

WANTED

Chrysanthemum Enemy Number 1 Chrysanthemum White Rust !

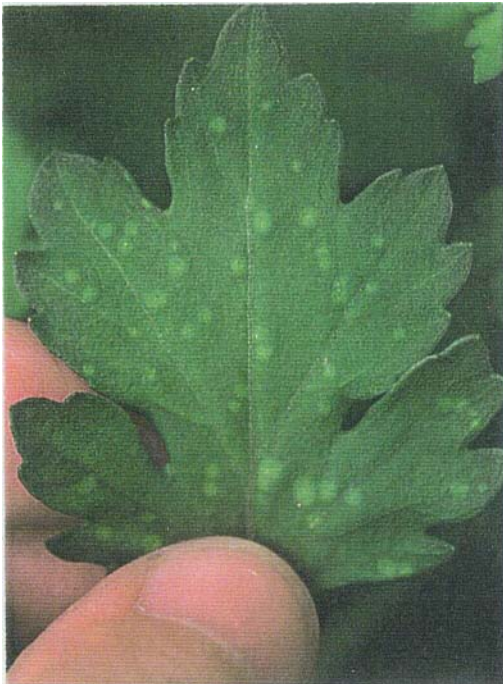
SYMPTOMS OF CHRYSANTHEMUM WHITE RUST



Older lesions on upper leaf surfaces



Yellowish blotches on upper leaf surfaces



Closeup of upper leaf surface



Pustules on lower leaf surface

White rust can spread rapidly in a greenhouse or nursery, resulting in severe losses.

WE NEED YOUR HELP!

***If you see any plants showing these symptoms, please report it to the
Napa County Agricultural Commissioner.***

(707) 253-4357

What is Chrysanthemum white rust?

Chrysanthemum white rust is a serious disease of chrysanthemum caused by a fungus called *Puccinia horiana*. It spreads very quickly through the crop, covering the plants with pustules. It is a quarantine disease in the United States and California which means that its presence must be reported to your local Agricultural Commissioner.

What does it look like?

Chrysanthemum white rust produces small white to yellow spots up to 4 mm wide on the upper surface of the leaf. These may be slightly dimpled. These spots become brown over time. Pustules form on the underside of the leaf, beneath the small spots. These originally appear as buff to pink-colored. As they age, they become white. Pustules are most common on young leaves and flower bracts but can be found on any green tissue and flowers.

Do infected plants always have symptoms?

- No, infected plants may be symptomless, especially during hot and dry conditions. Symptoms usually appear during cooler, wet weather.
- Fungicide applications may suppress disease development.
- It may take up to 8 weeks before infected plants show symptoms during periods of hot weather.

Where does it occur?

Chrysanthemum white rust originated in eastern Asia. It is now established in Europe, Africa, Australia, Central America and South America. It has not established in the United States. Although there have been outbreaks in Canada and the United States, these have been eradicated or are being eradicated. In countries where chrysanthemum white rust occurs, the disease requires weekly fungicide sprays as part of its management.

What plants does chrysanthemum white rust infect?

Twelve species of chrysanthemum are susceptible hosts, including potmums, spraymums, and gardenmums (*Dendranthema X grandiflorum* = *Chrysanthemum morifolium*). Other hosts are the Nippon daisy (*Nipponicanthemum nipponicum* = *C. nipponicum*), High daisy, and *C. pacificum* = *Ajania pacifica*. Species that appear to be resistant include the annual chrysanthemum (*C. carinatum*), crown (*C. coronarium*), pyrethrum (*Tanacetum coccineum* = *C. coccineum*), marguerite daisy (*Argyanthemum frutescens*), ox-eye daisy (*Leucanthemum vulgare*), shasta daisy (*Leucanthemum X superbum* = *C. maximum*), and the corn marigold (*C. segetum*).

Can I spread it on my clothes or hands?

It is possible to spread the disease if you have walked through a wet infected crop, and then walk into a healthy crop. It is therefore a sound precaution to wear coveralls and booties when going into an infested area. Change clothes, wash hands, and wash or change footwear before going into a clean area if you must go in.

To minimize potential spread within your garden and to other gardens, do not share cuttings or plant parts.

How do infections occur?

Infections occur when infected cuttings are brought into another area or garden or when viable spores are introduced. Infected cuttings may appear normal even though the fungus is present. Symptomless but infected plants start to show symptoms especially when the weather becomes cooler and wetter.

How can I prevent infections?

Buy healthy cuttings and regularly inspect them. Do not share plants or plant parts with other gardeners. If you have been in another garden, change your clothes and wash your hands before you go into your garden.