

A global agricultural trial site application

Glenn Hyman
ESRI USER CONFERENCE
July 14-18, 2014

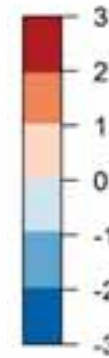
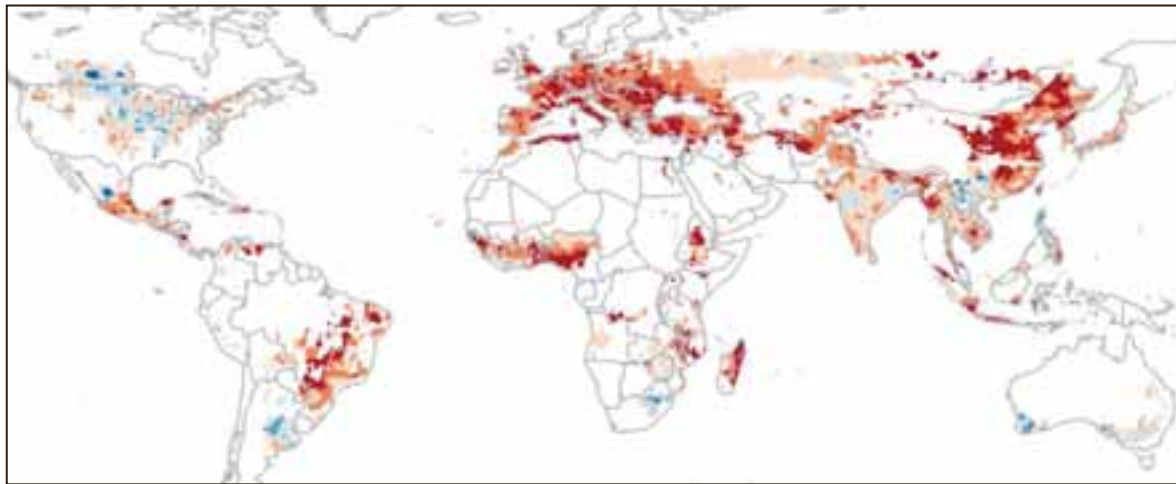


Research
Program on
Roots, Tubers
and Bananas

- an information portal developed by the CGIAR Research Program on Climate Change, Agriculture and Food Security (**CCAFS**)
- provides access to a database on the performance of agricultural technologies at sites across the developing world.
- builds on decades of evaluation trials, mostly of varieties, but includes any agricultural technology for developing world farmers.
- standardizes data and information to the benefit of crop adaptation research, climate change analyses, future multi-environment trials and research and development in international agriculture.

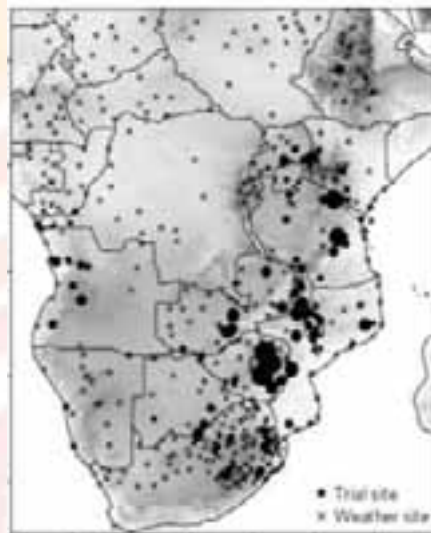


>> Multi-site agricultural trial database (agtrials.org)



Observed changes in growing season temperature for crop growing regions, 1980-2008.

