

## Cotton PGR and Pecan Leaf Sampling Time is Here

### Cotton PGR Requirements Check with Your Seed Salesmen for Vegetative Growth Potential



Contact our office as well concerning PGR applications and suggestions. I hope you find this information helpful

Cotton varieties vary in their vegetative growth potential. Some varieties are very aggressive while others are not.

	Classification	PGR Recommendations
1	Varieties with the most vegetative growth potential, require intensive PGR management	Applications - MULTIPLE Initiation - PRIOR TO BLOOM Product - MC (all applications, rates vary)
2	Varieties with similar growth potential of 1st class, yet more responsive to PGRs or earlier in maturity	Applications - MULTIPLE, MOST CASES Initiation - Squaring to 1st Bloom Product - 1st application - Stance or MC - Sequential app. - MC only
3	Varieties may require PGRs, but pre-bloom initiation not typically necessary, could result in premature cutout, esp. in dryland conditions	Applications - ONE to MULTIPLE Initiation - Bloom initiation likely sufficient Product- 1st app (Stance or MC, low rates) - seq. applications - Stance or MC
4	Varieties that may need no PGR applications, or almost always not applied prior to bloom	Application - NONE to ONE Initiation - Bloom initiation almost always Product - Stance or MC ( ↓rates)

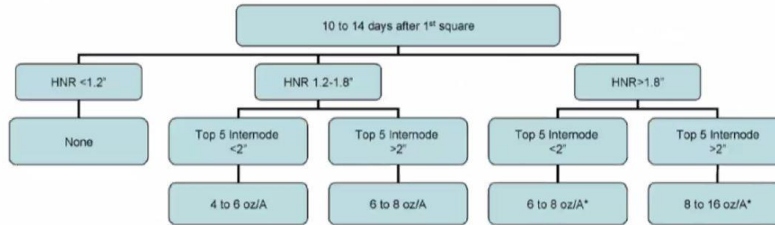
### Information to Help Make PGR Decisions

- Crop Information
  - Height
  - 4<sup>th</sup> / 5<sup>th</sup> internode length
  - Height to Node Ratio
  - Fruit Retention
  - Variety
  - Nodes above white flower
  - Stress
- Environment
  - Irrigation
  - Weather Forecast
  - Fertility
  - Field History

## PGR Strategies – Application Prior to Bloom

Figure 9. Flow chart for mepiquat applications for a crop 10 to 14 days after first square.

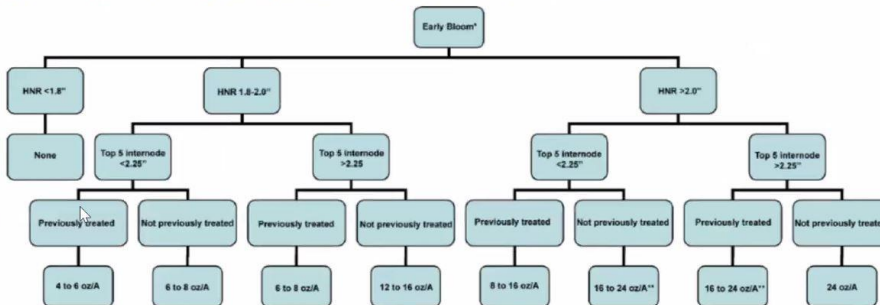


\* Use higher rate if history of rank growth in field

Prior to bloom – only if particular variety and rates typically below 12 oz / A with PIX.  
 Would be hesitant to apply to drought stressed pre-bloom cotton.  
 Wait until squares are visible.  
 Stance is a product that could be considered in early applications (2-3 oz/A).

## PGR Strategies – Applications in Early Bloom

Figure 10. Flow chart for mepiquat applications for a crop in the early-bloom stage.



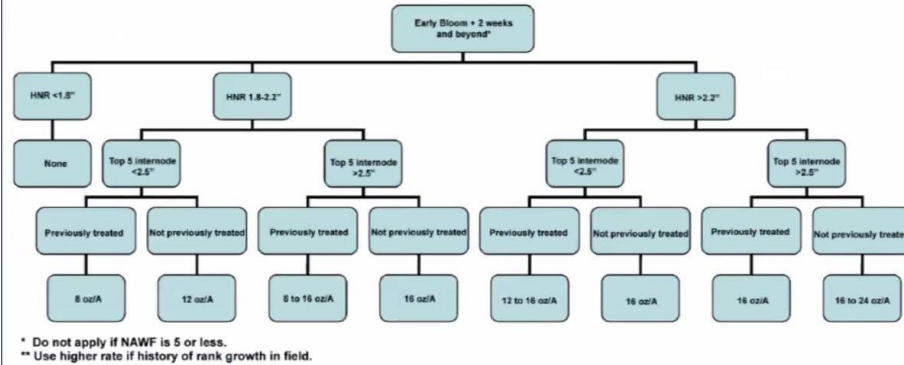
\* Early bloom = 50% of plants have 1 bloom.

\*\* Use higher rate if history of rank growth in field.

Typically, PGRs should be initiated in irrigated situations by early bloom.  
 Early bloom initiation often fine with most varieties (still some OK).  
 Rates can vary up to 16 oz/A, typically less than 16 oz/A.  
 Stance could be used on less aggressive varieties (2-4 oz/A).

