



## Cotton Plant Tissue Sampling Guidelines

Timing sampling is critical to good nutrition decisions

Growth Stage	Day Degrees	Sample Type	Product Code	Key Nutrients
<b>Late Vegetative -Early Squaring</b>	400 - 650	Leaf blade plus	PAA-01	N,P, K, S, Zn, Na, B, Cl  N, K  N
		Petiole NPK or	PPS-10	
		Petiole N only	PPS-12	
<b>Early Flowering</b>	780 - 900	Petiole NPK or N only	PPS-10 or PPS-12	N, K
<b>Mid Flowering</b>	900 - 1000	Petiole NPK or N only	PPS-10 or PPS-12	N, K
<b>First Max Size Boll</b>	1000 – 1150	Petiole NPK or N only	PPS-10 or PPS-12	N, K
<b>First Open Boll</b>	1450 – 1700	Leaf blade	PAA-01	N, P, K, S, Zn, Na, B, Cl

Leaf blade and Petiole taken from Youngest Mature Blade only

### Sampling conditions need to be appropriate to avoid the crop telling lies

For best outcomes from sampling program ensure:

- Crop growth rate unlikely to be limited by factors other than nutrients.
- Moisture availability and light intensity similar at each sampling; specify standard factors such as soil moisture (deficit), time of day and cloud cover.
- Photosynthesis and transpiration at, or near maximum, for the irrigation cycle.

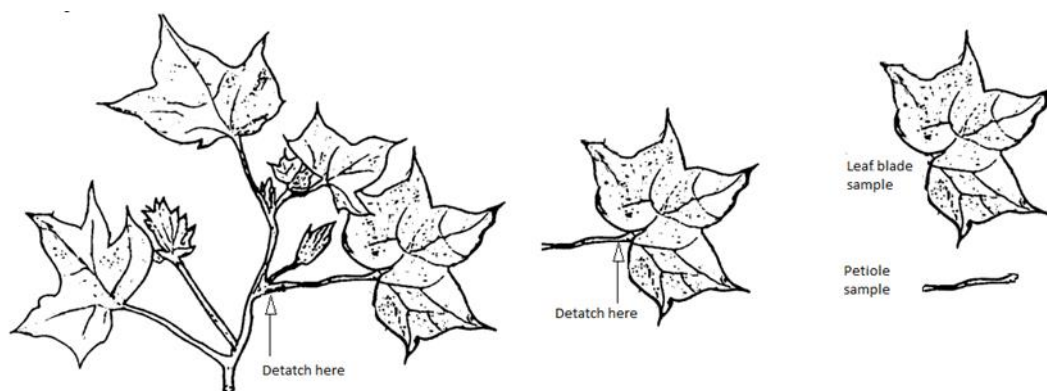
- Allowable variance from these conditions should be set e.g. within 24 hours of peak water use for an irrigation, at least 24 hours after more than 3 days of heavy cloud cover.
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## Location, location, location – getting it right

Select locations in the field that are:

- Easy to relocate for subsequent sampling.
- Relate to the expected performance of the crop ( e.g. high or low vigour/yield)
- Where other observations for normal scouting, soil moisture or soil tests taken
- Avoid areas of the field that may be atypical. e.g. too near to head ditches or tail drains
- Samples should be collected in a repeatable pattern (e.g. 10 paces north, south, east and west) within a 10 metre radius of the sampling reference point.

## Sampling the correct plant parts critical for success



### **Leaf Blade (minus petiole)**

- The “youngest mature blade” (YMB) on the main stem; this may occur between the third and fifth leaf below the terminal, depending on growing conditions.
- 40-50 leaves required depending on size of YMB

### **Petiole**

- Petioles to be taken from the “youngest mature blade” (YMB) on the main stem
- 40-50 petioles required

**Remove petiole from the leaf blade immediately after picking.**

### **SAMPLE HANDLING**

***Both leaf samples and petiole samples should be placed in a cooler immediately***