EVALUATION of grain yields from sorghum has been greatly hindered by bird damage at a number of locations. At Gainesville, Florida, the variety Schrock and its derivative Combine Sagrain have exhibited a high degree of resistance to bird damage in the field, but the seed of all other varieties and hybrids have been almost completely destroyed in the head.

The birds occurring in sorghum plots during 1954-1957 in order of decreasing frequency were: red-winged blackbirds, English sparrows, and boat-tailed grackles.

It has been possible to obtain grain yields only when tests were planted under the protection of a chicken-wire cage (60′x60′x8′). Although birds were completely excluded by this cage, its size did not permit adequate yield measurements. Weather conditions were favorable for determining the effectiveness of the treatments. The 4 coloring materials reported in the literature as repellants, had a repelling effect on the birds. Various combinations of the components were observed. Various coloring materials (red cement-pigment, black cement-pigment, blue, and brilliant red) were also tested.

The above chemicals and coloring materials (dried-blood (Armour), Bentonite (Spreader-sticker), Dupont Spreader-sticker, and polyvinyl alcohol) were applied singly to Martin milo seed. Ten-foot sections were harvested from each row in all plots.

Results and Discussion—Attempts to control bird damage with a shotgun in 1954-1955 were completely unsuccessful. Birds were initially frightened from the field, but within one week they would return to the sorghum heads unless hit by shot. Spraying heads with the various commercial mammal repellants, Z. I. P., failed to control the birds. The treatments, yields per plot, yields of field plots, and one untreated plot under the protection of a chicken-wire cage were used as controls. The sprays and dusts were applied, before 8 a.m., three times at 10-day intervals. The plots were harvested, one month after harvest. One hundred seeds from each line were used in waterways and other soil conservation practices where an even, uniform cover is essential. A rhizomatous strain eliminates clumpiness and permits filling of gaps and open areas without reseeding.—HARRY L. PORTER, JR., Plant Materials Technician, Soil Conservation Service, USDA, Big Flats, N. Y.

PROTECTING GRAIN SORGHUM FROM BIRD DAMAGE

Methods and Materials—Control of birds by physical means was attempted in 1954-1955. In 1956, a commercial mammal repellant, Z. I. P., was sprayed on sorghum heads to test its effectiveness as a bird repellant.

Sublimated anthraquinone, hydrated lignin, Arasan 75 were applied singly to the food plot of red-winged blackbirds in small cage tests to determine their repelling effects. Various coloring materials (red cement-pigment, black cement-pigment, blue, and brilliant red) were also tested.

The various test materials were combined and applied to Martin milo seed. One untreated field plot and one untreated plot under the protection of a chicken-wire cage were used as controls. The sprays and dusts were applied, before 8 a.m., three times at 10-day intervals. The plots were harvested, one month after harvest.

The treatments, yields per plot, yields of field plots, and replicates of the treatments were compared with each other. The treatments were applied singly to Martin milo seed. One untreated field plot and one untreated plot under the protection of a chicken-wire cage were used as controls.

Discussion—Attempts to control bird damage with a shotgun in 1954-1955 were completely unsuccessful. Birds were initially frightened from the field, but within one week they would return to the sorghum heads unless hit by shot. Spraying heads with the various commercial mammal repellants, Z. I. P., failed to control the birds.

The four chemicals used, previously reported in the literature as repellants, had a repelling effect. This effect was relatively constant during the period of the tests. The 4 coloring materials reported for periods of 3 to 4 days. After one week, to these components, no inhibition of growth was observed.

Weather conditions were favorable for determining the “sticking ability” of the dusts and sprays. The 11.17 inches of rain between the first applications of the repellants (8/15/57) and the harvest (16/11/57) were the only treatments applied. The sprays adhered to the grain after several heavy rains.

The treatments, yields per plot, yields expressed as percentages of the yield of the untreated plot, and repellancy of the treatments are presented in table 1.

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