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RESEARCH NEWS

OCCURRENCE OF POWDERY SCAB (*Spongospora subterranea*) OF POTATO IN SRI LANKA

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Powdery scab of potato, caused by *Spongospora subterranea* (Water) Lagerh *f. sp. subterrenea* Tomlinson, is a blemish disease that has increasingly become troublesome worldwide (Harrison *et al.,* 1997). Root galls, white wart-like out growths on roots and stolons, and blisters and pustules on tubers are characteristic symptoms of the powdery Scab disease. Matured pustules produce scabby lesions. This ruptured periderm is filled with a fine brown powder like mass containing numerous sporosori (Falloon, 2008).

A survey reported that powdery scab was found on potato tubers of varieties Dura, Desiree, Roko, Cycoda and Delaware at harvesting in the post control fields of Seed Certification Service, Nuwara Eliya, Sri Lanka in 2003 (Ref ?). In subsequent years, similar symptoms were recorded on variety Granola in seed production farms; at Diagama in 2006, at Bopaththalawa in 2007, in 2007 to 2010 at Pedru and at pre basic seed production unit Sita Eliya farm in 2010 and 2011. In 2009 & 2010 pimple like blisters on tubers and root galls on varieties Calwhite, Kekua Gold, Red la Soda and Chieftain were recorded at Agricultural Research Station, Sita Eliya, Nuwara Eliya.

The root galls were very prominent in pre basic seed potato production where a soil less media consisting of tea refuse and half burnt Paddy husk were used as growth medium. It is evident that the powdery scab of potato had become a serious threat to mini tuber production wherever loose media is used (Merz, 2011). Identification of causal organism of root galls was done byexamining stained root galls under light microscope and observing the presence of the characteristic sporosori of *S. subterrenea.* Baiting experiments with Tomato seedlings also proved the presence of zoosporangia (Babu and Merz, 2011) of *S. subterranea.*

Powdery scab of potato is a quarantine disease and seed certification rules do not permit the presence of the disease in seed production fields. Hence, 230 mt of seed potatoes of different grades and 50,000 pre-basic seeds were not accepted as seeds. As a result, seed multiplication process is affected due to shortage of seed potato and loss of suitable lands. Effective control measures are being investigated. The, seed certification rules may have to be amended to accept a level of tolerance as practiced elsewhere. The suitable temperature for powdery scab development is between 12-20°C and heavy soil is conducive (de Boer *et al.,* 1985). Recent records show that this pathogen

can survive and cause powdery scab even at temperatures above 20°C and in sandy soils (Van De Graaff *et al.*, 2005; Nielsen and Nicolaisen, 2000; Tsor, 2011). Also, amount of precipitation or soil moisture during cropping period play an important role in the development of powdery scab (Wale, 2000).

Weather conditions during potato growing seasons in Sri Lanka and cultural practices favour this pathogen to cause economical damage to potato, especially by reducing quality of potato. Therefore, appropriate measures should be taken to prevent spread of this pathogen through seed potato and avert inoculum build up in potato growing areas of this country.

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