



Food and Agriculture  
Organization of the  
United Nations

# Farm Data Management, Sharing and Services for Agriculture Development

Massive Open Online Courses  
(MOOCs)

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@AIMS\_Community





# Partnering to Enhance Digital Access to Scientific Information and Digital Data for Innovation

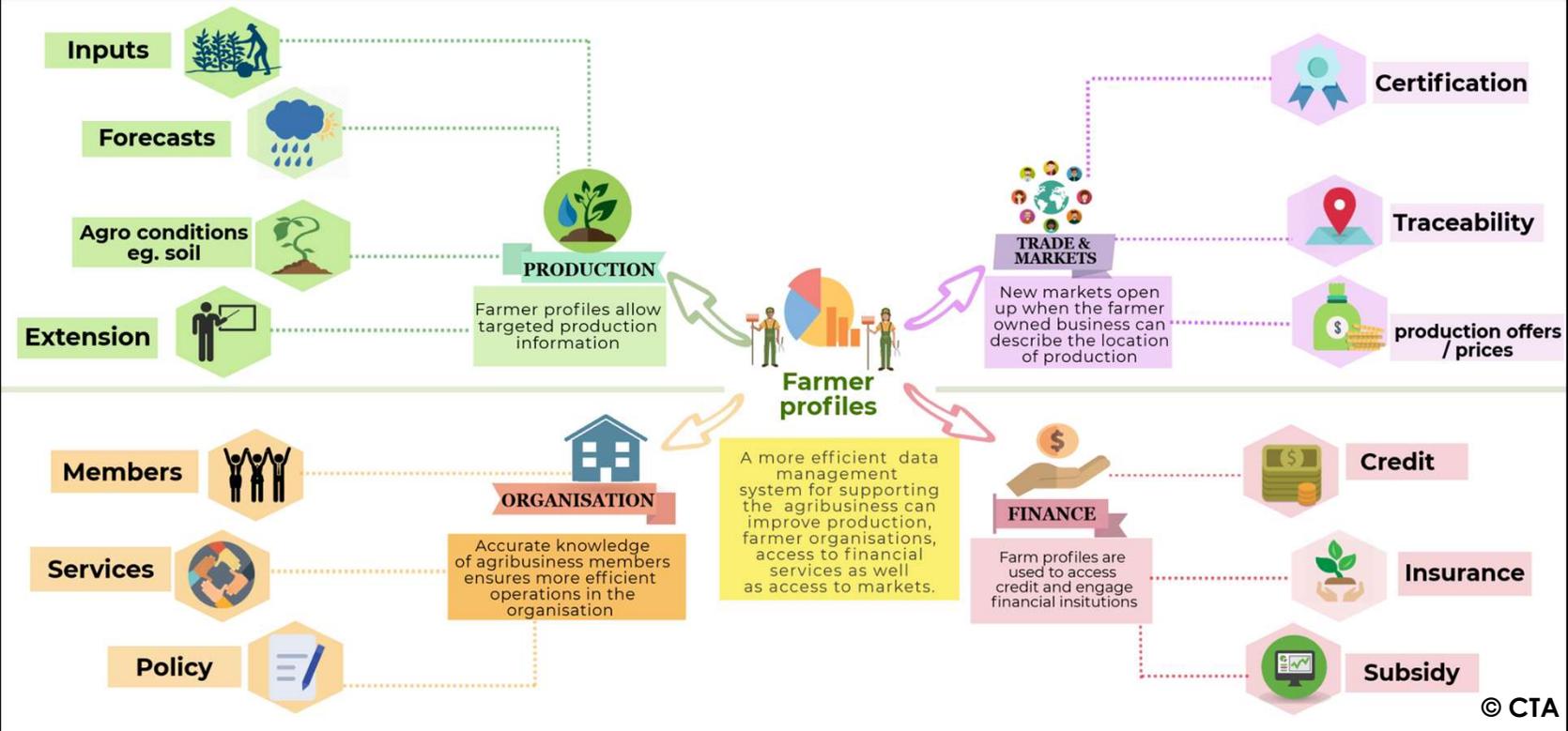
To increase the accessibility and visibility of research products in its Member Countries

