




Food and Agriculture
Organization of the
United Nations



International Treaty
on Plant Genetic Resources
for Food and Agriculture

An illustration on the left side of the page shows a woman's profile in profile, looking towards the right. She is holding a plant with a DNA double helix structure. The DNA helix is blue and white, with binary code (0s and 1s) written on it. The plant has green leaves and orange flowers. There are also some small insects and a blue bird flying around the plant.

Assigning Digital Object Identifiers (DOIs) to Plant Genetic Resources for Food and Agriculture (PGRFA)

Secretariat of the International Treaty on PGRFA
2025

What is a Digital Object Identifier (DOI)?

- A **Digital Object Identifier (DOI)** is a standardised alphanumeric string that is assigned by a registration agency and provides a persistent link to the location of information about the object. The **International DOI Foundation** is the registration authority for the ISO standard (ISO 26324) for the DOI system.
- A DOI can be used to identify **plant genetic resources for food and agriculture (PGRFA)** held by any individual or organization, including genebanks, plant breeders, geneticists, other plant scientists, farmers, landowners etc.
- A **DOI** is like an electronic social security number or a passport, but for plant genetic resources. It looks like this:

10. 18730/ M9SNT



What are the benefits of using a Digital Object Identifier (DOI) for plant genetic resources for food and agriculture (PGRFA)?



- **Coexistence:** DOIs **coexist** and reinforce other identifiers, allowing curators to **maintain** their current systems.
- **Information access:** DOIs make it **easier** to find information about PGRFA materials.
- **Accurate identification:** DOIs help provide **more accurate** identification of materials and related rights.
- **Reliable association:** DOIs enable **reliable** association of research results with the material used.



How to assign DOIs for PGRFA?

1

Obtain a Permanent Unique Identifier (PID) in Easy-SMTA

2

Select a registration mode

3

Register your collection (Excel template)

4

What to do with the DOI you just got?

5

DOIs for *in situ* materials



1

Obtain a Permanent Unique Identifier (PID) in Easy-SMTA

What is an Easy-SMTA PID?

- A PID is a unique 6-character code assigned to each Easy-SMTA registered user.
- As users involved with SMTA transfers are often also DOI registrants, their user accounts in GLIS are managed by Easy-SMTA.

How to obtain an Easy-SMTA PID?

- Register on Easy-SMTA (<https://mls.planttreaty.org>) and send an email to PGRFA-Treaty@fao.org with your PID and request for DOI assignments.
- Select the appropriate “User status” so that the account is properly identified as belonging to an organization.
- Enter the details of your “Organization”.



Create an account and get a Permanent Unique Identifier (PID)

Go to the Easy-SMTA website at <https://mls.planttreaty.org/itt/> and click on **register**.



International Treaty
on Plant Genetic Resources
for Food and Agriculture

[العربية](#) [中文](#) [english](#) [français](#) [русский](#) [español](#)



Main menu

[Home](#)
[About](#)
[Contact](#)
[User Manual](#)
[Register](#)
[Statistics](#)
[Charts](#)
[Maps](#)
[Login](#)

Easy-SMTA Homepage

Welcome to the homepage of Easy-SMTA, the Information Technology System developed in support of the users of the Multilateral System of Access and Benefit-sharing of the International Treaty on Plant Genetic Resources for Food and Agriculture ([ITPGRFA](#)).

The Standard Material Transfer Agreement ([SMTA](#)) is a private contract with standard terms and conditions that ensures that the relevant provisions of the International Treaty are followed by individual providers and recipients of plant genetic material. This System has been developed by the Secretariat of the International Treaty to assist users with:

1. compiling and generating SMTAs in the six official languages of the International Treaty;
2. reporting on SMTAs concluded in accordance with the instructions made by the Governing Body of the International Treaty.

You need to [log in](#) to be able to use the system. Please **register** to create a new account if you do not have one.



Create an account and get a Permanent Unique Identifier (PID)

If you work for a genebank, research institution, university or a company, define a corporate account by selecting '**organization**' (not 'individual').



[العربية](#) [中文](#) [english](#) [français](#) [русский](#) [español](#)

Main menu

- Home
- About
- Contact
- User Manual
- Register
- Statistics
- Charts
- Maps
- Login

User registration

Fields with * are required.

Username *

Password *

Passwords must be at least 8 characters long, include at least one uppercase and one lowercase letters and at least one digit

Please enter below an email address to be used for all messages sent by this system

Email *

Retype Email address *

User status **Organization** ▼

Type of organization *

FAO/WIEWS institute code

Organization *



[Help on this page](#)



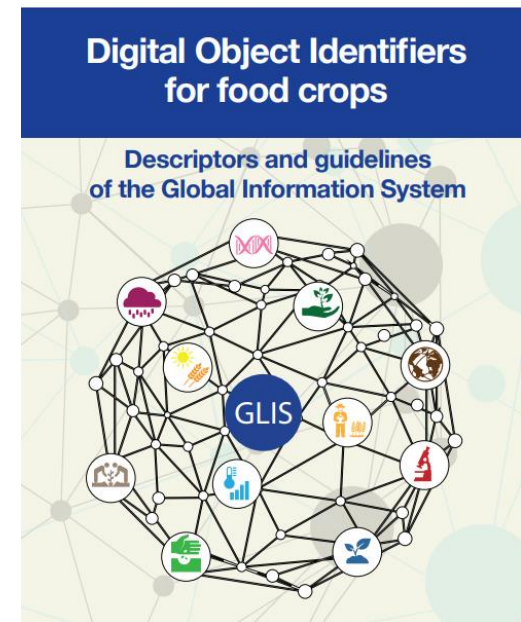
Additional documentation

Read our booklet in [English](#), [French](#), [Spanish](#) and [Arabic](#)!

