



Technology Platform

Maria J. A. Sampaio
Marcelo H. A. Freitas



Time line

2011 2012 2013 2014 2015



3^o Meeting: Plan for the strategic focusing of the Platform; Concrete activities in the 2016-17 biennium.

2^o Meeting Models of Technology Transfer that would be useful for smallholder farmers.

5^o Session Governing Body: Grouped activities under the Platform under “supporting activities” to the Programme of Work on Sustainable Use.

Rio Six-Point Action Plan For the International Treaty: to establish a Platform for the Co-Development and Transfer of Technologies, context of non-monetary benefit-sharing under the Treaty.

1^o Meeting Embrapa & IAARD Considered establishing a Platform.

4^o Session Governing Body: Recommended measures to facilitate the Transfer of Tecnology.



Brazilian Agricultural Research Corporation

Establishment: **1973**.



We are a technological innovation enterprise focused on generating knowledge and technology for Brazilian agriculture

Linked to the Ministry of Agriculture, Livestock and Food Supply (MAPA).

Mission

Provide solutions for research, development and innovation for sustainability of agriculture for the benefit of Brazilian society.

Embrapa

15

Central Units located in Brasília

47

Decentralized Units in all regions of Brazil

4

Virtual Laboratories Abroad (Labex), in the USA, Europe, China and South Korea

3

International Offices in Latin America and Africa



9.790 employees



- Embrapa Cerrados | Planaltina-DF
- Embrapa Vegetables | Gama-DF
- Embrapa Genetic Resources & Biotechnology | Brasília-DF
- Embrapa Agroenergy | Brasília-DF
- Embrapa Coffee | Brasília-DF
- Embrapa Technological Information | Brasília-DF
- Embrapa Products & Market | Brasília-DF
- Embrapa Plant Quarantine | Brasília-DF

- Embrapa Rice & Beans | Santo Antônio de Goiás-GO
- Embrapa Maize & Sorghum | Sete Lagoas-MG
- Embrapa Dairy Cattle | Juiz de Fora-MG
- Embrapa Soils | Rio de Janeiro-RJ
- Embrapa Food Technology | Rio de Janeiro-RJ
- Embrapa Agrobiology | Seropédica-RJ
- Embrapa Environment | Jaguariúna-SP
- Embrapa Agriculture Informatics | Campinas-SP
- Embrapa Satellite Monitoring | Campinas-SP
- Embrapa Territorial Management | Campinas-SP
- Embrapa Southeast Livestock | São Carlos-SP
- Embrapa Instrumentation | São Carlos-SP

47 Research Centres :

- 17 Ecoregional Units
- 14 Product Units
- 11 Basic Theme Units
- 5 Service Units

