EVALUATION OF DISPLAY HARVEST AID IN LOUISIANA COTTON PRODUCTION SYSTEMS D.K. Miller M.S. Mathews LSU AgCenter St. Joseph, La

<u>Abstract</u>

Separate field studies were conducted in 2012 at the LSU AgCenter Northeast Research Station near St. Joseph, La to evaluate the effectiveness of Display as a harvest aid in Louisiana cotton production systems. Soil type was a silt loam with pH 6.8. Cotton variety FM 1944 Glytol was planted on 5/6/12. The study was conducted in a randomized complete block design with treatments replicated four times. Treatments were applied via compressed air sprayer at 15 GPA. Treatments in the defoliation study included Display @ 0.25 oz/a applied at 15 to 20% open boll (OB) followed by (fb) either Display @0.6 oz/a or Def 6 at 12 oz/a, both in combination with Prep at 21 oz/a 60% OB; Display @ 0.6 or 0.8 oz/a, Def 6 @ 12 oz/a, or Aim @ 1 oz/a, all in combination with Prep at 21 oz/a 60% OB; and Display @ 0.4 or 0.6 oz/a, Def 6 @ 8 oz/a, or Aim @ 0.5 oz/a, all in combination with Dropp SC @ 1.6 oz/A and Prep @ 21 oz/A 60% OB. In a non-crop study looking at vine desiccation, treatments included Dropp SC @ 2.4 oz/a in combination with Prep @ 1.3 pt/A fb Display @ 0.8 oz/a 7 DAT; and Dropp SC @ 2.4 oz/a in combination with Prep @ 1.3 pt/a. Parameters measured in the defoliation study included percent defoliation and desiccation 7 and 20% after the 60% OB application and percent open boll 9 and 21 d after 60% OB application. In the vine desiccation study, percent desiccation was measured 7, 20, and 27 d after the initial application.

In the defoliation study, at 7 d after the 60% OB application (DAT), programs that included an initial 15-20% OB application resulted in 80 to 85% defoliation while other treatments defoliated cotton 60 to 75% with only minor differences noted. At 20 DAT, programs that included an initial 15-20% OB application resulted in 93 to 96% defoliation. Display resulted in 76 to 81% defoliation, which was equal to the 76% observed with Aim. Addition of Dropp SC did not increase defoliation over that observed with Display alone. At 7 DAT, Display, Def 6, or Aim applied in combination with Dropp SC resulted in 38, 24, or 13% leaf desiccation, respectively, while all other treatments resulted in no greater than 5% desiccation. At 20 DAT, respectively, and was equal for all treatments.

In the vine desiccation study, Display applied in the initial application resulted in 95% desiccation while Dropp SC in combination with Prep resulted in no greater than 15% desiccation. At 14 d after the initial application, follow-up treatment of Display applied at 0.6, 0.8, or 1 oz/a resulted in equal vine desiccation ranging from 81 to 85% and equal to that observed for Aim.

Display resulted in similar activity to that observed for other PPO type defoliants when applied under Louisiana growing conditions.