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Book of abstracts

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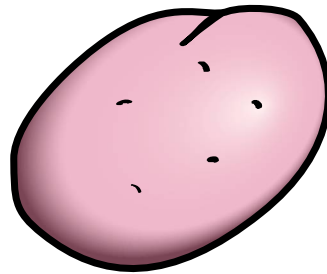
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Abstracts – Keynote presentations



NO	Title	Author	Country	Day
2-01	Using the CRISPR-Cas system to localize plant viruses	Carl Spetz	Norway	Monday
2-02	Using the CRISPR-Cas system to localize plant viruses	Guro Bukaasen	Norway	
2-03	<i>Tobacco Rattle Virus</i> and Trichodoridae: building blocks of a systemic and sustainable approach to disease control	Roberto Miglino	NL	
2-04	Dynamics of potato virus Y infection pressure and strain composition in State of Colorado, USA	Mohamad Chich-Ali	USA	
2-05	Evolution of the prevalence of potato virus Y (PVY) and potato leafroll virus (PLRV) in Switzerland between 2016 and 2023	Cecile Thomas	Switzerland	
2-06	Mineral oil to control Potato virus Y transmission in seed potato production	Mounia Khelifa	France	
2-07	Potato & the French post-entry quarantine station	Lorene Belval	France	
2-08	Evaluation of a cryopreservation method for virus elimination in potato	Florence Esnault	France	
2-09	7-hydroxytropolone and analogs to control potato blackleg.	Euphrasie Munier-Lépinay	France	
2-10	Potato soft rot – as an economically important disease for Georgia	Maka Muradashvili	Georgia	
2-11	Detection of <i>Ralstonia solanacearum</i> in different environmental samples.	Włodzimierz Przewodowski	Poland	
3-01	Biofumigation with sorghum and brown mustard: a sustainable solution to control wireworm damage in Swiss potato production	Geoffrey Darbon	Switzerland	Tuesday
3-02	Trial results on wireworm control in potatoes using chemical, biological and arable methods	Michael Zellner	Germany	
3-03	Management tools to reduce wireworm damage in potatoes in Canada.	Christine Noronha	Canada	
3-04	Horizontal and vertical movement of wireworms, <i>Agriotes sputator</i> (Coleoptera: Elateridae) through soil in Canada	Christine Noronha	Canada	
3-05	Weeds control in potatoes under agro-climatic conditions of Barsa Country, Romania	Manuela Hermeziu	Romania	
3-06	Importance of soilborne inoculum of <i>Colletotrichum coccodes</i> and assessment of potato cultivar resistance to black dot and in France	Roman Valade	France	
3-07	Optimizing Fungicide Timing for Effective Management of <i>Colletotrichum coccodes</i> in Potatoes	Phillip S. Wharton	USA	
3-08	Potato black dot caused by <i>Colletotrichum coccodes</i> in Inner Mongolia of China	Limin Xu	China	
3-09	Inhibition of the development of <i>Rhizoctonia solani</i> by plant secondary metabolites – a laboratory study	Maximilian Koch	Norway	
3-10	Weeds as alternative hosts of <i>Spongospora subterranea</i> , the causal agent of potato powdery scab, in Finland	Lea Hiltunen	Finland	
3-11	The influence of a preparation based on hydrogen peroxide and silver colloids and a preparation containing grapefruit extract on reducing fungal and bacterial diseases of Gardena variety seed potatoes during storage	Aleksandra Bech	Poland	
3-12	High-resolution analysis of effector genes in 394 <i>Phytophthora infestans</i> isolates using amplicon sequencing	Simeon Rossmann	Norway	Thursday
3-13	Virulence and fungicide susceptibility of <i>Phytophthora infestans</i> isolates collected in Belgium in the years 2021-2023	Vincent Cesar	Belgium	
3-14	Diversity and complexity of virulence races of <i>Phytophthora infestans</i> in the Baltic Sea region	Helina Nassar	Estonia	
3-15	Long term changes in late blight development in Estonia	Mati Koppel	Estonia	

2-11

Detection of *Ralstonia solanacearum* in different environmental samples

Włodzimierz Przewodowski¹, Kamilla Sadowska¹, Monika Marciniak¹, Katarzyna Salamońska¹, Dorota Szarek¹, Katarzyna Otulak-Kozielec², Edmund Kozielec²

¹ Plant Breeding and Acclimatization Institute – National Research Institute (IHAR-PIB), Department of Potato Protection and Seed Science, Bonin Division, Bonin, Poland

² Warsaw University of Life Sciences (SGGW), Department of Botany, Faculty of Biology and Biotechnology, Institute of Biology, Warsaw, Poland

Quarantine bacteria *Ralstonia solanacearum* (Rs) (Smith) Yabuuchi et al., the causal agent of potato brown rot, is one of the most troublesome pathogens of potatoes. Because of its pathogenicity, the bacteria pose a serious phytosanitary risk to the European and Mediterranean Plant Protection Organization (EPPO) region.

One of the greatest dangers in the uncontrolled spread of the pathogen is the asymptomatic (latent) form of the disease, often associated with low cell concentration in potato tissue, increased tolerance of potato varieties to the presence of bacteria in the infected tissue, as well as the varied degree of virulence of strains infecting potato tissue. The occurrence and severity of disease symptoms depend on many factors, such as the number and virulence of bacterial cells, the plant species/variety, the type of infected tissue, as well as the existing environmental conditions. These factors cause a relatively high risk of uncontrolled spread of these bacteria in the environment.

In the absence of effective methods of direct control in potato tissues, the most effective

way to protect against the spread of *R. solanacearum* is by planting healthy seed material and applying hygiene throughout the entire potato production and storage process. In both cases, reliable diagnostics are necessary to confirm the phytosanitary purity of the seed potato material and the place of production. Since the effectiveness of the diagnostic methods recommended by EPPO for monitoring the health of potatoes is largely dependent on the presence of various types of contaminants in the tested environmental samples, the EPPO PM 7/21 standards (3) require the use of appropriate diagnostic methods to verify the obtained result.

To improve the diagnosis of *R. solanacearum* in environmental samples, our team in this work evaluated different methods for isolating these bacteria in the presence of components of various environmental samples. The presented solutions allow not only to improvement of the effectiveness of currently used tests but also to development of new and simple methods aimed at minimizing the risk of uncontrolled spread of this quarantine pathogen in the environment.