

Asian soybean rust (*Phakopsora pachyrhizi*)

Symptoms



Early symptoms = mottled yellowing and scattered black specks on leaves in low or mid-canopy

Early symptoms = translucent areas when leaf held up to the sun

Asian soybean rust (*Phakopsora pachyrhizi*)



Tan or reddish-brown spots;
clustered along veins

Symptoms (cont.)



Pustules on the underside
of leaf; circular pore

Look-alike Diseases

Bacterial Blight (*Pseudomonas syringae* pv. *glycinea*)



Symptoms:

- small, angular yellow to brown spots surrounded by a yellow halo.
- Angular spots merge to produce large dead areas
- Dead areas tear away giving the leaves a ragged look

How does this differ from Asian soybean rust?

Angular spots; no pustules; ragged leaves

Look-alike Diseases

Bacterial Pustule (*Xanthomonas campestris* pv. *glycinea*)



Symptoms:

- small, angular reddish-brown spots
- yellow halo surrounds each spot
- small raised pustules on underside of leaf

How does this differ from Asian soybean rust?

Pustules openings are cracks (vs. round pores); no spores in pustule; pustules not associated with each spot

Look-alike Diseases

Cercospora Leaf Blight (*Cercospora kikuchii*)



Symptoms:

- starts as a mottled purple-to orange discoloration
- becomes orange or bronze
- leaves have a leathery texture
- usually affects on top three to four trifoliate leaves

How does this differ from Asian soybean rust?

Only upper leaf surface affected; no spots or pustules

Look-alike Diseases

Frogeye Leaf Spot (*Cercospora sojina*)



Symptoms:

- small, angular spots
- gray centers
- distinct purple to reddish-brown margins

How does this differ from Asian soybean rust?

Larger spots; spots have dark, defined margins; no pustules

Look-alike Diseases

Downy mildew (*Peronospora manshurica*)



Symptoms:

- small, irregular-shaped spots
- light-green to yellow in color
- gray, fuzzy fungal growth seen in spots on underside of leaf

How does this differ from Asian soybean rust?

Larger spots; no pustules; fuzzy, fungal growth may be seen

