

# ► To Spray Or Not To Spray: Rice Fungicides

Presented by Dr. Don Groth

Professor, Research Coordinator / Plant Pathologist, LSU AgCenter

Deciding to spray or not to spray for rice diseases is one of the hardest decisions a rice producer has to make. He must determine which diseases are present, if they exceed thresholds, and will the spray result in an economic benefit. Adding to the confusion is a proliferation of new fungicides with specific activities and multiple new rice varieties with different disease reactions. One way of addressing the decision is a check list of important facts to determine.

## The rice disease management checklist

### (Or 10 questions I should ask before applying a fungicide)

**1. What is the reaction of my varieties to the major diseases?** Check the Rice Varieties & Management Tips publication. You need to know how susceptible a variety is to sheath blight, blast, bacterial panicle blight or Cercospora.

**2. What disease is in my fields?** Get out in the field and scout! Every year is different, and you need to check which disease is present and how severe it is.

**3. What growth stage is my rice at?** Scout for growth stage at the same time you scout for disease. Timing is critical to effective disease control. You do not want to miss an important application growth stage.

**4. Are conditions favorable for disease development?** Warm and moist conditions favor sheath blight, blast and Cercospora. Hot, above 95, favors bacterial panicle blight and inhibits sheath blight, blast and Cercospora development.

**5. What's happening in my neighbor's fields?** Likely what's happening in their fields is happening in yours. Or if blast is in the area, it will increase disease in your fields.

**6. Is my agronomic management plan helping or hurting disease development?** Excessive N, thick stands, rice-rice and rice-soybean rotations, or late planting all favor rice diseases.

**7. Is my fungicide timing correct or is it too early or too late?** If you apply a fungicide too early, it will not last. If you apply it too late, especially after heading, you lose activity.

**8. Which fungicide should I use?** Propiconazole containing fungicides (Tilt, Bumper, PropiMax, Quilt, Quilt Xcel, and Stratego) are best for Cercospora, kernel smut and false smut. Xemium (Sercadis), strobilurin (Quadris, Gem, Quilt, Quilt Xcel, and Stratego), and flutolanil (Convoy) containing fungicides are best for sheath blight. The strobilurin fungicides are the only ones with blast activity. If you have or suspect you have the strobilurin-resistant sheath blight fungus, you need to use a Xemium or flutolanil-containing fungicide.

**9. What will it cost?** Compare fungicide prices, premixes vs. tank mixes, etc., and then add the application cost.

**10. Is a fungicide justified?** You need enough disease in a field to economically justify using a fungicide. Fields with low yield potential probably do not need fungicides.

Resistant or moderately resistant varieties seldom need fungicides.

Another way to decide to use a fungicide is to consider the pro and cons of application:

## Five reasons to use or not to use a fungicide

### To Use:

- **Increased rice yields**

- o If you have significant disease pressure, favorable disease weather, and apply a fungicide in a timely manner, yield losses will be reduced.

- **Increased milling**

- o Rice diseases significantly reduce grain milling by limiting grain filling. Fungicides can reduce these losses by reducing disease severity and allowing improved grain filling.

- **Increased second crop**

- o Disease in the first crop often limits ratoon or regrowth in the second crop, thus reducing yield potential. However, applications to the first crop normally do not decrease disease pressure in the second crop. There are no fungicides labeled for the second crop.

- **Reduced disease**

- o Some would think this should be the No. 1 reason, but the purpose of a fungicide is to help you make money. There are some advantages to future crops by reducing inoculum.

- **Peace of mind**

- o If you use a fungicide as a preventative treatment, you do not have to worry about late disease development.

### Not to use:

- **No disease**

- o If you do not have any disease or weather patterns do not favor disease development, fungicides will not help. Fungicides prevent yield losses due to diseases; they are not yield enhancers.

- **Too late**

- o If the rice crop is past the 50%-70% heading growth stage, the benefits of disease control and yield increase from a fungicide rapidly decrease.

- **Poor yield potential**

- o If a field does not have good yield potential because of poor stands, weeds, insect damage, etc., fungicides will only maintain yields, not increase them.

- **Variety is resistant**

- o Even if a disease is present, a resistant or even a moderately resistant variety will not have significant yield loss to that disease.

- **You are going to put a fungicide out just in case**

- o If you just apply a fungicide because you think you should and have not scouted, know the disease reaction of your variety, not paid attention to current weather patterns, or do not know the disease history of the field, you are gambling that the fungicide will help. Fungicide applications are expensive, and if not managed correctly, they will not pay for themselves.

This publication was partially funded by USDA-NIFA under Hatch Project:  
Management of Rice Diseases in Louisiana

### Notes:

---

---

---

---