

2014 CenUSA Switchgrass Bioenergy Feedstock Field Day

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Diseases of Switchgrass

Causes

- A. Viruses
- B. Bacteria
- C. Fungi
- D. Nematodes




A



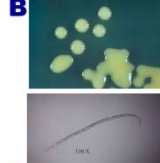
B

Effects

- Reduced yield
- Increased production costs



C



D

CenUSA is supported by Agriculture and Food Research Initiative Competitive Grant no. 2011-68005-30411 from the USDA National Institute of Food and Agriculture.




2014CenUSA-WEGULO (1)

Diseases associated w/ stand establishment

- Seed decay, seedling blight, damping off, root rot
- Caused by fungi, bacteria
- Favored by moisture and warm/cool temperatures

Management

- Use clean seed
- Seed treatments
- Good soil drainage
- Optimum planting depth



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2014CenUSA-WEGULO (2)

Virus Diseases of Switchgrass

- Panicum mosaic
- Switchgrass mosaic
- Barley yellow dwarf
- Sugarcane mosaic

Management

- Resistance
- Cleaning equipment between fields or sections of fields



Panicum mosaic

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2014CenUSA-WEGULO (3)

Foliar Fungal Diseases of Switchgrass



- Rust
- Anthracnose
- Spot blotch



Favorable env

- Moisture
- Wind
- Warm temps

Management

- Resistance
- Fungicide sprays

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2014CenUSA-WEGULO (4)

Smut of Switchgrass

- **Seed transmitted**
- **Causes severe stunting**
- **Up to 40% yield loss reported**

Management

- **Resistance**
- **Clean seed**
- **Fungicide seed treatments**
- **Prescribed burning**



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2014CenUSA-WEGULO (5)

Summary

Diseases reported on switchgrass in the U.S.:

- **Virus diseases**
- **Fungal leaf spots**
- **Rust**
- **Smut**

Management

- **Scout fields for early disease detection**
- **Viruses: Resistance, equipment cleaning**
- **Fungal diseases: Resistance, sanitation, fungicide sprays and seed treatments**

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