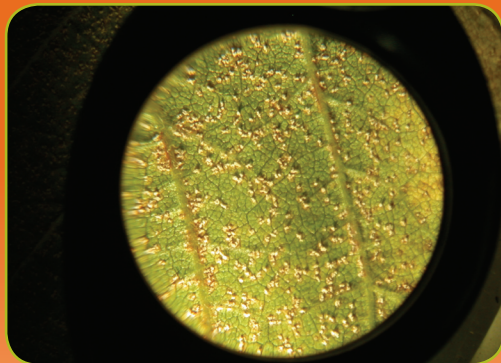




Upper leaf symptoms



Pustules (spores) under 20x hand lens

**When scouting for soybean rust, focus on:**

- Early planted fields with early maturing varieties
- Low lying or protected fields with prolonged dew periods
- Fields with early canopy closure

**For soybean rust detection on the plant:**

- Examine lower leaves of the plant
- Use a 10 to 20X hand lens to detect pustules (spores) on underside of leaves



Our soybean checkoff.

IDENTIFYING

# SOYBEAN RUST



Back lit leaf



Early symptoms

For confirmation and diagnosis of soybean rust contact your state plant diagnostic lab.

These can be found listed at:

[www.apsnet.org/directories/univ\\_diagnosticians.asp](http://www.apsnet.org/directories/univ_diagnosticians.asp)

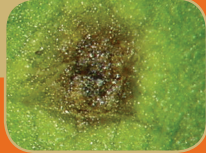
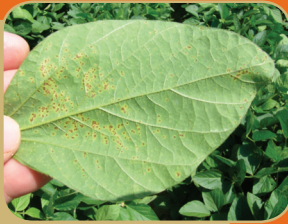


SIMILAR

# LOOKING DISEASES

## BACTERIAL BLIGHT

- Affects mid-to-upper leaves.
- Angular lesions, reddish-brown to black centers.
- Initial angular water soaked lesions with yellow halo.

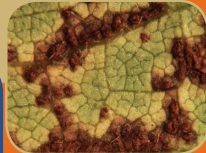
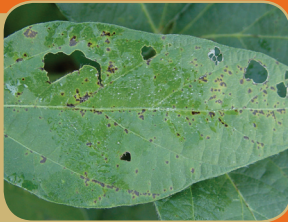


### **Difference from Soybean Rust:**

Water soaking; angular lesions; lesions on leaf underside are not raised.

## BACTERIAL PUSTULE

- Affects mid-to-upper leaves.
- Lesions — small spots to large irregular shapes without water soaking.
- Lesions associate with main veins; pustules form in lesion centers on leaf underside. (10X)



### **Difference from Soybean Rust:**

Pustules not always with each lesion; pustules do not have spores in openings; openings are cracks instead of circular pores.

## DOWNY MILDEW

- Affects upper leaves.
- Spots on surface enlarge into yellow lesions.
- Older lesions turn brown with yellow-green margins; size varies with age of leaf affected.
- Fuzzy fungal gray tufts on leaf underside (20x).



### **Difference from Soybean Rust:**

Lesions larger than rust lesions; no raised pustules on underside; fuzzy fungal growth on underside.

## CERCOSPORA BLIGHT AND FROGEYE LEAF SPOT

- Blight affects upper leaves exposed to sun after seed set; Frogeye affects lower leaves first.
- Blight starts as light purple areas on upper leaf surface which expands to cover surface; leaves leathery and dark reddish purple on upper surface only.
- Frogeye lesions start as dark, water-soaked spots; can have light centers; circular to angular brown spots with dark red-brown margins.



**Difference from Soybean Rust:** Blight — overall leaf area is discolored on upper surface only. Frogeye — discrete lesions larger than rust with defined lesion margins; no pustules evident on underside.

## BROWN SPOT

- Affects lower leaves first.
- Irregular-shaped dark brown lesions on both leaf surfaces; size — small spots to large areas; adjacent lesions can form irregular shaped blotches.
- Infected leaves quickly yellow and drop.



**Difference from Soybean Rust:** No raised areas (on leaf underside); angular lesions; if dark lesions, lack of uredia is key symptom; first symptoms can look like rust; has same canopy distribution as rust.