

THE IMPORTANCE OF RECOGNIZING THE
INTERNATIONAL TREATY IN THE CBD'S PROTOCOL
ON ACCESS AND BENEFIT SHARING (**ABS**)

SIDE EVENT

July 12, 2010

COUNTRIES' INTERDEPENDENCE ON
GENETIC RESOURCES FOR FOOD AND AG

Maria Jose Sampaio (zeze.sampaio@embrapa.br)
BRAZILIAN AGRICULTURE RESEARCH CORPORATION



**AMAZON
BIODIVERSITY**

- 40,000 VARIETIES OF PLANTS,
- 427 MAMMALS,
- 1,294 BIRDS,
- 378 REPTILES,
- 427 AMPHIBIANS, AND
- 3,000 FISHES

**POTENTIAL UTILIZATION
POTENTIAL BENEFIT SHARING**

COSMETICS INDUSTRY



Amor América



Ekos



MANEJO FLORESTAL



ULTIVO ORGÂNICO



SISTEMAS AGROFLORESTAIS



POLICULTIVO



CONSÓRCIO



CABRUCÁ



área que estava degradada é reflorestada;
 dução do que plantam que tiram o sustento;
 as espécies de plantas cultivadas juntas;
 voreas plantadas em uma pequena área, formando um bosque.



"Florestas de Alimentos"



Certificação Orgânica...

Produção de açaí orgânico



JUICES,
 BEVEAGES
 AND
 OTHER USES

EXPORT AS
 WELL

THESE EXAMPLES

SEEM

TO FIT WELL

IN THE ABS

DISCUSSIONS

Bilateral Direct Negotiations

HOWEVER,...

**AGRICULTURE
IS A DIFFERENT BEAST
WHICH NEEDS SPECIAL
TREATMENT**

**IT IS STRATEGIC FOR
SURVIVAL OF MANKIND**

CASSAVA HAS BEEN ACQUIRED BY ASIAN AND AFRICAN COUNTRIES FROM
DIFFERENT COUNTRIES IN LA
AND WERE DEVELOPED INTO CASH CROPS

RUBBER HAS BEEN ACQUIRED BY MALAYSIA AND WAS DEVELOPED INTO A
CASH TREE PLANTATION

SOME IMPROVED CLONES TRANSFERRED BACK TO BR IN THE 90'S

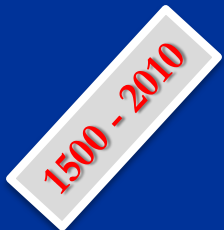
BOS INDICUS HAS BEEN ACQUIRED BY BRAZIL AND BRED
INTO MUCH BETTER BREEDS CREATING THE "NEW ZEBU"
SEMEN IS BEING NEGOTIATED WITH FARMERS IN INDIA

IMPROVED GRASSES , CORN, COTTON AND OTHER VALUE ADDED
PRODUCTS ARE BEING SENT TO DIFFERENT COUNTRIES IN AFRICA

BOLIVIA AND VENEZUELA ARE GROWING SOYBEAN RECEIVED FROM BRAZIL

COLOMBIA IS GROWING SUGAR – CANE

IS THIS ALL TO BE CONSIDERED BIOPIRACY ????



**ZEBU (CATTLE)
SOUTH ASIA**



**CORN
MEXICO**



SOYBEAN - ASIA



**SUGAR CANE
ASIA**



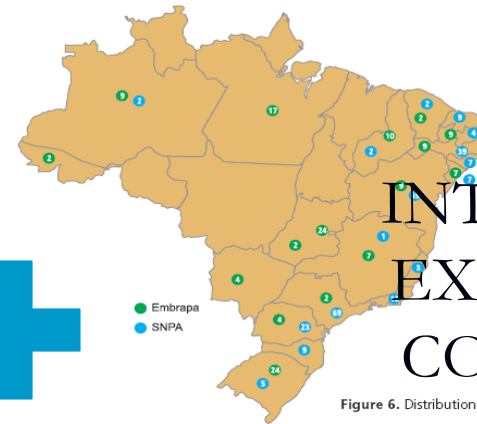
**WHEAT
CENTRAL EUROPE**

**SOME INITIAL GERMPLASM WAS INTRODUCED IN BRAZIL DURING COLONIAL TIMES – STARTING IN 1500
SOME WERE MUCH LATER INTRODUCED BY RESEARCH INSTITUTIONS**

ROADMAP FOR FOOD SECURITY/AGRICULTURE



COLLECT



INTRODUCE
EXCHANGE
CONSERVE

Figure 6. Distribution of Active Germplasm Banks by Brazilian States.

