applied at a rate of 1.25- 2.5 kg/ha mangoes to maintain boron levels.

Plaaskem: 011 823 8000

UAP: 021 868 4063



Boron deficiency on mango seeds
(<http://www.agnet.org>)



Boron deficiency on mango fruit
(<http://www.agnet.org>)