



# I spot a disease in my alfalfa ... *now what?*

Alfalfa can get sick too, but oftentimes the influence of a disease goes unrecognized or is mistaken for something else. Find out what ailments are prevalent in your area, what it can do to your alfalfa's production and what can be done to stop it.

## Phytophthora root rot (*Phytophthora medicaginis*)

- Kills seedlings and established plants in wet or slowly drained soils
- Spores are long-lived in soil



■ Severe ■ Moderate □ Mild

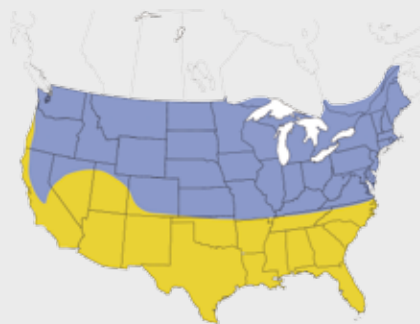


### Solutions:

- Select highly resistant cultivars
- Avoid excessive soil moisture
- Maintain high soil fertility
- Avoid untimely cuttings that stress plants
- Control foliar insects

## Aphanomyces root rot (*Aphanomyces euteiches*)

- Disease of seedling and adult plants in wet soils
- Reduces root mass of adult plants
- Symptoms of nitrogen deficiency



■ Severe ■ Moderate □ Mild

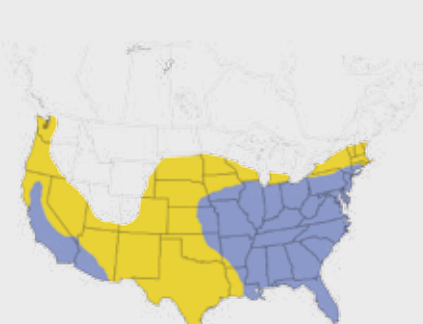


### Solutions:

- Select highly resistant cultivars
- Avoid excessive soil moisture
- Maintain high soil fertility
- Avoid untimely cuttings that stress plants
- Consider Stamina seed treatment

## Anthracnose (*Colletotrichum trifolii*)

- Disease of older stands
- Foliar and crown rot pathogen
- Most severe in late summer, early fall
- Persists in debris
- Spores spread by rain and irrigation



■ Severe ■ Moderate □ Mild

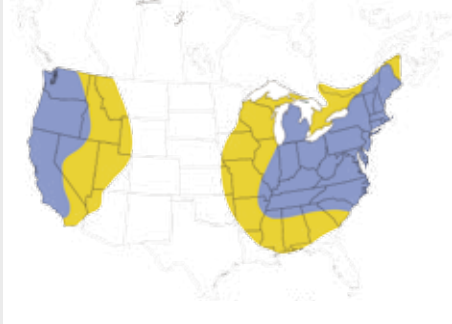


### Solutions:

- Select highly resistant cultivars
- Harvest early to reduce losses
- Rotate to another crop for at least two years

## Sclerotinia stem and crown rot (*Sclerotinia trifoliorum*, *S. sclerotiorum*)

- Causes damage in cool, wet conditions in stems of adult plants and seedling stands



■ Severe ■ Moderate □ Mild

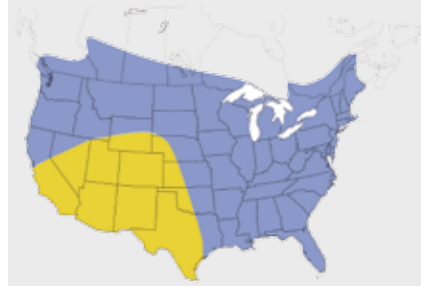


### Solutions:

- Established stands: Remove foliage before winter, control weeds, use fungicide application
- Seedling stands: Deep plowing of residue before planting, use fungicide application

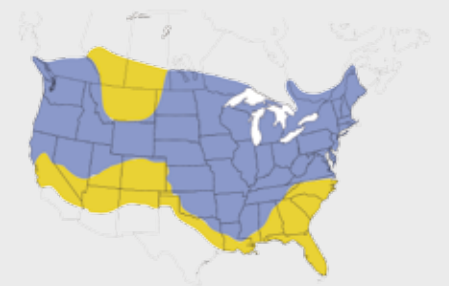
## Foliar leaf spots (*Common leaf spot or spring black stem and leaf spot*)

- Reduce yield and quality
- Spring black stem and leaf spot pathogen infects crown and roots
- Pathogens persist in crop debris



Common leaf spot

■ Severe ■ Moderate □ Mild



Spring black stem

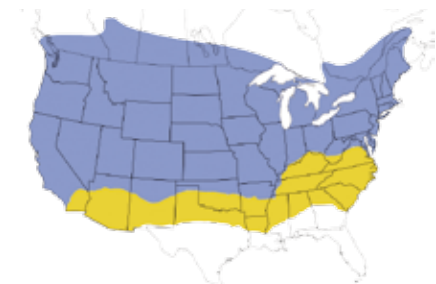


### Solutions:

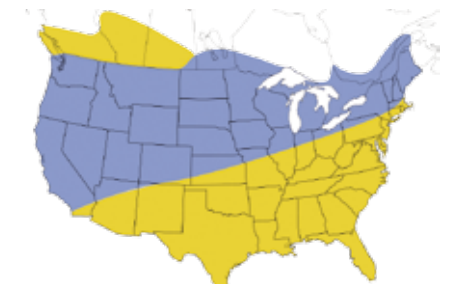
- Harvest severely infected stands early to reduce leaf losses
- Minimize prolonged leaf wetness
- Use foliar fungicide applications

## Wilt diseases

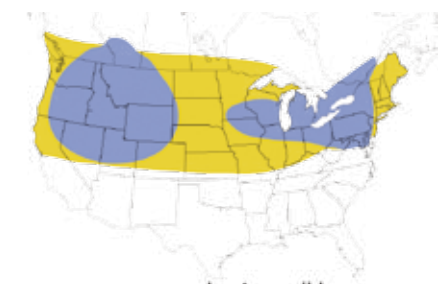
- Bacterial and fusarium wilt are rare with use of resistant cultivars
- Verticillium wilt reduces yields and stand life



Bacterial wilt



Fusarium wilt



Verticillium wilt

■ Severe ■ Moderate □ Mild



### Solutions:

- Prevent importation of infected plant materials
- Select highly resistant cultivars
- Deep plow infested fields
- Rotate from alfalfa for two to three years
- Harvest non-infested fields first

**Source:** Deborah A. Samac, research plant pathologist, Plant Science Research Unit, Saint Paul, MN – as presented at 2016 Western Alfalfa & Forage Symposium with maps attributed to *Alfalfa Management Guide*, Undersander, et. al. American Society of Agronomy Inc., Crop Science Society of America Inc. and Soil Science Society of America Inc.)