



THE QUARTERLY BULLETIN

OF THE

(STATE) PLANT BOARD

OF MISSISSIPPI

VOL. 6

OCTOBER, 1926

NO. 3

Contents

EXCHANGE
FEB 4 1927

	Page
Two Important Grape Diseases	1
Grape Spraying Schedule	4
Varieties of Grapes for Mississippi	5
A New Bean Disease in Mississippi	6
Treat Injured Pecan Trees Promptly	10
Effect of Mosaic on Sweet Potato Yields	11
Soak Seed Cane for Borers	12
Another Boll Weevil Attracts Attention	13
Stronger Oil Emulsion Spray Advised	14
Argentine Ant Campaigns Very Successful	15
Certified Irish Potato Seed Available	16
Don't Neglect The Orchard	17
Nursery Inspection Report	19
Quarantine Inspection Report	20

PUBLISHED BY
STATE PLANT BOARD OF MISSISSIPPI
A. & M. COLLEGE, MISSISSIPPI

Entered as second-class matter July 9, 1921, at the post office at
A. & M. College, Mississippi, under the Act of June 6, 1900.

Concord	Black	Good	Medium	Good	Ripens unevenly. Requires spraying for black rot. Home and market variety.
Ellen Scott	Black	Medium	Medium	Good	Requires spraying for black rot. Good home variety.
Lukfater	Black	Good	Good	Good	Excellent grape for culinary purposes. Home variety.
Muench	Black	Excellent	Good	Good	Vigorous producer. Ripens after above named varieties. Very good home and market variety.

*The data in the above list were obtained over a period of four years, from 1923-1926, inclusive.

Whenever possible, one should select varieties possessing resistance to the above diseases, as this will aid materially in combatting them. We advocate, however, that a thorough annual spraying of the vineyard be followed regardless of the variety selected.

A New Bean Disease in Mississippi

By

H. H. Wedgworth, Associate Plant Pathologist.

A new disease of snap beans known as *Macrophoma* stem blight was first observed in this state in a field about two and one-half miles south of the Mississippi A. & M. College on July 12, 1926. A few days later, the disease was discovered in a field of beans near Tibbee in Clay County, and on September 5, specimens of young plants infected with this disease were received from Lucedale in George County. The disease was first reported in this country from South Carolina in 1923. It has since been reported from South Carolina in 1925, and from Georgia and South Carolina in 1926.

In the bean field near the A. & M. College, the disease caused a loss of about 60 to 65% of the spring planting. The field was again planted to beans in the fall of

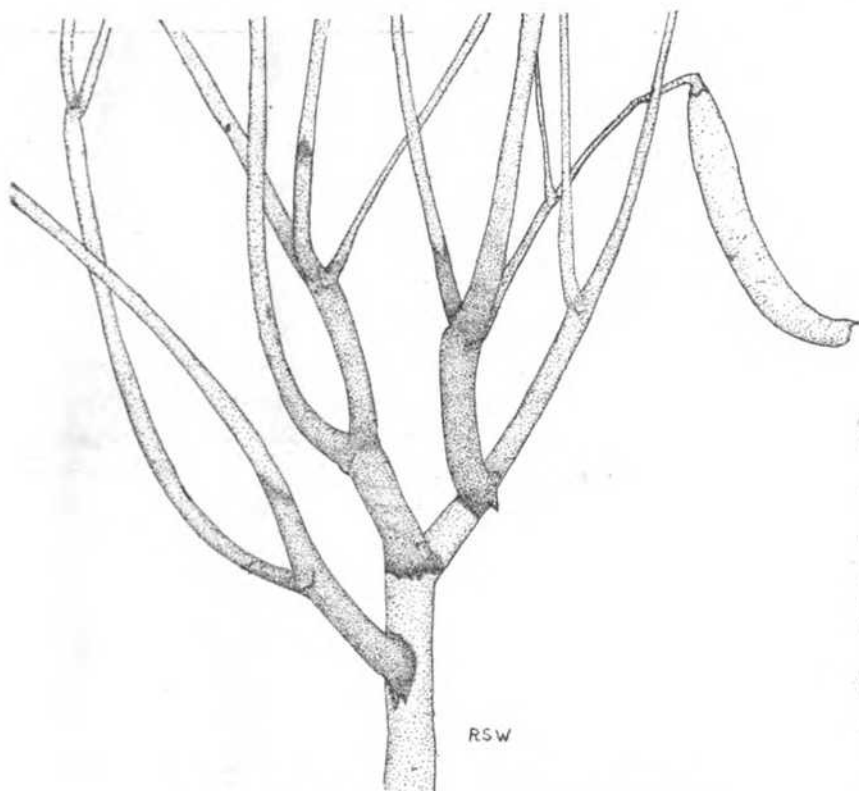


Fig. 3. *Macrophoma* stem-blight of bean.

