The Harnesstom First Advanced Training School successfully meets expectations

The first HARNESSTOM advanced school took place 29th March 2022 via zoom organized by UPV and counted with the participation of leading experts from Spain, Italy, France, Italy and Israel. The title of the school was: HARNESSING THE POTENTIAL OF GERMPLASM COLLECTIONS: INTERACTION W ITH X-OMICS AND BREEDING COMMUNITY and it addressed the important issue on how best to organize the phenotypic and genotypic info and linked it to the germoplasm banks. For the last two decades, EU-researchers and EU-funded projects have made important contributions in characterizing tomato genetic resources of relevance for the EU economy/agriculture. However, this information is still untapped or is dispersed in the literature or in specific websites and databases from diverse projects. The aim in HARNESSTOM is to make all the data collected FAIR – findable, accessible, interoperable and re-usable- by building an EU-public one-stop-shop database (HarnesstomDB) that unifies the information available in a single location. The HARNESTOM database will ensure that all results will be accessible in a one-stop- shop for information, with tools for visualization and a tool kit for their analysis, which will have a positive impact on advance genetic studies and on the use of genetic resources in general.

This “First Training School” is part of the dissemination, outreach and activities of HARNESSTOM. It has included aspects and described the use of data found in public repositories of genetic resources for breeding, new tools for genotyping and breeding, and has been directed to the members of the HARNESSTOM consortium. The Training School was structured in two sessions. The first one “HARNESSING THE POTENTIAL OF GERMPLASM COLLECTIONS” included presentations about the problem that represents the huge quantity of data related to tomato germplasm as well as the data generated in the EU funded projects on tomato. The lack of standardization of these data hampers enormously their utilization by breeders and researchers. In the second part “INTERACTION WITH X-OMICS DATABASES AND BREEDING COMMUNITY”, the main databases on tomato, SOLGENOMICS, TOMEXPRESS and PHENOME NETWORKS” were presented. This was followed by a brainstorming in which several options to implement and optimize the database that is being constructed in the HARNESSTOM project were discussed.

The workshop was attended by 33 participants, all of them researchers and PhDs and Posdocs HARNESSTOM consortium.

Another Advances Training School (D2.8) is planned later in the project organized by ENEA and this hopefully take in person and open to the large community of breeders, scientists and farmers.

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No *101000716*

Final Agenda of the Training School:

Harnesstom First Advanced Training School:
HARNESSING THE POTENTIAL OF GERMPLASM COLLECTIONS: INTERACTION WITH X-OMICS AND BREEDING COMMUNITY

DAY: 29th March 2022
Organizer: UPV
The link for the meeting:
https://inp-toulouse-fr.zoom.us/j/95292681395?pwd=SEhMc2hIWlNMM2NFT1BkVTJENlJPQT09
ID: 952 9268 1395
Code: 371775

Program
09:00 INTRODUCTION TO THE COURSE
Antonio Granell, IBMCP
SESSION1: HARNESSING THE POTENTIAL OF GERMPLASM COLLECTIONS
Moderator: *Jaume Prohens*
09:05 **GENETIC DIVERSITY IN GENEBANKS**
María José Diez, COMAV
09:25 **OVERVIEW EUROPEAN TOMATO PHENOTYING AND GENOTYPING PROJECTS (5 to 10 min to each project)**
Speakers project leaders or IPs
10:35 **INTEGRATION PROBLEM INSIDE AND BETWEEN LABS/PROJECTS.**
Clara Pons, UPV
10:55 Break
11:10 **RELATIONAL DATABASES**
David Pierre, INPT
11:30 **HARNESSTOM DATABASE V1.0**
David Pierre &Clara Pons

SESSION 2: INTERACTION WITH X-OMICS DATABASES AND BREEDING COMMUNITY
11:50 **THE SOLGENOMICS DATABASE (SGN)**
Aureliano Bombarelli, IBMCP
12:05 **TOMEXPRESS: VISUALIZATION AND ANALYSIS OF RNAseq DATA**
Mohamed Zouine, INPT
12:15 **PHENOME NETWORKS': PHENOMEONE PLATFORM FOR BREEDERS**
Amnon/Yaniv, Phenome
12:35 Break
12:45 Round table: HARNESSTOM GATEWAY BRAINSTORMING
All assistants
13:15 **CONCLUDING REMARKS**
Antonio Granell, IBMCP

