African Rice Initiative and NERICA dissemination

Inoussa Akintayo, Coordinator

FASID, September 11, 2007
Outline

1. Introduction
2. About ARI
3. NERICA development
4. Where are we now?
5. Seed strategy
6. Achievements
7. The way forward
8. Conclusion
Introduction

Known in only a few countries, particularly in Guinea and Côte d’Ivoire, until the late 1990s, NERICA is today a crop of hope for millions of Africans. The AU and NEPAD have identified NERICA as a crop that can make a difference in fighting hunger and poverty. ARI is making this happen.
About ARI

- Formed: 2002 by WARDA and partners
- Objective: stimulate and coordinate strategies for disseminating NERICA and other improved rices in SSA
- Donors: Rockefeller Foundation, AfDB, UNDP, Japan, SG2000, FAO
How ARI operates:

- Coordination units established at WARDA and in participating countries.
- Stakeholders’ Platforms established in these countries.
- Partners such as JICA, SG2000 and other NGOs, and the private sector complement our efforts, especially in Eastern and Southern Africa.
How was NERICA developed?

BC₂F₁ population from *O. sativa* x *O. glaberrima*
What is good in NERICA?

- Earliness of maturity (30–50 days)
- Resistance to local stresses
- Higher yield
- Good taste
Where are we now?

Status of NERICA dissemination in SSA
Upland NERICAs tested in more than 30 SSA countries

Test Countries (2005)
Lowland NERICAs tested in more than 20 SSA countries
Based on results of PVS:

- 18 upland named
- 60 lowland

Among the named NERICAs, the following have been released or adopted:
17 Upland NERICA varieties adopted/released in about 20 SSA countries...

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R</td>
<td>R</td>
<td>A</td>
<td>R</td>
<td>A</td>
</tr>
<tr>
<td>Congo Rep.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>DR Congo</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Rep. C.I.</td>
<td>R</td>
<td>R</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Gambia</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Ghana</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Guinea</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>
... 17 Upland NERICA varieties adopted/released in about 20 SSA countries

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madagascar</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mali</td>
<td>R</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>R</td>
<td>R</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. Leone</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sudan</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Togo</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uganda</td>
<td>R</td>
<td>A</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>8</td>
<td>9</td>
<td>13</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11 Lowland NERICA varieties adopted/released in SSA countries

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>NERICA-L</th>
<th>WAS 161-B-9-2</th>
<th>WAS 122-IDSA-15-WAS-6-1</th>
<th>WAS 127-B-5-2</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>19 20 34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burkina</td>
<td>R R R R R</td>
<td>R</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Mali</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Togo</td>
<td>R R R R R</td>
<td>R</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>R R R R R</td>
<td>R</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Cameroon</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>The Gambia</td>
<td>R R R R R</td>
<td>R R R R R R R</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Niger</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5 2 1 1</td>
<td>1 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1</td>
<td></td>
<td>1 1</td>
</tr>
</tbody>
</table>
Upland sativa lines tested

1. WAB 56 - 50
2. WAB 56 -104
3. WAB 56 -125
4. WAB 181 -18
5. WAB 32-80
6. WAB 365-B-1- H1-
7. WAB 365-B-B-2
8. WAB 224-8-HB
9. WAB 515-B-16
10. WAB 570-10B-1-
11. WAB 189.B.B.B8
13. TOX 3377
14. WAB 96-1-1
15. ITA 257
16. IDSA 85
17. IR 47701-6-3-1
18. CNA 6675
19. ITA 321
20. Sikassoka (WAB 181-18)
21. Jigifa (WAB 56-104)
22. Kumabani (WAB 189-B-B-B-8-HB).

Adopted/released
NERICA production in Africa

- Over 200,000 ha are reported under NERICA cultivation in SSA countries
- The leading countries are Guinea, Nigeria, Côte d’Ivoire and Uganda
- Emerging countries: Benin, Ethiopia, Togo, Mali, The Gambia
An NGO (Songhaï) is promoting NERICA and the private sector (Tunde SA and BRS) is investing in NERICA dissemination.
NERICA 2 field in Togo
Togo

Tunde collaborator visiting NERICA producers
The following agronomic practices to increase the production of NERICA and other improved varieties have been evaluated in selected countries:

- weeding regime
- fertilizer rate and timing
- cropping systems
- water regime

Some preliminary results are available
Development of complementary technologies

- Weeding twice, 21 & 45 days after germination, or
- One pre-emergence herbicide application + one hand weeding if necessary are sufficient to control weeds in fields growing NERICA
Multi-row seed drill developed in Mali (1 ha in 8 hours, 50-60 kg ha\(^{-1}\) seed)
NERICA-based processed products:
- developed
- evaluated
- recipes prepared and published

Market opportunities for women have been created

Development of complementary technologies
Seed strategy and achievements

Demand for all rice seed, but particularly NERICA, is extremely high and increases season by season. More than 30,000 mt of NERICA 1 seed are projected for 2007 in Nigeria alone by the Presidential Initiative.

A seed strategy was developed to meet the burgeoning demand.
…Seed strategy and achievements

- CBSS approach enhanced
- NARS seed technicians trained
- Strong NARS utilized to produce seeds
- Private sector sensitized to invest in seeds
Between 2003 and 2007, over 180 tonnes of Breeder and Foundation seeds have been produced by the coordination unit of ARI, of which 100 tonnes were in 2007 alone.

This has facilitated the production of more than 3,000 tonnes of certified seed in the seven pilot countries.
...Seed strategy and achievements

Trends in seed distribution (tonnes)

- Breeder and Foundation Seeds distributed by ARI
- Foundation and Certified Seeds produced in participating countries

Countries

ARI

2003 2004 2005 2006
Seed strategy and achievements

Seed to post-conflict countries

- Liberia (2 tonnes)
- Sierra Leone (1 tonne)

With logistic support from the UN Mission and FAO
100 tonnes of Foundation seed produced for Nigeria
Capacity building

Several training sessions conducted on seed production and PVS by WARDA and PCUs – more than 100 technicians trained.
Field days and monitoring tours conducted at regional coordination and PCU levels
The way forward

- Seed will continue to be our major target
- Build NARS capacity to enhance seed availability
- Extend Lowland NERICAs to more countries
- Mobilize resources for more countries, especially post-conflict countries
Conclusion

NERICA dissemination is teamwork – the power of partnership. No one can embrace it alone. What we have achieved today is the result of collective effort from WARDA, NARS and partners: AfDB, Rockefeller Foundation, UNDP, Japan, JICA and JIRCAS.

We can only progress with your help as donors.
Thank you!

NERICA !!!