the same year and by the middle of September about 50% of this planting was infected. It was reported that 5% of the plants were infected on May 10, 1926, in a field of beans near Boston, Georgia. It is obvious, therefore, that this disease may become a serious menace to the bean industry of this state should it become widespread.

The *Macrophoma* stem-blight of the bean has been reported on the Kentucky Wonder and the Burpee's Stringless Greenpod varieties. The susceptibility, however, of the different varieties has not been determined and it is likely that many other varieties will become infected when subjected to the disease. The disease is not known to attack any crop other than the bean.

Symptoms:—When young plants become infected, reddish brown, sunken cankers are formed (Fig. 4.) The lesions on older stems are reddish brown in color in the early stages of the disease but are not sunken (Fig. 3.)

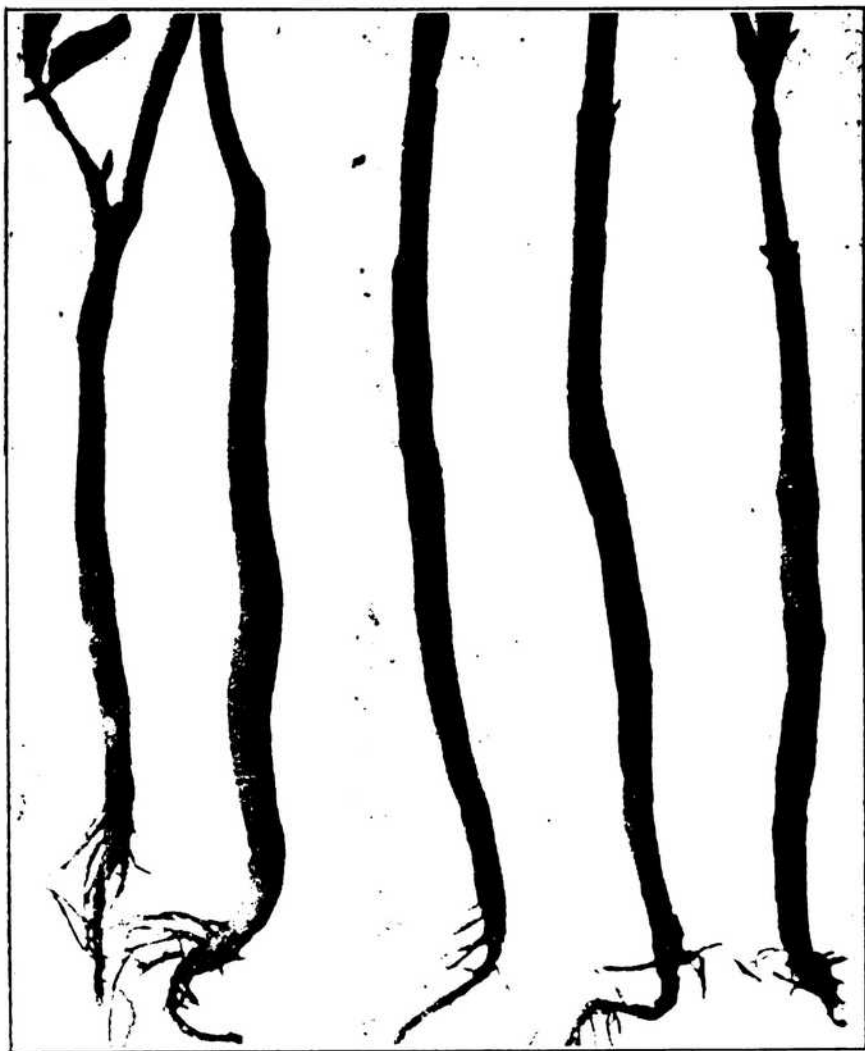


Fig. 4. *Macrophoma* stem-blight on young beans.

and as the lesions enlarge, their centers become gray. The plants may be affected from below the surface of the ground well out into the branches. The infected parts of the plants soon wilt and die, and assume a grayish color similar to dead bean stems. In the meantime, however, the fungus which causes the diseases by growing within the tissues of the plants, produces a multitude of tiny fruiting bodies (pycnidia) on the surface of the affected parts of the plant (Fig. 5). These appear as

minute black pustules about the size of pin points on the gray background, which gives a characteristic ashen appearance quite different from the symptoms of any other bean disease.

