

**FLOWERING RESPONSES TO MEPIQUAT
CHLORIDE AND PGR-IV**

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Abstract

This study was conducted in effort to better understand the effects of mepiquat chloride (MC) and PGR-IV on cotton flowering when applied alone or used in sequential applications. Field experiments containing an untreated control, a MC treatment, a PGR-IV treatment, and a treatment of both MC and PGR-IV applied sequentially were conducted in 1996 and 1997 at the Texas Agricultural Experiment Station near College Station. The MC and PGR-IV + MC treatments caused plants to have a season long average of 0.55 and 0.48 more flowers per meter of row per day than untreated plants. All PGR treatments resulted in a higher rate of flowering than untreated plants during the later portion of flowering. The MC treated plants also had accumulated 19.1 more flowers per meter than PGR-IV treated plants by the 40th day of flowering. No treatment effect was observed on flower survival. All PGR treatments resulted in increased yields and boll numbers. These studies indicate that application of MC and PGR-IV in sequential applications did not result in a greater effect of either of the two PGRs when used alone. The application of MC and PGR-IV either in sequential applications or alone increased the rate of flowering and the number of flowers per meter of row, but did not impact the ability of flowers to survive to maturity.