To promote the exchange of scientific and technical information related to all aspects of food and agriculture

To make data and information on food and agriculture available, accessible and usable worldwide

To contribute to the five priorities of FAO to achieve a world without hunger, malnutrition and poverty in a sustainable manner, with focus on exchange of knowledge, information and data as a key step to achieving the SDGs

# How access to data can improve lives of farmers?



# Challenges in Agriculture: Access & Sharing

Incomplete and unreliable farmers' records

Lack of affordable access even to open data

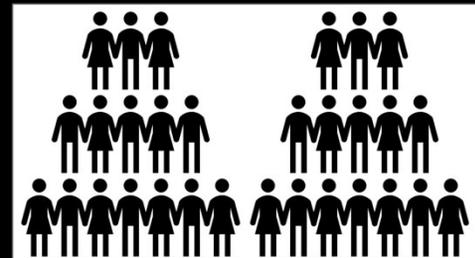
Lack of digital literacy and awareness of data sources

Data not published in form that is FAIR

Quality of data unknown

Are rights controls in place

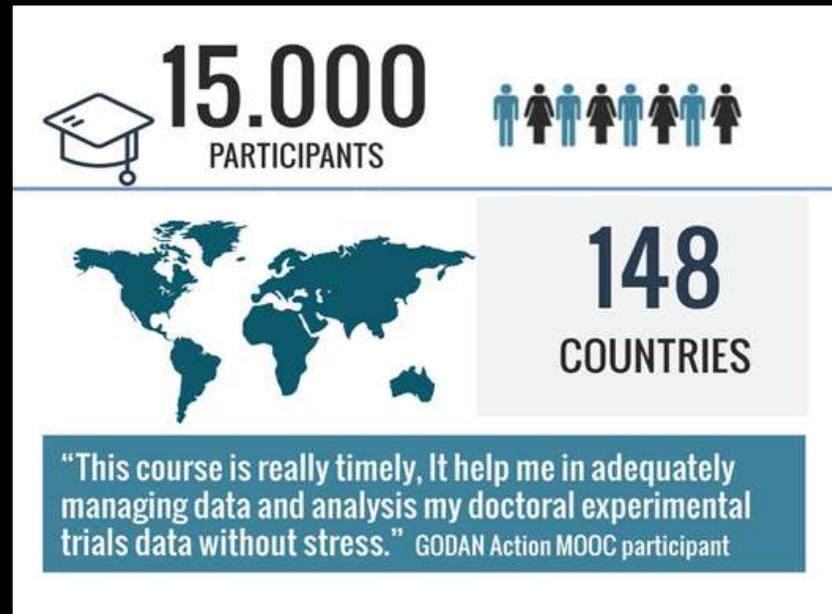
Aggregation of data difficult also respecting anonymity



Capacity Development

# Massive Open Online Courses (MOOCs)

FAO actively engages with various types of partners such as the United Nations' sister agencies, development agencies, international and intergovernmental organizations, private sector, academic and research institutions as well as CSOs and NGOs to foster an innovative environment to maximize the outreach of FAO's programmes, as well as enhance awareness about the principles of data, information and knowledge sharing



Enabling individuals and organizations to access, manage and use information and data

# Farm Data Management

Moving towards Data Management, Sharing and Services for Agriculture Development



**5.000**  
MOOC PARTICIPANTS



**153**  
COUNTRIES

"Data protection and services is a very critical element in every development sector and the content of the training gave me an in depth understanding of critical issues in working with data that needs to be preached to others for sustainable development especially in developing countries." Shadreck Richard Ngulube, Malawi



Food and Agriculture Organization  
of the United Nations



## Lesson 1.1: Data for Agriculture

### LEARNING OUTCOMES

- Understand the value of data in agriculture to support farmers, increase their income and develop food production
- Identify the type of services that data enables
- Understand the two main categories of data: Global data and farm-level data
- Identify key datasets in farming crop cycles
- Understand how and why farm-level data can be collected and exploited