Figure 7. Ecogeographical regions where cassava was collected in Brazil.



INVEST IN
RESEARCH

1972 - 2010

GERMPLASM BANKS

PRODUCE
AND
BUILD
THE
BUSINESS
ENVIRON-
_MENT

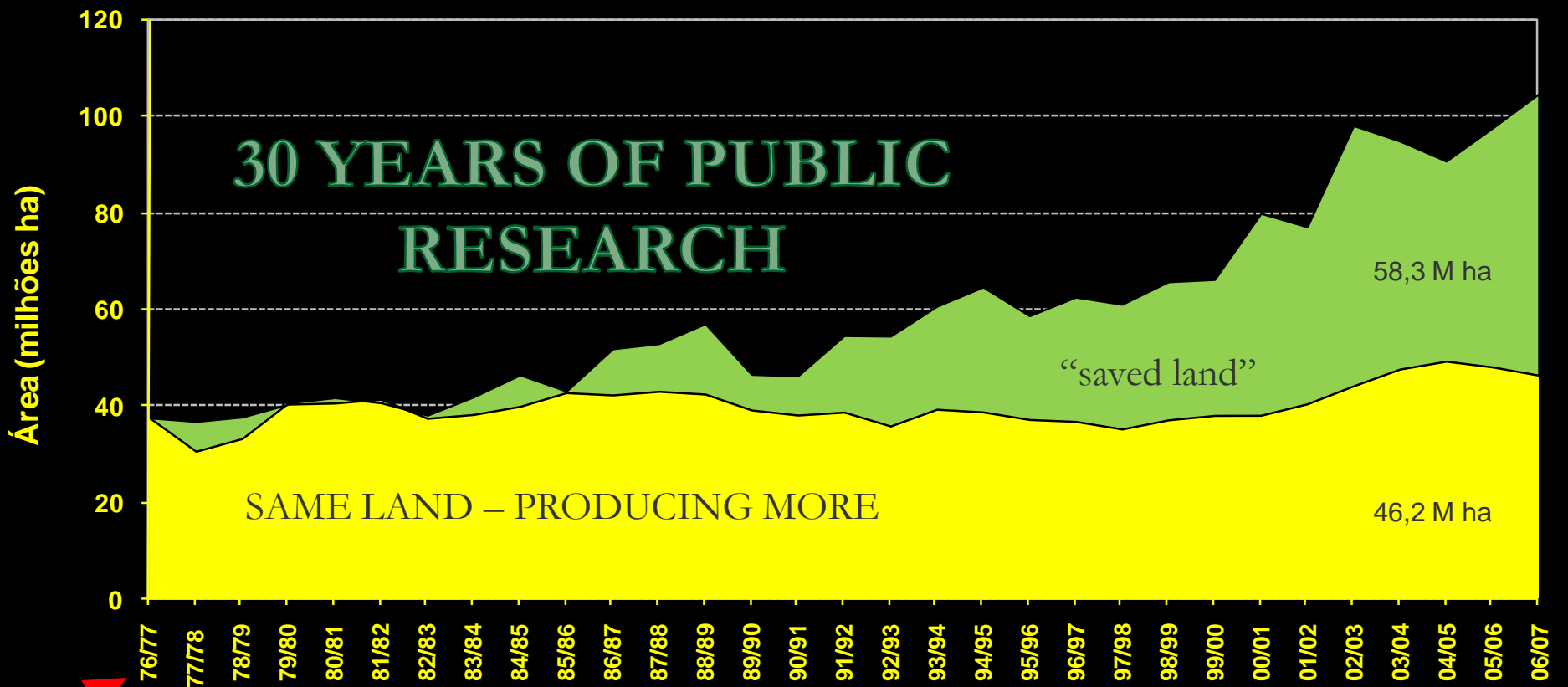


RESEARCH
CENTERS



Fonte: Martha Jr. (2008) a partir de Conab (2007)

