



The Agriculture Program

The Texas A&M University System



Grain Sorghum in Texas

Crop Brief on Production, Pests, & Pesticides

Grain Sorghum Production

- Texas is the 2nd largest producer in the U.S., harvesting 3.15 million acres annually.
- The cash value to farmers is \$315 million, which generates \$1.065 billion for Texas.
- Sorghum is commonly rotated with other crops to reduce insects, weeds and diseases.
- The grain is important for beef cattle, the feed lot industries, and poultry.

Insect Pests

- 80% of the acres are scouted and insecticide use is based on economic thresholds.
- Greenbug and sorghum midge are the most damaging insects. If left untreated, these pests can reduce crop yields 15% or more.
- Other pests include spider mites, headworms, stink bugs, chinch bugs, and aphids.
- **Chlorpyrifos (Lorsban)** is used for greenbug. **Terbufos (Counter)**, **dimethoate (Cygon)**, **carbofuran (Furadan)**, **ethyl parathion**, and **carbaryl (Sevin)** are also important. **All of these pesticides are targeted for review under FQPA.**
- Three pyrethroids are important - **esfenvalerate (Asana)**, **lambda-cyhalothrin (Karate)** and **cyano (Baythroid)**.

Diseases and Nematodes

- Sorghum hybrids are bred for genetic resistance to most diseases. But seed rot, head smut, pythium, downy mildew, charcoal rot, and nematodes are still a problem.
- Seed treatments and crop residue management help alleviate most disease problems. **Metalaxyl (Apron)** and **Captan (a potential carcinogen)** are common seed fungicides. No fungicides are foliar-applied in the field.

Weeds

- Weeds cause major crop losses in an already water-sensitive crop. Weeds reduce yields up to 24% if not controlled and are a primary concern for producers.
- 100% of the irrigated sorghum is treated with a herbicide but little of the dryland sorghum is treated at planting time.
- Cultivation and crop rotations are commonly practiced in all fields.
- Pigweed, morning glory, johnsongrass, and sunflower are major problems. Cocklebur and foxtail are on the rise. Weeds are a greater problem in irrigated fields.
- **Atrazine** is of major importance but is being reviewed by EPA.
- Other common herbicides (usually in combination with a triazine) are **metolachlor (Dual)**, **prosulfuron (Peak)**, **bromoxynil (Buctril)**, and **dimethenamid (Frontier)**.
- Postemergence herbicides, especially **2,4-D** and **dicamba (Banvel)** help control escapes or late season weeds.
- Roundup Ready sorghum is not being developed since sorghum out-crosses with johnsongrass and could result in a herbicide-resistant weed.

Outlook

- Breeding for greenbug resistance and head smut tolerance continues.
- Non-chemicals are advocated in Extension programs, but pesticides are essential to sustain production.
- For latest information regarding these issues and status of risk assessments visit ipmwww.ncsu.edu/opmppiap and www.epa.gov/pesticides.

Crop Briefs is an information series developed by The Agriculture Program of the Texas A&M University System on critical pest problems and pesticide needs for Texas agriculture. This effort is supported by the **Texas Grain Sorghum Producers Board**, other commodity groups. Dr. Dudley Smith, Texas Agricultural Experiment Station and Dr. Juan Anciso, Texas Agricultural Extension Service prepared these reports August 2000 using information from numerous sources. Departmental Report SCS-2000-34.

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