# Farm Data Management, Sharing and Services for Agriculture Development MOOC

Resulted from work undertaken as part of the **Data4Ag project** of the **Technical Centre for Agricultural and Rural Cooperation (CTA)** with the **Pan African Farmers' Organisation (PAFO)**

The content was developed and delivered as a course by **FAO** in 2019

It was aimed **to strengthen the skills of professionals** who use, manage data **for the benefit of farmers and farmers organizations** by exposing them to the topics of **importance of data in the agriculture** value chain and how new and existing technologies, products and services can leverage farm level and global data **to improve yield, reduce loss, add value and increase profitability and resilience**

# Course outline: 4 units in a 4-week time

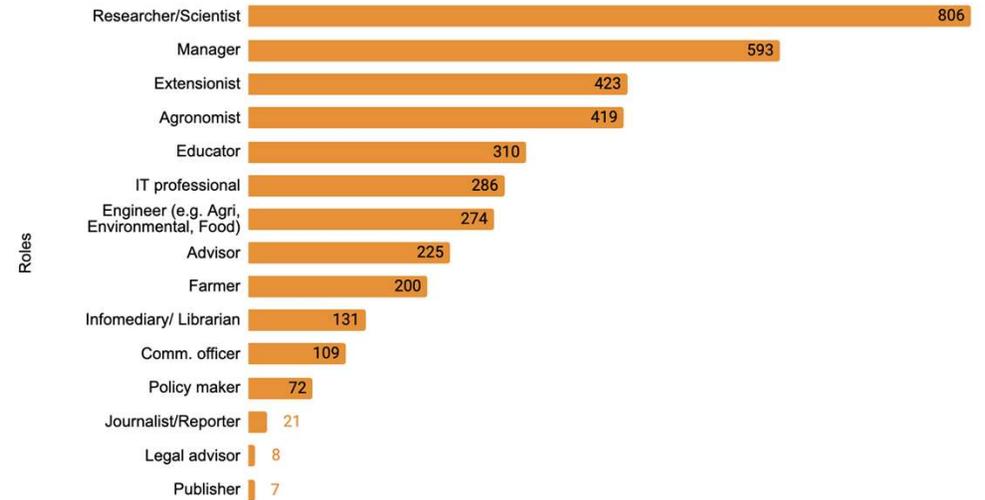
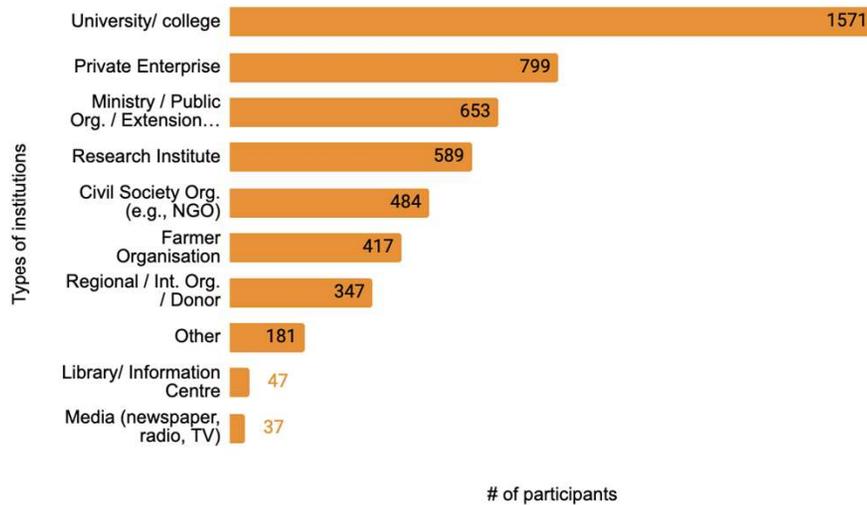
Unit 1: Data, Services and Applications	Unit 2: Data Sharing Principles	Unit 3: Using Data	Unit 4: Exposing Data
Lesson 1.1. Data for agriculture  Lesson 1.2. Farmer profiling	Lesson 2.1. What is shared and open data?  Lesson 2.2. Challenges for smallholders in data value chains  Lesson 2.3. Responsible data sharing in agricultural value chains  Lesson 2.4. Personal data protection	Lesson 3.1. Discovering shared and open data  Lesson 3.2. Quality and provenance  Lesson 3.3. Data retrieval, analysis and visualization  Lesson 3.4. Open data in policy cycles	Lesson 4.1. Managing data for reuse  Lesson 4.2. Guiding frameworks for data sharing  Lesson 4.3. Introduction to data interoperability  Lesson 4.4. Interoperability of farm data  Lesson 4.5. Open licensing for data

