Symptoms of Fusarium Head Blight (Scab)

Program 4CR-2

Management Of Glyphosate-Resistant Weeds In A Corn Rotation

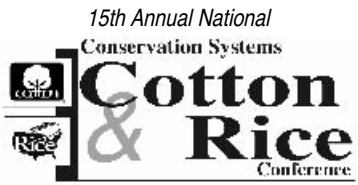
Presented by Dr. Larry Steckel
Extension Weed Specialist, University of Tennessee

There are no less than 8 glyphosate-resistant (GR) weeds in the Mid-South. They include horseweed, Italian ryegrass, goosegrass, Johnsongrass, giant ragweed, common ragweed, common waterhemp and Palmer amaranth. One way some growers choose to manage fields infested with GR weeds is to rotate the field from cotton and soybean to corn. This can be a very effective way to reduce the population of GR weeds. Unfortunately, this rotation often does not work to reduce the overall GR weed population. There are a number of reasons for this which includes enhanced atrazine soil degradation, poor corn stands that do not shade the ground effectively and a long growing season in the Mid-South that allows weed seed production after corn harvest.

Recent research in Mississippi and Tennessee has shown that atrazine no longer provides reliable residual weed control due to enhanced soil degradation. In part due to this development, effective corn weed control is best obtained in a planned sequential program. In our research a Pre followed by an early Post application has provided more consistent weed control than relying on a single application.

There are many herbicides that can be used in corn that are quite effective on GR weeds, particularly Palmer amaranth. However, none of them can provide good residual control in thin corn stands. Light able to reach the soil after herbicide residual has played out will promote germination of many GR weeds, especially Palmer amaranth. These late emerging weeds will often begin to grow as the corn begins to dry down in late July and early August. As a result, weeds can mature and produce a large weed seed load that will have to be managed in the fol-

lowing year's soybean and cotton crop. Growers must consider initiating weed control after harvest to help reduce seed production of late emerging weeds. In the era of GR weeds, just rotating to corn is not enough without considering the total weed management in the corn crop and continuing after harvest.



SOYBEAN PRESENTATIONS

Program 5SB-2

Yield And Economics Of Seed Treatment On Soybean With Different Maturity Groups And Planting Dates

Presented by Dr. Normie Buehring
Research Professor/Senior Agronomist, Mississippi State University

Very limited information is available regarding soybean maturity group (MG) response to insecticide-seed-treatments and planting dates. We selected one productive Roundup Ready variety per MG III, MG early (E) IV, MG late (L) IV, MG E V and MG L V. The MG response to a fungicide (APRON MAXX RTA) and an insecticide-fungicide seed treatment [APRON MAXX RTA (mefenoxam +fludioxonil) + CRUISER 5SF (thiamethoxam)] with three planting dates was evaluated in 2007-2009. Studies were planted in three 4-week planting intervals starting early to mid April through early to mid June at three locations (Verona, Starkville and Stoneville).

The results indicated a MG by planting date interaction for yield at all locations. At Starkville, all MG yields were higher with the April planting than May and June plantings. Yields at Verona were similar for MG E IV (AG 4403), MG L IV (Pioneer 94B73), and MG E V (DK 5058), planted in either April or May. The MG III (AG 3906), had the lowest yield and MG L V (DP5634) had the highest yield of all MG's across all planting dates. However, the MG L V was about two to three weeks later in maturity then the MG IV's.

With supplemental irrigation, the delta location (Stoneville) had the highest yields of all locations. The MG III's highest yield was planted in May, and was similar to the May planted MG L IV, MG E V, and MG L V varieties. All MG yields were similar and the lowest when planted in June. The highest yield for MG E V and MG L V were planted in April; and were not different from MG E IV and MG L IV planted in April. However, the MG E V and MG L V varieties usually matured one to three weeks later than the MG IV's and may require an extra irrigation. Both MG E IV and MG L IV showed no yield differences planted in either April or May and were higher in yield than MG III, MG E V and MG L V planted in May.

Although bean leaf beetle [Cerotoma trifurcata (Forster)] defoliation and thrips (frankliniella spp.) injury levels were very low at all three locations, the April planting most often showed more bean leaf beetle defoliation or thrips injury at V1 or V3 growth stage than May and June plantings, at all locations. APRON (APRON MAXX RTA) + CRUISER showed less defoliation and thrips injury than APRON alone at V1 and V3 with no differences between varieties. The yield for APRON + CRUISER and APRON alone were not different across MG and planting dates. APRON + CRUISER produced 1.8, 4.3 and 2.1 bu/acre more than APRON alone with low (Starkville), medium (Verona) and high (Stoneville) yield environments, respectively. Averaged over locations, the APRON + CRUISER yield was 2.7 bu/acre more