

DO NOT CONFUSE CITRUS GREENING DISEASE WITH A NUTRIENT DEFICIENCY!

By Kenny Beeton

Citrus greening symptoms can often be mistaken for a nutrient deficiency in citrus orchards. It is important to know the difference and alert growers of a possible presence of citrus greening before nutrient corrections are advised.

Citrus greening is a bacterial disease found in Citrus. Although a debilitating disease, it will not kill a tree but stunt growth and affect fruit development and quality. To date, there is no remedy for the disease, which highlights the importance of early detection and eradication.

Citrus greening is found in South African citrus regions and is known as African greening - *Liberibacter africanus* (*Laf*). The disease is spread by a vector known as Citrus Psyllid (*Trioza erytreae*). The citrus psyllid feeds on young tree flush, spreading the disease from tree to tree. All citrus varieties are susceptible to citrus greening.

The vector Citrus Psylla *Trioza Erytreae* survives in temperate climates of 21 to 30 °C with high humidity. For this reason, the vector is not found in hot and dry climates such as the northern regions of the Western Cape and Northern Cape.

IDENTIFYING AFRICAN CITRUS GREENING

One of the first noticeable signs of African Citrus Greening is that symptoms will occur on single branches or sectors of the affected tree. This is referred to as a sectoral infection.

Typical leaf mottling will be present on affected branches, visible on both the upper side as well as the underside of the leaf. Leaf samples of 10 to 15 leaves can be sampled in a plastic bag and sent to the CRI Diagnostic centre in Nelspruit for disease identification and recommended disease and vector control measures.

A typical warning sign that Citrus Psyllid is present are bumps on the topside of leaves with hollow egg nests on the underside of citrus leaves.

The effective control of citrus psylla is imperative in young citrus orchards to control the spread of the Citrus Greening disease.



Citrus Psyllid *Trioza Erytreae* leaf damage



Leaf mottling typical of African Citrus greening disease. *Liberibacter africanus* (*Laf*)

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CITRUS GREENING OR NUTRIENT DEFICIENCY?

Citrus greening can often be incorrectly identified as a nutrient deficiency such as Zinc (Zn) or Iron (Fe) deficiency. With a Zn deficiency, the veins of the leaves will remain green with yellowing between veins and will be found throughout the canopy of the tree, not only on one single branch as in the case with Citrus greening.

Iron deficiency in Citrus will present an overall yellowing of the leaf similar to that of a severe Nitrogen deficiency, very typical in young Citrus orchards.



Zinc deficiency



Iron deficiency

PRODUCT RECOMMENDATIONS

Nutrigo offers a range of products for zinc and iron deficiencies.

- Zinc Nitrate – Foliar application 0.5 L – 10 L per ha
- Ag Zinc – Foliar application 1 L - 3 L per ha
- Chelplex Zinc – Foliar application 2 kg - 15 kg per ha

ZINC NITRATE
SOLUTION

Amino Gluconate
ZINC

Zinc WDP

- AG Fe – Foliar application 3L per ha
- Ferri 60 EDDHA – Soil application on >7 pH soils

Amino Gluconate
FERRO

600g/L
FERRI 60



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