

## **Asian Soybean Rust Survival and Development**

From what we know, it is unlikely that soybean rust will overwinter in Alabama. The pathogen survives on living plant material. Most likely, the pathogen will survive on alternate hosts such as kudzu in south Florida or possibly in the Caribbean. In South America, kudzu, growing along roadsides and in ditch banks in Brazil and Paraguay, was observed to be severely infected with rust, but showed no apparent loss of plant vigor. In the spring, soybean rust spores will likely be carried from its overwintering site into the gulf coast states on wind currents and on storms, eventually moving northward into the Midwest.

At least 31 species in 17 genera of legumes can be hosts of this fungus. Among the pathogens hosts in the United States are kudzu, yellow sweet clover, medic, species of vetch, lupine, green and kidney bean, Lima or butter bean and cowpea or black-eyed pea. The full host range of Asian soybean rust has not been clearly identified and may be complicated by pathotypes and differential reactions within host species. It is unclear how these alternate hosts will impact the pathogen's survival and development or how the pathogen will effect production of these crops in Alabama.

The development of soybean rust is favored by prolonged periods of leaf wetness (6 to 12 hours) and temperatures of 46 to 82 degrees F. Extended periods of cool, wet weather during the growing season favor soybean rust development. Rust pustules appear on the leaf surface 9 to 10 days after infection, and spores are usually visible soon after. Each lesion can produce vast number of spores and spore production may continue for weeks. Spores are easily spread by wind. Soybean plants are susceptible to soybean rust at any stage of development, but symptoms are most common during and after flowering.