



## TEXAS PLANT & SOIL LAB, Inc.

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Soil-Water-Plant Analysis - Consulting

### MAXIMIZING COTTON BOLLS for M E Y

#### CONTROL NITROGEN EARLY

- ◆ *N plus Water equals excessive vegetative volume! – causing extra expenses for PGR's.*
- ◆ High Nitrate in Sap reduces up take of other minerals and Micros, especially P.
- ◆ Excessive STALKS shade lower leaves, sun on all leaves needed to produce more photosynthates (sugars).
- ◆ SUNLIGHT on all leaves needed for optimum CARBOHYDRATE and other photosynthates needed for optimum fruit (boll) production

**FRUITING** needs good root system to supply adequate PHOSPHATE essential for seed production and a balance of all plant nutrients especially Ca & B needed for pollination and sugar transport.

Regular PETIOLE (sap) TESTING (crop logging) IS BEST WAY TO know Plant Needs!

START when 5<sup>th</sup> true leaf is size of a quarter, test whole plant! (Then largest petiole early – then most recent full leaf)

Control N, convert excess NO<sub>3</sub> to protein NH<sub>2</sub> with humus, sugars, microbes, hormones, etc.

Increase P uptake for better roots and carbohydrate production add P + Humus + Multi-hormones + Microbes, etc.

Test PETIOLE when 5<sup>th</sup> Leaf is fully expanded & mature – balance all nutrients.

Skip a week and start regular systematic testing program weekly  
PETIOLE TESTING PROGRAM!

WATER early (where possible) should be minimized to avoid excessive vegetative growth.

**KEEP N TO ABSOLUTE MINIMUM** until plants show need for more as bolls start developing.

Keep N rates below 20 lb/ac as plants can only properly utilize about 1 lb / ac / day of actual N --- feed 3-5 days for best uptake.

Excess promotes excess vegetative growth at expense of fruiting.

**SPOON FEED N & H<sub>2</sub>O** to grow bolls not stalks.

**PHOSPHATE IN THE SAP** rates the root activity necessary for healthy plants.

- ◆ P is a MAJOR need for fruiting and seed formation.
- ◆ P is taken up by young root hairs old roots are poor performers
- ◆ Many tools are available to manage Plant uptake of Phosphate
- ◆ Weekly Petiole Tests show what is in the sap for future needs  
Visible plant signs show in 10 – 21 days
- ◆ High PO<sub>4</sub> in sap aid more fruiting sites (squares-bolls)
- ◆ High P with balance of all nutrients can produce 5 locks / boll
- ◆ Each Lock has 9 seed potential for highest yields and quality

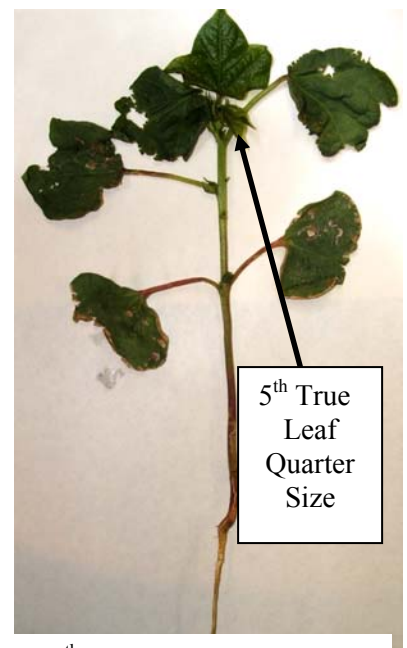
OTHER MINERALS & MICRONUTRIENTS are vital especially

- ◆ Calcium & Boron for pollination and nutrient transport
- ◆ POTASH in large quantities essential for quality, yields, health, water use efficiency, etc.

MICRONUTRIENTS in proper balance also essential, Ask the Plant weekly for the best returns on investment!

NON TRADITIONAL PRODUCTS are great aids for more profits. --- Humus, Carboxyl's, Multi-hormones, Activators, Transporters, Sugars, Microbes, Compost Teas, Rock minerals, etc. when used wisely.

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Early start 5<sup>th</sup> true leaf (Quarter Size)  
Fast " 8<sup>th</sup> Node Mature leaf  
Average " Just prior 1<sup>st</sup> bloom  
Never too late to help even to set & mature top crop.