International Presence

Scientific Cooperation, Technical Cooperation and Technological Business



Source: SRI-Embrapa – April / 2015

4

Virtual Laboratories
Abroad (Labex), in
the USA, Europe,
China and South
Korea

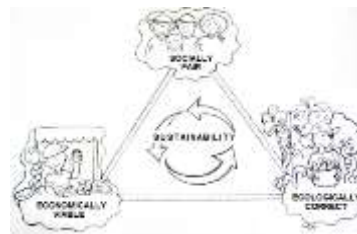
3

International Offices
in Latin America
and Africa

Important projects from Embrapa to the Plataforma



Social Technologies



Genetic Resources

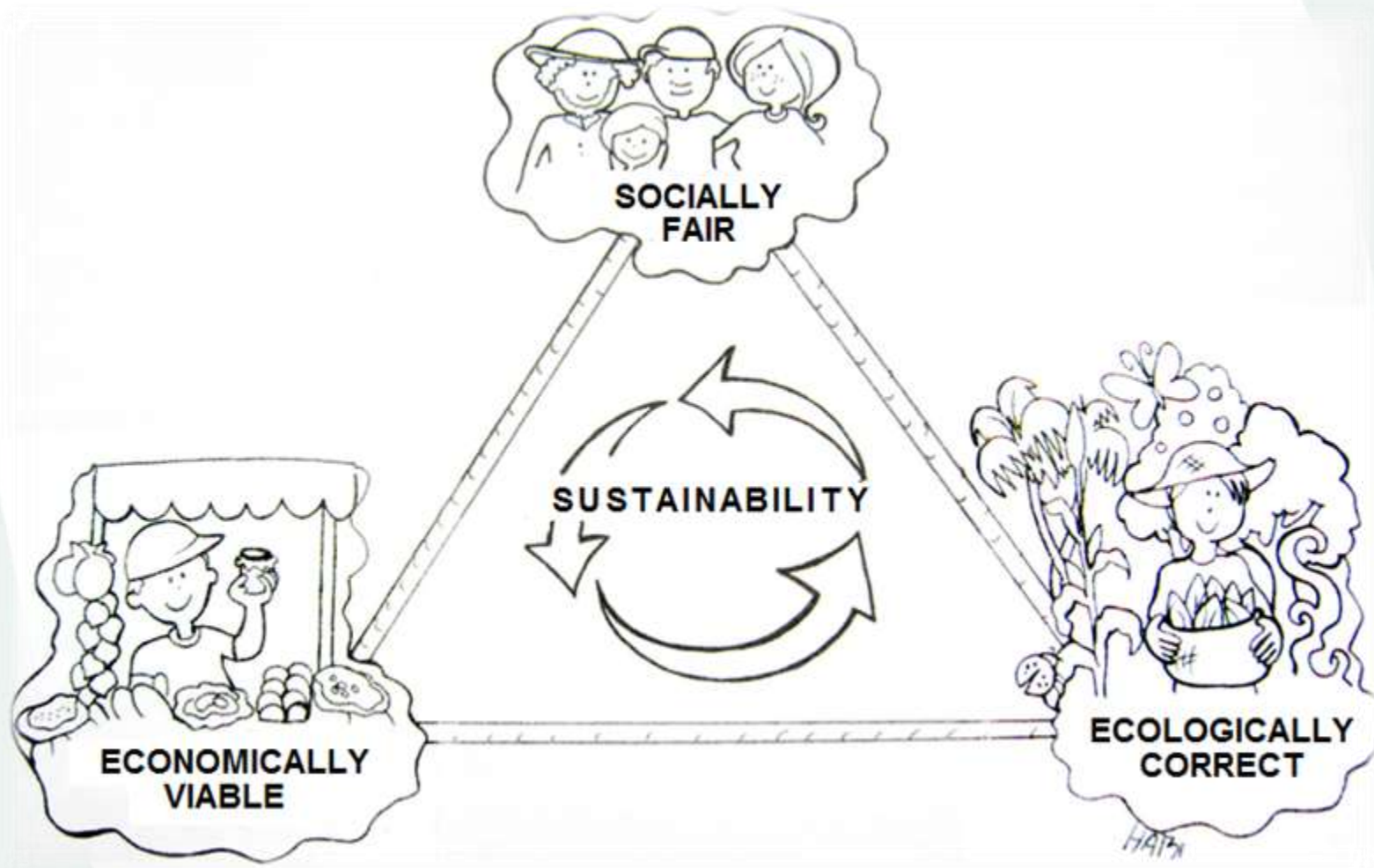


Partnership



Social Technologies

Social inclusion



Social Technologies

Projects that focus on specific problems from farmers' demands for adequate solutions (SOCIALLY, ECOLOGICALLY AND ECONOMICALLY) to the local conditions and, preferably, that are within DRS experiences or resulting from them.

Which technologies are more appropriate for the reality?

Generation of appropriate technologies

Generation of social technologies



EMBRAPA'S TECHNOLOGIES CERTIFIED BY THE BANK OF BRAZIL FOUNDATION



INCLUSÃO QUE TRANSFORMA



Tecnologia Social

LITTLE DAMS FOR CAPTURING SURFACE WATER OF RAIN FALLS

Certified, 2003 – Embrapa Maize and Sorghum

Small reservoirs that, besides providing better conditions for families in rural areas, reduce environmental damage, especially erosion and siltation. The wetting promoted by the System of Little Dams (*Barraginhas*) in agricultural areas of lowland favors the development of family agriculture, providing conditions for planting orchards, sugarcane field and woodlands, as well as for raising small livestock.



