

Small Grains XII

Dwarf Bunt

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Identification and Life Cycle

- Dwarf bunt is caused by the fungus *Tilletia controversa* Kühn.
- The fungus can infect wheat, barley, rye, and several wild grasses.
- The pathogen can survive in soil as long as 10 years as teliospores.
- The fungus grows optimally at 37 to 46°F under snow cover and infects seedlings AFTER emergence, at or near the soil line.
- Plants in the 2-5 leaf stage are the most susceptible.
- This is a disease of winter wheat in areas subjected to prolonged periods of snow cover.

Plant Response and Damage

- Diseased plants are stunted and only grow one-fourth to one-half as large as normal size, and typically have more tillers than healthy plants.
 - Common bunt looks similar, but the plants are generally not stunted.
- Bunted heads are slender, remain green longer, and have glumes that spread apart.
- Bunt balls are evident in the head and are approximately the size and shape of kernels. They will have a fishy odor due to the chemical trimethylamine that is produced by the fungus.
- Dark spore clouds are sometimes produced at harvest in fields severely affected by dwarf bunt. These clouds are flammable and can combust during harvest.
- The disease reduces grain yield, quality, and marketability.

Management Approaches

- Resistant cultivars
- Plant clean seed. Do not save dwarf-bunt infected seed.
- Fungicide treatment
- Cultural management

Biological Control

- No biological control strategies have been developed for dwarf bunt.

Cultural Control

- Resistant varieties offer the most practical means of control for dwarf bunt.
- Planting in warm soils often helps to avoid infection.

Chemical Control

Product List for Dwarf Bunt:

Pesticide	Product per 100 lbs seed	Remarks
Difenoconazole		
Dividend XL RTA	10 fl oz	Seed treatment; 55 day PHI
Dividend Extreme	4 fl oz	Seed treatment; 55 day PHI

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