



SAPIENZA
UNIVERSITÀ DI ROMA



Summer school

Agrobiodiversity in a changing climate

Sustainable production, fragile ecosystems, resilience to global changes

18 - 26 September 2019
FAO Headquarters

FAO, ETHIOPIA ROOM (C285)

Date	Content	Lecturers
MODULE 1: MANAGEMENT OF AGROBIODIVERSITY		
DAY 1	Wednesday, 18 September	
08:45 - 09:00	Welcome and introductions	All participants
09:00 - 10:00	Crop genetic diversity, Domestication and Traditional Varieties (Chapters 1,2, Chap. 3 part I) Introduction to traditional varieties (pp. 1-11) The origins of Agriculture and Crops (pp. 13-28) Centres of Crop diversity and Centres of Origin (pp. 28-33) Nature, Biodiversity and Genetic Resources (pp. 35-40)	T. Hodgkin/ D. Jarvis/M. Turdieva (Bioversity)
10:00 – 13:00	Diversity and Its Evolution in Crop Populations (Chapter 4) The Nature of Diversity (pp. 64-66) Crops, Varieties, and Populations (pp. 67-70) Population Genetic Structure (pp. 71-77)	
11:00 - 11:15	Coffee break Evolution in Crop Varieties and Populations (pp. 78-84) Reproductive Biology (pp. 84-89) Crops and Crop Varieties in Production Systems (pp. 91-92)	
13:00 - 14:00	LUNCH BREAK	
14:00-17:00	Measuring Diversity in Crops (Chapter 5) Exploring the Extent and Distribution of Diversity (agronomic, biochemical, molecular) (pp. 92-107) Gathering data using Participatory approaches (pp. 108-118)	D. Jarvis (Bioversity)/P. Colangelo (CNR)
15:00 - 15:15	Coffee break Designing and Investigation (pp.119-123) Practicum: Calculating On farm Diversity Indices: Richness, Evenness, Divergence (Chapter 5)	

17:00 - 18:00	Presentations of participants	
DAY 2	Thursday, 19 September	
09:00-11:00	Abiotic and Biotic Components of Agricultural Ecosystems (Chapter 6) Abiotic components of Agroecosystems (pp. 126-131) Farmer Characterization and Classification of Abiotic and Biotic Components (pp. 137-145) Reducing the Dimensionality of Complex Data Sets (pp. 146-149) Ecosystem Diversity and Function (pp.150-153)	M. Reverberi/ F. Attorre/ (Sapienza) D. Jarvis (Bioversity)
11:00 - 11:15	Coffee break	
11:15-13:00	Diversity in, and Adaptation to, Adverse Environments On-farm (Chapter 6) Evolution of Crop Varieties in Stress Prone Environments (pp. 154-157) Abiotic Stress and Crop Genetic Diversity (pp. 157-163) Biotic Stress and Crop Genetic Diversity (pp. 163-169) Farmer Management of Crop Genetic Diversity to Cope with Environmental Stress (pp. 169-172) Identifying Where Diversity is Used to Cope with Environmental Stress (pp. 172-180) Genetic Diversity, Damage, and Genetic Vulnerability (pp. 181-190)	D. Jarvis/ P. Colangelo/ D. Jarvis (Bioversity)
13:00 -14:00	LUNCH BREAK Who Are the Managers of Diversity? Characterizing the Social, Cultural, and Economic Environments (Chapter 8) Farmers' Roles and the Management of Crop Diversity (pp. 191-199) Social Relationships and the Distribution of Diversity (pp. 199-202)	R. Nanyka (Bioversity)
15:00 - 15:15	Coffee break Social Capital, Collective Action and Property Rights (pp. 202-203) Tool and Methods for Documenting and Relating Farmer Characteristics to Crop Genetic diversity (pp. 203-211)	
16:00 – 17:00	Practicum – Who are the Managers of Diversity? (Chapter 8)	
17:00 - 18:00	Presentations of participants	
DAY 3	Friday, 20 September	
09:00 - 13:00	Measuring the Values of On-Farm Diversity (Chapter 9) Public and Private Values of Diversity (pp. 212-214) Varietal Choice and Diversity Maintenance (pp. 215-220)	D. Gauchan (Bioversity)
11:00 - 11:15	Coffee break Econometric Models and Value Chain Actors (pp. 220-226) Measuring Non-Market Values of Diversity (pp. 226-31)	
13:00 -14:00	LUNCH BREAK	
14:00- 17:00	Policy and Genetic Diversity On-Farm (Chapter 3 part II, Chapter 10) The Development and Evolution of National Programs on Plant Genetic Resources (pp. 41-44) The Origins of an International Commitments to Plant Genetic Resources Conservation (pp. 45-46)	I.L. Noriega (Bioversity)

15:15 – 15:30	Policy Debates on Conservation- ABS (pp. 46-57)
	Coffee break
	The Use of Genetic Resources for Plant Breeding (pp. 58-62)
	Policies and Legal Frameworks that Have a Negative Impact on Farmers' Capacities to Use Diversity On-Farm (pp.232-242)
	Policy Processes: Overview on Concepts and Methods (pp. 242-249)
17:00 - 18:00	Developing Policies that Support Farmers' Role as Generators, Managers, and Conservers of Crop Diversity (pp. 249-254)
	Presentations of participants

