Forum for Agricultural Research in Africa

PRESENTING THE SABIMA PROJECT

Walter S. Alhassan

SABIMA Coordinator

Forum for Agriculture Research in Africa, Accra, Ghana.

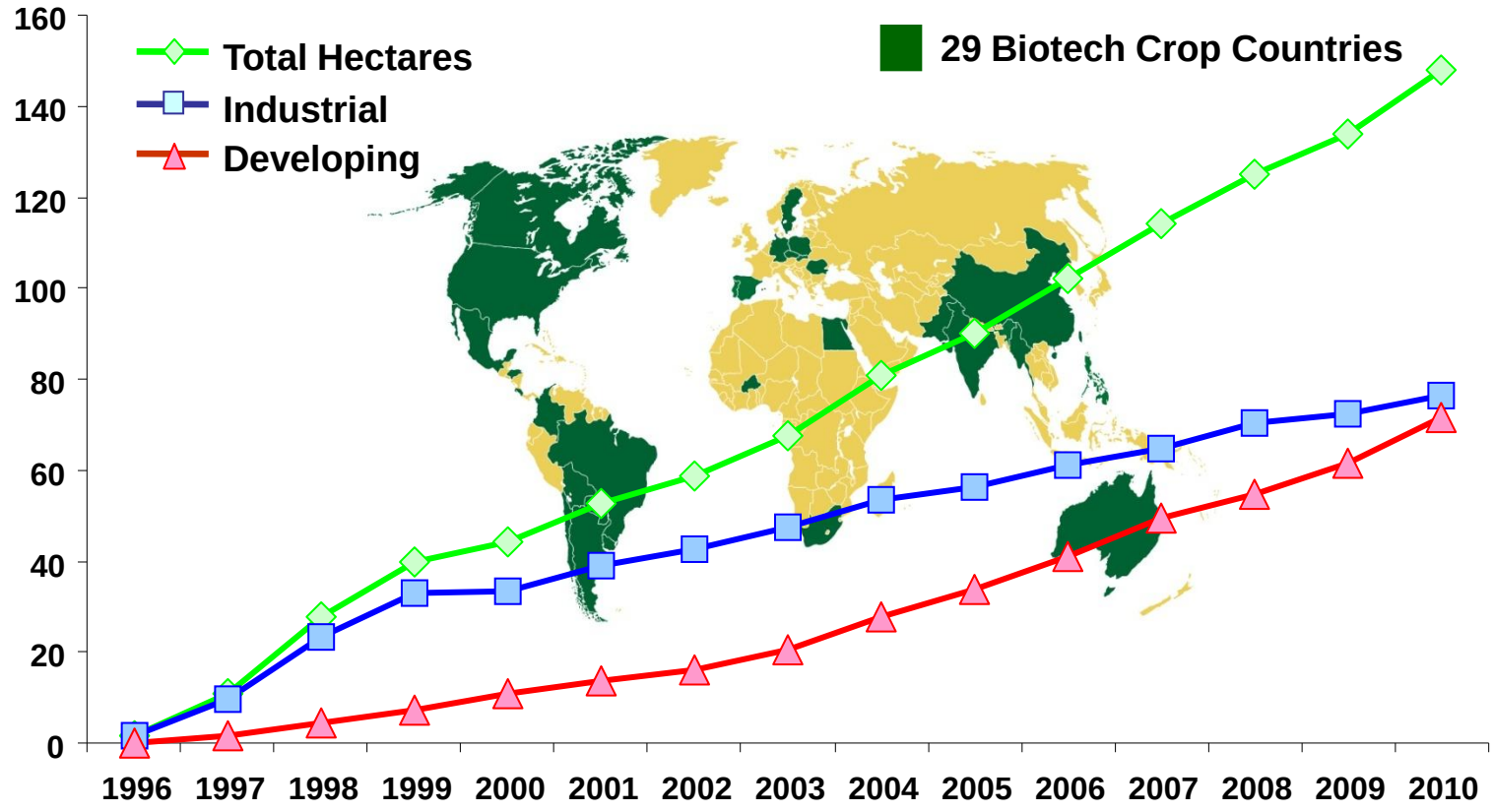
Bamako, Mali Conference on Agriculture

October 5-7, 2011

INTRODUCTION

- Commercialized biotech crops have seen phenomenal growth – from 1.7 million ha in 1996 to 148 million in 2010 (15 years).
- GM crops in global trade:
  - Soybean
  - Cotton
  - Maize
  - Canola

2010 Adoption Highlights



A record 15.4 million farmers, in 29 countries, planted 148 million hectares (365 million acres) in 2010, a sustained increase of 10% or 14 million hectares (35 million acres) over 2009.

Source: Clive James, 2010.

GM Candidate Crops in Africa

- Maize: *drought tolerance*
- Cowpea: *Pod borer- a devastating insect*
- Cassava virus: *nutrient enhancement*
- Eggplant: *borer*
- Tomato: *YLCV*
- Sorghum: *Striga, nutrient enhancement*
- Rice: *drought tolerance, nitrogen use efficiency, salt tolerance*
- Sweet potato: *weevils, viruses, nutrient enhancement*

GM Candidate Crops in Africa

For Animals:

- Diagnostic procedures using specific antibodies (monoclonal)
- The recombinant vaccines of interest relate to the control of East Coast Fever, Heart Water, heat stable recombinant poultry vaccines

Biosafety Bills

- The use of GMOs has led to the development of various international protocols (Cartagena Protocol on Biosafety, 2000) to which Mali is a signatory and to the development of Biosafety legislation at country level.