# Course design

- Downloadable lessons
- Supporting audiovisual materials
- Forum discussions with moderation from subject experts
- Quizzes for each unit
- Webinars and Q&A sessions
- Certification

The screenshot displays a course management interface. On the left is a navigation menu with items: Farm Data Management, Participants, Badges, Grades, Pre-Course Instructions, Unit 1: Data, Services and Applications, Unit 2: Data Sharing Principles, Unit 3: Using Data, Unit 4: Exposing Data, Course Assessment and Certificates, Dashboard, Site home, Calendar, and Private files. The main content area is titled 'Farm Data Management, Sharing and Services for Agriculture Development' and includes a 'Welcome' message, a 'Your progress' indicator, and a 'LATEST ANNOUNCEMENTS' section. A webinar announcement is highlighted, titled 'WEBINAR: Reflection on Farmer Profiling, Data Management and Services for Farmers, 31 October 2019'. Below the text is a video player thumbnail with the title 'Reflection on farmer profiling, data management and services for farmers' and a play button. The thumbnail also lists speakers: Mr. Ishmael Sunga, CEO, SACAU; Valeria Pesce, Information Management Specialist, FAO of the United Nations; and Stéphane Bovera, CEO, SBC4D. The date '31 October, 2019' is shown at the bottom of the thumbnail.

# Course participants



# Testimonials

“Having gone through this course it is now much easier for me to think about business models around ICT for Agriculture. Many thanks for the sponsor of this programme. I cannot begin to describe the status of agriculture in SSA, I'm sure you are familiar with this already, so an opportunity to participate in this course is a huge milestone for me.”

**Caleb Olanipekun, Nigeria**

“This course is very useful and I am looking forward to design the project to support the Ministry of Agriculture title related to Farm Data Management.”

**Fadhili Mtengela, Tanzania**

“A very timely course that has the potential to influence change in the once marginalised data management issues. The course has potential to influence how policy can be re-aligned to the realities of more complex data collection and storage and sharing principles.”

**Joseph Perseverance Musara, Zimbabwe**

“This course has given me the insight into the role the private sector can play in transforming farmers livelihoods if they can just open up their data to the public. It also clearly suggests the dilemma farmers face because their (farmers) data is used against them and this is a very sensitive topic that the government and other stakeholders need to take into consideration.”

**Jordan Otim, Uganda**

“This has been an amazing program and I've learnt a lot on almost all aspects of Data collection and management. I feel refined. Thanks to all organisers and all who took part in this to make it interesting.

**Dennis Baffour-Awuah, Ghana**

# Farm Data Management Community of Practice

This community is formed to create a communication platform among the Alumni of the Farm Data Management, Sharing and Services for Agriculture Development



**Managed by FAO**

**4,900 Member from 97 Countries**

## User stories

### **My Experience: 157 Participants from More Than 11 Countries Benefit from “Pass-it-on” Training of FAO’s “Farm Data Management, Sharing and Services for Agriculture Development” Online Course**

“Upon completion of the course, as my usual practice, I saw the need to pass the knowledge acquired to passionate colleagues within my network of agricultural practitioners and enthusiasts. I immediately leveraged mobile technology in launching and disseminating a Pass-It-On Training and before long entries rolled in.”

