

► Early Season And Secondary Pest Management In Cotton

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Thrips, aphids and spider mites are common pests of cotton in the Mid-South. Thrips are one of the most consistent insects affecting Mid-South cotton. Although a number of thrips species may be found infesting Mid-South cotton, the most common species encountered include the tobacco thrips, *Frankliniella fusca* and the western flower thrips, *Frankliniella occidentalis*. Both of these species can cause severe injury to seedling cotton and injury is most severe when plant growth is suppressed by cool temperatures, pre-emergence herbicides, or other stress factors. Currently, neonicotinoid seed treatments are the primary means of managing thrips in seedling cotton; however these products often fail to provide sufficient residual control and foliar insecticide applications are required. Within the past three years thrips control with seed treatments containing thiamethoxam (Cruiser/Avicta) has been poorer than expected. The reason for this lack of activity is not certain, but may be due to resistance or formulation changes, exasperated by poor weather conditions. Cotton aphid, *Aphis gossypii*, is commonly found infesting cotton in the Mid-South. These infestations are most common prior to bloom or during early bloom, but late season infestations do occur. Early season aphid infestations rarely justify an insecticide application but mid to late season infestations tend to be more damaging. Later aphid infestations tend to occur following insecticide applications targeting plant bugs or bollworms. Aphids often do not require insecticide applications for management due to the activity of natural control factors; namely lady beetles, lacewing larvae, syrphid flies and pathogenic fungi. Where problematic, aphids have been managed using foliar applications of neonicotinoid insecticides; however, resistance issues with neonicotinoids have shifted much of these applications to Transform (sulfoxaflor). Spider mites can be a serious pest of Mid-South cotton. The most common species of spider mite infesting Mid-South cotton is the two-spotted spider mite, *Tetranychus urticae*. Infestations of this mite may occur at any cotton growth stage but infestations usually are most severe once the crop begins to bloom. There are a number of factors that contribute to spider mite outbreaks; these include weather, overwintering populations and insecticide use. Managing spider mites starts with timely and adequate fall and spring burn down herbicide applications to reduce wild hosts harboring overwintering mites within or surrounding planned planting sites. Insecticides targeting other pests will contribute to spider mite outbreaks. Most notably acephate and pyrethroids, but foliar and seed applied neonicotinoid insecticides have also been shown to contribute to spider mite outbreaks. There are a number of miticides commonly used for managing mites in Mid-South cotton. The most common miticide used is abamectin. However, recent control failure and resistance issues with this chemistry in Louisiana and Mississippi have resulted in other miticides becoming more common than in past years.

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