

Pest Alert

FDACS-P-01637
Updated April 2016

Florida Department of Agriculture and Consumer Services, Division of Plant Industry
Adam H. Putnam, Commissioner of Agriculture

Chrysanthemum White Rust, *Puccinia horiana*

Dr. Tim Shubert, Florida Department of Agriculture & Consumer Services, Division of Plant Industry

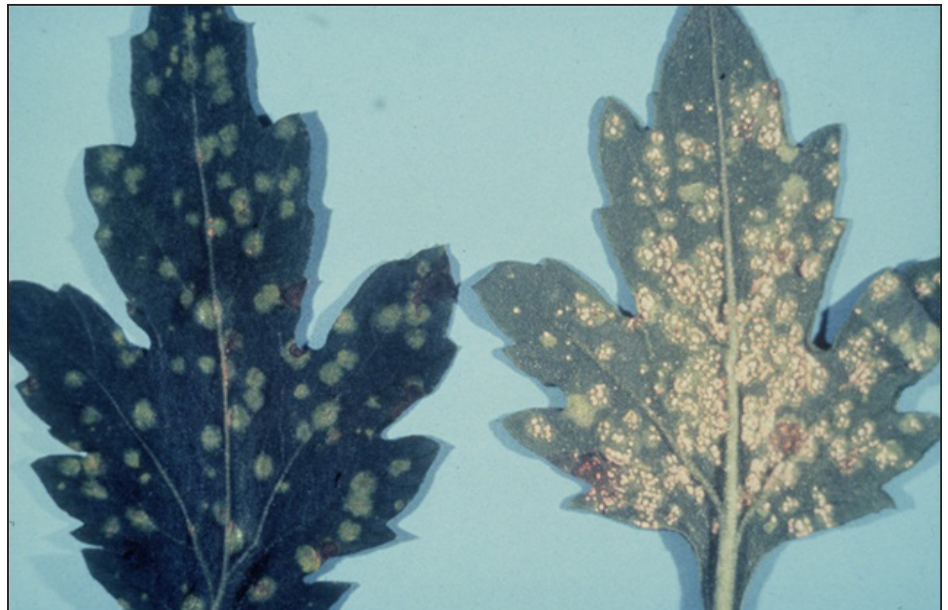
Chrysanthemum white rust is caused by the fungal pathogen *Puccinia horiana*. This exotic pathogen has made occasional appearances in the U.S. over the last 25 years, presumably as a result of the introduction of infected plant material. The rust is once again active on mums in New Jersey, New York and California (as of 11/7/03). The rust causes conspicuous and debilitating lesions on all the green above-ground parts of florist chrysanthemum (*Chrysanthemum x morifolium*) and some close relatives in that genus. The symptoms appear mostly on the leaves as light yellow chlorotic spots on the upper leaf surface (Figs. 1A and 1B). Corresponding buff-white raised pustules appear eventually on the lower leaf surface (Figs. 2A and 2B). There are only two spore stages in this rust's life cycle. The telial stage spores are present in the large unsightly protuberant lesions on the leaf underside. These teliospores germinate in place under very high humidity to produce the other airborne or water-splashed spore stage, basidiospores. These basidiospores die when they dry out, so very moist conditions must prevail for chrysanthemum white rust to spread. Basidiospore production from teliospores can occur in as little as three hours of wetness, and two hours of leaf wetness is all that is required for successful infection by dispersed basidiospores. New telial pustules appear in about two to four weeks after infection.

USDA-APHIS-PPQ policy is to eradicate white rust upon detection. Conscientious survey over several weeks, careful destruction of infected and exposed plants when discovered, and application of appropriate fungicides to nearby plants on a prescribed schedule can very successfully eradicate the disease.

1A



1B



Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner

2A



2B



Figures 2A and 2B. Close-up views of telial pustules on the underside of chrysanthemum leaves.
Photo credit: Pennsylvania Department of Agriculture