



The Agriculture Program

The Texas A&M University System



Rice in Texas

Crop Brief on Production, Pests, & Pesticides

Rice Production

- Texas produces nearly 225,000 acres high quality long grain rice for domestic and export markets.
- Rice produces \$145 million for farmers and generates \$480 million for Texas.
- Pest control is essential in both first- and “ratoon” crop rice.

Insect Pests

- Insects are devastating and are a major concern for rice growers every year. 98% of acreage is scouted and economic thresholds are commonly followed.
- Stink bug causes pecky rice, which reduces quality and lowers revenues 10 to 12%. Rice water weevil reduces yields by 10 to 15% if unchecked.
- Other pests include fall armyworm, chinch bug and stem borers.
- Non-chemical practices to reduce water weevil damage include laser leveling and delayed flooding for water management, seeding rates for uniform stands, and selective planting dates.
- 100% of the Texas rice acreage is treated with an insecticide at least once.
- Key insecticides include **lambda cyhalothrin (Karate)**, **diflubenzeron (Dimilin)** and **fipronil (Icon)**. Carbofuran (Furadan) is no longer used.
- **Methyl parathion** and **malathion** (both OP's) are targeted by the FQPA but are important in the rice industry.

Diseases

- Diseases reduce yields 12%, in the humid gulf coast climate. 47% of the acreage is treated with one or more fungicides each year.
- Sheath blight is most damaging, followed by stem rot, rice blast, kernel smut, narrow brown leaf spot, panicle blanking complex, black sheath rot, and straight head.

- Key fungicides include **propiconazole (Tilt)** and **azoxystrobin (Quadris)**.
- **Benomyl (Benlate)** – a carbamate) is important but used to a lesser extent.
- **Capton, macozeb (Dithane)**, and other seed treatments are applied to planting seed but will be reviewed under FQPA.

Weeds

- **Halsulfuron (Permit)** for sedges and **triclopyr (Grandstand)** for broadleaves are important.
- Weeds cause economic losses in rice, even with widespread use of herbicides and non-chemical control measures.
- Integrated Weed Management includes cultural and mechanical practices, coupled with herbicide applications. Scouting determines infestations and herbicide timing.
- Annual grasses (barnyard grass and sprangletop) and broadleaf weeds (hemp sesbania - coffeebean and alligatorweed) reduce yields 12 to 22%. Dayflower seed and red rice seed contaminates market rice and reduces grades by 4 to 8% or more.
- 97% of acreage is treated with a herbicide. **Propanil (Stam)** is usually applied with a residual herbicide, such as **molinate (Ordram)**, **thiobencarb (Bolero)**, **quinclorac (Facet)**, or **clomazone (Command)**.
- **Molinate (Ordram)** is under EPA review for worker safety concerns. But occupational exposure is now reduced with closed system bulk loading and GPS equipment on aircraft has totally replaced field flaggers.

Vertebrate Pests

- Blackbirds are the most damaging avian pest, eating seed at planting and near harvest. Brush removal, early planting, scare tactics, and **avicide DRC-1339** help reduce losses.
- Feral hogs, alligators, turtles, and nutria damage ditch banks, and levees.
- 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 Rice Research Foundation**, and 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-2000-31.

The information given herein is for educational programs only. Reference to commercial products or trade names is made with the understanding no discrimination is intended and no endorsement by the Texas Agricultural Extension Service and the Texas Agricultural Experiment Station is implied.

Educational programs conducted by The Agriculture Program, Texas A&M University, Texas Agricultural Experiment Station, and the Texas Agricultural Extension Service serve people of all ages regardless of socioeconomic level race, color, sex, religion, handicap or national origin.