

Gaillardia Smut

Introduction

Gaillardia or blanket flower occasionally has mysterious yellow spots on its leaves that are caused by a white smut disease.

Symptoms

Look for white to yellowish-green spots, up to ¼ of an inch long. At first, you may see very faint spots that can be confused with tomato spotted wilt virus (TSWV) symptoms that is vectored by thrips. Light to dark brown spots later develop in the center of these spots. Fungal fruiting bodies will not be seen on the surface of these leafspots. As the disease advances, spots may appear brown surrounded by yellow areas.



Figure 1: Early and late stages of white smut on gaillardia. Photos by L. Pundt



Figure 2: TSWV symptoms, closeup of ringspots (Photo by J. Allen) and yellow spots (photo by D. Ellis). Confirmed by laboratory testing.

Causal Agent and Host Range

White smut on gaillardia is caused by fungi in the genus *Entyloma*. This smut disease is most severe on *Gaillardia* but can also infect *Aster*, *Echinacea*, *Helianthus* and *Rudbeckia*. Cool, humid conditions favor this disease which is more common in production yards with close plant spacing and overhead irrigation.

Microscopic examination is needed to see the distinctive thick walled resting spores known as ustiliospores. These resting spores enable the fungus to overwinter. White spores are also form on the surface of the leaf spots, which are spread via air current. A white coating may be visible on the leaf surface.

Gaillardia smut may be seed borne. Certain cultivars may be more susceptible as it has been reported on the cultivars Goblin, Baby Cole and Fanfare.

Monitoring

Look for the white to yellowish green spots in the late spring or early summer.

Management

- Keep leaves dry by irrigating in the morning so leaves dry by nightfall
- Give plants plenty of space
- Preventive applications of fungicides, especially those fungicides that perform well against rust diseases. Systemic fungicides can be rotated with protectant fungicides.
- Consult the most recent edition of the *New England Greenhouse Floriculture Guide: A Management Guide for Insects, Diseases, Weeds and Growth Regulators* available from [Northeast Greenhouse Conference and Expo](#).

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References

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