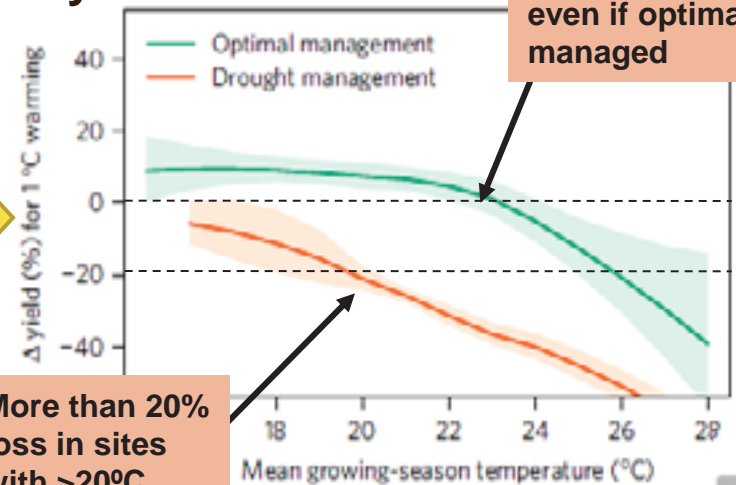
Lobell et al (2011)



20,000+ maize trials in 123 research sites



Effect of +1°C warming on yield



Sites with >23°C would suffer even if optimally managed

More than 20% loss in sites with >20°C, under drought

Lobell et al. 2011



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



The Global Agricultural Trial Repository and Database



Research
Program on
Roots, Tubers
and Bananas

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AgTrials—The Global Agricultural Trial Repository

Agtrials.org is an information portal developed by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) which provides access to a database on the performance of agricultural technologies at sites across the developing world. It builds on decades of evaluation trials, mostly of varieties, but includes any agricultural technology for developing world farmers. This project will standardize data and information to the benefit of climate change analyses, future multi-environment trials and research and development in international agriculture.

What you can do with the interface

- ✓ Share data and information on evaluations of agricultural technology.
- ✓ Acquire agricultural evaluation data sets for your own research.
- ✓ Explore the geographic dimensions of agricultural evaluation

Partners



Social Media



www.agtrials.org



Latest Posts



Continued collaboration between AgTrials, CropOntology, AgMIP, CSISA and others
Jan 15th, 2014 | by Glenn Hyman

The Climate Change and Agricultural Food Security (CCAFS) program's AgTrials initiative places a strong emphasis on partnerships with other

Latest Trials

- ➔ Site characterization of NOPT trials for rice - Rice - Mar 15th, 2014
- ➔ Isaac savini_ct 2005_2 maize - Maize - Jan 27th, 2014
- ➔ Isaac savini_ct 2005 maize - Maize - Jan 27th, 2014

Statistics

- Trial Groups: 1456
- Technologies: 42
- Trials: 34536
- [More Information...]

Videos

- ➔ NewTrials by Batch upload
- ➔ New Trial
- ➔ Introduction to entering AgTrials
- [More Videos...]

