

**CONTROL OF VOLUNTEER COVER CROPS WITH PREEMERGENCE HERBICIDES IN COTTON****Michael E Fogleman****Jason K Norsworthy****University of Arkansas****Fayetteville, AR****Tom Barber****University of Arkansas-Extension****Lonoke, AR****Mohammad T Bararpour****University of Arkansas****Fayetteville, AR****Abstract**

As the benefits of incorporating cover crops into sustainable agricultural systems become well known, the number of acres planted to cover crops continue to increase each year. Inadequate termination of cover crops, via herbicide or tillage, can lead to interference between volunteer cover crops and cash crops during critical periods of growth. Recent literature indicates that poorly terminated cover crops can become in-season weeds and decrease yield potential of cash crops. Thus, a field experiment was conducted in summer 2016 at the Arkansas Agricultural Research and Extension Center in Fayetteville to determine preemergence herbicide options for controlling volunteer cover crops in cotton. This study was designed as a randomized complete block with four replications in which Deltapine Bollgard II XtendFlex cotton was planted into four-row plots immediately after being broadcast seeded with several species of cover crops. Herbicide treatments included a number of products currently labeled for use in cotton. Control of tillage radish and oilseed rape provided by Direx, Reflex, and Staple LX treatments was > 90%, while Clarity was the only herbicide to provide the same level of control for Austrian winterpea, hairy vetch, and sunn hemp. Warrant provided unacceptable control (< 40%) across all cover crop species evaluated. Overall, less than 5% crop injury was observed regardless of treatment. The results of this study suggest that the efficacy of preemergence herbicides is heavily dependent upon the species of cover crop present. Future research should evaluate in-crop postemergence options for controlling cover crops.