■ Área cultivada ■ Área poupada



Productivity 1,4 t ha⁻¹



Productivity 3,3 t ha⁻¹



Ministério da Agricultura, Pecuária e Abastecimento



FOR PRODUCTIVITY TO INCREASE :

. CREDIT TO FARMERS



1960 - 2010

BETTER ADAPTED VARIETIES;

. QUALITY SEEDS;



. INTEGRATED PEST MANAGEMENT

. IMPUTS – FERTILIZERS

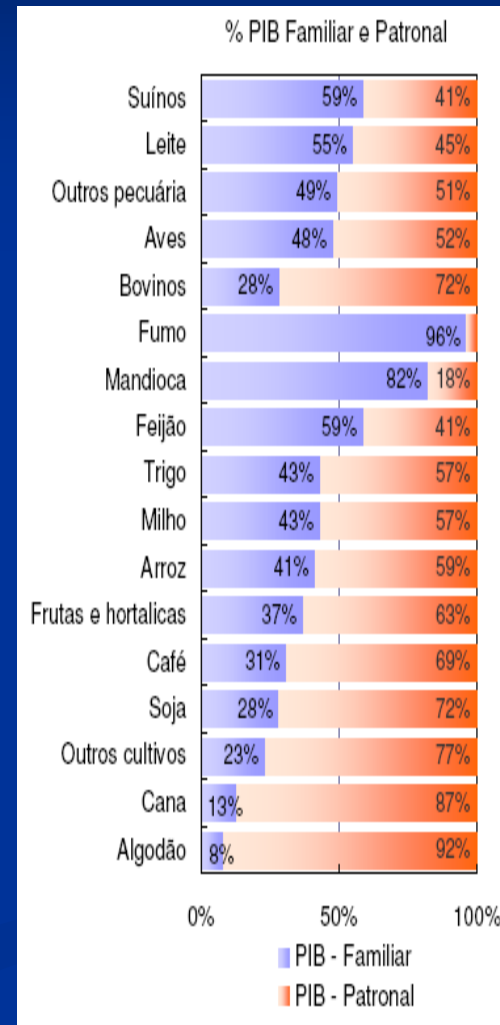
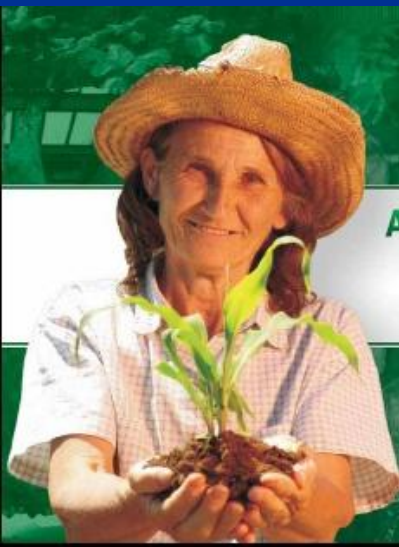
. SOIL & WATER CONSERVATION PRACTICES



Fonte: Alves et al., 2005; Gasques et al., 2007; Lopes & Guilherme, 2007

MAJOR AGRIBUSINESS PRODUCTS FAMILY AND NON-FAMILY FARMING

- CASSAVA (native)**
- TOBACCO (exotic)**
- BEANS (exotic)**
- WHEAT (exotic)**
- CORN (exotic)**
- RICE (exotic)**
- FRUITS and VEG (exotic)**
- COFFEE (exotic)**
- SOYBEAN (exotic)**
- SUGAR-CANE (exotic)**
- COTTON (exotic)**
- PLUS GRASSES (exotic)**



ONLY CASSAVA IS NATIVE TO BRAZIL

CROPS AND ANIMAL BREEDS ALSO COVERED BY THE NATIONAL PROGRAM WHICH FINANCES FAMILY FARMERS IN BRAZIL

- CARNAÚBA, BRAZIL NUT, CAJU NUT, PEANUTS (NATIVE CROPS)