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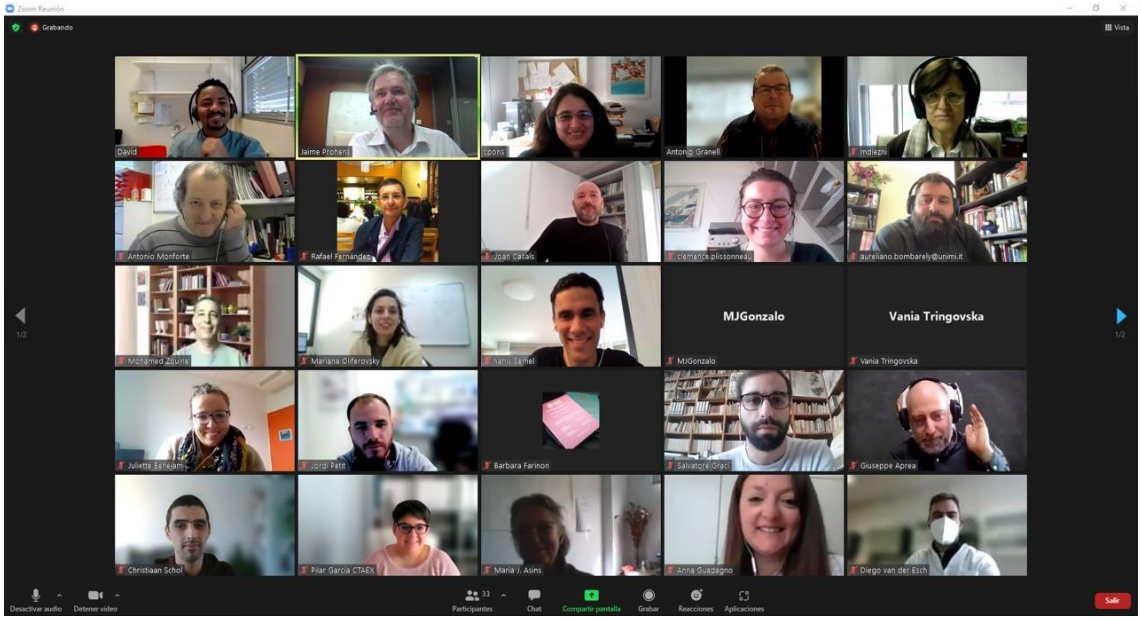