BASIC SANITATION IN THE RURAL AREA

BIODIGESTOR ASEPTIC TANK

Certified, 2003 – Embrapa Instrumentation

A system of biodigester aseptic tanks replaces the black pits at a low cost for farmers, prevents contamination of soil and of groundwater and prevents the spread of diseases caused by the ingestion of water inappropriate for consumption.



Fossa Séptica Biodigestora

O que é e como funciona

Construção de
**FOSSA
SÉPTICA**
biodigestora

PRODUCTION OF VARIETAL GRAINS BY SMALL HOLDERS/FAMILY FARMERS



Certified, 2003 – Embrapa Rice and Beans

Encouraging the production of grains for food security (rice, beans and maize), in a sustainable way, without chemical inputs, using traditional varieties (creole), preservation and restoration of local environmental resources (soil, water) and reforestation with Cerrado-native fruit trees.



“PROSA RURAL” (RURAL TALK) EMBRAPA’S RADIO PROGRAM

Certified, 2005 – Embrapa Technological Information

"Prosa Rural" is a 15-minutes long weekly program, retransmitted by more than 1,300 community, business and education radios in the North, Northeast, South, Southeast and Midwest regions of Brazil. It discloses sustainable rural development, especially researches applied in everyday life of smallholders.



EMBRAPA'S KIT FOR MANUAL MILKING



Certified, 2007 – Embrapa Dairy Cattle

Equipment, suitable materials and procedures which are an alternative to minimise microbial contamination of milk due to manual milking, bringing, then, the production of safe milk according to the sanitary and nutritional point of view of consumers.

The correct use of the kit enables the maintenance/inclusion of family-based dairy farmers in the milk production chain with a product of good quality and better value. A booklet on how to use the instruments and inputs properly and about milk storage is also part of the kit.



FULL BUCKET – MILK PRODUCTION

Certified, 2009 – Embrapa Southeast Livestock

Technology transfer program that contributes to the implementation of dairy production in family-based farms. The goal of the program is to train rural extension workers and farmers, to promote the exchange of information on technologies to be regionally applied and to monitor the environmental, economic and social impacts in production systems that adopt the available technologies.



MEDICINAL PLANTS: AN ALTERNATIVE FOR SOCIAL INCLUSION

Certified, 2009 – Embrapa Eastern Amazon

The cultivation, conservation and use workshops for processing medicinal plants offered to different communities brought new opportunities for increased income, cost savings in the procurement of medicines, improved quality of life, and has awoken the networking among members of each community.



SMALL MACHINES DEVELOPED FOR FAMILY-BASED AGRICULTURE

Certified, 2013 – Embrapa Rice and Beans



Three rice threshers and three blowers of grains and seeds, intended to small producers of rice, beans, maize and other grains.



FIELDS WITHOUT FIRE AND CASSAVA PRODUCTIVITY TRIO

Certified, 2013 – Embrapa Eastern Amazon



"Fields without Fire" is the preparation of the area for planting without fire using low-cost hand tools.

The **"Productivity Trio"** is the selection of cuttings-seeds, planting cassava in 1m x 1m spacing and shovelling during the first five months of the crop cycle.

Genetic Resources

LATIN AMERICA AND CARIBBEAN SYMPOSIUM



NATIONAL SYMPOSIUM



REGIONAL SYMPOSIUM



Created in 1997, **SIRGEALC** brings together scientists from different countries to discuss microbial, animal and plants genetic resources, every two years. It is the biggest event on genetic resources in the world, so far.

Many workshops, meetings and symposia help to keep the contact between professional and students.