- SHEEP, GOATS, CATTLE



**MAIS
ALIMENTOS**

**A FORÇA DA
AGRICULTURA FAMILIAR
ESTÁ COM TUDO NA EXPOINTER.**



FAMILY FARMING IS GROWING WITH GOVERNMENTAL SUPPORT



THEY GROW , CONSUME AND SELL MAJOR COMMODITIES AND OTHER CROPS

OVERALL PRODUCTION AND WORLD RANKING OF SOME COMMODITIES PRODUCED IN BR (INTERNAL USE AND EXPORT)



COMMODITIES ORIGIN	WORLD RANK	PRODUCTION (Million ton)
SUGAR CANE (exo)	1	420.1
ORANGES (exo)	1	17.8
COFFEE (exo)	1	2.2
PAPAYA (exo)	1	1.7
SOYBEAN (exo)	2	50.2
<u>CASSAVA (native)</u>	2	26.6
BEEF (exo)	2	7.8
BANANAS (exo)	2	6.7
POULTRY (exo)	2	8.7
CORN (exo)	3	34.9
PINEAPPLES (mix)	4	1.4
PORK (exo)	4	3.1

SOURCE: FAO STATISTICAL DATABASE, 2005. (exo = exotic / origin - other country)

YELLOW – EXOTIC CROPS / BREEDS

RED – NATIVE CROP

CROPS

Seed market

Wheat 17%

Cotton 2%

Rice 5%

Beans 1%

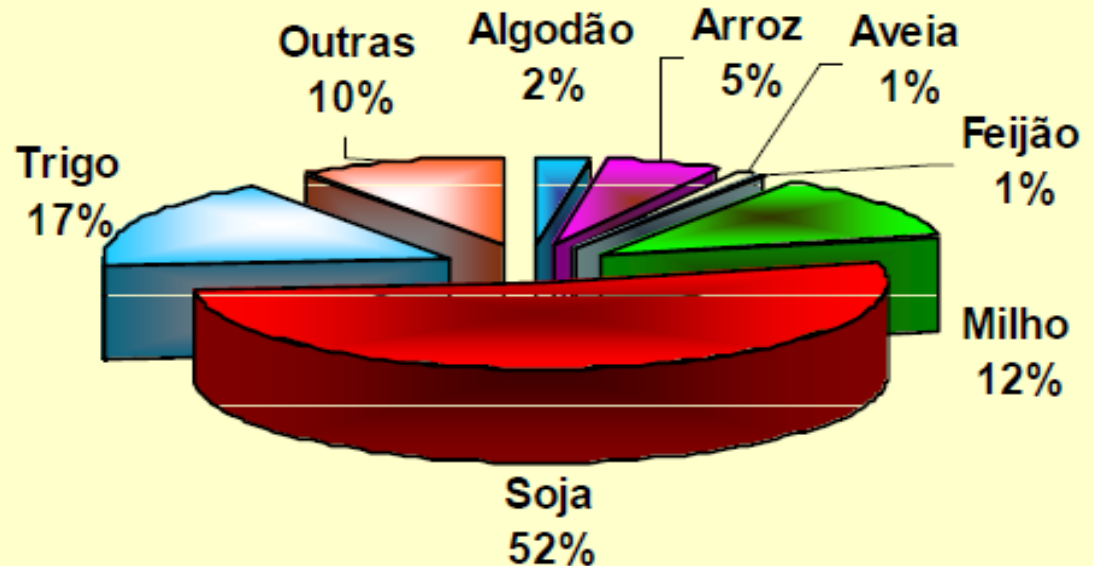
Corn 12%

Soybean 52%

Others 10%

PRODUÇÃO DE SEMENTES SAFRA 06/07

PRODUÇÃO TOTAL = 1,50 MILHÕES DE TONELADAS



1.5 MILLION TONS OF SEEDS PRODUCED AND SOLD FOR PLANTING IN 2007

(0.5 million dollars – selling value seeds Annex I crops x ~0.7% /

however present rules for BS are voluntary)