Project
Info

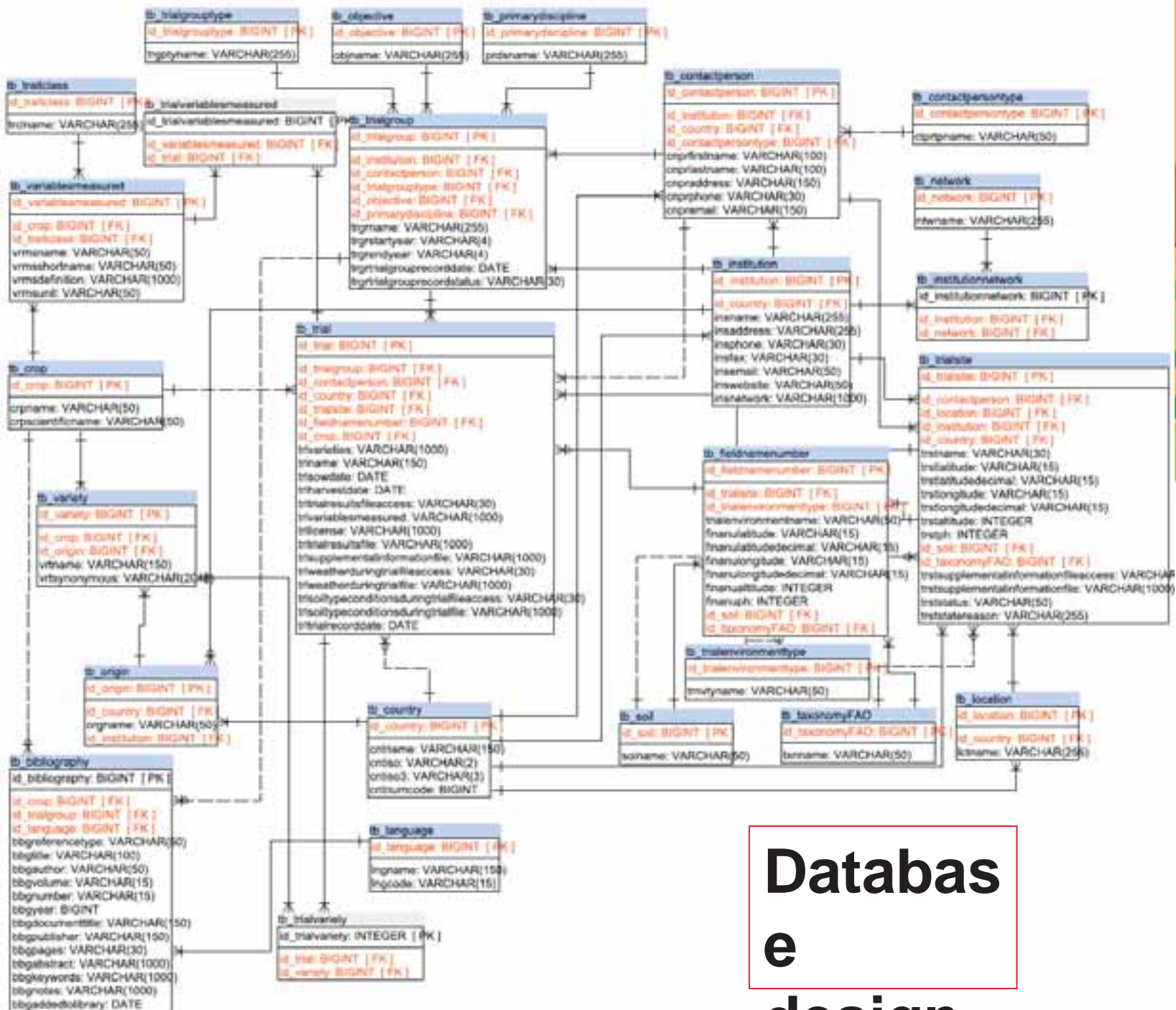
Partners

Social
media

Maps
all
trials

Latest
Posts
&
Trials

Stat &
Videos



**Databas
e
design**



Dynamic link to CropOntology provides terminology and definitions for traits and variables measured

The Global Agricultural Trial Repository

Trial Group Trial Bibliography

View Trial

Id: 61
Trial group: Ciat yield 1998-2008
Contact person: Isabela Jimena Moreno
Country: Colombia
Trial site: Palmira
Field name number:
Technology: Cassava
Varieties/Race: **Gm 523** - 137-0914-47, Gm 104-30, Gm 201-70, Gm 205-18, Gm 373-33, Gm 374-35, Gm 374-40, Gm 375-38, Gm 473-35, Gm 509-15, Sm 2830-33, Sm 2903-53, Sm 3026-40, Sm 3055-11, Sm 3055-9, Sm 3055-10, Sm 3006-20

Variables measured: **initial vigor**, Plant height, Top yield, Harvest index, Dry yield, Proportion of lodged plants, Leaf retention

Name: Palmira-ciat-colombia

Sow/plant date: 2006-07-26

Crop Ontology Curation Tool

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Search

Add New Terms API Video Tutorials Annotation Tool Register Login

- Cassava trait ontology
- agronomical trait
- sprouting
- initial vigor**
- plant stands harvested
- root number
- fresh root weight
- fresh root yield
- dry yield
- harvest index
- fresh shoot weight
- top yield
- plant height
- rotted storage root

initial vigor

Identifier: CO_334.0000009

creation_date: 2010-11-08T02:32:17Z

created_at: Tue Aug 02 08:19:09 UTC 2011

name: initial vigor

synonym: "VIGOR" EXACT []

def: "Visual assessment of plant vigor during establishment scored one month after planting." [CO mb. ISBN4 978-131-302-1 "Dixon et al 2010"]