Genetic Resources

Genetic Resources Bank

Largest Genetic Resources Bank in Latin America and 3^o of the world.

Including

Microorganisms,
Animals,
Plants.

Capacity ➔ **750,000.**

Actual ➔ **124,000 (765 species).**



Genetic Resources

Alelo

The Alelo Portal aims to gather information about genetic resources. Besides the databases and information systems, it is formed by websites that organize text information about the system of curatorship and the terms and concepts of genetic resources in Alelo databases.



Portal



Information

Microorganism

Animals

Plants

5,000 N° of records

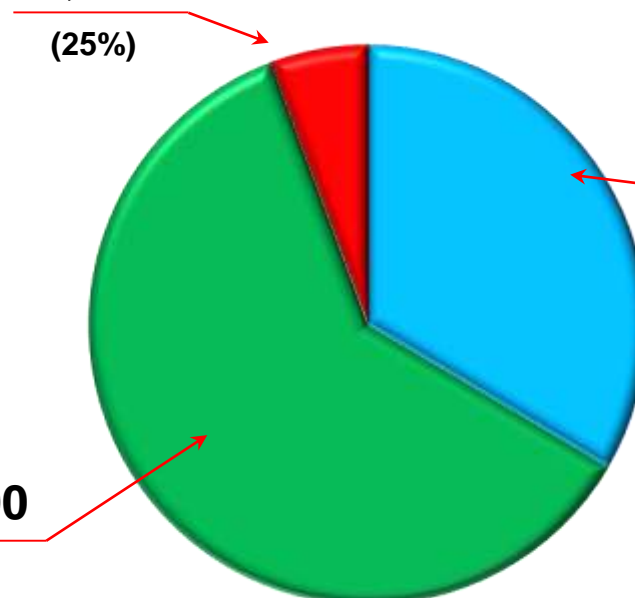
(25%)

32,000

(100%)

57,000

(35%)



■ Microorganisms

■ Plants

■ Animals



Site
News, agenda, FAQ, forum, partner institutions, portfolio of germplasm banks



SYSTEM

• Animal • Microorganism • Plant

Maintenance of passport data, characterisation and assessment

WikiRG
Terms of reference, concepts, definitions, flowchart, processes



SURVEYS

• Animal • Microorganism • Plant

Passport data, statistics of characterisation and assessment in germplasm banks

Documents
Files, texts, spread sheets, presentations, control of versions, survey in files



EXCHANGE

• Microorganism • Plant

Survey, selection, request, following the transit of plant germplasm to TIRFAA

BAGs-Collections
Site for presentation of Active Germplasm Banks and collections



Legislation

Regulatory framework, treaties, agreements, contracts, procedures

Passport

It contains the germplasm identification data, what it is and where it came from.



Observation

It contains the test data within specification or agronomic evaluation in consolidated format.



News

04/05/2015 - Nova funcionalidade "Custos" / New functionality "Costs"
 Nova funcionalidade de custos, está disponível no Menu Configurações, Opção Custos. / New feature costs, is available on the Menu Settings, Option Costs.

20/03/2015 - Interrupção do Serviço / Interruption of Service
 O Alelo vai sobre uma interrupção do serviço a partir de 20/03/2015 as 19h até as 17h do dia 22/03/2015, por motivo de troca de equipamento de rede para melhorar o serviço. The Alelo goes on a service outage from 03.20.2015 19h to 17h of the day 03/22/2015, by network equipment exchange of reason to improve the service.

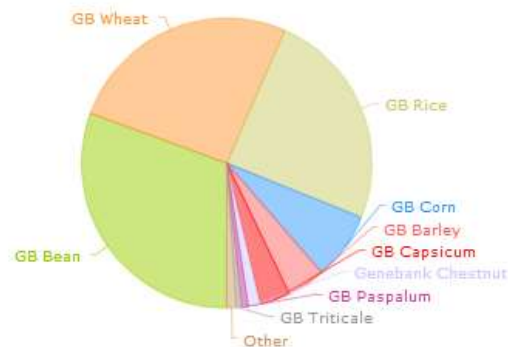
10/07/2013 - Alteração tela cadastro de passaporte / Change screen passport registration
 Colocamos o campo para filtro "Palavra Chave" afim de facilitar a busca do acesso. / We put the field to filter "Keyword" in order to facilitate the search of access.

