

## Cotton Growth Regulators

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**Table 6.1 - Plant Growth Regulation**

Objective	Chemical rate per acre	Product per acre	Remarks and Precautions
Plant growth regulation	Mepiquat chloride 0.35 lb or Mepiquat chloride + <i>Bacillus Cereus</i> or Kinetin 0.35 lb or Mepiquat pentaborate 0.82 lb	Pix, Mepex, 4.0-8.0 oz or Pix Plus, Mepex Ginout 4.0-8.0 oz or Pentia 4.0-8.0 oz	Although plant growth regulator applications can be an important part of an overall cotton management program, they can result in reduced yields if applied while plants are undergoing stressful (especially moisture) conditions. Before applying plant growth regulators, variety, soil type, fertility, irrigation potential, and field history must be taken into consideration.

**Note:** Maximum of 48 oz of Mepiquat chloride may be applied/A/growing season.

### Timing Suggestions – the Modified Early Bloom Technique

The modified early bloom strategy involves the use of height to node ratios and the measurement of the most recently expanded internode length. The most recently expanded internode is measured by counting down the plant from the highest mainstem leaf (> quarter size) to the fourth leaf. Examine the internode above and below the fourth leaf and measure the larger of the two. This is a good indicator of the plant vigor over that past week or so. Long internodes will range between 2.5 to 3 inches while short internodes will be below 2.0 inches. The tables below are provided to aid in determining Pix application decisions using the modified early bloom strategy.

**Table 6.2 - 10 to 14 Days after First Square**

	Plant height		
	< 17 in	17 - 20 in	> 20 in
Height to node ratio > 1.85 in	4 oz	6 oz	8 oz
Internode <sup>1</sup> > 2.5 in	4 oz	6 oz	8 oz

Do not apply if soil moisture is poor.

<sup>1</sup>Most recently expanded internode (see measurement description above).

**Table 6.3 - Early Bloom – Use this Chart if Prior Pix Has Been Applied**

	Plant height			
	< 24 in	24 - 27 in	27 - 30 in	> 30 in
Internode <sup>1</sup> > 2.5 in	6 oz	6 oz	9 oz	12 oz

Do not apply if soil moisture is poor.

Do not apply if nodes above the highest first position white bloom < 7.

<sup>1</sup>Most recently expanded internode (see measurement description above).

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**Table 6.4 - Early Bloom – Use this Chart if No Prior Pix Has Been Applied**

	Plant height			
	< 24 in	24 - 27 in	27 - 30 in	> 30 in
Internode <sup>1</sup> > 2.5 in	8 oz	8 oz	12 oz	16 oz

Do not apply if soil moisture is poor.

Do not apply if nodes above the highest first position white bloom < 7.

<sup>1</sup>Most recently expanded internode (see measurement description above).

**Table 6.5 - 10 to 14 Days after Early Bloom**

	Pix applied at early bloom	
	> 8 oz	0 - 8 oz
Internode <sup>1</sup> > 2.5 in	0 oz	0 oz
Internode 2.5 - 3.5 in	8 oz	12 oz
Internode > 3.5 in	12 oz	16 oz

Do not apply if soil moisture is poor.

Do not apply if nodes above the highest first position white bloom < 5.5.

<sup>1</sup>Most recently expanded internode (see measurement description above).