IT IS DIFFICULT TO GUESS WHEN NEW VARIETIES WILL CONTAIN

ANY GENE COMING FROM CROSSES WITH MLS MATERIAL

EMBRAPA IS TRACKING NEW CASSAVA VARIETIES

THESE DATA WILL BE USEFUL WHEN

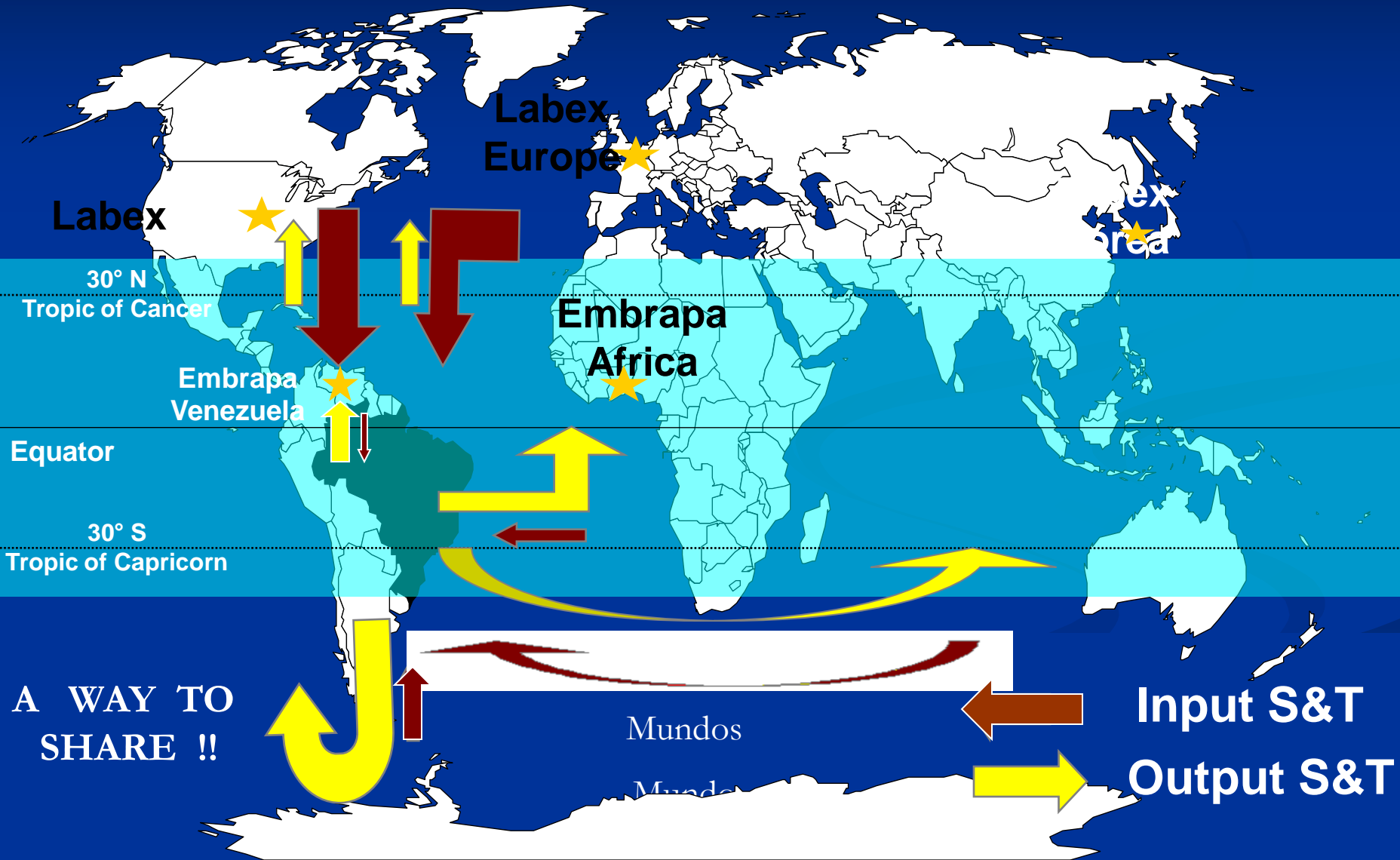
THE LEVEL OF PAYMENT GETS REVIEWED BY THE GOVERNING BODY OF THE TREATY



**SHARING BENEFITS
SEVERAL WAYS
POLITICAL WILL
COORDINATION
INSTITUTIONAL CAPACITY**



