

DOWNY MILDEW OF WHEAT IN MEXICO

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During the crop season of 1945-46 an unusual disease of wheat was observed in two different areas in Mexico. At that time in the Torreon region the abnormalities were thought to have been caused by a severe attack of aphids. Subsequent observations have shown that the abnormalities observed at that time were due to a cause other than aphids. Infected plants showing similar symptoms were collected near Celaya, Guanajuato, during the 1946-47 season and were taken to Washington, D. C., by Dr. B. B. Bayles. These specimens were studied by Dr. A. G. Johnson, who found them to be infected with Sclerospora macrospora Sacc. Since 1945 plants with the same type of symptoms have been observed in many different fields but usually only a few of the plants are infected. During the 1948-49 season economic losses were caused by this disease in the Laguna area (Torreon, Coahuila). Infection was general over the entire area but losses were more severe in some fields. Poor leveling of the seedbed resulted in higher percentages of infection, the low places where irrigation water collected having a far higher percentage of plants infected (up to 60 percent of the spikes distorted) than in the parts of the field where the soil drained properly (2 to 3 percent of distorted spikes).

Infected plants present various types of symptoms. Many plants are severely stunted and either die when they are a few weeks old or fail to head. Other plants head but fail to produce grain or produce only a few seeds. The spikes in all cases are severely distorted through vegetative proliferations of the spikelets. In some cases the proliferations become very accentuated and result in secondary culms arising from the spikelets of the primary culms.

Similar types of distortions have been observed in both cultivated oats (Avena sativa) and wild oats (Avena fatua), and in a species of Phalaris.

The disease has been observed in the following areas in Mexico:

<u>Year</u>	<u>Locality</u>	<u>Host</u>
1945-46	Torreon, Coahuila	Wheat
"	Chapingo, Mexico	Wheat
		Oats, wild and cultivated
1946-47	Chapingo, Mexico	Wheat
"	Celaya, Guanajuato	"
"	Torreon, Coahuila	"
1947-48	Tula, Hidalgo	Wheat
"	Chapingo, Mexico	"

<u>Year</u>	<u>Locality</u>	<u>Host</u>
1948-49	Torreon, Coahuila	Wheat
"	Gomez Palacio, Durango	"
"	Chapingo, Mexico	Wheat and oats

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