



**FEED THE FUTURE**

The U.S. Government's Global Hunger & Food Security Initiative

**AgriLinks**

# Creating Policies for Scaling Smallholder Access to Quality Seed

## **Speakers**

**Mark Huisenga**, *USAID Bureau for Food Security*

**Pradeep Prabhala**, *Monitor Deloitte*

**Charlee Doom**, *USAID East Africa*

## **Facilitator**

**Julie MacCartee**, *USAID Bureau for Food Security*

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## Mark Huisenga



Mark Huisenga is a Senior Program Manager in USAID's Bureau for Food Security working on Feed the Future programs. He manages the Scaling Seeds and Technology Partnership, conducts investment due diligence and modeling, and analyzes commercial, legal and institutional reforms for agricultural development. Mark has also researched approaches to breeder and foundation seed production by US states and was a key contributor to the "Early Generation Seeds Study," co-funded by USAID and the Bill & Melinda Gates Foundation.



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## Pradeep Prabhala



Pradeep is a Senior Manager with Monitor Deloitte. He leads Monitor Deloitte's work in Agriculture and Food Security in Emerging Markets and has worked extensively across Sub-Saharan Africa, South Asia, South East Asia and the Middle East. He has led Monitor Deloitte's work with USAID on Feed the Future Private Sector Action Plans and has supported governments across Africa and Asia on transforming agriculture sectors through inclusive private investments.



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## Charlee Doom



Charlee Doom manages the Integrated Partnership Assistance Agreement with the Common Market for Eastern and Southern Africa (COMESA). Her work with this portfolio focuses on seed, biotechnology, and fertilizer regional policy harmonization in the 19 Member States of COMESA. She also manages the agricultural component of the East Africa Trade and Investment Hub. Prior to working at USAID, Doom worked in the private sector for firms including Bunge Global Agribusiness, BASF – The Chemical Company, and Monsanto Company.

# Key Seed Sector Constraints

- AgBEE Framework
- Early generation seed supply scarcity
- Low capacity of NARS and private MSME seed companies
- Financing the seed value chain
- Raising farmers' awareness

# Policy and AgBEE framework in developed countries

<i>Comparing Seed Regulatory Models: United States vs. European Union</i>		
	<u>United States</u>	<u>European Union</u>
<b>Registration of seed companies, contract farmers:</b>	Not required, although individual states may have requirements	Required, but based on minimum criteria
<b>Variety Registration:</b>	Voluntary	Mandatory: 2 years of VCU and DUS tests for field crops; 1 year of DUS for vegetables
<b>Seed Certification:</b>	Voluntary, although the owner of the variety can make certification required	Mandatory for field crops; voluntary for vegetable seed
<b>Developing economies adopting this model:</b>	South Africa, India, Bangladesh, Pakistan, the Philippines, Guatemala, Nepal <sup>1</sup>	Turkey, Ukraine, much of Sub-Saharan Africa

*Sources: USAID-AGP-MADe Project, Comparative Analysis of Ethiopia's 2013 Seed Proclamation and Draft Seed Regulations (October 2013); World Bank, Enabling the Business of Agriculture 2015: Progress Report (2014) (World Bank, EBA Progress Report (2014)).*

# Capacity of NARS and private MSME seed companies: Current FtF portfolio of activities

Project Title	Countries	Category	Partner organization
Seed Scaling: Climate Resilient Maize	Ethiopia, Kenya, Uganda, Tanzania, Malawi, Mozambique, Zambia	Cereals	CIMMYT
Seed Scaling: Stress tolerant rice for Africa	Senegal, Liberia, Ghana, Nigeria	Cereals	Africa Rice
Seed Scaling: Stress tolerant rice for Asia	Cambodia, Nepal	Cereals	IRRI
Seed Scaling: Household Vegetable Seed kits	Liberia, Cambodia, Kenya, Tanzania, Uganda	Horticulture	AVRDC
Seed Scaling: Cowpea for West Africa	Senegal, Mali, Ghana, Nigeria	Legume	IITA
Seed Scaling: Groundnut in West Africa	Mali, Ghana, Nigeria	Legume	ICRISAT
Seed Scaling: Barley and Faba in Ethiopia	Ethiopia	Specialty Market	ICARDA
Seed Scaling: CSISA Wheat and Lentil in Nepal	Nepal	Cereal/Legume	CIMMYT
MasAgro Guatemala	Guatemala	Cereal	CIMMYT
Scaling Seeds & Technologies Partnership	Ethiopia, Ghana, Malawi, Mozambique, Senegal, Tanzania	Field crops	AGRA
Partnering for Innovation	Various	Various	Fintrac
Mission Scaling Plans and Projects	FtF Focus Countries	Various	Various