<http://www.cropontology-curationtool.org/>

<http://www.agtrials.org>



Weather during the trial

Weather Information File

File Access	Variables Measured	File	Start Date	End Date	Actions
Public	Temperature	AF_DBA.RPT_METEORO_R01.xls	2011-01-01	2011-09-18	 

Public ▼

Seleccionar archivo

No se elig...n archivo

Next File

AF_DBA.RPT_METEORO_R01 (1) [Compatibility Mode] - Microsoft Excel

	1	2	3	4	5	6	7	8	9	10	11
1		Lugar	Fecha	Temperatura Maxima	Temperatura Minima	Termometro Seco 07	Termometro Seco 13	Termometro Seco 19	Termometro Humedo 07	Termometro Humedo 13	Termometro Humedo 19
2											
3		PALMIRA	02-JAN-11	31	20	22.3	31	24.8	21.2	21.9	20.8
4		PALMIRA	03-JAN-11	31	18	20	30	23	19.5	21.6	20.7
5		PALMIRA	04-JAN-11	30	19	21.7	28.8	24.1	21	20	21.5
6		PALMIRA	05-JAN-11	31	19.5	21.8	29.5	23.2	21.1	21.2	20.2
7		PALMIRA	06-JAN-11	30	18.5	21.2	29.6	24.4	20.7	21.2	21.6
8		PALMIRA	07-JAN-11	30	20	22	29.4	25.5	21.5	20.5	23.2
9		PALMIRA	08-JAN-11	30	18	22	30	24.5	21	21	20.7
10		PALMIRA	09-JAN-11	30	19	23	29	25	22.5	21	23.7
11		PALMIRA	10-JAN-11	30.5	18	24	30.2	25.5	23.7	23.5	

The Global Agricultural Trial Repository



Home

About AgTrials

Contact AgTrials

Partner Login

New Users

Visitors

Trial Group Trial Bibliography Other + Reports Admin + Help ghyman

View Trial

Id: 61

Trial group: Ciat yield 1998-2008

Contact person: Isabela Ximena Moreno

Country: Colombia

Trial site: Palmira

Field name number:

Technology: Cassava

Varieties/Race: **CM 523-7**, Cm 9901-137, Cm 9901-193, Cm 9902-23, Cm 9902-10, Cm 9901-12, Cm 9901-13, Cm 9901-14, Cm 9901-15, Cm 9901-16, Cm 9901-17, Cm 9901-18, Cm 9901-19, Cm 9901-20, Cm 9901-21, Cm 9901-22, Cm 9901-23, Cm 9901-24, Cm 9901-25, Cm 9901-26, Cm 9901-27, Cm 9901-28, Cm 9901-29, Cm 9901-30, Cm 9901-31, Cm 9901-32, Cm 9901-33, Cm 9901-34, Cm 9901-35, Cm 9901-36, Cm 9901-37, Cm 9901-38, Cm 9901-39, Cm 9901-40, Cm 9901-41, Cm 9901-42, Cm 9901-43, Cm 9901-44, Cm 9901-45, Cm 9901-46, Cm 9901-47, Cm 104-30, Cm 268-63, Cm 201-70, Cm 295-18, Cm 373-33, Cm 374-35, Cm 374-40, Cm 375-38, Cm 3055-11, Sm 3055-9, Sm 3055-12, Sm 3006-20

Variables measured: [Initial vigor](#), [Plant height](#), [Top yield](#), [Harvest index](#), [Dry yield](#), Proportion of lodged plants

