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Crop Production Guide Series

Pre-harvest Weed Control in Cotton and Peanut

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The primary purpose of pre-harvest weed control is to reduce harvest losses caused by weeds. Pre-harvest weed control starts with effective weed management during the growing season. Weed escapes during the season and late season weed emergence may cause harvest problems if weeds are present. Herbicides used prior to harvest in cotton and peanut must be used according to the pre-harvest interval (PHI) listed on the herbicide label.



Cotton. In Roundup Ready cotton, **Roundup WeatherMax (RWM)** and **other glyphosate-based herbicides** may be applied for pre-harvest control of annual and perennial weeds as a broadcast treatment to cotton after 20% boll crack. Up to 44 fl oz/A of **RWM** (or 64 fl oz of a 4 lb per gallon **glyphosate**) may be applied using either aerial or ground spray equipment. **Glyphosate** will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

In non-Roundup Ready cotton, pre-harvest weed control and cotton regrowth inhibition may be achieved when a glyphosate-based herbicide is applied prior to harvest. For weed control, apply the rate given in the rate table for annual, perennial, or woody brush and tree control. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential. Pre-harvest applications are not recommended for cotton grown for seed because germination and seedling vigor may be reduced.

Gramoxone Max may also be applied as a harvest aid to defoliate and desiccate cotton and troublesome weeds that may interfere with harvest. The use rates are 0.7 to 1.3 pt/A. If weed desiccation is the primary objective, you will most likely want to apply the maximum rate. However, heavy “leaf stick” should be expected. Apply when 85% of the bolls are open and the remaining bolls are mature. Apply with a 0.25% volume/volume non-ionic surfactant (1 quart per 100 gallons of spray mix). Cooler temperatures may delay desiccation and defoliation caused by this herbicide. **AIM** may be applied as a harvest aid at rates of 1.0 to 1.6 fl oz/A to defoliate and desiccate cotton and troublesome weeds (especially vining weeds such as morningglory) that may interfere with harvest. Apply with 1% v/v (1 gallon per 100 gallons of spray mix) crop oil concentrate. Make application when 60-70% of the bolls are open or according to local Texas Cooperative Extension recommendations. **ET** is another product that may improve harvest efficiency when used as a cotton harvest aid product. Apply **ET** at a rate 1.5 to 2.0 fl oz/A when sufficient mature bolls have developed to produce the desired yield (generally 50-70%).



Harvade is a plant growth regulant that may also improve the harvest operation by desiccating most mature morningglory species. Use 8 ounces of **Harvade** with 1 to 2 pints of crop oil concentrate per acre. The use of **Gramoxone Max**, **Aim**, **ET**, and **Harvade** will require thorough plant coverage for the best results. You should use spray volumes (15 gallons per acre and up) and nozzle tips that will best accomplish this.

All of these products must be applied at least 7 days prior to harvest. These products can be applied with many other harvest aid chemicals. Read the label to determine compatible tank mix partners. As mentioned earlier, plant coverage is essential for effective defoliation and weed desiccation. Conditions not conducive to complete coverage (such as a dense plant canopy) will most likely reduce performance. Repeat applications may be needed to remove remaining foliage and completely desiccate weeds. Additional guidelines and recommendations such as maximum applications and seasonal use rates, spray volumes, choice of spray tips and adjuvants, etc. may be found on the labels.

Peanut. Glyphosate may be applied through a wiper application (rope or sponge wick) in peanut. Suggestions regarding wiper applications were provided in the Focus Crop Production Guide Series entitled “Late season weed control in cotton and peanut” and may be found at <http://lubbock.tamu.edu/focus/>. The only other option in peanut is mowing or shredding above the canopy. However, this method will be only marginally effective in improving yields.

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