# Financing the seed value chain

Challenge	Opportunity
Farm infrastructure finance	Line of credit , DCA, TA
Fixed asset finance	Line of credit, DCA, TA
Working capital finance	Line of credit, DCA, TA
Capital equipment finance	Line of credit, leasing
Smallholder input finance	Mobile, clubs

Environment for finance: high cost of capital, land tenure, collateral registry, credit rating agency, deposit restrictions

Seed companies: under-capitalized, bookkeeping skills are inadequate

Smallholders: limited credit option, savings (mobile, other commitment mechanisms)

# Farmer awareness raising through assurance building

- Agro-dealer certification
- Seed company supervision: “fake seed” and truth-in-labeling versus certification
- “Free seed”: effect of giveaways
- Mobile and social networks

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## **Scaling the Production and Delivery of Early Generation Seed**

**Pradeep Prabhala, Senior Manager**

**Jessica Weddle, Manager**

**Monitor Deloitte**

May 14<sup>th</sup>, 2015

**For the purposes of this study, we leveraged a common economic framework to define public and private goods**

**EXCLUDABILITY**

*The degree to which a consumer can be prevented from using or accessing a good*

High

Low

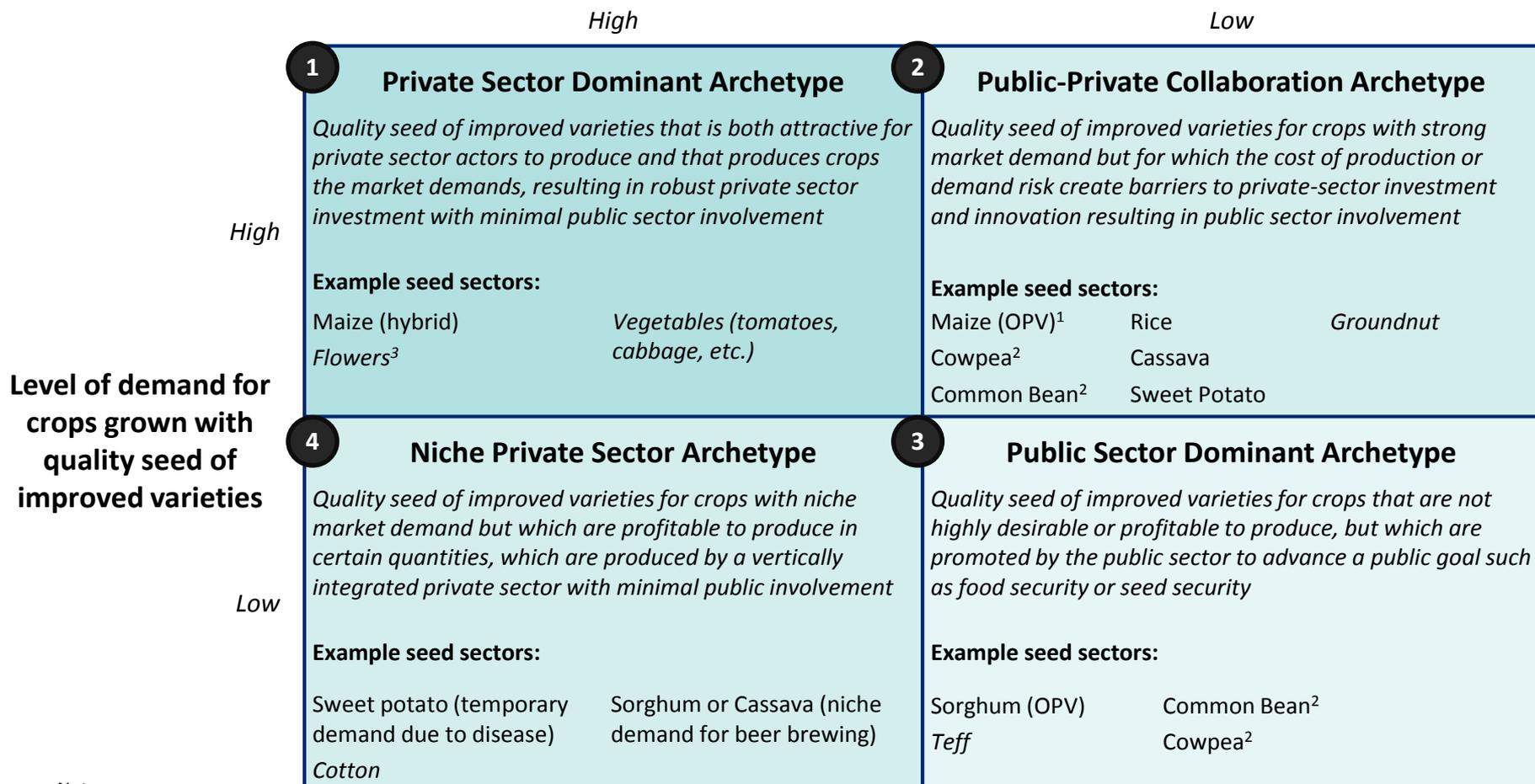


**RIVALRY**

*The degree to which consumption of a good by one consumer prevents the simultaneous consumption of the good by another consumer*