Olusegun Oloruntobi,  
Manager at MoreMeatMoreMilk Initiative for Development, Nigeria  
<http://aims.fao.org/activity/blog/my-experience>

# Next Steps

Consolidating the collaboration between FAO/PAFO  
and CTA

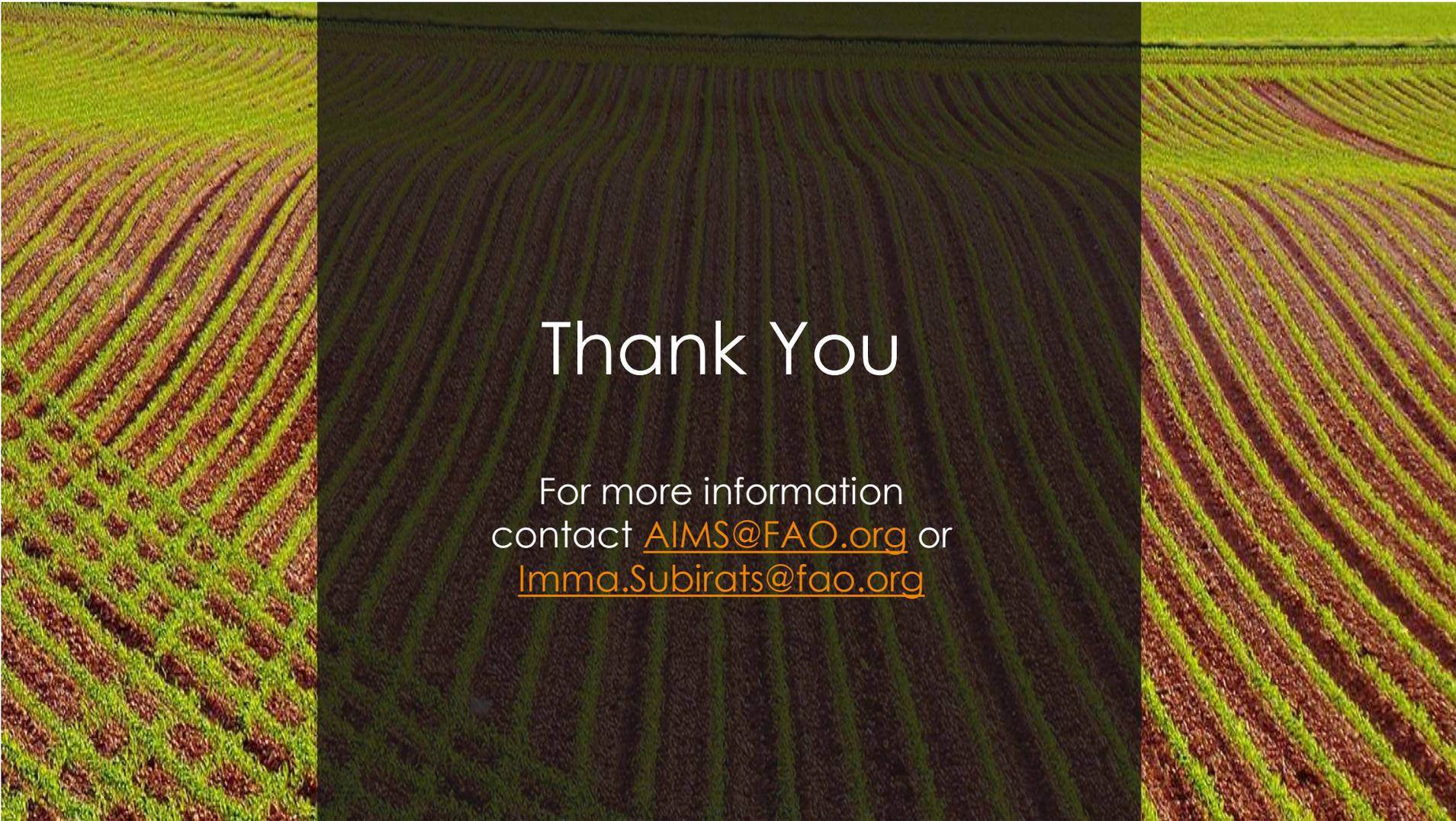
New 2020/2021 editions of the MOOC

Translation available in French

Planning the paper publication of the MOOC

Would your institution like to collaborate with us?

Write to [AIMS@fao.org](mailto:AIMS@fao.org)



Thank You

For more information  
contact [AIMS@FAO.org](mailto:AIMS@FAO.org) or  
[Imma.Subirats@fao.org](mailto:Imma.Subirats@fao.org)