- These are aimed at controlling any risks that might arise in its use. Biosafety legislation at varying degrees of stringency is in place to guide the use of GMOs.

Degrees of Biosafety Stringency

- Promotional policy: *USA and Canada*
- Permissive policy: *Burkina Faso, Kenya, Nigeria, Ghana*
- Precautionary policy: *Ethiopia, parts of Africa* (some have strict liability clauses)
- Preventive policy: *Benin*

Very precautionary biosafety legislation can deny access to GM crops important in food security.

BIOTECH MANAGEMENT CAPACITY STRENGTHENING

Will consider:

- **Earlier pre-SABIMA period (2004-2008)**
- **Current SABIMA and ABNE periods (2008-2011).**

STRENGTHENING CAPACITY FOR SAFE BIOTECHNOLOGY MANAGEMENT

A number of initiatives over the years has been put in place to build Africa's capacity for safe biotechnology management. Notable initiatives:

Earlier

- Program for Biosafety Systems (PBS)
- Agricultural Biotechnology Support Project Phase II(ABSPII)

Current

- African Biosafety Network of Expertise (ABNE)
- Strengthening Capacity for Safe Biotechnology Management in sub-Sahara Africa (SABIMA)

PBS AND ABSPII

- Both supported by USAID.
- PBS coordinated by IFPRI
- ABSPII coordinated by Cornell University.
- Both launched in 2003.
- In West Africa, PBS run from 2004-2008
- In West Africa (Ghana, Mali), ABSPII run from 2004-2005 in Ghana and 2004-2006 in Mali.
- PBS still running in East Africa (Kenya, Uganda) and Southern Africa (Malawi, Mozambique, South Africa).
- ABSPII running in Uganda.