Conservation

It contains the summary of storage and use conservation structure.



Access Amount Per Genebank





Passport

[Presentation](#)[Taxonomy](#)[Degree of Completion](#)[Accesses per Institution](#)[Accesses per Taxonomy](#)[Images per Bank](#)[Search of Accesses](#)[Graphics](#)[Heat Map](#)

:: [Home](#) > [Passport](#) > [Presentation](#)

Presentation - Passport

Passport data comprises the set of access identity information. The main attributes pass by the way have been obtained, the location and information about the basic features of access, such as taxonomic classification. These data are the gateway to genetic resources system, from them are aggregated new data, as is done crawling access the various BAGs.

[Print](#)[Send](#)[Top](#)



Passport

Presentation

Taxonomy

Degree of Completion

Accesses per Institution

Accesses per Taxonomy

Images per Bank

Search of Accesses

Graphics

Heat Map

:: Home > Passport > Degree of Completion

Degree of Banks Filling

Institution	Bank	Select
Embrapa Agroindústria Tropical	Genebank Chestnut-Active Germplasm Bank of Chestnut	
Embrapa Arroz e Feijão	GB Bean-Active Germplasm Bank bean	
Embrapa Arroz e Feijão	GB Rice-Germplasm Bank Rice	
Embrapa Hortaliças	GB Capsicum-Germplasm Bank Capsicum	
Embrapa Mandioca e Fruticultura	GB Acerola-Active Germplasm Bank of Acerola	
Embrapa Mandioca e Fruticultura	GB Banana-Active Germplasm Bank of Banana	
Embrapa Mandioca e Fruticultura	GB Pineapple-Germplasm Bank of Pineapple	
Embrapa Mandioca e Fruticultura	Genebank Manihot-Germplasm of active bank Manihot	
Embrapa Mandioca e Fruticultura	Genebank Papaya-Germplasm of Active Bank Papaya	
Embrapa Milho e Sorgo	GB Corn-Germplasm Bank Corn	
Embrapa Pecuária Sudeste	GB Paspalum-Germplasm Bank Paspalum	
Embrapa Tabuleiros Costeiros	BAG Cane-Germplasm Bank of Cane	
Embrapa Trigo	GB Barley-Germplasm Bank Barley	
Embrapa Trigo	GB Canola-Germplasm Bank of Canola	

Print

Send

Top

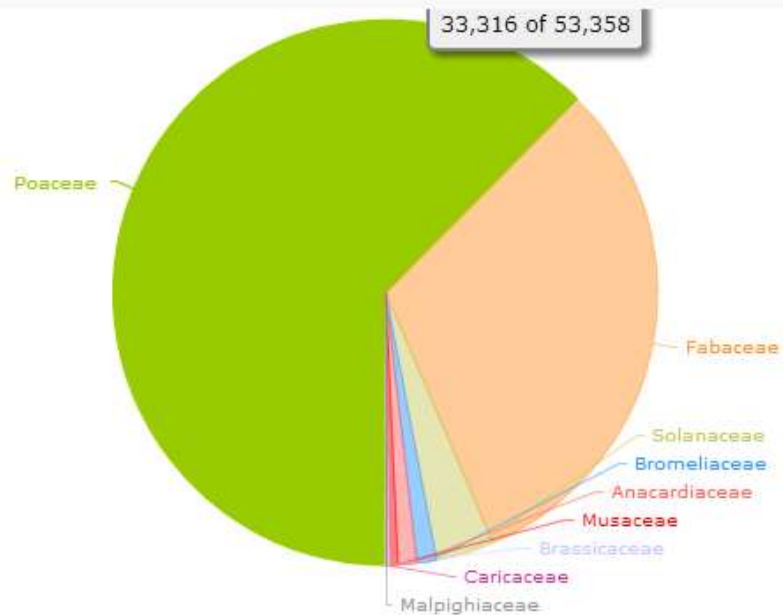
Genetic Resources

Passport

- Presentation
- Taxonomy
- Degree of Completion
- Accesses per Institution
- Accesses per Taxonomy**
- Images per Bank
- Search of Accesses
- Graphics
- Heat Map

