

Myrothecium Leaf Blight

A leaf blight of peanut caused by *Myrothecium roridum* has been observed in India and Thailand. *M. gramineum* has also been reported as a leaf blight pathogen in India. Both pathogens infect a wide range of host plants.

Symptoms

The two pathogens produce similar symptoms on infected peanut leaves. Lesions are round to irregular, 5–10 mm in diameter, with tan centers and brown margins surrounded by chlorotic halos. The centers of these lesions become thin, papery, and light tan. Lesions coalesce to give affected leaves a blighted appearance. Abundant olive green to black fruiting bodies, often arranged in circular rings, are formed on necrotic areas of both leaf surfaces (Plate 29).

Causal Organisms

The conidia of *M. roridum* Tode:Fr. are hyaline, one celled, elongated, and 4.7–11.7 × 1.2–3.5 µm. Conidia of *M. gramineum* Lib. are 5.5–14.0 × 3.0–5.0 µm with stiff, acute setae mixed with smaller, torsive ones.

Selected Reference

Mahrshi, R. P. 1983. *Myrothecium gramineum*—A new report on groundnut from Rajasthan. Indian Phytopathol. 36:728.

(Prepared by P. Subrahmanyam)

Neocosmospora Foot Rot

Foot rot has been observed in peanuts in Taiwan and South Africa. The causal organism, *Neocosmospora vasinfecta* E. F. Sm., has been observed colonizing aboveground plant parts and is also pathogenic to pod hulls and seed. Pods exhibit discolored internal tissues and later decompose. Diseased plants are stunted with yellow lower leaves and frequently defoliate and senesce prematurely. There are no control measures available.

Selected References

Baard, S. W., and Van Wyk, P. S. 1985. *Neocosmospora vasinfecta* pathogenic to groundnuts in South Africa. Phytophylactica 17:49–50.

Huang, J. W., Chen, S. S., and Chung, W. C. 1992. *Neocosmospora* foot rot of peanut in Taiwan. Plant Pathol. Bull. 1:203–205.

(Prepared by D. M. Porter)

Olpidium Root Discoloration

Root discoloration of peanut caused by *Olpidium brassicae* has been reported in the Indian states of Andhra Pradesh, Gujarat, and Punjab and in Texas in the United States.

Symptoms

Lightly infected roots remain apparently healthy, but when infection is advanced, the root cortex becomes brown to black. The pathogen is restricted to the peripheral layers of the cortex of infected roots.

Causal Organism

Plasmodia of *O. brassicae* (Woronin) P. A. Dang. are thin walled, cylindrical to rounded, and 10–22 × 15–45 µm and have densely granulated protoplasm. Zoosporangia are variable

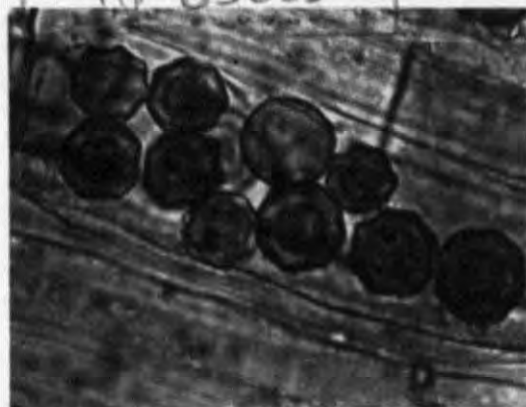


Fig. 34. Endospores of *Olpidium brassicae* with typical stellate wall surfaces.

in size (8–32 µm in diameter) with a single exit tube. Resting spores are spherical (10–27 µm in diameter) and consist of thick, stellate exospores and thin, smooth endospores (Fig. 34). Zoospores are spherical and have a single posterior, whiplash flagellum.

O. brassicae is widely distributed, particularly in temperate regions. It is parasitic on roots of several phanerogams and is a vector of several soilborne plant viruses.

Selected Reference

Subrahmanyam, P., and McDonald, D. 1980. Occurrence of *Olpidium brassicae* on groundnut. Trans. Br. Mycol. Soc. 75:506–509.

(Prepared by P. Subrahmanyam)

Peanut Pod Rot Complex

Peanut pod rot (pod breakdown) is a sporadic but common disease of peanut that causes serious losses throughout all peanut-growing regions of the world. In 1954, the condition was described in Georgia as black pod, and it has been prevalent in Israel since 1959. In 1964, a preharvest pod (fruit) rot of peanut in Virginia was described and referred to as pod breakdown. Others have since referred to what appears to be the same malady as the peanut pod rot complex. Losses are variable and appear to be related to cultivar, the pathogen involved, and nutrition.

Symptoms

Symptoms of the pod rot disease complex vary depending on the location, season, and pathogens involved. Deterioration or rot of fully developed pods is the first sign of disease. Pods develop either a tan to brown, dry decay or a greasy, black, wet decay, depending on the pathogens and environmental conditions (Plate 30). Many pods, both sound and rotted, may remain in the soil after digging, the result of weakened or decayed pegs.

There are no aboveground symptoms of pod rot, except that severely affected plants may be darker green and exhibit prolonged flowering. The root system generally is not infected, and the reduced demand for carbohydrate from the loss of the fruit usually increases the vigor of the foliage. Plants with the greatest degree of pod rot at or near harvest will appear to be the most vigorous and provide no indication of serious disease losses below the soil surface.