

***Puccinia thlaspeos* strain woad (dyer's woad rust) (006489) Fact Sheet**

Summary

Dyer's woad rust (*Puccinia thlaspeos* 'strain woad') is used as a pesticide to control the spread of dyer's woad, an invasive weed in the dry open areas of eight western states. Rusts are a group of fungi that infect only plants, and are often very selective about their hosts. Despite extensive testing of related plants, dyer's woad is the only known plant host for this rust. When used according to label directions, pesticide products containing dyer's woad rust present no known risks to humans, non-target plants, wildlife, or the environment.

I. Description of the Active Ingredient

Puccinia thlaspeos 'strain woad' is a fungal rust whose only known host is its target weed, *Isatis tinctoria*, or dyer's woad. American colonists brought dyer's woad from Europe for its valuable blue pigment, and the weed is spreading rapidly in eight western states. Many rust species require two different hosts to complete their life cycle, but dyer's woad rust can reproduce and spread using only dyer's woad as a host. As with many rusts, the woad rust does not survive except when grown on a host plant (that is, it is an obligate parasite).

Woad rust is not found in Europe; rather, the rust is closely related to a group of rusts in the western United States. Experiments suggest that a small change in genetic makeup resulted in this rust's ability to infect dyer's woad, and its inability to infect other plants.

II. Use Sites, Target Pests, and Application Methods

- Use Sites: Dyer's woad rust is used outdoors on sites such as rangeland, rights of way, and farmland. It is not approved for use on food.
- Target Pests: Dyer's woad
- Application Methods: The only registered product consists of rust spores on finely ground leaf and stem pieces of infected dyers woad. The product is applied once in the spring, either dry or as a water suspension sprayed from the ground or air. Because the rust spreads naturally, application in subsequent seasons is often not needed.

III. Assessing Risks to Human Health

No risks to human health are expected. The rust infects only plants. Workers have reported no harmful health effects from working with the rust.

IV. Assessing Risks to the Environment

No risks to the environment are expected. Rusts infect only plants. The only known host for the woad rust is its target weed, dyer's woad. Deer eat infected woad plants with no apparent ill effects. No environmental effects were found in various databases.

V. Regulatory Information

Puccinia thlaspeos 'strain woad' was registered (approved for distribution) as a pesticide active ingredient in June, 2002, with "Woad Warrior" as the only registered product.

VI. Registrant Information

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VII. Additional Contact Information

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