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

AMAZON BIODIVERSITY

POTENTIAL UTILIZATION
POTENTIAL BENEFIT SHARING
COSMETICS INDUSTRY

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 ?????
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

GERMPLASM BANKS

INVEST IN RESEARCH

PRODUCE AND BUILD THE BUSINESS ENVIRONMENT

1972 - 2010

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

Figure 7. Ecogeographical regions where cassava was collected in Brazil.
Área (milhões ha)

30 YEARS OF PUBLIC RESEARCH

SAME LAND – PRODUCING MORE

Productivity 1,4 t ha\(^{-1}\)

Productivity 3,3 t ha\(^{-1}\)

FOR PRODUCTIVITY TO INCREASE:

. CREDIT TO FARMERS

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
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)

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

**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%

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

A WAY TO SHARE !!

Labex
Labex Europe
Embrapa
Embrapa Africa

Tropic of Cancer
30° N
Embrapa Venezuela

Tropic of Capricorn
30° S

Mundos
Mundos

Input S&T
Output S&T
IMPROVING THE CHANCES TO NEGOTIATE TECHNOLOGY TRANSFER NORTH – SOUTH AND SOUTH – SOUTH
SOME EXAMPLES
Local landraces

Valuable landraces with high Zn and Fe

Embrapa
Ministério da Agricultura, Pecuária e Abastecimento
BRASIL
GOVERNO FEDERAL
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
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

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

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

Acervo ABC/MRE. Viver em Marpou, Haiti.
2009 – 2010 TRANSFERS OF TROPICAL ADAPTED LINES, CLONES, VARIETIES

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

KENYA
SORGHUM, WHEAT, TRITICALE, OAT, BARLEY

SOUTH AFRICA
PEACH
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 CONSIDERED FOR FUTURE GENERATIONS THANK YOU