PBS

PBS role:

- **Policy Development and Implementation (PDI) such Biosafety Laws.**
- **Technical Training on Biosafety and Food Safety**
- **Communication Strategies and Outreach**

PBS focus:

- **West Africa: Ghana, Mali, Nigeria**
- **East Africa: Kenya, Uganda, Tanzania**
- **Southern Africa: Still being developed but Malawi currently receives a lot of attention.**

ABSPII

- **Complement national/regional efforts to develop and commercialize safe and effective bio-engineered products in agriculture. Acts at CFT level and beyond.**

West Africa

- **The Tomato Leaf Curl Virus Resistance Project. Tomato Multi-Virus Control Project**
- **PBS and ABSPII assisted CORAF/WECARD develop its biotechnology/biosafety proposal document in 2004.**

ABNE

- ABNE is a continent-wide service officially approved in 2008 by the African Ministerial Council on Science and Technology (AMCOST)
- The overall goal of the ABNE is to build functional biosafety systems in Africa.
- ABNE biosafety services aim to empower African regulators with science-based information

ABNE

- Targets the members of National Biosafety Committees (NBCs),
- Institutional Biosafety Committees (IBCs),
- Plant Quarantine Officers (PQs)

  So that they can make informed decisions on biotechnology products.

ABNE provides service on request. It's headquarters is in Ouagadougou, Burkina Faso.

SABIMA

- SABIMA is the acronym for “Strengthening capacity for safe biotechnology management in sub-Sahara Africa”.
- It provides hands-on training in responsible biotechnology management throughout the product cycle to provide not only a safe product but one with high quality.
- The nature of training offered is the first of its kind in Africa

SABIMA

- **Project duration: 3 years (2009-2011).**
- **Grant : $ 1.26 million**
- **Grant source: Syngenta Foundation for Sustainable Agriculture (SFSA).**
- **Beneficiary countries: Burkina Faso, Ghana, Nigeria, Kenya, Uganda, Malawi.**
- **Partner SROs: CORAF/WECARD (full participant), ASARECA (training only), SADC/FANR (not part).**
- **Countries selected should be handling GM crops by 2010.**

SABIMA

- **FARA coordinates project. Implementation is at the country level by NARS.**

Objectives

- **In 3 clusters as follows:**

✓ **Current status and information gathering on biotechnology and biosafety.**

✓ **Capacity building: Stewardship**

✓ **Outreach and Advocacy: Awareness creation and advocacy for biotechnology, biosafety and stewardship.**

SABIMA Project Achievements

- Biotech/biosafety Status and information gathering:
  - **Released 2011 publication on status of biotech/biosafety in SSA**
  - **On-line database on biotech and biosafety in African countries-living database i.e. continuously updated information.**
- Capacity strengthening: Stewardship training. Major aspect of SABIMA

Stewardship Principles

Stewardship in plant biotechnology

- **is the responsible management of a product from its inception through to its use and discontinuation.**

- **applies across the life cycle of a plant product and includes careful attention to the responsible introduction and use of products.**

Stewardship Principles

Objectives of a Stewardship plan:

- Fully comply with applicable regulatory requirements,
- Seek to achieve and maintain plant product integrity, and
- Work to prevent trade disruptions