DAY 4	Saturday, 21 September (ROME BOTANICAL GARDEN - Largo Cristina di Svezia, 24)
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09:00 – 10:30	Genetic Diversity and Selection Pressures at Different Social, Spatial, and Temporal Scales (Chapter 11)	
	The Crop Cycle (pp. 255-258)	D. Jarvis/ P Colangelo (Bioversity)
	Use of Harvested Materials and Diversity of Traditional Varieties (pp. 259-263)	
	Selection During Crop Production and Seed Management (pp. 263-264)	
	Patterns of Seed Supply: The "Seed Systems" (pp. 267-274)	
10:30 - 10:45	Social, Spatial and Temporal Dimensions of Traditional Varieties (pp. 275-282)	
	Coffee break	
10:45 - 12:30	Strategies for Collaboration and Intervention (Chapter 12)	
	Institutional and Partner Diversity (pp.283-285)	P. De Santis (Bioversity)
	Building Trust and Equitable Collaboration (pp. 286-290)	
	Actions that Incorporate Genetic, Ecological, Social and Economic Concerns in Support of On-farm Management of Crop Genetic Diversity (pp.291-303)	
	Farmers Benefit from the Use and Conservation of Materials (pp. 303-311)	
12:30 - 13:00	Traditional Varieties and Agricultural Productivity (Chapter 13)	D. Jarvis/ (Bioversity)
	Socioeconomic, Policy, Environmental, Biological and Genetic Dimensions (pp.313-320)	
	The Future Value of Traditional Varieties (pp. 320-323)	
	Approaches to Maintenance of Traditional Varieties (pp. 323-325)	
13:00 - 14:00	LUNCH BREAK	
14:00 - 17:00	Rome Botanical Garden visit – hands on experience on biodiversity	F. Attorre/ (Sapienza)
		D. Jarvis (Bioversity)
17:00 - 18:00	Presentations of participants	

DAY 5	Sunday, 22 September
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REST – Free day

MODULE 2: APPLICATIONS OF AGROBIODIVERSITY ON THE GROUND

DAY 6

Monday, 23 September

9:00 – 11:00	Agroecology The principles of Agroecology Agroecology as a Science, Practice, and Social Movement	A. Bicksler (FAO AGPM)
11:00 - 11:15	Coffee break	
11:15 - 13:00	Agroecology for Resilience and Climate Change Adaptation	
13:00 - 14:00	LUNCH BREAK	
14:00 - 15:30	Climate-Smart Agriculture (CSA) The CSA Approach - Challenges and opportunities for agriculture in the face of climate change - CSA concept and 5 step-process to CSA implementation - Practices and production systems for CSA Tools and Methods for Evidence-based Decision Making in CSA: Brief introduction	F. Matteoli/ J. Schnetzer (FAO CBC)
15:30 - 15:45	Coffee break	
15:45 –16:45	Tools and Methods for Evidence-based Decision Making in CSA: Examples & Exercise - Modelling System for Agricultural Impacts of Climate Change (MOSAICC) - Ex-Ante Carbon Assessment Tool (EXACT)	R. Vuolo (FAO CBC)/ L-S. Schiettecatte (FAO ESA)
16:45 – 18:30	Mountain partnership: mountain products' value chains The Mountain Products initiative	G. Grussu (FAO MP)

MODULE 3: AGROBIODIVERSITY VALUES AS MARKET DRIVERS

DAY 7

Tuesday, 24 September

09:00 - 13:00	Slow Food Agrobiodiversity as driver for rural development and the preservation of healthy ecosystems Externalities, ecosystem services and common goods	F. Mattei/ E. Dughera (Slowfood)
11:00 - 11:15	Coffee break	
11:15 - 13:00	Promoting market access and generating sustainable demand paradigms Education and awareness raising	
13:00 - 14:00	LUNCH BREAK	
14:00 - 15:30	NaturaSi Organic products in Italy and in the world: growing market, more responsible consumers Effective and equitable farming techniques and distribution processes with low environmental impact Economic and social wellbeing of producers and their communities	F. Brescacin/ C. Murer (NaturaSi)
15:30 - 15:45	Coffee break	
15:45 - 17:00	How to build long lasting relationships of trust between producers, retailers and consumers	

17:00 - 17:30 **Open discussion**
 Marketing and distribution strategies for small mountain producers
 Organic farming: new approaches and research

DAY 8 **Wednesday, 25 September**

10:00 - 17:00 **FIELD TRIP to Vallepietra Village**
 Visit to the Slow Food presidium of Vallepietra, where a small consortium of farmers is starting to revive a traditional legume from the Simbrivio Valley, the "Ciavattone" bean.

DAY 9 **Thursday, 26 September**

09:00 - 13:00 **IFOAM**
 Fundamental principles and definitions: Organic Agriculture
 Organic Agriculture and its relation and contribution to other Sustainable Agriculture initiatives

11:00 - 11:15 **Coffee break**

11:15 - 13:00 Organic 3.0: Towards truly sustainable food and farming systems
 The Organic Movement and its Support Systems - Organic and SDGs

L. Luttikholt
 (IFOAM)

13:00 - 14:00 **LUNCH BREAK**

14:00 - 15:30 **PGS (IFOAM)**
 An overview/summary of current organic guarantee systems
 Locally appropriate and smallholder-friendly alternatives - and overview

15:30 - 15:45 **Coffee break**

15:45 - 17:00 Participatory Guarantee Systems - principles and practice

17:00 - 17:30 **Open discussion**

D. Jarvis
 (Bioversity)/
 G. Grussu
 (FAO MP)/
 F. Attorre
 (Sapienza)

17:30 - 18:00 **Closing Remarks**