

EVALUATION OF DISPLAY FOR COTTON DEFOLIATION AND MORNINGGLORY DESICCATION**D. K. Miller****M. S. Mathews****LSU AgCenter Northeast Research Station****St. Joseph, LA****D. Dodds****Mississippi State University****Mississippi State, MS****Abstract**

Field studies were conducted in 2013 at the LSU AgCenter Northeast Research Station near St. Joseph, La and on Harlow Farms in Ms. to evaluate the effectiveness of Display in defoliating cotton and providing morningglory desiccation. Separate studies were conducted in cotton (defoliation) and non-cropland (morningglory desiccation) in La while a single study accomplished both objectives in Ms. Each study was conducted in a randomized complete block design with treatments replicated four times. Treatments were applied via compressed air sprayer at 15 GPA. In St. Joseph, treatments for the defoliation trial included Display applied alone at 0.4, 0.6, or 0.8 oz/A or at 0.4 and 0.6 oz/A in combination with Dropp SC at 1.6 oz/A; or Folex alone at 8, 12, or 16 oz/A or at 8 and 12 oz/A in combination with Dropp SC at 1.6 oz/A. All treatments included Prep at 21 oz/A + nonionic surfactant (NIS) at 0.25%. Treatments were applied at the 60% open boll (OB) stage on September 11. For the morningglory desiccation trial, treatments included Display applied alone at 0.6 or 0.8 oz/A + 1% crop oil concentrate (COC), Aim at 1 oz/A + 1% COC, ET at 2 oz/A + 1% COC, or Sharpen at 1 oz/A + 1% Methylated Seed oil + ammonium sulfate at 17 lb/A, all applied 8 d after an application of Dropp at 2.4 oz/A + Prep at 21 oz/A + 0.25% NIS. Additional treatments included Display at 0.6 oz/A in combination with the Dropp + Prep treatment described above followed by (fb) Display at 1 oz/A + NIS at 0.25% and then Dropp + Prep combination applied alone. Treatments were applied on September 9 fb September 17. At Harlow Farms, treatments were similar to the morningglory desiccation trial at St. Joseph with the exception being that the Sharpen treatment was excluded and Bollbuster was the ethephon product of choice. Treatments were applied at the 60% OB stage on October 8 fb October 18. Parameters measured at St. Joseph included cotton defoliation and desiccation 7, 14, and 23 d after treatment (DAT) and vine desiccation 7 d after the initial application and 7 and 14 d after the fb treatment. At Harlow Farms, evaluations included cotton defoliation and desiccation 10 d after the initial application and 8 and 14 d after the fb treatment along with vine desiccation.

At St. Joseph, Display applied alone at 0.4 to 0.8 oz/A resulted in no greater than 63% defoliation 7 and 14 DAT, which was significantly lower than the 74 and 85% minimums observed for Folex applied alone. Addition of Dropp SC to Display at all rates resulted in defoliation levels equivalent to those observed for Folex alone. By 23 DAT, complete defoliation was observed for all treatments. At Harlow Farms, all treatments resulted in equal cotton defoliation of at least 94%. Insignificant cotton desiccation was observed at both locations. Vine desiccation was at least 80% in St. Joseph and 90% at Harlow Farms.

Results for cotton defoliation at St. Joseph were lower than has been observed in past years and more closely resembled results obtained at Harlow Farms in 2013. In previous research, Display was applied with COC instead of NIS and defoliation has been greater and more rapid as a result. Display offers cotton producers an effective means of defoliating cotton and desiccating morningglories to aid in harvest efficiency.