Time of Day Impact on Herbicides. *(Culpepper)* Over the past few years, we have been studying the impact of application time of day on the postemergence activity of numerous herbicides. The table below is provided to help guide you in assisting your growers with timely applications. Liberty remains, by far, the most sensitive herbicide to the time of day in which it is applied. However, research is showing most herbicides applied early, late, or early and late may not perform at their optimum.

Consistent results from numerous locations have been generated with Liberty, Roundup, Clarity, and 2,4-D. For Reflex, Direx, and Gramoxone results provided are from a single location and the study will be repeated during 2015.

Data results used to generate this table will be discussed in depth during the cotton section at Winter School on April 1, 2015.

Time of Day Impact on Palmer Amaranth Control by Various Herbicides

| Herbicides | 6 AM | 7 AM | 8 AM | 10 AM | 12 PM | 2 PM | 7 PM | 9 PM |
|------------|------------------------|----------------|---------|----------|----------|---------|----------------|---------|
| Liberty | XX | X | X | \$ | \$ | \$ | \$ | X |
| Roundup | $\mathbf{X}\mathbf{X}$ | X | X | \$ | \$ | \$ | \$ | X |
| Reflex | XX | X | \$ | \$ | \$ | \$ | \$ | X |
| Direx | \$ | \$ | \$ | \$ | \$ | \$ | X | XX |
| Clarity | $\mathbf{X}\mathbf{X}$ | X | \$ | \$ | \$ | \$ | \$ | X |
| 2,4-D | $\mathbf{X}\mathbf{X}$ | X | \$ | \$ | \$ | \$ | \$ | X |
| Gramoxone | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |

XX = worst level of control; X = low level of control; \$ = highest level of control Times provided in the top row of the table are when applications were made.