

Entry level training school:

# USING POTATO BIODIVERSITY IN BREEDING

## ORGANISER

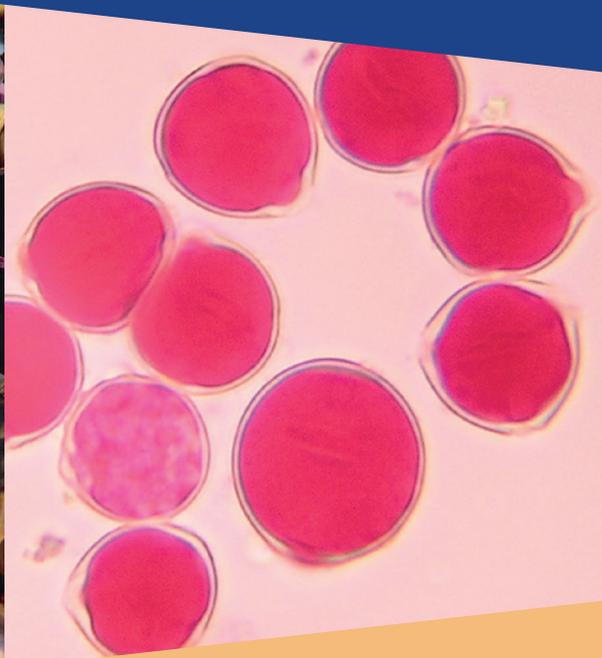
International Potato Center (CIP)

## VENUE

CIP Lima

## DATE

November 5–7, 2019



Wild relatives of cultivated potato are a source of nutritional diversity, resistance to a wide range of pests and diseases, as well as, abiotic constraints such as drought or salinity. The genebank at the International Potato Center (CIP) in Lima, Peru maintains clonal and seed collections of potato germplasm as a global public good that is available for requestors to use in research, education, and breeding purposes.

In this training school you will learn about crop biodiversity and how genetic resources can be used in pre-breeding. The event consists of expert lectures with real life examples of successful incorporation of important traits from wild or native germplasm into elite breeding materials, demonstrations on how to design a crossing block, as well as, hands on training in the usage of essential tools in breeding and germplasm characterization. Modern breeding tools and methods such as diploid breeding, marker assisted selection (MAS), and genome wide association studies (GWAS) will be discussed.

## WHAT WE OFFER

Three-day course combining theory and practice:

### DAY 1

#### **Tuesday November 5, 2019: Conservation and Access to Biodiversity**

- The CIP Genebank: what we do
- Distribution of germplasm
- Tour of the Genebank
- Characterization of germplasm
- Phytosanitary quality of genebank germplasm
- Plant treaty and benefit sharing

### DAY 2

#### **Wednesday November 6, 2019: Pre-breeding**

- Incorporating genes from wild relatives
- Laboratory and greenhouse exercises:
  - Module 1: Crossing
  - Module 2: Evaluating pollen viability
  - Module 3: Ploidy level determination
  - Module 4: Apps for data collection and management

### DAY 3

#### **Thursday November 7, 2019: Molecular markers, QTL and marker discovery, marker assisted breeding**

- Molecular characterization of genebank diversity
- GWAS
- Marker assisted introgression breeding
- Diploid breeding
- Genomic selection

## SPEAKERS

**Dr Glenn Bryan**, James Hutton Institute, UK

**Dr Giovanni Giuliano**, Agenzia Nazionale Per Le Nuove Tecnologie, L'Energia e lo Sviluppo Economico Sostenibile (ENEA), Italy

**Dr Hannele Lindqvist-Kreuze**, CIP

**Dr Noelle Anglin**, CIP

**Dr Norma Manrique**, CIP

## WHO SHOULD APPLY

This training school is aimed at (Junior) potato breeders and researchers from Latin America who are interested in potato biodiversity, how to utilize this in breeding, and the use of modern breeding techniques. The course will be bi-lingual: English and Spanish. Simultaneous translation from English to Spanish will be available during the lectures.

## HOW TO APPLY

The training school is organized in the framework of the G2P-SOL project funded under the European Union's Horizon 2020 research and innovation program. The project can fund a maximum of 20 qualified applicants from the public sector, including travel costs, room and board. Further details will be specified in the invitation letter. In addition, 5 qualified applicants can participate at their own expense. Only the selected participants will be informed via email.

**To apply for this event please use [this link](#). Please fill out and submit the online application form before 31 August 2019. Applications received after this date will not be considered. Items marked \* are mandatory. Incomplete registrations will not be processed.**

