

Date	Topic	Speaker	Institution
14 Oct	Presentation of the course	Mouin Hamzé /Ana Oliveira	CIHEAM/INIAV
	The Plant Breeding Triangle	Rex Bernardo	University of Minnesota
	Paradigm Shift for Accelerating Genetic Gain	Shiv K. Agrawal	ICARDA
	High-Throughput Phenotyping	Moez Amri	UM6P
	Genomic Selection	Mike Olsen	Bayer
	Data Analysis in Plant Breeding	Manje Gowda	CIMMYT
21 Oct	HTPG Data for Plant Breeding	César Petrolí	CIMMYT
	Training Populations through Phenotyping	Juan Burgueno	CIMMYT
	Genetic Data Management	Fernando Toledo	CIMMYT
28 Oct	KASP Genotyping	Emily Conley	University of Minnesota
	Marker Selection & Validation	Agre Paterne	IITA
	Gigwa Data Management	ABC/CIRAD Team	ABC/CIRAD
	Enterprise Breeding System	André Embersics	CGIAR
4 Nov	AI for Plant Breeding	Mohsen Y. Najafabadi	University of Guelph
	AI-powered Imaging	Alexis Comar	HIPHEN
	Machine Learning for GWAS	António Maquil	Makerere University
	Genome Editing	Nelson Saibo	ITQB
10 Nov	Agroecology	Gerard Schwarz & Ana Oliveira	THUN / INIAV
	Regulatory Frameworks	Rodomiro Ortiz	SLU
	Participants Presentations	All Participants	
	Closing Ceremony	Margarida Oliveira/Teodoro Miano	INIAV/CIHEAM

Online Advanced Training on Plant Breeding and Genetics Applications for Nacional Programs

The Instituto Nacional de Investigação Agrária e Veterinária (INIAV) in Partnership with the BEANS Network Initiative

Starting on 14 October 2026 at 2:00 PM (Lisbon and Nigeria Summer Time), 3:00 PM (Cairo Summer Time), 8:00 AM (Minnesota), 7:00 AM (Mexico), 6:00 PM (India), and 4:00 PM (Kenya).

The course is divided into five sessions, each running from 2:00 PM to 6:00 PM, delivered across five different weeks.

S/N	Date/Time	Title	Type	Trainer(s)	Institute	Time
1st day – 2pm-6pm						
0	14 Oct	Presentation of the course and its objectives		Mouin Hamzé /Ana Oliveira	CIHEAM/INIAV (PT)	10 min
1	Shaping the Future of Plant Breeding					
	14 Oct	The Plant Breeding Triangle	Brs	Rex Bernardo	UoM (US)	20 min
	14 Oct	Paradigm Shift for Accelerating the Genetic Gain in Legumes Breeding Program at ICARDA		Shiv K. Agrawal	ICARDA (IN)	20 min
2	14 Oct	Building Resilient Agricultural Systems Through Advanced Plant Breeding and High-Throughput Phenotyping	T/S	Moez Amri	UM6P (MA)	40 min
3	14 Oct	Implementing Genomic Selection in PB Programs	T	Mike Olsen	BAYER (US)	40 min
4	14 Oct	Optimizing Plant Breeding through Data Analysis: Minimizing Tradeoffs for Enhanced Results	T	Manje Gowda	CIMMYT (KE)	40 min
2nd day – 2pm-6pm						
5	21 Oct	HTPG Data for Plant Breeding	T/D	César Petroli	CIMMYT (MX)	1h
6	21 Oct	Developing Training Populations through Phenotyping.	T/D	Juan Burgueno	CIMMYT (MX)	2h
7	21 Oct	Genetic Data Management - Data structure for analysis	D	Fernando Toledo	CIMMYT(MX)	1,5h
3rd day – 2pm-6pm						
9	28 Oct	Interpreting and Quality Assessing KASP Genotyping Data	T	Emily Conley	UoM (US)	1h

10	28 Oct	KASP Marker Selection and Validation: Lessons from Yam	D	Agre Paterne	IITA (NG)	1,5h
11	28 Oct	Genotyping Data Management and Analyses using Gigwa tool	D	Catherine Breton/Mathieu Rouard/Guilhem Sempere	ABC/CIRAD (FR)	1h
12	28 Oct	Digital Transformation for Intelligent Breeding: Building the Foundation with the CGIAR Enterprise Breeding System (EBS)	T/D/S	André Embersics	CGIAR (MX)	1h
4 th day – 2pm-6pm						
13	4 Nov	Next-Generation Plant Breeding: Computational and Ai Approaches for Data-Driven Crop Improvement	T	Mohsen Y. Najafabadi	Un. Guelph (CAN)	1h
	4 Nov	AI-powered Imaging to Deliver Quality Phenomics Data	S	Alexis Comar	HIPHEN (FR)	1h
14	4 Nov	Using Machine Learning to Improve GWAS Accuracy in Legumes	D	António Maquil	Makarere Un. (UG)	1h
15	4 Nov	Genome Editing in Rice: From Functional Characterization to Plant Breeding	T	Nelson Saibo	ITQB (PT)	1h
	5 th day – 2pm-6pm					
16	10 Nov	Agroecology as a Framework for Transitional Plant Breeding	T	Gerard Schwarz/ Ana Oliveira	THUN Un. (DE)/ INIAV (PT)	1,5h
	10 Nov	Regulatory Frameworks for Bio-innovation in Agrobiotechnology	T	Rodomiro Ortiz	SLU (SU)	1h
	10 Nov	Participants 2 slide presentation on how they will use the knowledge learnt and where these need support	BrS/P	All participants	Training participants	2h
	10 Nov	End Closing Session		Margarida Oliveira/Teodoro Miano	CIHEAM	
		Send certificates to participants				

BrS – Brainstorming

T - Theoretical

D - Demonstration

S - Demonstration/Theoretical on given services

P - Partnerships

Who should attend:

- Young researchers from National Programs - plant breeders and molecular breeders with PhD and Pos-doc level with a degree from Plant Breeding, from anywhere in the globe, will be prioritized. For this opportunity, candidates must give a 1-page CV and a half-page cover letter detailing why this opportunity is significant to them and their institution. Send to ana.oliveira@iniav.pt
- **Maximum capacity:** 20 participants (Flexible). Women are encouraged to participate.

Certificates will only be awarded to participants who attend all sessions (non-attendance of any session will result in ineligibility for certification).