:: Home > Passport > Accesses per Taxonomy

Number of Hits For Family





Localization

Staff



1º Int. Training



Luis Robledo (PAR)
Federico Condón (URU)



Instituto Paraguayo de
Tecnología Agraria



Instituto Nacional de
Investigación Agropecuaria



A partnership to enhance agricultural innovation and development

An international initiative supported by different partners aiming to link experts and institutions to develop cooperative research projects for development.

Brazilian,
African,
Latin American and Caribbean.

The MKTPlace aims to benefit smallholder producers by enabling innovation through collaborative partnerships between Africa, LAC and Brazil.

3 Basic pillars:

- 1) A policy dialogue between the main authorities from Africa, LAC and Brazil supporting institutions focused on the development of a mutually agreed framework for collaboration;
- 2) A forum for capacity strengthening, presentation and discussion of research for development ideas consolidated into research for development projects supported by the MKTPlace;
- 3) Joint agricultural research for development projects.

369 accessions from 11 species/breeds were exchanged.

The species exchanged were

Napier grass,
Cotton,
Peanut,
Coffee,
Cowpea,
Cassava,
Pepper,
Bean, and
Tomato.

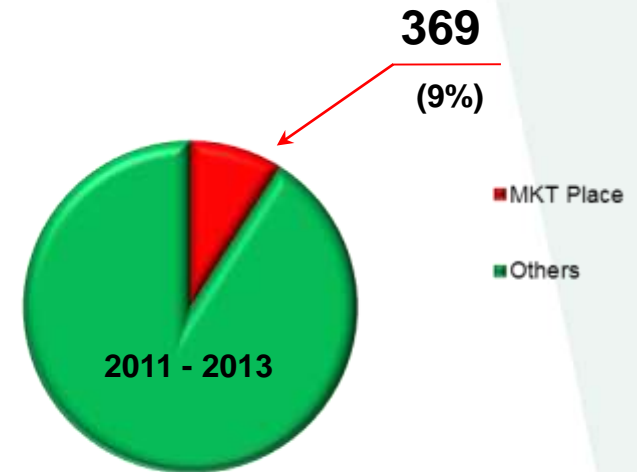
The exchange involved 8 countries

Africa

Cameroon,
Kenya,
Nigeria,
Uganda,
Tanzania.

Latin America

French Guyana,
Colombia,
Bolivia.



Partnership



A partnership to enhance agricultural innovation and development



Ministério da
Agricultura, Pecuária
e Abastecimento

Ministério da
Ciência, Tecnologia
e Inovação



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP





Brazilian Agricultural Research Corporation
Ministry of Agriculture, Livestock, and Food Supply



search

What we do ^

Embrapa v | Multimedia v | News | Libraries | Press room | Access to Information | Click here if you are a: v

Products, Processes and Services

Projects

Publications



Agritempo

Agricultural weather monitoring system has new version

News | [read more](#)