Name: Palmira-ciat-colombia

Sow/plant date: 2006-07-26

CM 523-7 CIAT

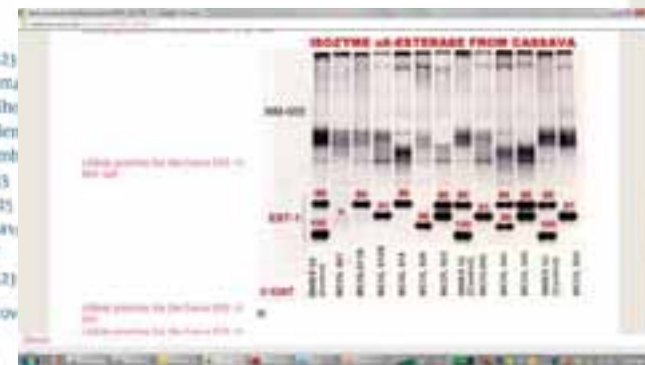
ACCNUMB
CENAME
GENUS
SPECIES
ORIGCTY
LATITUDE
LONGITUDE
CROPNAME
INSTCODE
(Identification) Synonyms
(Ecological observations) Biological status
(Ecological observations) CORE collection
(Collection information) Department
(Collection information) Country
(Collection information) Place
(Collection information) Altitude (masl)
(1) Plant height (cm)

About

CM 523
Cassava
Manihot
esculenta
Colombia
3.5335
-76.25
Cassava
CIAT
CM 523
Improv

Yes
Valle del Cauca

Palmira
Ciat
915.0
24%



Intellectual Property Rights

Only registered and authenticated users can upload or download any data

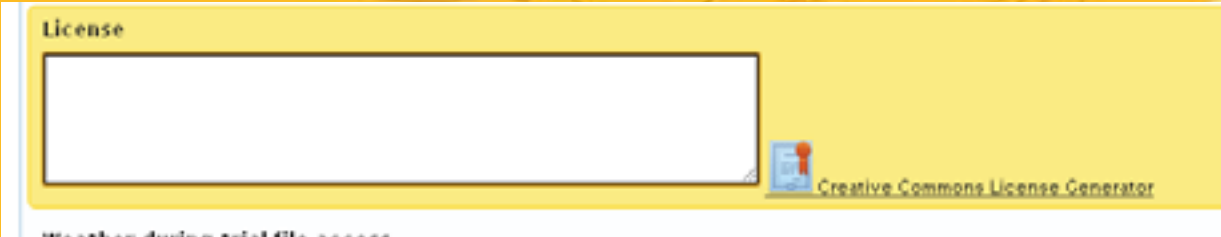
You establish the type of license to use the data, which can only be downloaded if user agrees to license

You specify who can download

You control your data



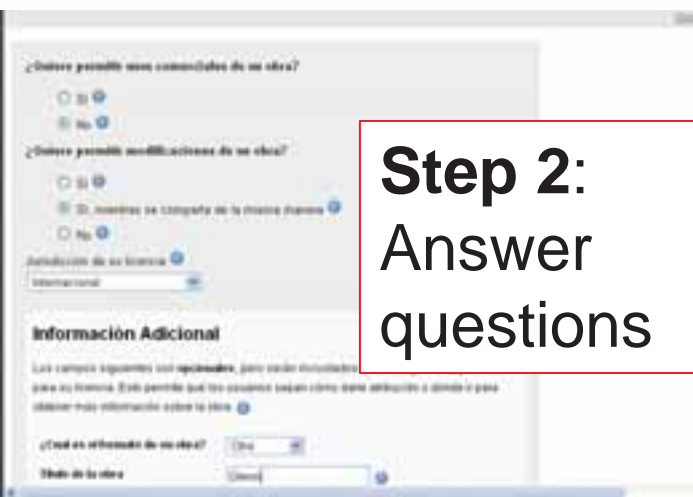
Data sharing and intellectual property rights pr



