



NEW PEST ADVISORY GROUP (NPAG)
Plant Epidemiology and Risk Analysis Laboratory
Center for Plant Health Science & Technology

NPAG Report

***Synchytrium endobioticum*: Potato Wart**
NPAG Chair Approval Date: December 15, 2000

Potato Wart is a soil borne disease of potatoes produced by a single celled fungus, *Synchytrium endobioticum*. The disease appears on all underground parts except the roots. Buds on stems, stolons and tubers are the main centers of infection. Above ground symptoms are not usually obvious though a reduction in plant vigor may occur. Warts are typically white in color, and are soft and pulpy in texture. The warts darken and decay as they age. Entire tubers may be replaced by the warty proliferation. When warts develop in storage they may be similar in color to the tuber.

The fungus, which thrives in wet conditions, has a complicated life cycle. *Synchytrium endobioticum* produces a thick walled structure known as a winter sporangium that can remain viable in soil for up to 30 years and can occur at depths of 50 cm in the soil. When temperatures rise in spring and sufficient moisture is present overwintering sporangia germinate and release mobile zoospores that locate and penetrate suitable host cells. As the zoospores divide, the infected and surrounding plant cells swell and divide to produce the wart.

The fungus is readily transmitted to new areas in soil, on tubers grown in infected soil, machinery and implements used in potato cultivation, on footwear and manure from animals that have fed on infested tubers. (<http://www.biosecurity.govt.nz/pests/potato-wart>)

This pest was closed by NPAG because it is an Emergency Programs issue. An Action Plan was composed in September of 1990.

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