Stewardship Principles

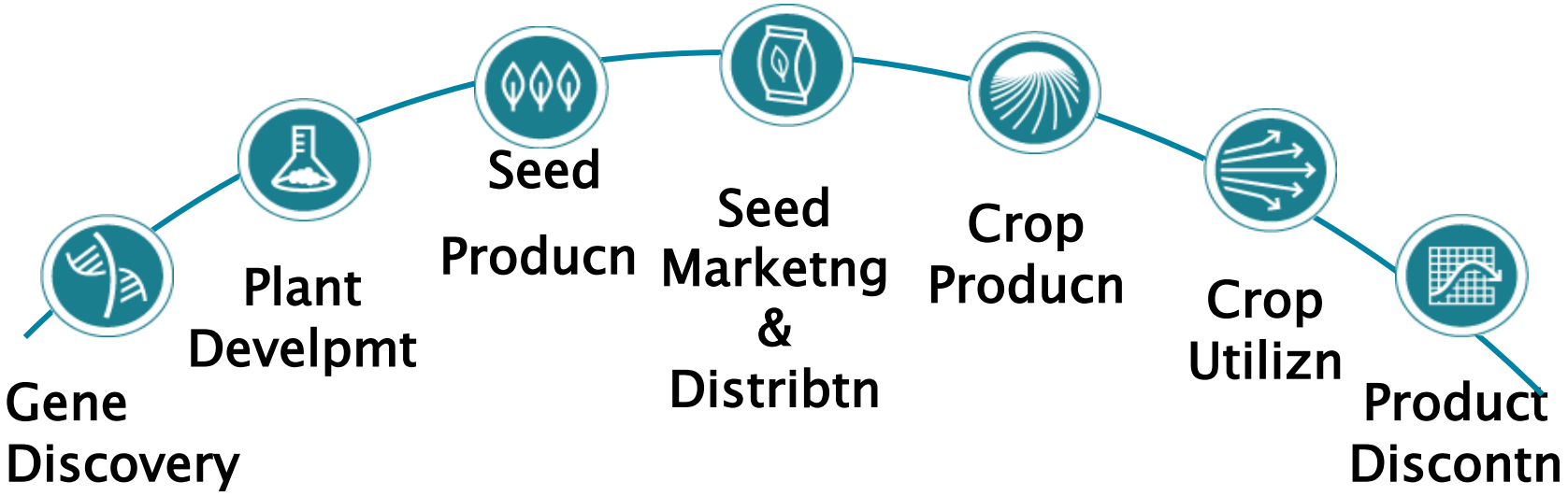
Stewardship is not a regulatory requirement.

- **Stewardship covers a broad range of aspects which should not be subjected to regulatory oversight.**
- **There is no question that as minimum developers must comply with science-based regulations.**
- **While a strong regulatory system oversees plant biotechnology, biotechnology product stewardship is the responsibility of each developer and user.**
- **It is a good way of doing business, supports mutual trust in collaborations, and improves efficiency and strengthens stakeholder and consumer confidence.**

Stewardship Principles

- The entire product cycle from gene discovery through product (seed development) and product discontinuation is examined.
- For each product development process, critical control points (CCPs) are identified and procedures developed (SOPs) to minimise or eliminate the hazard.
- The stewardship process emphasises detailed record keeping and making this available for audits/verification. Allows for tracking.

Life Cycle Phases



Stewardship Achievements

- As at August 2010, all project countries train-the –trainers had received training in stewardship from consultant. 12 country trainers have received full training and certified as trainers.
- 103 trainees receive certificates for various stewardship modules attended.
- SOPs have been developed for various projects at country level.

Stewardship Achievements

- The First Pan African Conference on Stewardship for agricultural biotechnology is planned for November 2011.

- African countries will showcase stewardship examples to the rest of the world.

SABIMA Advocacy and Awareness Creation Achievements

- Awareness creation workshops have been held on biotechnology and stewardship with various stakeholders.
- In Ghana and Nigeria these have also been in collaboration with ABNE.
- Country Champions for biotechnology have been identified and have played an advocacy role for biotechnology.

SABIMA Advocacy and Awareness Creation Achievements

- Contributed to the passage of Biosafety legislation in Nigeria and Ghana
- Advanced the review of the application of Bt cotton for CFT in Malawi.
- Has enhanced national debate to advance the course of Biosafety legislation in Uganda.

SABIMA CHALLENGES

- Initial project acceptability difficulties at the SRO level. Addressed by a consensus building workshop.
- Delayed reporting from countries
- Slow implementation of stewardship principles learnt- policy development, institutional budgetary limitation, development of SOPs.

