Brix Buster tm

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What does Brix measure?

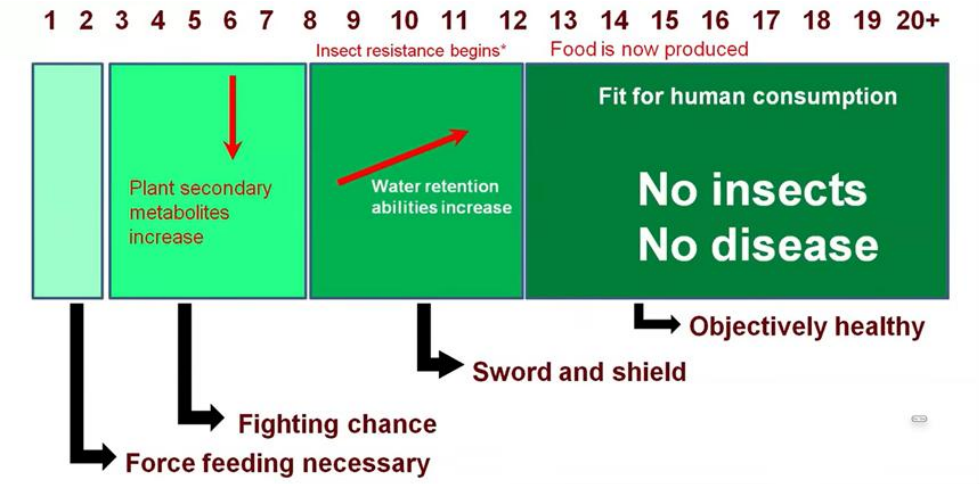
Brix is a measure of the sugar the plant can make using chlorophyl to convert sunlight, water, and carbon dioxide into glucose.

Brix is the metric named after the German scientist Adolf Brix to measure plant sugar. Measurement is taken with a refractometer which measures Brix on a numbered scale where one brix represents a one percent solution of sugar.

The Brix scale is taken by squeezing crushed leaf sap over the measuring prism and looking through the eyepiece to the scale. The opaque line will rise to a level and the number recorded. The Brix level will give an insight into how well the plant is photosynthesising as the higher the brix number the healthier the plant and the more robust it is to defend itself from insect attack.

Typical Analysis % w/v	
Nitrogen	1.6
Phosphorous	0.6
Potassium	0.4
Sulphur	0.8
Calcium	0.3
Magnesium	1.0
Iron	0.74
Manganese	0.52
Copper	0.33
Zinc	0.76
Boron	0.22

With Carbohydrates and Traces of Moly, Selenium and Cobalt



Why is Brix Low ? Brix will be low in a plant for the following reasons.

- Poor growth due to mineral imbalance.
- Too Wet or Too Dry (water imbalance) also if its Too Hot or Cold.
- Excess Nitrogen, through fertiliser or legume rhizobia production.

Can we Enhance Brix ?

- Yes, Brix levels can be raised and thus the levels of protection from insects can be increased.

How can we use Brix?

Dr Tom Dykstra a respected entomologist has been able through his research to determine the Brix levels of plants that certain insects are able to assess as vulnerable to attack.

Dr Dykstra has grouped these into four categories. Grasshoppers and Crickets attack plants between brix levels 12 to 10. Beetles and Moths (chewing insects) attack between Brix 5 to 9

Sucking Insects (Hemiptera) Leaf hoppers, Harlequin bugs, Red Legged Earth mites, Lucerne Flea attack when the Brix is less than 6. Aphids (Hemiptera) attack when the Brix is less than 5.

Interpreting Brix With Other Sap Test Results

Brix	EC	pH	Interpretation
High	NA	NA	Good. Balanced microbial activity. **Your goal!**
Low	Low	Low	Ions are missing. Possibly due to a lack of microbial activity. Carrier elements (N, P) may be lacking. Sodium and potassium are also possibly lacking. Indicates Ca:Mg ratio imbalance. **Soil test, correct mineral ratios, build organic matter and microbial levels in soil.** Tissue test and foliar spray for correction in this crop.
Low	Low	High	Ions are missing. Possibly due to a lack of microbial activity. Carrier elements (N, P) may be lacking. Phosphates, acetates and organic acids possibly missing. **Soil test, correct mineral ratios, build organic matter and microbial levels in soil.** Tissue test and foliar spray for correction in this crop.
Low	High	Low	Ions are not complexed. Possibly due to lack of microbial activity. Excess of acid-producing elements (sulphates, metals). May be lacking Ca, Mg, K or Na. **Soil test, correct mineral ratios, build organic matter and microbial levels in soil.** Tissue test and foliar spray for correction in this crop.
Low	High	High	Ions are not complexed. Possibly due to lack of microbial activity. Elements and ions at excess levels (NO3). May be lacking phosphates, sulphates or magnesium. **Soil test, correct mineral ratios, build organic matter and microbial levels in soil.** Tissue test and foliar spray for correction in this crop.

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