## PGR Strategies – Applications after Early Bloom

Figure 11. Flow chart for mepiquat applications for a crop 2 weeks or later past the early-bloom stage.



When making applications after early bloom, higher rates are needed (16 oz/A)  
 Stance not likely best option.

The key with these applications is what was applied before and being sure that  
 applications were made within 14-17 days after initial.

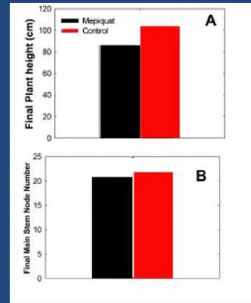
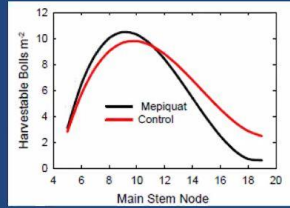
Be sure to know where the crop is regarding Bloom.

## Plant Growth Regulators (Products)

- Commercial plant growth regulators
  - Mepiquat Chloride (0.35 lbs a.i. / gal) (PIX, etc.)
  - Mepiquat Pentaborate (0.82 lbs a.i. / gal) PENTIA
  - Mepiquat Chloride (0.736 lbs a.i. / gal) + cyclanilide (0.184 lbs a.i. / gal) STANCE
- ALL MEPIQUAT PRODUCTS ARE THE SAME
  - They give same effect on growth at same rates
  - Except for Stance (twice the Mep + Cyc.)
- Rain-fastness
  - Pentia – 2 hours (alone) & 1 hour (with high quality adjuvant)
  - Mepiquat Chloride – 8 hours (alone) & 4 hours (with surfactant)
  - Stance – 4-8 hours (alone) | 2 hours (with surfactant)

## Effects of PGRs on Cotton

- Direct
  - Reduced plant height
  - Shortened internodes
  - Slowed terminal growth
  - Smaller leaves
  - Improved boll retention on lower nodes
- Indirect
  - Improved harvest efficiency
  - Earlier maturity
  - Reduced chance of boll rot & lodging
  - Improved canopy penetration (spray efficacy)
  - Improved drying of lint and boll (improved harvest)

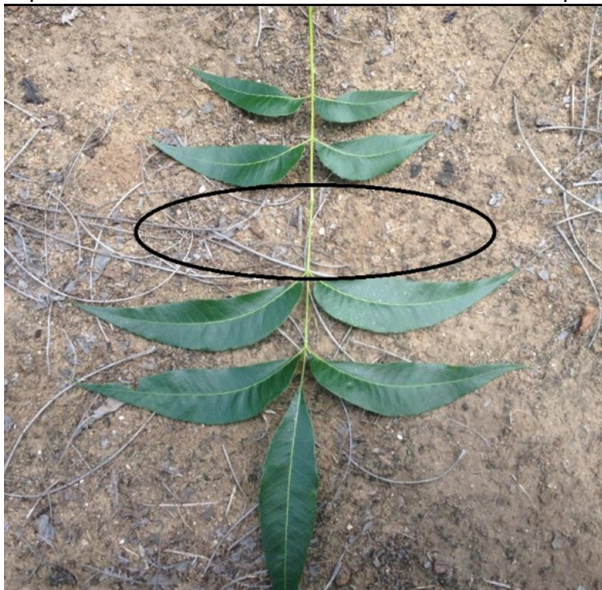


*Effect on Yield?*

### Time for Pecan Leaf Tissue Sampling – Preferred Sampling Dates from July 7-August 7

Now is the time for pecan producers to consider collecting leaf tissue samples. While soil samples are helpful for checking soil pH and determining any potential problems with competitive uptake between nutrients in the soil, leaf samples tell you the fertility status of the actual trees. Leaf sampling is the most important tool pecan growers have for determining their fertility needs. Using soil and leaf samples together allows growers to match their fertilizer applications with the actual needs of the tree rather than just guessing. This provides an excellent opportunity to save money on fertilizer cost.

The general recommended time period for leaf sampling is July 7 through August 7. The reason for sampling from early July to early August is because during that time the least amount of change in the concentrations of mineral nutrients occurs. Leaf samples should be taken at this time because critical levels established through experimentation and observation are based on sampling done during this period.



*Collect middle pair of leaflets from the middle leaf as shown.*

Steps to taking a pecan tissue sample:

Collect 50-100 middle-pair of leaflets from the middle leaf of this year's growth (See figure above). Use terminal shoots exposed to the sun. Avoid twigs from the interior of the tree. Collect leaflets from all sides of the tree. Avoid leaflets damaged by insects and diseases.

Abnormal trees or trees not representative of the area should be sampled separately. A complete and accurate description of abnormalities should accompany such samples.

Sample trees of the predominant variety in a given block. If Schley is the main variety, sample Schley; if Stuart is the main variety, then sample Stuart, etc.

Immediately upon collection, wipe leaves (entire surface, both top and bottom) with a damp cellulose sponge or cheese cloth to remove dust and spray residue. Do not allow the leaves to come into contact with rubber or galvanized containers. Partially air dry and place in a large envelope for mailing.

If recent soil test data is not available, it would be advisable to collect a soil sample and have it sent to a soil testing laboratory. By sampling the same trees each year, growers can more readily see the results of any changes to their nutritional programs.