Tropical Agriculture: a fine case of international cooperation



IMPROVING THE
CHANCES TO NEGOTIATE
TECHNOLOGY TRANSFER
NORTH – SOUTH AND
SOUTH – SOUTH

USA
EUROPE
KOREA
GHANA PLUS
VENEZUELA
PANAMA
CHINA

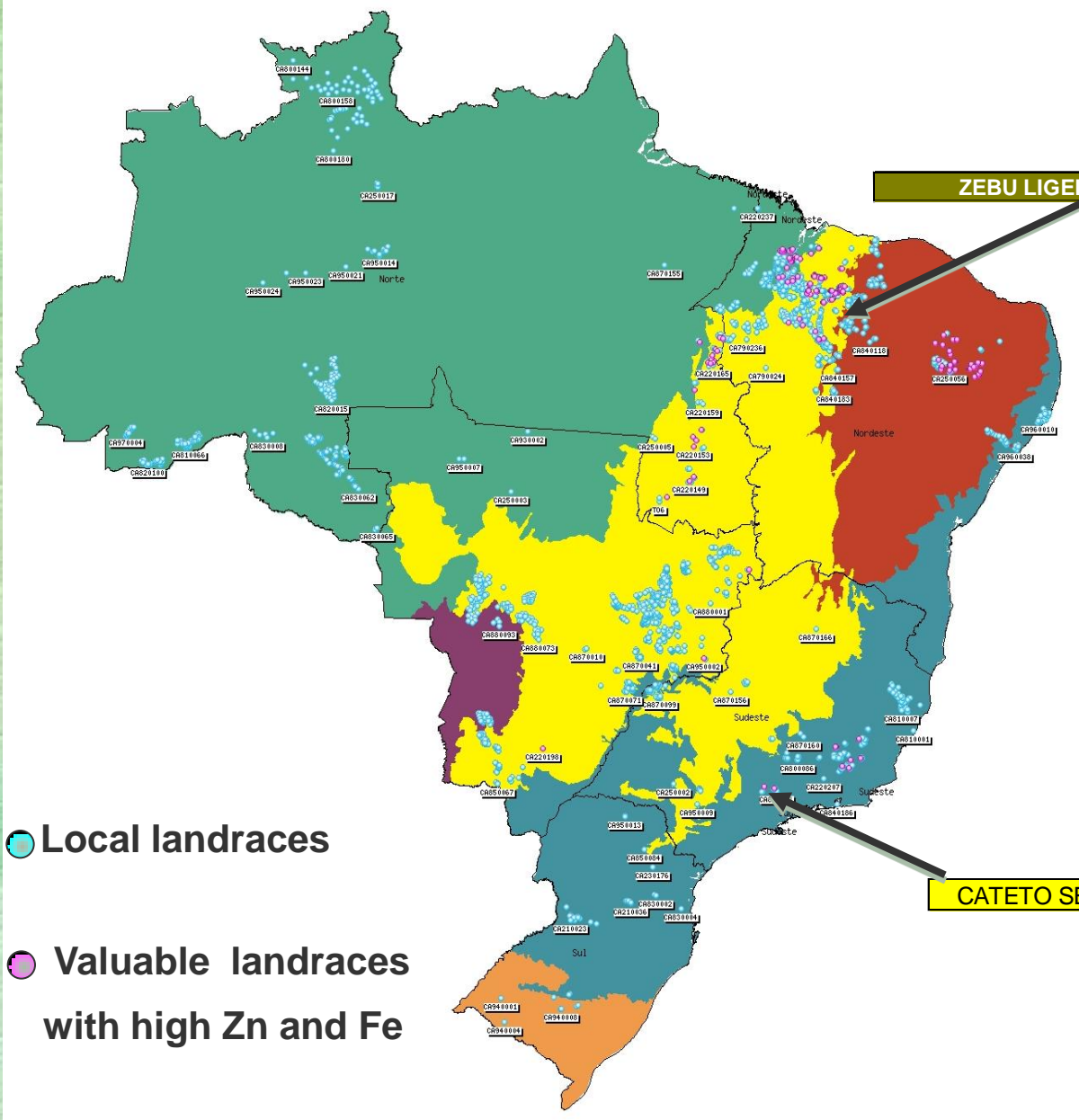


POLITICAL DECISION

EMBRAPA
INTERNATIONAL



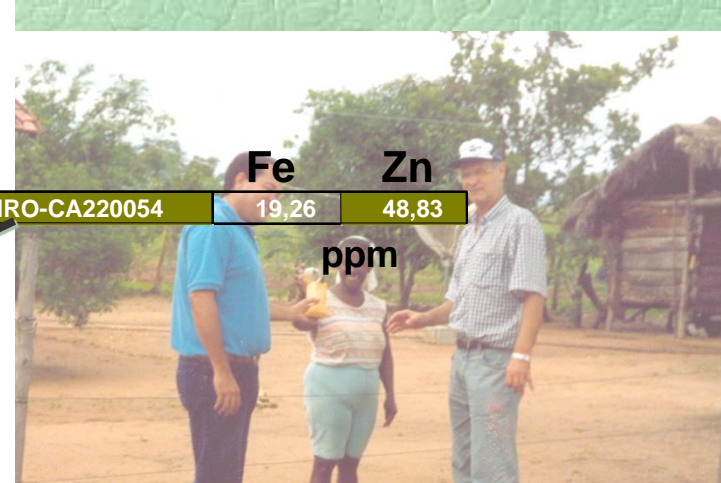
SOME EXAMPLES



- Local landraces
- Valuable landraces with high Zn and Fe

