

**EFFECTS OF MEPIQUAT CHLORIDE ON
COTTON LINT YIELD IN THE SOUTH TEXAS
COASTAL PLAINS**

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Abstract

In order to further understand the effect of application timing of mepiquat chloride (MC) on cotton yield, we reviewed data collected from our experiments conducted 1996 – 1999 in Corpus Christi, Texas. All tests were irrigated randomized complete block design and received MC applications based on height-to-node ratio at the time of treatment. All experiments were planted with either Deltapine 5409 or Deltapine 33B and grown in a Victoria clay soil on 38-inch spacing. Applied amounts of MC were calculated by the MEPRT software that takes plant size into account. Weather data was collected on an hourly basis.

When yield increase over the untreated control was plotted against heat units at the time of application, a general pattern was visible. The trend indicated that a yield improvement is likely if a single dose of mepiquat chloride is applied after 850 accumulated heat units. The percent yield over the control increased progressively to nearly 15 percent when applied at 1400 accumulated heat units, whereas the early applications at “match-head square” to “one-third-grown square” reduced yield by varying amounts.

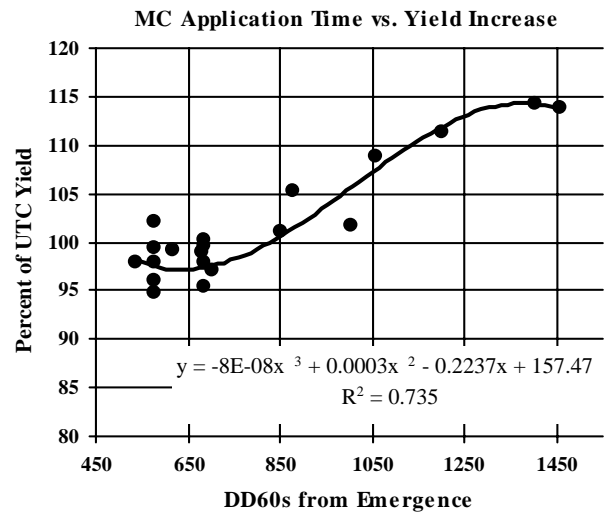


Figure 1: Mepiquat chloride application time versus yield increase over the control. The MC-treated yield equals the control at the 100 percent line.