

New Network Improves Cooperation Around Late Blight Disease in Asia

CIP played an important role in the creation of AsiaBlight, an Asian network to improve collaboration and knowledge sharing on the management of potato late blight, a crop disease that has caused historic famines and remains a major constraint for smallholders around the world.

The first meeting of AsiaBlight was held in Beijing in July 2015 with approximately 50 participants from an array of countries, as a satellite event during the World Potato Congress. The proposal to create the network, however, had been approved in November 2014 at a CIP workshop in Nepal that brought together potato experts from ten Asian nations.

Though the pathogen behind late blight, Phytophthora infestans, is widely controlled with fungicides, those agrochemicals represent a significant cost and threat to the environment and human health. This is especially true for the smallholders in developing nations, who usually do not wear protective equipment, and whose diets and incomes CIP works to improve. Because they lack the necessary resources or knowledge, those farmers often fail to apply the fungicides properly, and suffer major crop loss despite using them.

"Late blight is a huge problem globally. It is managed with fungicides, but it's still a big issue," said Greg Forbes, a senior scientist at the CIP Center for Asia and the Pacific who was instrumental in AsiaBlight's creation.

CIP has long bred late-blight-resistant potato varieties and promoted integrated approaches to managing the disease, but the pathogen's propensity for spawning new lineages has complicated efforts to control it. A first order of business for AsiaBlight members is consequently to map the major genetic groups of Phytophthora infestans in Asia, as a baseline for studying the disease and designing better control strategies. A second major objective will be to develop collaborative arrangements between private and public partners to adjust disease management strategies to incorporate host plant resistance in the optimization of fungicide use.

Forbes explained that there are many advantages to regional cooperation, such as centralized data management, capacity building, and better selection of late-blight-resistant potato varieties. European scientists have been sharing knowledge on late blight since 1996 through the EuroBlight network, whereas their colleagues in the United States created USABlight in 2011. A Latin American late blight network called Red Tizón Latino – after the disease's name in Spanish (tizón) – was launched in Bogotá, Colombia, in October 2014. The first Asiablight meeting included presentations on Red Tizón Latino and EuroBlight.

"CIP is kind of a broker in this, facilitating and trying to find funding for these different networks," said Forbes. "As a global research center, we promote ideas such as standardization and better data management, and these networks can provide a mechanism for achieving them."