It includes:

- An introduction to DOIs;
- Concrete cases of DOIs assignments;
- Explanations of the descriptor associated to a Global Information System (GLIS) DOI;
- A mapping of the GLIS descriptors to MCPD 2.1 descriptors.

For additional support on the registration and use of GLIS DOIs, contact PGRFA-Treaty@fao.org.



2

Select a registration mode

① **Excel template for batch registration:** The excel template is suitable for medium-sized collections (up to thousands of accessions). You can download it as well as the accompanying documentation at the following link:

<https://doi.org/10.5281/zenodo.11275578>

② **Integration toolkit:** The Integration toolkit is a lightweight Java middleware application that connects your institutional database with the Global Information System (GLIS). Institutions only need basic database skills to integrate it with GLIS (no XML expertise required). The Integration toolkit:

- stores DOI registration data in its built-in database;
- automatically extracts and converts your data to GLIS-compatible XML format;
- manages all communication with GLIS;
- tracks registration results back to the database;
- can be downloaded through the documentation at

<https://doi.org/10.5281/zenodo.11278436>.

③ **Connection between GLIS and Grin-Global (GG) or GGCE (Grin-Global Community Edition):** Once the plug-in is installed, it can read your data and automatically update it. GRIN-Global and GRIN-Global Community Edition are fully integrated with GLIS for DOI registration and update.



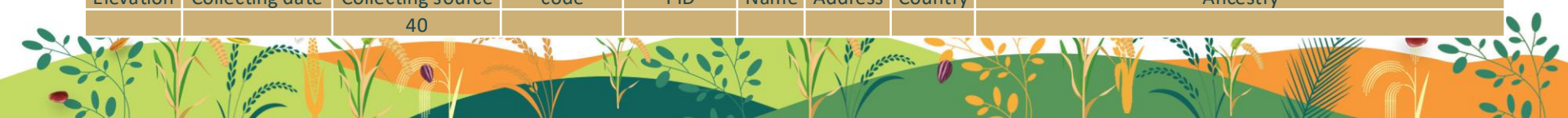
Registration mode ① - Excel template for batch registration

The Excel template is divided into three areas:

MANDATORY DESCRIPTORS										
Organization or individual conserving the PGRFA						Scientific or common name				
M01	M01	M01	M01	M01	M02	M03	M04	M05	M05	M05
FAO WIEWS code	Easy-SMTA PID	Name	Address	Country	PGRFA unique identifier	Date	Method	Genus	Species	Common name
IND002	00AF93				ICC 20596	2012-08-01	acqu	Cicer	arietinum	Chickpea

HIGHLY RECCOMENDED DESCRIPTORS										
R01			R01		R02			R03		
Links to associated information			Link keyword codes		DOI(s) of progenitor(s)			Biological status		
http://genebank.icrisat			1,2,3					300		
Additional taxonomic category										
R04	R04	R04		R05		R06		R07		R08
Species auth.	Subtaxa	Subtaxa auth		Names		Other identifiers		MLS Status		Historical PGRFA
L.								1		n

ADDITIONAL DESCRIPTORS											
Provider's location					Collector's location						
A01	A01	A01	A01	A01	A02	A03	A04	A04	A04	A04	A04
FAO WIEWS code	Easy-SMTA PID	Name	Address	Country	Provider's PGRFA unique ID	Country of provenance	FAO WIEWS code	Easy-SMTA PID	Name	Address	Country
A05	A06	A07		A08		A09		A10		A11	A12
Collector's PGRFA unique ID	Collecting mission ID	Location where PGRFA was collected		Latitude		Longitude		Uncertainty		Geodetic datum	Georeferencing method
Breeder's location											
A13	A14	A15	A16	A16	A16	A16	A16	A17			
Elevation	Collecting date	Collecting source	FAO WIEWS code	Easy-SMTA PID	Name	Address	Country	Ancestry			
		40									



3 Registering your collection through option ① - Excel template

What to do?

- Once the template is filled, send it to PGRFA-Treaty@fao.org.
- We will check it and come back to you if any information is missing.
- If everything is correctly completed, we will upload the template and return the newly assigned DOIs as a TAB-separated text file with the following columns:

- WIEWS code
- Easy-SMTA PID
- Genus
- Accession Number
- Assigned DOI
- MLS Status

PRACTICAL TIP

No need to separate by crop, just keep file size manageable (e.g. max 5 MB)



4

What to do with the DOIs you just got?



- **Record the DOIs in your documentation system:** Make sure to associate the DOI to the proper accession number.
- **Use the DOIs in the SMTAs you prepare:** List them in the Annex 1 to the SMTA. This also makes you compliant with Art. 5-b).
- **Cite the DOIs in papers and publications and in dataset you deposit in repositories:** This will allow GLIS to identify your publications and datasets and make them available to users.
- **Keep the DOIs up to date:** Descriptor updates do not change the DOI. If the material is lost, just mark it as historical.

IMPORTANT

Never reuse
the DOI for
another
material

5 DOIs for *in situ* material

- The purpose is to assign DOIs to *in situ* materials to promote their visibility and availability for research. The Excel template and the Toolkit have been updated to include *in situ* descriptors.
- The process is similar to the one on *ex situ* but with some specific descriptors:
 - Population identifier
 - Manager
 - Observation date
 - Ex situ copy holder
 - Observation location
 - Protection and conservation details
- Documentation on descriptors for *in situ* is available [here](#).
- CWR Descriptor Tool v.1 is available [here](#).



Contact us at pgrfa-treaty@fao.org for direct assistance
on assigning DOIs to your materials.

Thank you!