# To analyze the economics of EGS, we applied a common economic framework, which we adapted to highlight the economic characteristics of seed that have implications for ideal state value chains

## Marginal economic value of quality seed of improved varieties



Notes:

- (1) Examples are relevant for quality seed of improved varieties in formal seed sectors
- (2) In the context of this slide, “quality seed of improved varieties” refers to commercial quality seed, not EGS
- (3) Examples given are illustrative and may not be applicable across all countries and crop varieties, which accounts for the same crop appearing in more than one box
- (4) Examples in *italics* indicate crops that were outside the scope of this study’s target crops

**Within the public-private collaboration category we identified two archetypes based on the certainty of demand, cost, and complexity of supply**

Private	Public-Private
Niche	Public

2a

*Uncertain market demand*

**Public-Private Archetype I: Public Sector Mitigates Demand Risk**

*Seed that is attractive for private sector companies to produce, but for which they cannot reliably forecast demand and so are exposed to high demand risk and high cost of capital as a result*

**Example seed sectors:**

Rice                      Sweet Potato  
Cassava

2b

*Costly / complex production*

**Public-Private Archetype II: Public Sector Supports Breeder and Foundation Seed Production**

*Seed that is reliably demanded by consumers, but which are unattractive to produce EGS for due to high effort or technology intensity, risk of post-production loss, or generally low margins*

**Example seed sectors:**

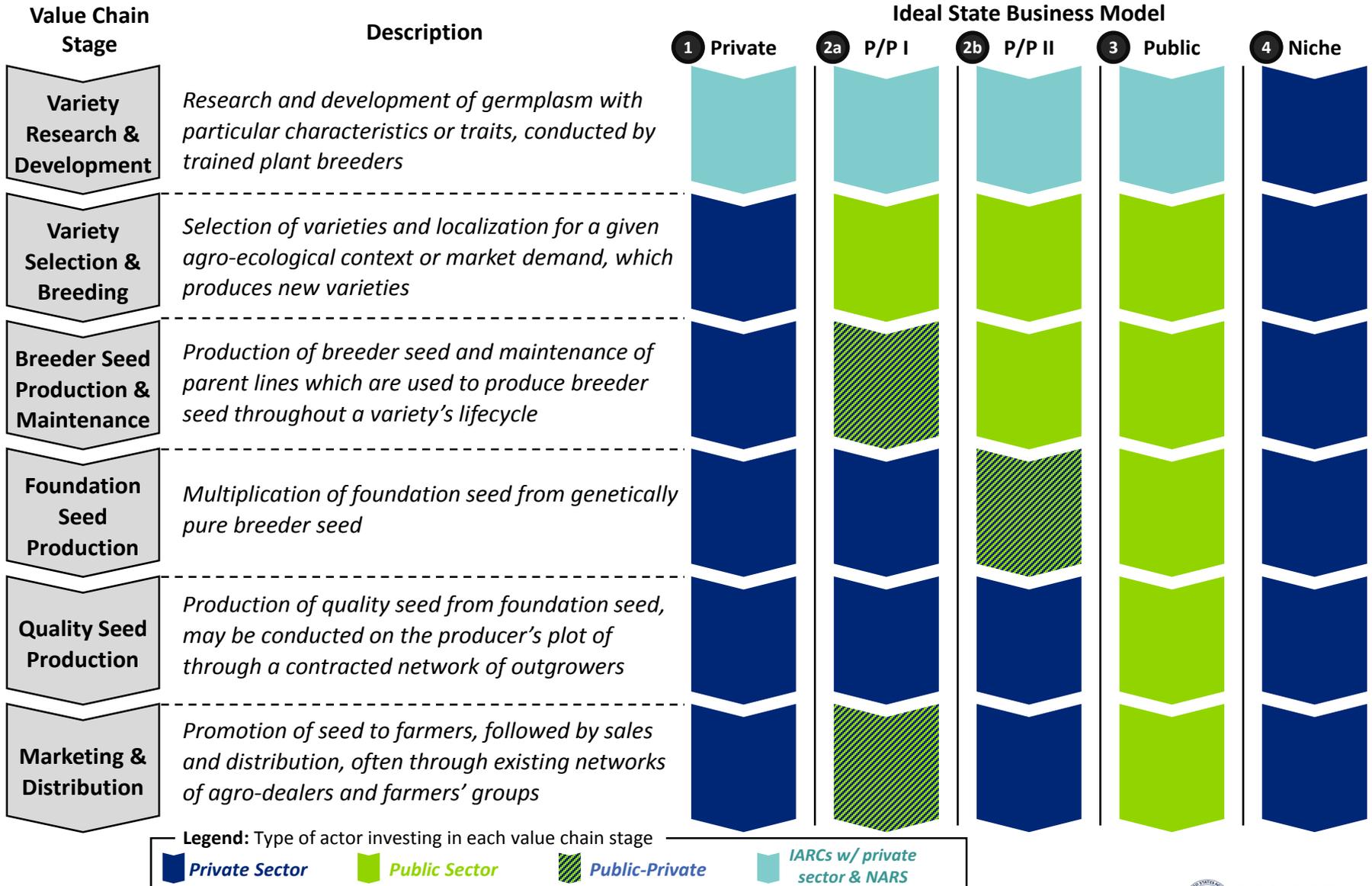
Cowpea                      Maize (OPV)  
Common bean