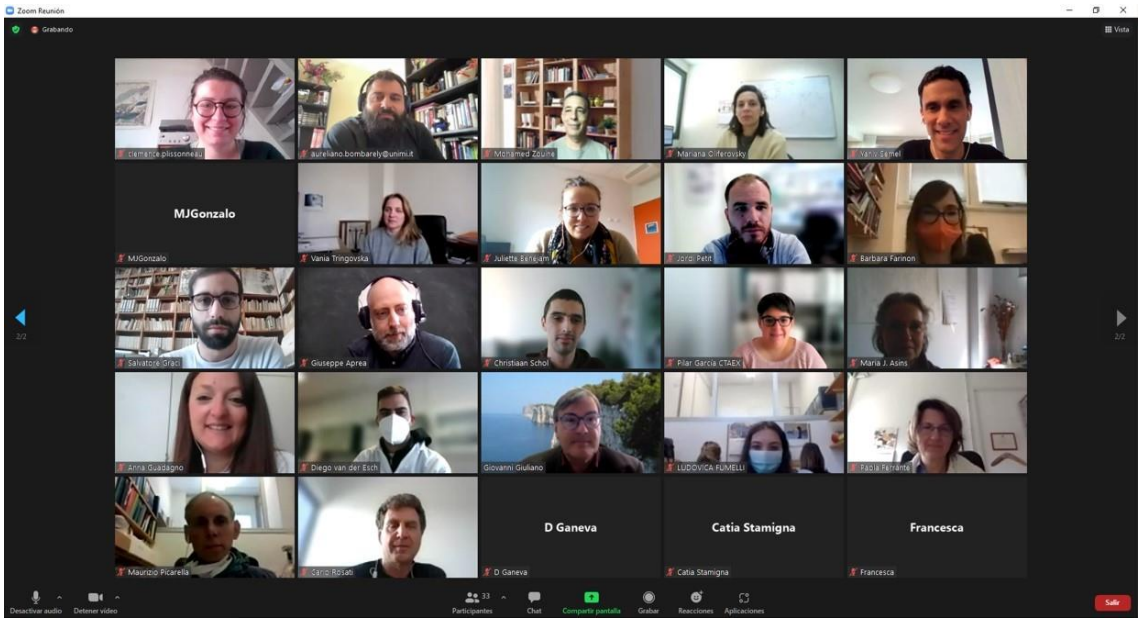

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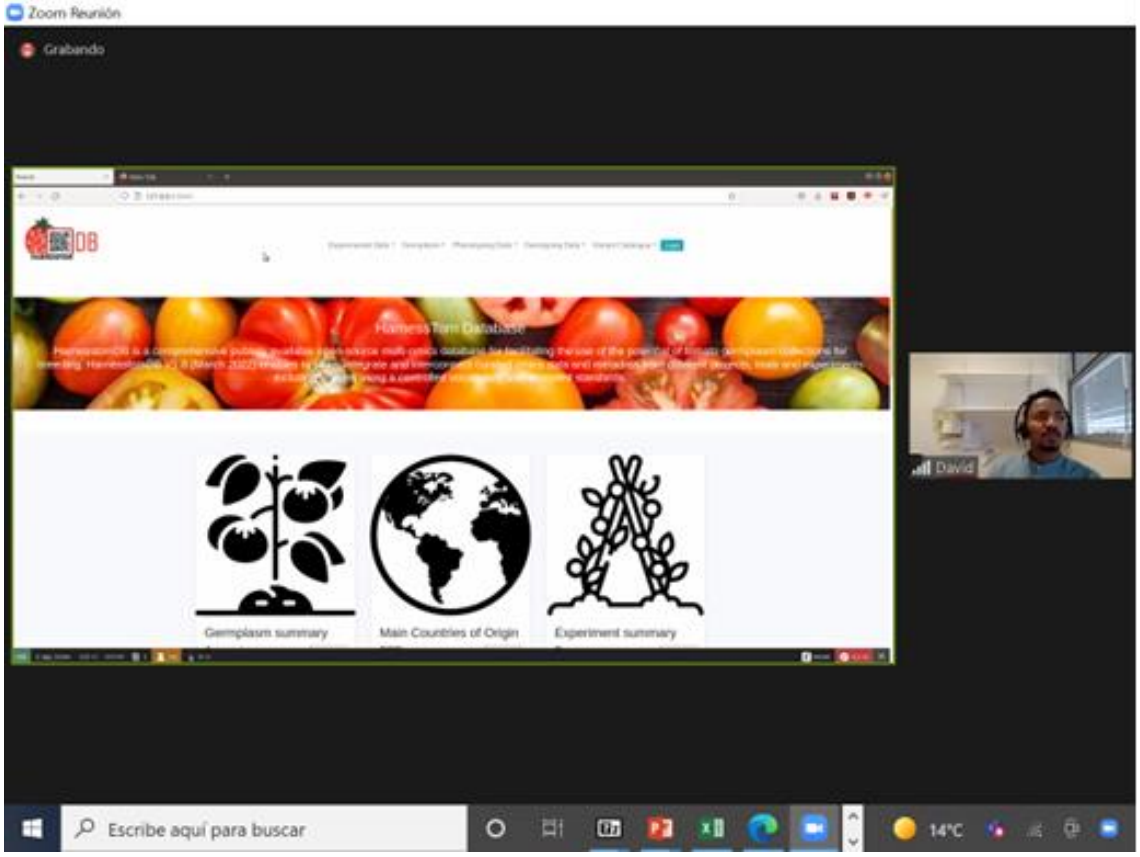
David Pierre (INPT) presented the standards of a Database and the current version of the HARNESSTOM database:



Yaniv Semel (Phenome Networks) presented the database Phenome Networks, including some examples about the type and management of the data generated in the EU-funded project G2PSOL.

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