WAY FORWARD

- First Pan-African conference on stewardship in agricultural biotechnology in November 2011.
- Outscaling of SABIMA 1 into a SABIMA 2.
- Countries to join in SABIMA 2 are:

  -Mali

  -Tanzania

  -Mozambique

  -South Africa

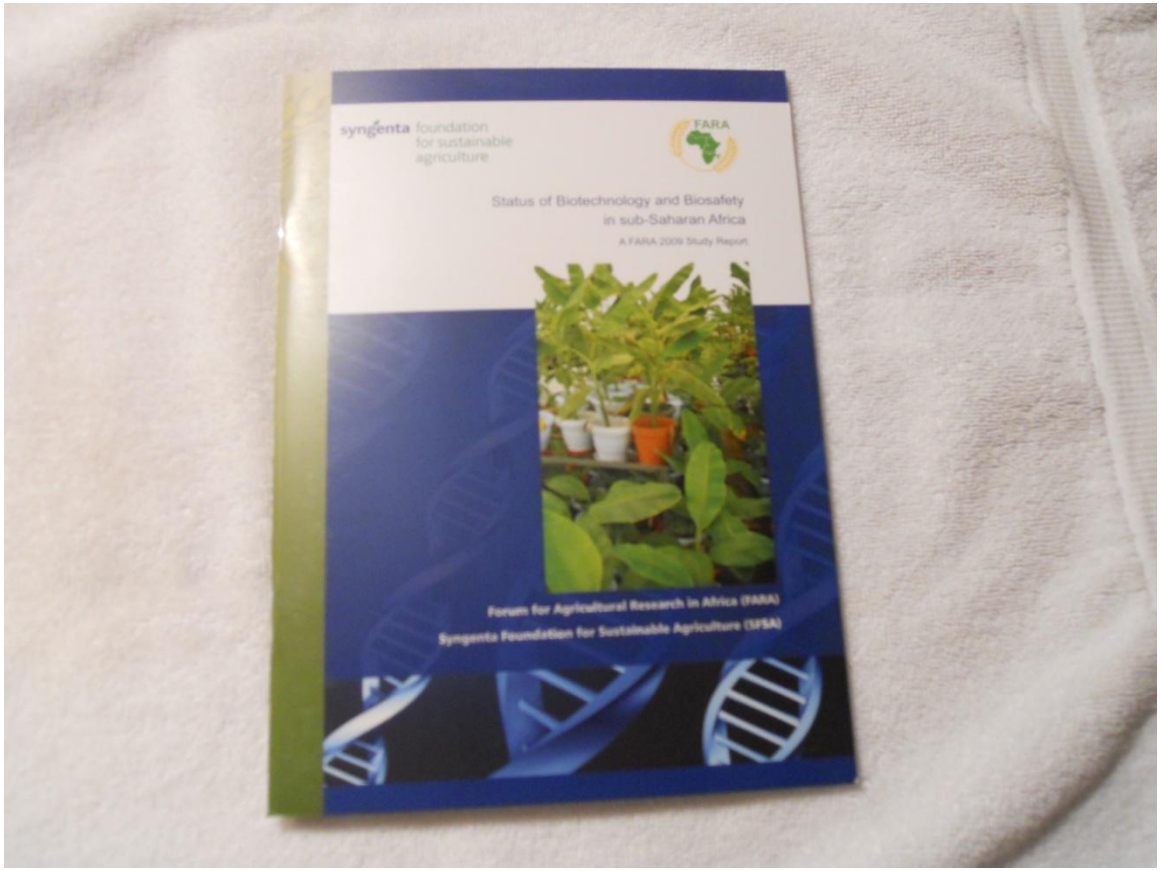
The above is in addition to the 6 old countries.

WAY FORWARD

- Sourcing funds for SABIMA 2 is a major challenge.
- Necessary to source additional funding to match SFSA support.

2010 TRAINING SESSEION IN OUAGADOUGOU

10/14/2011
31



2011 PUBLISHED REPORT ON BIOTECH STATUS IN SSA

10/14/2011
32

KARI KENYA CONFINED FIELD TRIAL SITE- COTTON GENE FLOW STUDIES 2010

10/14/2011
33

STEWARDSHIP TRAINING CLOSE OUT MEETING

Thank you

… and do not forget to visit

www.fara-africa.org