Bacterial pustule has been reported worldwide. In Arkansas, bacterial pustule is not as common as another bacterial disease, bacterial blight, and is of minor importance because of the availability of highly resistant cultivars.

In susceptible cultivars, early symptoms are characterized by small yellow-green spots with elevated reddish-brown centers that are most conspicuous on upper leaf surfaces (Fig. 1). As these leaf spots mature, a small, slightly raised, pale-colored pustule develops at the center of each lesion that is most noticeable on lower leaf surface. Leaf lesions vary from very small specks to large, irregular, mottled necrotic areas depending on the susceptibility of the cultivar and environmental conditions. Diseased leaves develop a ragged appearance when the necrotic areas are torn away by stormy or windy weather. Severe infection often results in premature defoliation that may decrease yield by reducing seed numbers and size.

Figure 1. Small, reddish brown lesion caused by bacterial pustule.
(Photo by C. Coker)

Symptoms of bacterial pustule may resemble those of bacterial blight, and it is common for both diseases to occur together. Pustule formation and the absence of a water-soaked appearance during the early stages of lesion development (before the leaf spots turn yellow) distinguish bacterial pustule from bacterial blight.
Bacterial pustule is caused by *Xanthomonas axonopodis pv. glycines* that overwinters in infested seed and soil on crop residue. The bacteria spread from crop residue or nearby diseased plants by splashing water, windblown rain and during cultivation when the foliage is wet. The bacterium enters the plant through stomata and wounds. Disease development occurs during warm (86 to 91°F), wet weather conditions.

Management of this disease is primarily dependent on the use of cultivars that are resistant to bacterial pustule. Cultural practices include planting high-quality, disease-free seed and using tillage practices that hasten rapid decomposition of crop residue. Cultivation when foliage is wet should be avoided to reduce disease spread.