Cause:—The disease is caused by a fungus known as *Macrophoma phaseoli*. The fungus produces its spores or seeds in small pustules (pycnidia) partly embedded in the tissues of the infected bean plant. These spores are liberated and serve to spread the fungus from plant to plant and probably from field to field.

The development of the disease is closely related to weather conditions, according to C. A. Ludwig, Plant Pathologist of the South Carolina Agricultural Experiment Station, who first discovered the disease in this country. Wet weather seems to favor the development of the disease; for instance, the rainfall for the season of 1926 in the vicinity where the disease seems to have been most serious in this state for May was 6.41 inches; June, 9.44; July, 4.83; August, 9.05; September, 0.15. If dry weather had not prevailed in September, it is prob-

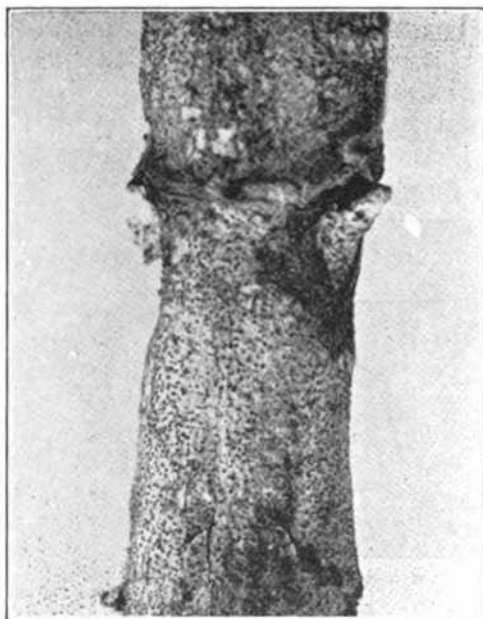


Fig. 5. Portion of bean stem showing fruiting bodies of the *Macrophoma* stem-blight fungus. Enlarged 3 1-2.

able that the entire fall planting in this field would have been destroyed.

Control:—It is not known how the disease is disseminated, the response of the different varieties of beans to the disease, or the longevity of the fungus in the absence of the bean plant. Until some of these facts have been determined no practical control measures can be recommended. It is known, however, that crop rotation is necessary for economical control of certain other bean diseases and it is entirely possible that this practice will greatly reduce the amount of loss from *Macrophoma* stem-blight.

Treat Injured Pecan Trees Promptly

By Clay Lyle

Many South Mississippi pecan growers suffered considerable loss during the storm which swept the Eastern Gulf states in September with such great destruction of life and property in Florida. The wind blew off a large percentage of the nuts, but even more serious was the injury to the trees, which were badly torn and broken in many orchards. Top-worked trees suffered unusually heavy damage, especially those trees in which the grafts had been placed in such a manner as to give a vase-



Fig. 6. Fungous disease entering tree through stub. (U. S. D. A.)

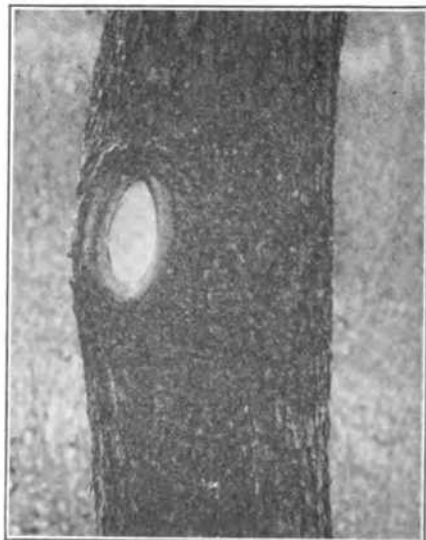


Fig. 7. Cuts heal quickly when made properly. (U. S. D. A.)