

We invite you to attend a Workshop on

The Global Plant Health Assessment

Produced by

The International Society for Plant Pathology

Background : The Global Plant Health Assessment (GPHA) is a very large, global, collective, and volunteer-based effort to assemble information on plant health and disease impacts on ecosystem services. The effort is truly international, distributed across countries and institutions, and operates across disciplinary specialisations. It aims to be both scientific and inclusive. The goal of the project is to assemble the largest, most diverse, possible information on the state of plant health in the biosphere, its consequences for the performance of plant-systems, and their effects on human activities. The GPHA also considers the feed-back loop of human activities on plant health. These multiple effects can be quantitative and qualitative. The GPHA considers all plant-based systems, including forests, agriculture, and urban systems, including urban forests, peri-urban agriculture, and household gardens. The approach is based on identifying tractable entities in the form of [Ecoregion × Plant System] combinations. The project has thus far mobilised over 80 scientists over two years, focusing on specific plant systems across many ecoregions of the world. Many of these scientists also contributed to the coordination of the project and to its scientific secretariat. The GPHA is an unusual example of a scientific collective working towards a common good – improving plant health on a global scale.

 **Date: August 20, 2023**

 **Venue: Lyon, France**

Sponsor: International Congress of Plant Pathology

Interested colleagues are welcome to indicate their intent to attend to **Pr Paul Esker** with a copy of correspondence to the Scientific Secretariat of the Global Plant Health Assessment

Pr Paul Esker (Chair of the Workshop), Penn State University (pde6@psu.edu)

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The map in this flyer shows where scientists have focused their attention thus far, in which types of plant systems, and in which ecoregions of the world.

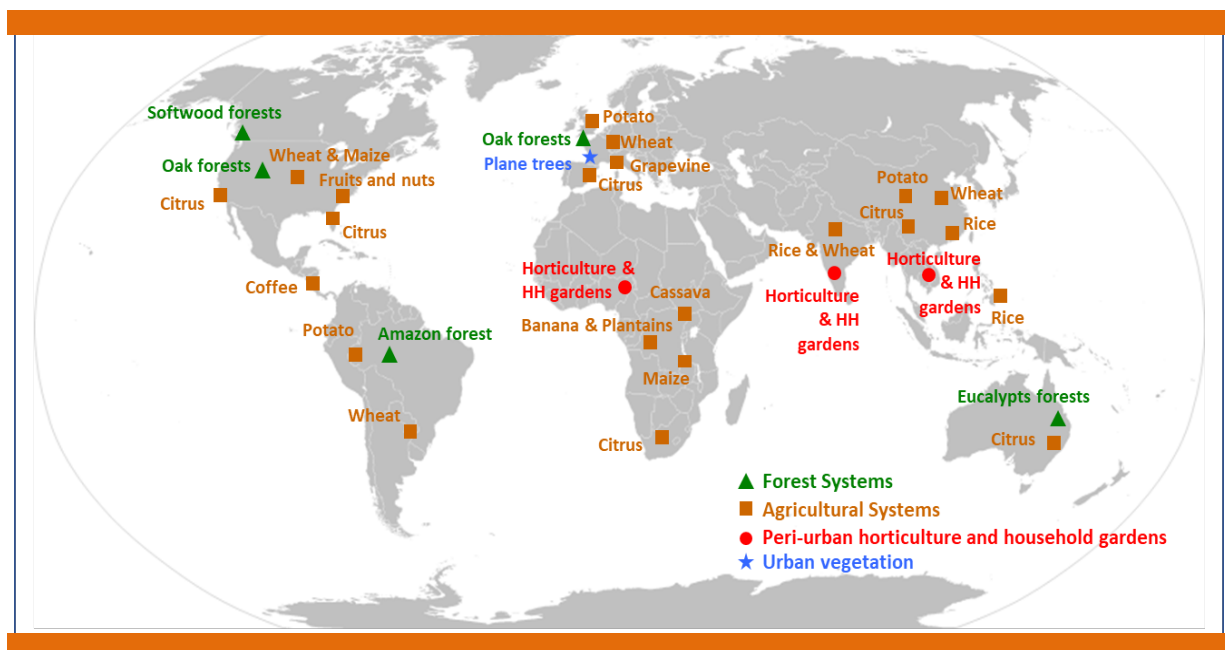
During the workshop, some of the key findings of the GPHA will be summarised: pathogen invasions and pandemics, the evolutionary processes underlying the invasions of plant pathogens and the vulnerability of plant systems to diseases, the consequences of climate change for plant health, and also a vision of plant disease that includes ecological considerations. These lines of inquiry may guide a better management of plant health in the human-made or human-influenced plant systems of Earth. The results already available generate new questions. First is the reliability of the findings and the necessity for further documentation. But, beyond the assessment, questions regarding the choices that can be made to improve plant health are becoming more pressing.

The results of the GPHA already allow identification of priorities, that is, [Ecoregion × Plant System] combinations where improvement is urgently needed. The most obvious needs arise from a decline in provisioning (notably food, but also fibres, and other materials), but other key factors include the disruption caused by disease in regulatory roles played by plants that affect the atmosphere, water, and soils. Plant diseases may also damage the cultural, spiritual, or social benefits provided by plants.

Prioritisation is not enough. Action needs focus. What is truly desirable needs to be defined: this will be in the form of scenarios. Scenarios differ in their ability to provide humans and nature with desirable outcomes and sustainable futures; they may also differ in their resilience to shocks, biotic (pandemics), or abiotic (heat waves and droughts). Paths to these scenarios need defining: this has been addressed by climatologists, environment specialists, and economists but not by plant health specialists. Plant health specialists develop new technologies: we need to know if and where these will be required. The role of plant health, and its consequences in these scenarios, need documentation and, whenever possible, quantification.

Policies cannot be based on mere statements. Figures are needed that document the impact of science better used, more wisely designed, in scenarios that are clearly documented in their purposes, their individual paths, and their consequences. In short, policy instruments are necessary.

This Workshop cannot address all these topics in a single day. But it is hoped that key questions leading to a new phase of this project will be framed. These questions may serve as a basis for the full use of the results of the Global Plant Health Assessment and a new dynamic involving its collective.



Interested colleagues are welcome to indicate their intention to attend by contacting Pr Paul Esker, Penn State University, who will chair the Workshop (pde6@psu.edu) with a copy of any correspondence to the Scientific Secretariat of the Global Plant Health Assessment

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