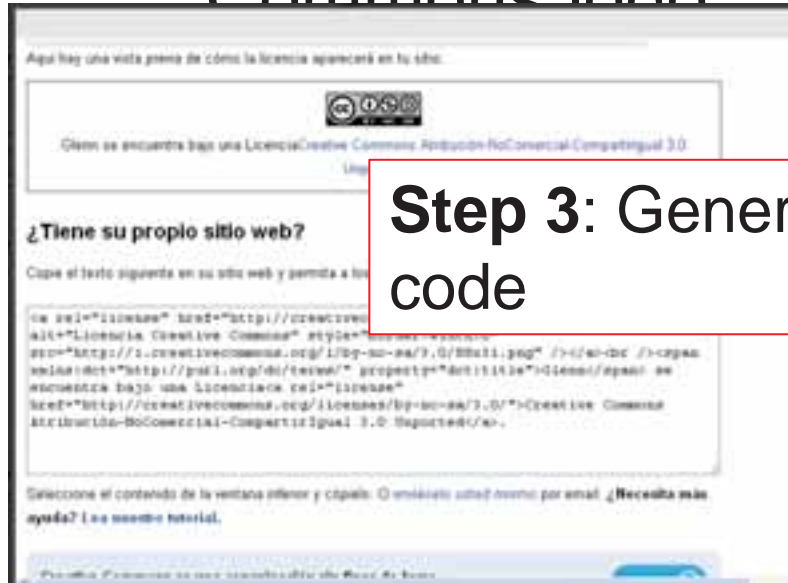
This form **accepts** **code** from Creative Commons to establish IPR: click on the hyperlink.



Step 1: A window appears that explains how to establish IPR. Click on Creative Commons logo



Step 2: Answer questions



Step 3: Generate code

Other users must accept the license

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FIRST AFRICAN BEAN YIELD AND ADAPTATION NURSERY (AFBYAN I): PART I. PERFORMANCE IN INDIVIDUAL ENVIRONMENTS by J.B. Smithson is licensed under a Creative Commons Attribution-ShareAlike 3.0 Unported License.

I accept the license

I do not accept the license

If users have given permission for others to download their files, they will have that capacity... .otherwise, any data or information about trials entered into the site will only be available as metadata (data about the trials, but not the raw data).



Research
Program on
Rice, Tapes
and Bananas



Information for our Partners

AgTrials can be used as a trial server for accessing information for your own website or application



API

API for the The Global Agricultural Trial Repository. It allows you to programmatically retrieve and interact with AgTrials data.

Returns: JSON Format

Key: Generated key for each user [View your Key](#)

API Trial Sites
URL: <http://www.agtrials.org/api/apitrialsites?key=80418728F131FF0>

API Trials
URL: <http://www.agtrials.org/api/apitrials?key=80418728F131FF0>

API New Variables measured
URL: <http://www.agtrials.org/api/apivariablesmeasured?key=80418728F131FF0>

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For best performance use Google Chrome

User

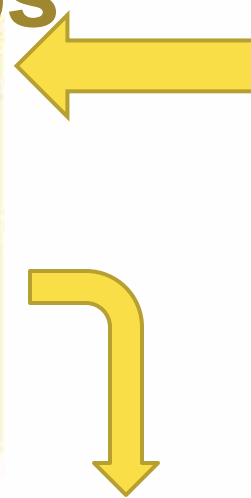
Username:	hespinosa
Email address:	<input type="text" value="h.r.espinosa@cgiar.org"/>
First name:	<input type="text" value="Herlin Rodolfo"/>
Last name:	<input type="text" value="Espinosa Gutierrez"/>
Institution or Affiliation:	<input type="text" value="CIAT - CENTRO INTERNACIONAL DE AGRI..."/>
Country:	<input type="text" value="Colombia"/>
City:	<input type="text" value="Caloto"/>
State:	<input type="text"/>
Address:	<input type="text" value="Vda La Arrobleda Km 8 Via A Caloto"/>
Telephone:	<input type="text" value="4450001 ext 3728"/>
Key:	<input type="text" value="80418728F131FF0"/>



