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PURPOSE: 2009 One Page Summary: Randolph County Nighttime Fungicide Application Test Trial

This is the second year of a three year replicated study. The study was performed on the farm of Clifford Rigsby on Georgia O-6G peanuts. The field was selected from his irrigated farm. The main reason that we chose this field was that it had a history of disease over the last decade. The main reason for this is it had only a two year peanut rotation. Other reasons we chose this particular field was that the field had very few changes in soil type.

The actual fungicide program selected was a chlorothalonil and tebuconazole program. The farmer made seven fungicide applications. The actual fungicides were generics of the original products which included: chlorothalonil (Monsoon 7.2 oz.; Initiate 1.5 pt.) and tebuconazole (Folicur 7.2 oz.; Toledo 7.2 oz.). However the 3rd-6th fungicide applications were applied at night, while the others were applied during normal working hours on the third fungicide application the farmer included 1 pt. Butyrac and 1.5 pt. Initiate. On the remaining tebuconazole applications the farmer included 1 pt. of chlorothalonil with all tebuconazole applications. The farmer made his applications from 5:00 A.M. to 6:00 A.M. During the 3rd fungicide application is typically the time when fungicides designed to combat white mold and limb rot are applied. It is these two diseases along with leaf spot that this research effort was targeted. Typically, peanut plants lay down at night and the leaves fold. Three replications had fungicides applied at the normal time while three were applied at the designated morning time.

This year Dr. Tim Brenneman came to do a leaf spot and disease rating for the peanut test plots. A dry and hot month of June coupled with an excessive amount of summer and fall rainfall brought heavy disease pressure on the peanuts. The two diseases that were the most detrimental to the crop were early and late leafspot and white mold. It was decided that with such a history of disease and a short rotation that the following years of testing with tebuconazole products should be combined with 1.5 pts. chlorothalonil rather than the 1 pt. recommended by UGA specialist due to climate and leaf spot pressure. The daytime plots averaged 61% defoliation due to leafspot at the time of the rating compared to 59% for nighttime plots. The daytime plots averaged 24 white mold hits per 100 ft/row while the nighttime plots averaged only 18 per 100 ft/row. It was this reduction in disease that appeared to be the difference between the plots.

According to the farmer, the entire field averaged about 4200 lbs/A. The average of the three replications of regularly sprayed peanuts averaged 4524 lbs/A. The nighttime sprayed peanuts averaged 5018 lbs/A. This is a 494 lbs/A difference in yield, which is extremely compelling. I have made plans to continue this research for at least one more year to determine the practicality of this practice.