

# Science, Art, or Witchcraft? Plant Growth Regulator Use on Cotton in Northeast Louisiana

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# Mepiquat Chloride

- What does it do?
- Why do we need it?
- What factors influence the need and cotton plant response to M.C.?

# Mepiquat Chloride

- Description : MEPIQUAT CHLORIDE is absorbed by the plant primarily through leaves and translocated throughout the plant. It inhibits the biosynthesis of **gibberellic acid**, and leads to a deeper green leaf coloring after 3-6 days. It is used on cotton to reduce vegetative growth and to advance maturation of the bolls. It is also used in combination with ethephon to prevent lodging in cereal and flax.

# Mepiquat Chloride

- **Gibberellic Acid-**  
Promotes plant cell growth and elongation.
  - Longer nodes, thus a taller plant



# Does Cotton Deed M. Chloride?

- Shorter Cotton is beneficial
  - M.P. aids in promoting boll retention
  - Better penetration of insecticides and defoliant
  - Can help farmers manage against boll rot and hard lock
  - Easier to harvest
  - Can often lead to higher yields..

# Major Factors that Influence the Use of M. Chloride?

- Available soil moisture and Weather
  - Irrigation?
- Cotton Growth Stage
- Cotton Variety
  - Row Configuration
- Soil Fertility-Nitrogen
  - Previous crop residual nitrogen
  - How “stout” is the soil?



# Potential Catastrophes

- “Over-Pixing” cotton
  - Too much too soon
  - Lack of rainfall following application
  - Varietal response?
- Can this limit yield potential by “shutting cotton down”?



Sometimes You May Not Need It