8/25/15 | Genetic improvement

**Parceria Embrapa-Basf
lança Sistema de
Produção de soja
Cultivance**

8/26/15 | Biodiversity

**Pesquisa apresenta alternativas para a agricultura
sustentável na bacia Guapi-Macacu, no RJ**

8/25/15 | Mechanization and Automation

Drones auxiliam no aumento da produtividade no campo

Embrapa in Brazil

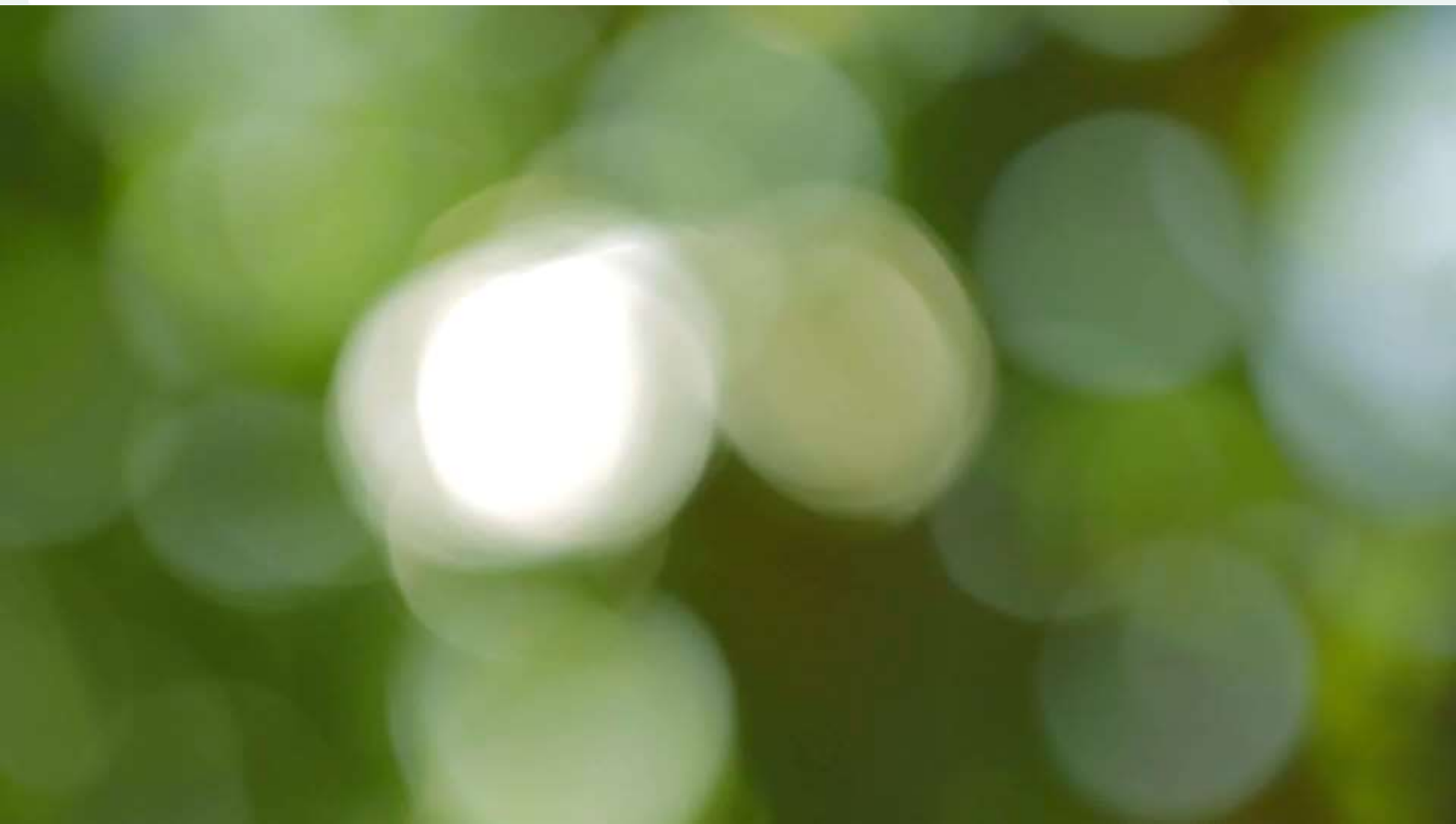


» Browse and learn more about our units

International Operations



» Embrapa's international activities



Thank you

zeze.sampaio@embrapa.br
and
marcelo.freitas@embrapa.br



Ministry of
Agriculture, Livestock
and Food Supply

