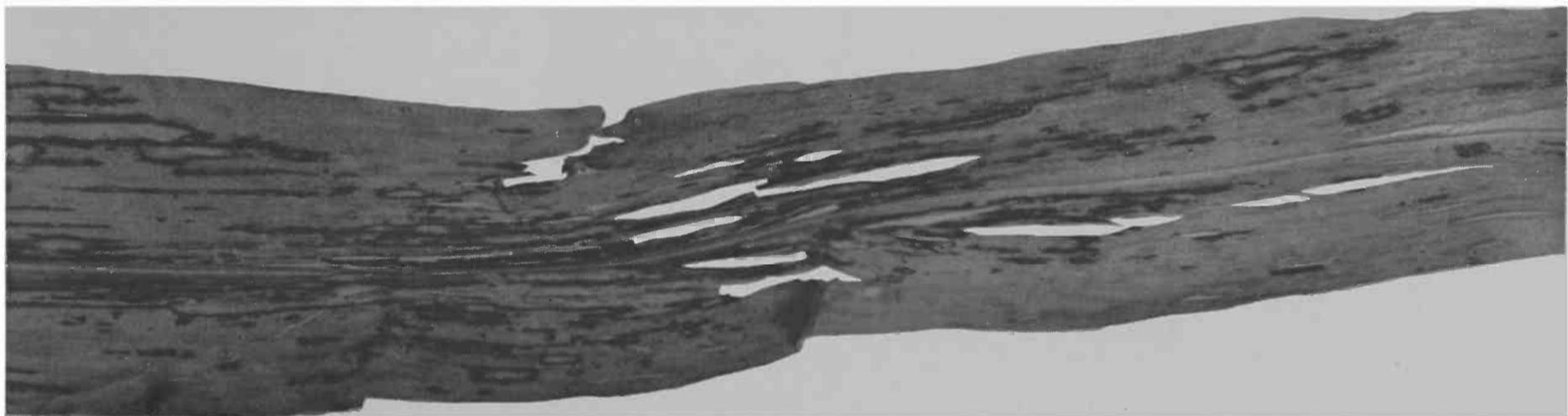
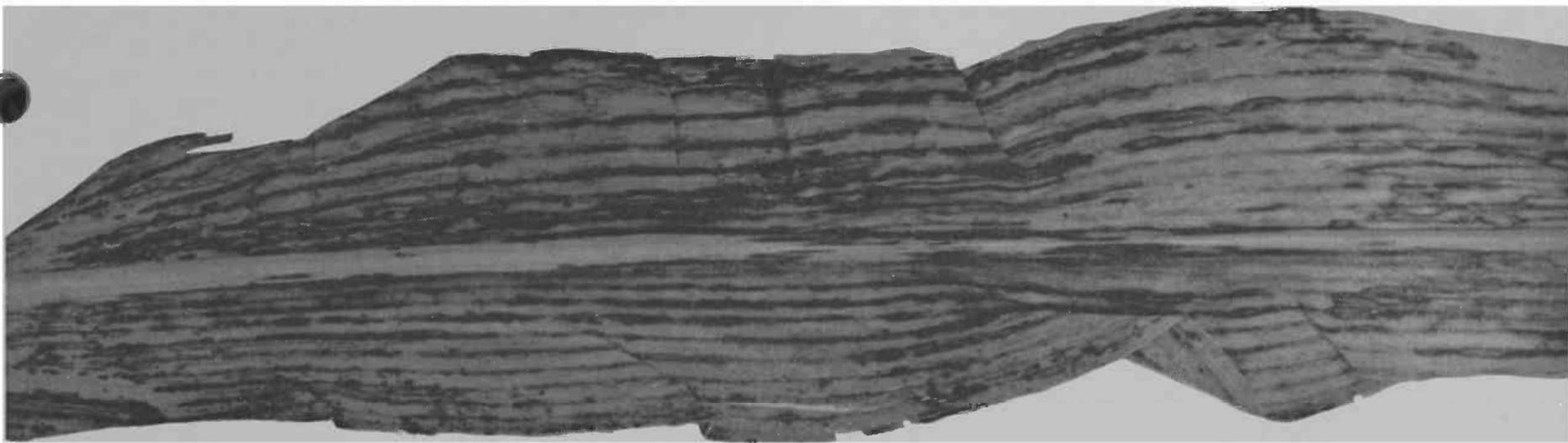


Newly Identified Sorghum Disease is . . .

Widespread in Arizona

*by R. B. Hine, M. R. Nelson, R. E. Dennis and D. L. Johnson**





A serious disease of sorghum, only recently identified in Arizona, is now found widespread in the state. It is caused by a virus known as Maize Dwarf Mosaic virus.

It was first observed in Cochise county by Carmy Page, Cochise County Agricultural Agent in Charge; Warren Plants, Asgrow Seed Co.; and Gene Anderson, Chevron Chemical Company.

Identification of the virus was made by transmission studies in the greenhouse and in cooperation with plant pathologists at the University of California, Kansas State University and Texas A and M University.

The virus undoubtedly occurred in Arizona prior to 1968 but had gone unrecognized in sorghum probably because of the low incidence in the field and the similarity of symptoms with known bacterial diseases of sorghum.

At left typical early disease symptoms caused by Maize Dwarf Mosaic virus in leaves of sorghum, left, and johnsongrass, right. Note the lighter color mottling between the veins of the leaves. On the right these appear as lighter green against the darker typical leaf color.

Rapid spread and destructive nature of plant disease is dramatically illustrated by the Maize Dwarf Mosaic virus 1968 outbreak in Arizona. It parallels a similar outbreak in Ohio in 1962. This disease was first described in Ohio in 1962 when it caused some losses in corn. From a few diseased plants along the Ohio river, the Maize Dwarf Mosaic virus

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Red-streaking symptoms of Maize Dwarf Mosaic virus in older leaves of sorghum are shown above. The black areas appear red in the diseased plant.

spread to 15,000 acres of corn in 1963 and was responsible for a 5 million bushel loss of corn in 1964.

Since the original discovery in 1962, it has spread rapidly across the U.S. and is now known to occur in major corn and sorghum producing states. The disease was identified in Texas for the first time in 1966. It reached epidemic proportions in 1967 in grain and forage sorghum particularly in the Texas high plains and Gulf Coast areas. In New Mexico it was first found in 1967 when two to three thousand acres of sorghum and broomcorn were severely damaged in the Tucumcari area.

A brief description of the disease follows:

Symptoms

Symptoms of Maize Dwarf Mosaic depend upon a number of factors. These include genetic makeup of the host plant, stage of growth at time of infection, and environmental con-
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