Global Cassava Partnership for the 21st Century

GCP21
A Global Alliance
For the
Improvement of Cassava

Developing
a Global Vision for Cassava
Cassava Producing Countries

105 Countries

20%  50%  30%

Latin America  Africa  Asia
Cassava Producing Countries

Productivity

- Latin America: 12t/ Ha
- Africa: 10t/ Ha
- Asia: 19t/ Ha
Cassava Producing Countries

Latin America: 3MHa
Africa: 12MHa
Asia: 3.5MHa
Cassava Productivity Highly Variable

Productivity Increase of Cassava in the World

- World Yield (T/Ha)
- Africa Yield (T/Ha)
- Asia Yield (T/Ha)
- Latin Amer. Yield (T/Ha)

Cumulative Percentage Increase

Asia

Africa

World

Latin A

% Increase / Year

Cassava Production Highly Variable

Production Increase of Cassava in the World

Asia
Africa
World
Latin A

Cumulative Percentage Increase

% Increase / Year

World Production (M Tons)
Africa Production (M Tons)
Cassava Production in Africa

Production Increase of Cassava in Africa

- Africa Yield (T/ha)
- Africa Production (M Tons)
- Africa Area (M Ha)

Production: 350%
Surface: 200%
Productivity: 170%
African Food Productivity Increase

African Food Productivity Increase (%)

R² = 0.9802

R² = 0.97761

Wheat

Cassava

African Food Productivity Increase (%)

10.8 t/Ha

15.4 t/Ha

0.35 b people

1.2 b people

R² = 0.9761
African Food Productivity Increase

Increase Cassava Indexes in Africa

- Africa Yield (T/Ha)
- Africa Production (M Tons)
- Africa Area (M Ha)

Cumulative Percentage Increase:
- 426 Mt
- 30 t/Ha
- 14.2 MHa
GCP21 Push-Pull Concept

Lack of Science

Genetic Complexity

No Seed Systems

Low Value

Consumers Needs

Push Science into cassava

Pull Cassava Products
What Will GCP21 Do?

- Trigger, Organize, stimulate R&D at the global level: looking for gaps
- Invest, transfer modern science into cassava, inviting top labs in AICs
- Steer communication on cassava through thematic meetings, global meetings, databases, websites, publications…
Creation of a Secretariat: RTB, CIAT, IITA,

Creation of a Technical Advisory Group: RTB, CIAT, IITA, representatives from Africa and Asia, Embrapa

Strengthen relations between GCP21 and RTB by participating in planning and strategic meetings of RTB, and by co-organizing thematic meetings on cassava

GCP 21 will be a Partnership Platform for RTB which will contribute to mobilizing advanced research and development players in the world
Cassava Productivity

Poverty

Africa

Latin America

Asia

Food Security

Industry

> 20 t/ha

> 15 t/ha

< 10 t/ha
The Cassava Poverty Circle

No Productivity
No Input
No Industrial Use
No Return
Examples of Activities

1- Developing Cassava Omics
2- Declaring War on Cassava Viruses - RTB
3- Preserving Cassava Landraces – RTB, GB
4- Cassava-Base Feed System – RTB, WF, LSF, HT
5- Cassava and a Better Nutrition – RTB, A4NH
6- Cassava Academy – all CRPs and NARS
7- Cassava and the Climate Change - CCAFS
8- Cassava Seed System Delivery – RTB, HT
A War on Cassava Viruses

Cassava Poverty Circle

No Input

No Productivity

No Return

Virus Eradication

10t/Ha

15t/Ha

20t/Ha

30t/Ha

No Industrial Use
A War on Cassava Viruses

CMD

Whiteflies

CBSD
Declaring a War on Cassava Viruses in Africa

Bellagio, May 6-10, 2013

Can we prevent CBSD to reach West Africa?
Can we decrease the impact of cassava viruses in Africa?
Can we prevent CBSD and CMD to spread in the rest of the world?
Declaring War on Cassava Viruses in Africa

1- Creating a Global Alliance to Declare a War on Cassava Viruses
2- Writing the Road Map
3- Publication of the Road Map
4- Enlarging the Global Alliance
5- Action Plan - Proposals
6- Funding of the Action Plan
7- Execution of the Action Plan
Contrasting responses between maize and cassava: 2-3°C temp rises, changes in prec

CHANGE IN SUITABILITY FOR MAIZE - 2050
Change In suitability for Cassava 2050
Change In Whitefly Populations 2050

Bemisia tabaci

Current

2050

B. tabaci current suitability
1
2
3
4
5

B. tabaci 2050 suitability
1
2
3
4
5

1-No suitability, 2-Restricted, 3-Low, 4-Moderate, 5-Optimum
## Frame Work for Action Plan

<table>
<thead>
<tr>
<th>Action Frames</th>
<th>Organizations involved</th>
<th>Immediate</th>
<th>Midterm</th>
<th>Longterm</th>
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</thead>
<tbody>
<tr>
<td>Out-Reaching &amp; Rallying</td>
<td>All. but FARA, ASARECA, CORAF</td>
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<tr>
<td>i) Viruses, surveillance and diagnostics</td>
<td>IITA, CIAT, CIRAD, IRD, NARs, Regional Networks &amp; Centers, Extension services at large</td>
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<td>ii) Climate, cassava landscape and pest and diseases</td>
<td>CIAT</td>
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<td>iii) Whiteflies and IPM</td>
<td>IITA, CIAT, and NARs &amp; Regional Centers</td>
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<td>iv) Breeding</td>
<td>IITA, CIAT, and NARs</td>
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<tr>
<td>v) Seed systems</td>
<td>IITA, CIAT and NARs, FAO, NGOs, Private sector, Extension Services, Communities</td>
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<td>vi) Capacity development</td>
<td>IITA, CIAT, NARs, FAO, Regional Networks &amp; Centers, Extension services at large</td>
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<td>vii) Policy and Advocacy</td>
<td>GFAR, FARA, Regional Networks</td>
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<td>viii) Economic value</td>
<td>IFPRI, Regional Networks, Consultants</td>
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Declaring War on Cassava Viruses in Africa

Cassava Workshop in La Reunion June 2014

- Creation of a Pan-African Cassava Surveillance Network for Cassava Diseases - PanACSN
- Establishment of an International Transit Site
  - Development of a website with real time information on cassava diseases
  - Development of related capacity building
PanAfrican Surveillance Network for Cassava Diseases

Montpellier

La Reunion
PanAfrican Surveillance Network for Cassava Diseases

Montpellier

PanAf-SNCD

French Speaking Branch

English Speaking Branch

La Reunion
Plant Protection Platform
Station de Bassin Plat

1,08 ha

0,23 ha

1,57 ha
Beautiful places to visit in Guangxi province in China after the conference

Li River in Guilin

Thae Ban Gioc Falls

Longshen Rice Terrasses