Spongospora subterranea spread, and development of disease management in the United States of America

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Potato mop-top virus (PMTV), which is vectored by *Spongospora subterranea*, was detected in 2000-2001 in seed potatoes from Maine that were exported to Canada. A survey was therefore undertaken of all seed potato producing regions of the USA in 2002, and PMTV was only detected in Maine. Subsequently, PMTV has been reported in most major potato-producing regions in the USA and PMTV and *S. subterranea* are causing increasing concern. Because of a powdery scab outbreak at a mini-tuber production facility, commercial potting mixes were tested, and *S. subterranea* was shown to be present. The sources of *S. subterranea* in these mixes remains unknown. This discovery caused a shift in how minitubers are produced. Some growers now use various types of hydroponics systems, or routinely test peat-based potting mixes for *S. subterranea.* Because of the prevalence of *S. subterranea* and PMTV in some regions, potato varieties, rotation crops, and two chemical management methods were assessed to provide disease management recommendations. Potato varieties vary in tolerance, and amount of inoculum increase in soil, and the chemicals growers were using to manage powdery scab were ineffective. The roles are currently being assessed of soil type, moisture, temperature, potato variety, and soil microbiomes, in *S. subterranea* inoculum increase, PMTV incidence, and in development of spraing and powdery scab in an experiment that spans four potato production regions in the USA.