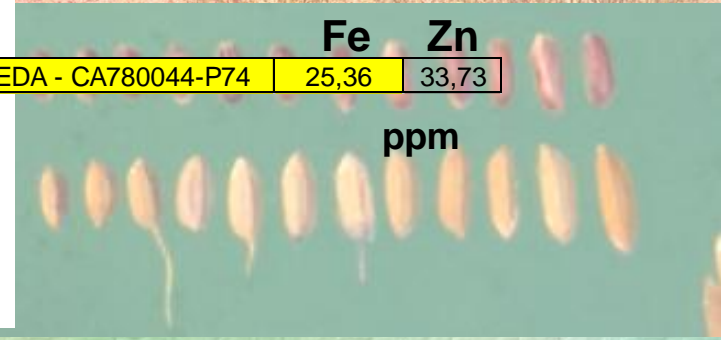
ZEBU LIGEIRO-CA220054

Fe	Zn
19,26	48,83
ppm	



CATETO SEDA - CA780044-P74

Fe	Zn
25,36	33,73
ppm	



BioFORT PROJECT

Germplasm screening
For RICE best Parents found in
Brazil among landraces which
were further improved by
classical breeding (molecular
marked assisted) to contain high
values of ZINC and IRON
USES – Northeast Brazil
and Africa



