

# Sugarcane Rust in Mississippi

NATALE ZUMMO, Research Plant Pathologist, U.S. Sugar Crops Field Station, Southern Region, SEA, USDA-AR, Meridian, MS 39301

## ABSTRACT

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Sugarcane rust from natural infection caused by *Puccinia melanocephala* was found on sugarcane seedlings at Meridian, MS, in November 1979. Rust pustules were mainly on the older, lower leaves and did not appear on the upper three or four leaves. Both urediospores and teliospores were on the adaxial surfaces. Many uredia were overgrown by the rust hyperparasite, *Darluca filum*.

Because sugarcane rust was recently reported in Louisiana (8) and Florida (3) and has been reported in several Caribbean countries (5,6,9-11), Australia (4), India (13), Mauritius (12), South Africa (1), Taiwan (7), and several other sugarcane-growing countries, all sugarcane fields at the U.S. Sugar Crops Field Station in Meridian, MS, were monitored for the disease. In November 1979, rust from natural infection caused by *Puccinia melanocephala* H. & P. Syd. (2) was found on 23 sugarcane seedlings (*Saccharum officinarum*) in a field of 3,715 first-stubble seedlings of 40

different sugarcane crosses.

No rust was found on 6,786 first-year cane seedlings planted 100 m from the stubble seedlings, on any commercial syrup sugarcane varieties, or on advanced unreleased sugarcane lines nearby. A survey of *Saccharum spontaneum* and *Erianthus* spp. in the Meridian area did not show rust infection.

Rust pustules were concentrated on the older, lower leaves and did not appear on the upper three or four leaves. Both urediospores and teliospores were on the adaxial surfaces. Urediospores were echinulate,  $34.8 \times 24.2 \mu\text{m}$ , with four or five equatorial germ pores. Teliospores were brown to black, mostly clavate,  $50.2 \times 20.8 \mu\text{m}$ . Many uredia were overgrown by *Darluca filum* (Biv.) Sacc.

Because the disease appeared late in the growing season and infected seedlings only, the effect on yields of sugarcane for syrup could not be determined.

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