AgTrials provides information to RTBMaps

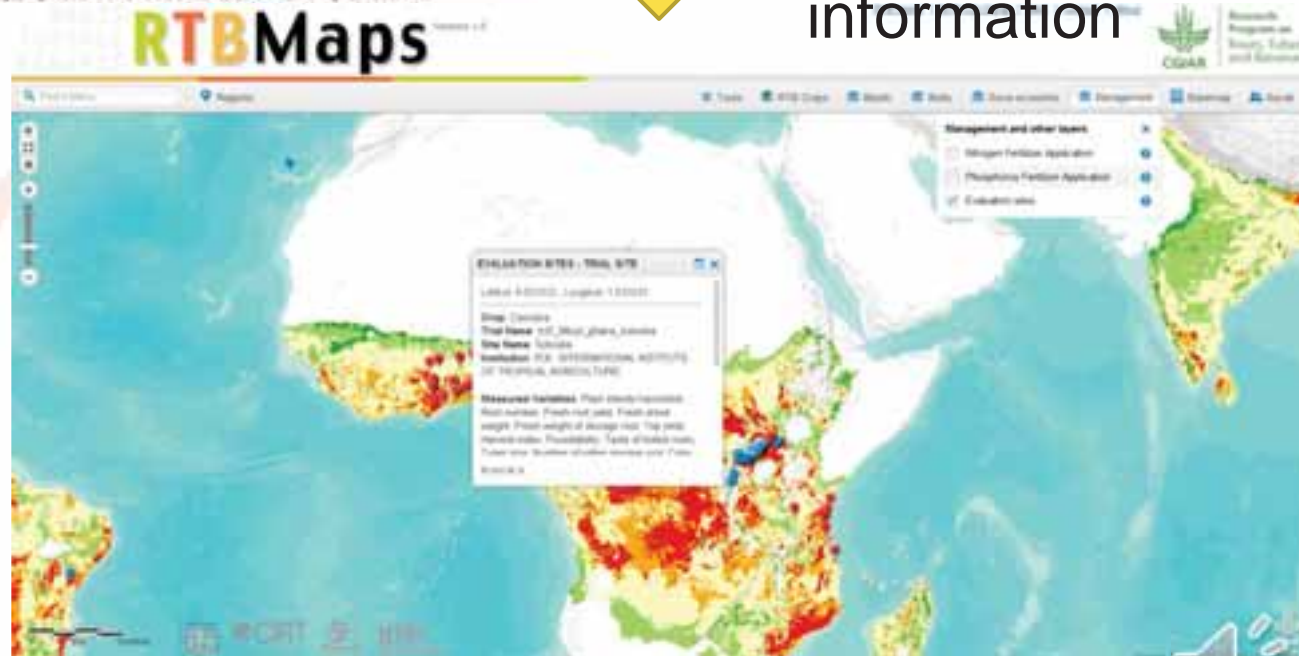


The screenshot shows the AgTrials API documentation. It includes a header with the AgTrials logo and the text 'Research Program on Roots, Tubers and Bananas'. Below this is a section titled 'API' with a green header. Underneath, there is an 'Information' section with details about keys, options, values, and returns. A list of API endpoints follows, such as 'Retrieve Trials', 'Retrieve Trial Groups', 'Retrieve Contact Person', 'Retrieve Country', 'Retrieve Trial Sites', 'Retrieve Technology (Crops)', 'Retrieve Variety', and 'Retrieve Variables Measured'. At the bottom, there is a copyright notice for the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).



The AgTrials API can be accessed by other applications to serve trial data and other related information

RTBMaps displays all trials of cassava, sweet potato, potato, yam, banana and plantain.



The screenshot shows the RTBMaps web application. The title 'RTBMaps' is prominently displayed at the top. Below the title is a map of Africa with various trial locations marked. A pop-up window titled 'EVALUATION SITE - This Site' is open, displaying details for a specific trial site, including its name, location, and measured variables. The interface includes a search bar, a map navigation toolbar, and a legend for trial types.



Status Update

265 registered users (95 of whom have not entered the application)

42 technologies (mostly crops)

34,535 trials

Maize has the largest number of trials (29,196) followed by common bean (1,866), cassava (1,613), sorghum (359), rice (388) and others

89,170 varieties/races at 2,473 sites in 110 countries



Relies on www.croponontology.org

Cereal Systems Initiative for South
Asia (CSISA)

AgMIP

RTB



2014 Goals

Restructuring and Interface makeover with CIMMYT

Fully incorporate roots tubers and bananas trial data from the CGIAR RTB team

Other CRPs to participate

Integration with AgMIP.

**Continued efforts to increase the number of trials in the system
(please contact us about your participation)**

Acquire resources to advance the initiative



Thank you....