GLOBAL EFFORT

HARVESTPLUS IS FUNDED
BY B&M GATES FOUNDATION
AND THE CGIAR

AGROSALUT IS FUNDED BY
THE CANADIAN CIDA AGENCY
BIOFORT IS FUNDED

BY EMBRAPA AND A RESEARCH

FUND MAINTAINED BY MONSANTO

WITH ROYALTIES FROM ITS TECH FEES



AgroSalud



HarvestPlus
Breeding Crops for Better Nutrition



Arroz e Feijão

Ministério da
Agricultura, Pecuária
e Abastecimento



COTTON 4 PROGRAM

**TECH TRANSFER ON
COTTON
PRODUCTION
BENIN, BURKINA
FASO,
CHADE , MALI**

**PORTUGUESE SPEAKING COUNTRIES
TECH TRANSFER ON
TROPICAL FRUITS PRODUCTION
AND CASSAVA MANAGEMENT**



**ANGOLA
IIC
TECH TRANSFER
SOIL, SEEDS AND
TISSUE CULTURE**

**INTITUTIONAL
CAPACITY**

HAITI
RE-BUILDING AGRICULTURE
GERMPLASM TRANSFER
SEED TRANSFER – COMMERCIAL
VARIETIES

TRAINING

IMPLEMENTATION OF PROJECTS
WITH CAPACITY BUILDING
OF LOCAL INSTITUTIONS

BOLIVIA
INIAF
SEED SYSTEMS

FARMS ORGANIZED
BY HAITI'S
GOVERNMENT
WITH
INTERNATIONAL
FUNDING



Processo	Produto	Procedência	Destino
015/09	Mamona	CNPA	USA
035/09	Mucuna Preta	CNPH	IICA-Haiti
042/09	Nabo Forrageiro	CNPH	IICA-Haiti
043/09	Ervilha	CNPH	IICA-Haiti
078/09	Cebola	CNPH	INTA-C.Rica
097/09	Soja	SNT	ALIAR-Colôr
134/09	Cenoura	CNPH	IICA-Haiti
135/09	Coentro	CNPH	IICA-Haiti
136/09	Brócolos	CNPH	IICA-Haiti
137/09	Repolho	CNPH	IICA-Haiti
138/09	Cebola	CNPH	IICA-Haiti
139/09	Tomate	CNPH	IICA-Haiti
060/09	Algodão	ABC-DF-BRA	Mali

036/09	Guandú	CNPH	IICA-Haiti
037/09	Crotalária	CNPH	IICA-Haiti
038/09	Feijão de Porco	CNPH	IICA-Haiti
039/09	Sorgo	CNPH	IICA-Haiti
040/09	Aveia Preta	CNPH	IICA-Haiti
041/09	Milheto	CNPH	IICA-Haiti

CASTOR BEANS,
MUCUNA BEANS, PEAS,
CARROTS, CABBAGE,
ANIONS, TOMATOES,
BEANS, SORGHUM,
MILLET, COWPEA



A cooperação brasileira no Haiti.

2009 – 2010 TRANSFERS OF TROPICAL ADAPTED LINES, CLONES, VARIETIES

084/09	Cenoura	CNPH	IER-MALI
085/09	Tomate	CNPH	IER-MALI
086/09	Cebola	CNPH	IER-MALI
087/09	Repolho	CNPH	IER-MALI
088/09	Brócolos	CNPH	IER-MALI
173/09	Sorgo	CNPMS	Kenya
174/09	Sorgo	CNPMS	INRAN-NIGER

MALI

CARROTS, TOMATOES, ANIONS, CABBAGE,
GREEN CABBAGE, CORN

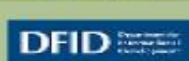
099/09	Trigo	CNPT	Kenya
100/09	Cevada	CNPT	Kenya
101/09	Centeio	CNPT	Kenya
102/09	Triticale	CNPT	Kenya

KENYA

SORGHUM, WHEAT, TRITICALE, OAT, BARLEY

046/10	Cenoura	Embrapa	Mali
051/10	Miho	CNPMS	Mali
054/10	Pêssego	CPACT	África do Sul

SOUTH AFRICA PEACH



**AFRICA
BRAZIL**

Agricultural Innovation Marketplace



BRAZIL-ÁFRICA DIALOGUE ON FOOD SECURITY, COMBATING HUNGER, AND RURAL DEVELOPMENT

LAUNCHED MAY 2010
www.africa-brazil.org

**THE AFRICA-BRAZIL AGRICULTURAL INNOVATION MARKETPLACE
AIMS TO BENEFIT SMALLHOLDER PRODUCERS BY ENABLING INNOVATION
THROUGH COLLABORATIVE PARTNERSHIPS BETWEEN AFRICA AND BRAZIL.**

HOPEFULLY THE
ABS PROTOCOL
WILL HELP
TO IMPROVE WHAT IS
ALREADY HAPPENING
IN TERMS OF BENEFIT
SHARING MAKING SURE
THAT GR ARE
DULLY CONSERVED
FOR FUTURE GENERATIONS
THANK YOU