

The re-launch of the AsiaBlight network

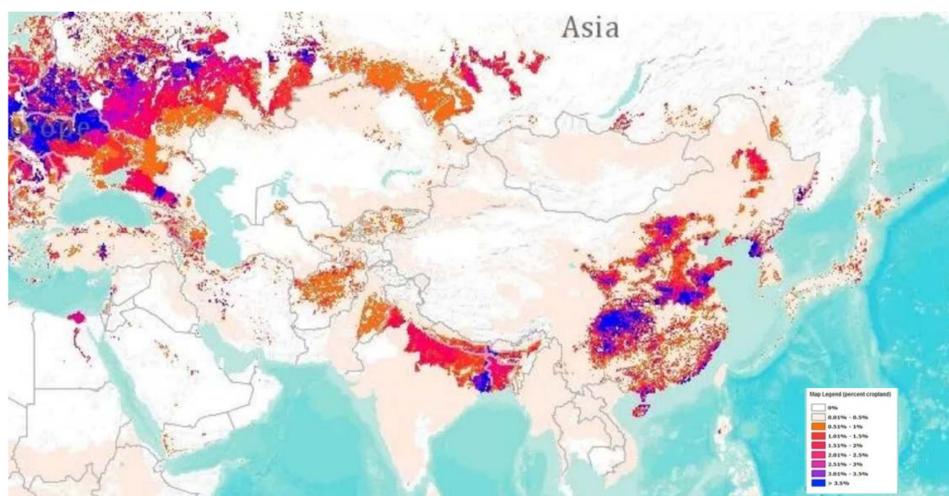


Figure 1. Distribution of potato cultivation in the world. Colors indicate the % crop land dedicated to potato, 2017 (Source RTB maps).

Potato and LB in Asia

In terms of human consumption, potato is the third most important food crop in the world, after rice and wheat. Asia, a continent that has about half the total world population, produces about half of the total global potato production.

The potato disease late blight (due to oomycete *Phytophthora infestans*), is one of the biggest threats to food security in Asia and in the world. This disease destroys entire potato crops, and not only is able to develop resistance to fungicides, but also overcomes the natural genetic resistance that new potato varieties may have against it.

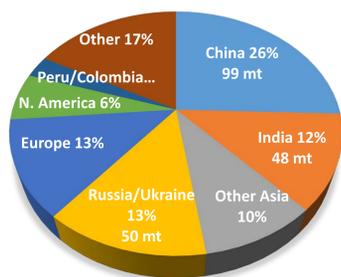


Figure 2. World potato production (in %). Adapted from FAOSTAT 2017. mt=million metric tons

A CIP survey of potato leaders and stakeholders, by region, ranked the most important potato issues that could trigger increased risk towards food security, that could result in an increase of global poverty, as could make potato production less sustainable. From this study, LB and drought show up as the two most important issues for Asian potato stakeholders.

Table 1. Comparison of different potato research priorities, by region

Breeding goal	Priority Top 12	Priority Global	Priority ESEA	Priority SWCA
Drought tolerance	1	2	2	1
LB resistance	2	1	1	--
Improved nutritional quality	3	--	--	--
Resistance to soil diseases	4	--	--	--
Improved cropping systems	5	6	--	--
Earliness	6	3	4	1
Yield	--	4	3	4
Improved seed storage	--	5	6	5
Virus tolerance/resistance	--	--	5	1

Top 12 = Survey of top 12 potato scientists at CAAS (2018). Priority Global = Global survey of 411 scientists and influencers (2014). ESEA = East and Southeast Asia (same dataset as the global survey). SWSC = Southwest and Central Asia (same dataset as the global survey).

In Asia, there is a strong prevalence of limited information regarding LB. This lack of knowledge could result in lower potato yields, higher production costs and higher use of inputs due to their misuse. A key strategy to succeed in fighting potato late blight could be for LB stakeholders in Asia to join forces together through the AsiaBlight network.

Abstract

Countries in Asia range from the very wealthy to the very poor. A few of these show some of the highest malnutrition levels in the world. Potatoes are highly nutritious, can adapt to marginal conditions, and produce more food per unit of water than any other crop, making potatoes a key component of food security.

China and India are the two most populated countries in the world. They also are the two most important potato producers, with a third of the world total. Potato is popular in Asia, having 12 countries ranked in the top-50 potato. As in other parts of the globe, *Phytophthora infestans* (Late blight-LB) is the most important pathogen affecting potato production.

AsiaBlight got started in 2015 with the objective of establishing a coarse-scale map of LB in Asia. Since 2018, the CIP-China Center for Asia-Pacific (CCCAP) has been working to implement an AsiaBlight network that is self-sustaining, and that is able to respond to the expectations of LB stakeholders in different Asian countries, including capacity building regarding LB, and improving LB management through information, communication, collaborations, and research.

AsiaBlight – Who are we?

AsiaBlight has been established as an inclusive network of scientists, companies, farmers and other stakeholders working on potato late blight, in Asia.

Together the network will build knowledge, skills, technology, promote collaborations, share information, and perform research on LB.

The main objective is to better understand and manage late blight, and through that, to accelerate the alleviation of rural poverty in Asia, while enhancing potato productivity.

AsiaBlight – 2019 activities

AsiaBlight Activity	What/Where/When	Date
International Workshops	Workshop for 100 participants from Asia.	Q4 2019
Trainings	2 to 3 workshops/year on LB management, in English and Chinese.	Q2-Q4 2019
Website	New AsiaBlight website, in Chinese, English then extend to other languages.	Q2 2019
<i>P. infestans</i> genotyping/phenotyping	CCCAP is establishing the protocols in Yanqing, China to study LB population and its resistance to fungicides.	All 2019
Expand the network	Expansion from China to Georgia, Vietnam, Tajikistan, Kyrgyzstan, Bangladesh etc.	All 2019
Fundraising	Sponsors will be found all through Asia. AsiaBlight will create a corporate sponsorship program.	All 2019

AsiaBlight – Logo contest

CIP-CCCAP organized an AsiaBlight logo contest. Thanks to a generous first prize of \$800, we obtained multiple entries from all over China and Asia. After a rigorous selection process, the winning logo was declared the winner. The winning logo depicts potatoes, LB damage, and the geographical diversity present in the Asian continent. Congratulations to Buddhi Prakash Sharma Adhikari, won the contest for AsiaBlight logo. Buddhi is a PhD retired Scientist from Nepal Agricultural Research Council (NARC), National Potato Research Program, Nepal.



Figure 3. Winning logo from the AsiaBlight Logo Contest.

The AsiaBlight network is active!

Asian representation and expansion:

AsiaBlight's goals are to become successfully implemented in Asia, starting with China and the extend it to the rest of Asia. In parallel, AsiaBlight will represent Asia in the global LB network, together with EuroBlight, Tizon Latino, USABlight, and others.

Communication platforms

A WeChat group, a tweeter account, and a website: www.asiablight.org will be launched.

Yearly international conference

Asian LB stakeholders will have the opportunity to meet at AsiaBlight's main conference, which will be focused exclusively to the science of LB. This yearly conference will be held in China this year.

Increase capacity building: training workshops

The workshops will be targeted to Asian potato stakeholders. Thanks to them, they will be better able to manage LB potato thanks to becoming aware of new information and LB-tools.

Research

LB genotyping for population dynamics, host resistance, and fungicide efficacy studies are being set up at CIP-CCCAP's facilities in Yanqing, (China). Collaborations with leading Chinese potato scientists are being set up.

Fund raising

Grant application and our special financial and in-kind sponsorship program will allow AsiaBlight to become financially independent.