### SORGHUM: *Sorghum bicolor* L. Moench, 'Northrup King 2660'

Sorghum webworm; *Celamina sorghiella* (Riley)

**Corn earworm; Heliothis zea** (Boddie)

**SORGHUM: *Sorghum bicolor* L. Moench, 'Funks 522 DR'

Sorghum midge; *Contarinia sorghicola* (Coquillett)

**INSECTICIDE CONTROL OF PESTS ON SORGHUM IN ARKANSAS, 1987:

Populations of sorghum webworm and corn earworm were observed 20 Aug feeding on sorghum (pre-milk), planted 20 Jun in Little River County. Insecticide treatments were applied to plots of 50 ft × 1 row. An untreated buffer row was left between plots. Treatments were arranged in a completely randomized block design with 4 replicates. Insecticides were applied using a backpack sprayer delivering 13.6 gal/acre at 30 psi through a single Teejet TX10 nozzle. Sprays were applied approximately 10–12 inches above the sorghum panicles on 20 Aug between 10 A.M. and 12 A.M. Ten panicles/plot were randomly tagged pretreatment. The effectiveness of the treatments was evaluated on 21 Aug (24 h postapplication) by selecting 5 of the tagged panicles from each treatment in each replication. The panicles were clipped and twirled in a white plastic bucket, and the number of live sorghum webworms and corn earworms was counted. The other 5 panicles were hand harvested 25 Sep from each row. The panicles were threshed and the grain was weighed. Data were analyzed by conventional analysis of variance and multiple-comparison procedures.

All insecticide treatments provided excellent suppression of sorghum webworm and corn earworm, reducing their densities to well below their economic thresholds of 4/panicle and 2/panicle, respectively. Pretreatment counts of 20 randomly selected panicles within the test area indicated a mean of 37.4 webworms/panicle and 2.6 corn earworms/panicle on the day of treatment. Webworms ranged from early instars to fully mature larvae; corn earworms were first- to fourth-instar larvae. Mean grain weight/panicle was significantly higher in the insecticide treated plots than the untreated check plot.

### INSECTICIDE CONTROL OF SORGHUM MIDGE AS INFLUENCED BY TYPE OF INSECTICIDE AND FREQUENCY OF APPLICATION, 1987:

A small-plot field study was conducted at the Texas A&M University Agricultural Research and Extension Center at Corpus Christi. Seven treatments and an untreated check were compared in 4-row x 30-ft plots of sorghum planted 16 Apr on 38-inch rows. Treatments and the untreated check were replicated 4 times in a randomized complete block design. Due to heavy rainfall, muddy soil conditions, and insufficient numbers of midges, treatment applications were not initiated until 95% of the panicles were in bloom, with the upper third of each panicle having complete bloom. Treatments were applied with a CO₂-pressurized backpack sprayer calibrated to deliver 3.5 gal total spray/acre through size 3X hollow-cone nozzles (2 nozzles/row) at 35 psi. All treatments were initially applied on 18 Jun, and all but 2 treatments were applied again on 21 Jun. On 23 Jun, 90–95% of the panicles had completed bloom and were no longer susceptible to further attacks by adult midges, thus treatment applications were discontinued. Counts of adult midges were made in the untreated plot.