

**COTTON RESPONSE TO IN-FURROW  
APPLICATION OF AMISORB,  
ASSET, AND PGR-IV  
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**Abstract**

Vigorous early-season growth is beneficial in establishing high yield potentials. In the Delta it is sometimes difficult to achieve rapid emergence and vigorous plant growth prior to squaring. Starter fertilizers, fertilizer additives, and plant growth regulators have the potential to enhance emergence and early-season growth. In-furrow compounds include but are not limited to AmiSorb, a nutrient absorption enhancer (AmiLar Int.) Asset, a fertilizer additive (Helena Chemical) and PGR-IV, a plant growth regulator (MicroFlo). This study was conducted to evaluate emergence and yield response of cotton to in-furrow starter fertilizer containing AmiSorb, Asset, or PGR-IV. Three demonstrations were conducted in producer fields using strips the length of the field in 1997 and 1998. Replicated treatments were harvested with conventional pickers and weighed in the field using boll buggies equipped with load cells. Samples were ginned on a laboratory gin to determine lint fraction. Treatments in 1997 and 1998 consisted of: 1)control, 2)starter (11-37-0, 1.5 gal/ac), 3)starter + Asset (5.3 oz/A), 4)starter + PGR-IV (2.0 oz/A). AmiSorb (2.0 qt/ac) was used with 11-37-0 in 1997 and was used alone in 1998. PGR-IV (2.0 oz/A) was also used alone in 1998. Emergence differed only in Desha County in both 1997 and 1998. In 1997, emergence in the control exceeded all other treatments (46,800 vs 42,600 to 45,440 plants/A) with the exception of 11-37-0 + Asset (46,700 plants/A). No other treatments differed statistically from the control or 11-37-0 + Asset. In 1998, emergence of 11-37-0 + Asset was below that of all other treatments including the control (42,000 vs 49,170 to 52,500 plants/A). Lint yield was not influenced by in-furrow treatments. Lint yields ranged from 1244 lb lint/A for Starter + Asset, 1235 lb lint/A Starter + PGR-IV, 1238 lb lint/A for Starter + AmiSorb, to 1277 lb lint/A for the untreated control in 1997. In 1998, yields ranged from 787 lb lint/A for Starter + PGR-IV, 795 lb lint/A for AmiSorb, 805 lb lint/A for Starter + Asset, 814 lb lint/A for the untreated control, to 830 lb lint/A for starter alone. In-furrow treatments used alone or in combination with a starter fertilizer (11-37-0) did not enhance emergence or lint yield compared to that of the untreated control. Other sources or methods of applying starter fertilizers should be evaluated. More field testing is needed to better evaluate how Asset and AmiSorb may best be used.