

UROMYCLADIUM WOODII

A rust fungus released for biocontrol of Stinkbean



A

The gall-inducing rust fungus, *Uromycladium woodii*, was released as a biological control agent against Stinkbean (*Paraserianthes lophantha*) infestations in South Africa in June 2016. It has now established at a few sites in the Western Cape, and will be established at more sites in the future.

DESCRIPTION

The rust fungus originates from Australia where it naturally attacks Stinkbean (A). It causes large, irregularly sized galls on the stems and flowers (B). The single-celled, brown teliospores (D) are produced in large quantities on the surface of the galls, appearing as a dry brown powder that is easily brushed off, during winter (C).

LIFE CYCLE

The teliospores are spread by the wind. After germinating, they infect young stems, axillary buds and flower buds, causing the plant to grow abnormally into the galls. Teliospores are produced during winter in the winter-rainfall region, when cool temperatures are prevalent. Germination occurs when there is available water on the plant surface (overnight dew or light rain), and the temperature is 10-20°C. As only young developing host plant tissue is infected, infection occurs when the plants are actively growing during the winter rain season in the Western Cape.



B

DISEASE SYMPTOMS

The branches and flowers of infected Stinkbean trees are covered in conspicuous, knobby, elongated, red-brown galls. New galls are produced during the winter months.

DAMAGE TO PLANTS

The fungus uses the plants nutrients, thereby reducing its growth and seed production. Heavy gall loads impair the plant's ability to cope with environmental stress, especially drought, and the plant dies. Like all rust fungi, the stinkbean rust fungus can only survive inside a living host plant. Once the plant dies, the fungus dies with it.



C

IMPACT ON STINKBEAN

Stinkbean occurs in small to large stands in higher rainfall areas of the winter rainfall region of the Western and Eastern Cape provinces. Populations appear to come and go, with large numbers of seedlings growing after fires. However the trees are not long lived and so populations may decline in time, only to reappear after fires in even larger numbers of seedlings. Infection by the rust fungus will help to reduce the number of seed produced, and thin the trees more rapidly than occurring currently.



D

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