Notes:

(1) Examples are relevant for quality seed of improved varieties in formal seed sectors

(2) Examples given are illustrative and may not be applicable across all countries and crop varieties, which accounts for the same crop appearing in more than one box

**Within each archetype, the ideal state of who invests at each value chain stage is determined by who derives value from the activity, though the work may be contracted to other actors**



# Recommendations to overcome specific Market Archetype economic constraints to scale

## 1 Remove Market Distortions and Decrease Public Role

*Support and advocate for policies that enable the private sector to grow sustainably*

### Potential Role of Government:

- Transition out of playing a direct role supporting the value chain (e.g., stop producing foundation seed)
- Remove distortionary subsidies and restrictions where possible

### Potential Role of Donors:

- Demonstrate profit potential of the market through business cases
- Alleviate high fixed cost of breeders through capacity building
- Build capacity in banking sector to increase financing availability

Private Sector Dominant	Public-Private Collaboration
Niche Private Sector	Public Sector Dominant

## 3 Drive Public Sector Efficiency

*Support efficiency of public entities through capacity building and organizational linkages*

### Potential Role of Government:

- Increase responsiveness of public breeding and production efforts by increasing farmer participation
- Implement more efficient QA processes to ensure more effective resource use, including through building private sector capacity

### Potential Role of Donors:

- Build decentralized capacity throughout a country to better leverage public resources and reduce dependence on
- Implement monitoring and evaluation for public programs to understand impact and effectiveness of public investments

2a

## Mitigate Demand Risk

*Support stable and predictable demand and linkages between producers and markets*

### Potential Role of Government:

- Share demand risk with the private sector by backing financing and entering into surplus purchase arrangements
- Invest in extension services to increase demand in rural markets

### Potential Role of Donors:

- Improve availability and accessibility of data to enable more accurate demand forecasting and planning of production
- Demonstrate private sector potential with business cases

2b

## Subsidize Production Costs

*Support breeder and foundation seed production by mitigating high fixed costs*

### Potential Role of Government:

- Directly subsidize fixed costs (e.g. breeders, certification) or back financing for capital investments, e.g. in technology
- Partly or fully fund production of breeder and foundation seed on an ongoing and stable basis (e.g., CGIAR, NARS)

### Potential Role of Donors:

- Alleviate fixed costs by funding R&D and breeder training
- Ensure ROI on research by advocating for IP protections and linking breeding more closely to farmers' and market demand

# Recommendations to overcome specific Market Archetype economic constraints to scale

## 1 Remove Market Distortions and Decrease Public Role

Support and advocate for policies that enable the private sector to grow sustainably

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- Transition out of playing a direct role supporting the value chain (e.g., stop producing foundation seed)
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### Potential Role of Donors:

- Demonstrate profit potential
- Alleviate high fixed costs
- Build capacity in banking

## 2a

### Mitigate Demand Risk

Support stable and predictable demand and linkages between producers and markets

### Potential Role of Government:

- Backstop financing and
- Support production in rural markets
- Enable more production business cases

Across all archetypes, the recommendations require actors to make **strategic trade-offs** in a way that results in a more efficient allocation of resources for all stakeholders.

## 3 Drive

Support efficiency of production and organizational linkages

### Potential Role of Government:

- Increase responsiveness of public breeding and production efforts by increasing farmer participation
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## Seed Trade Harmonization in Africa

24 June 2015 – Ag Sector Council Seminar – Scaling Smallholder Access to Quality Seed  
Charlee Doom, Regional Agricultural Trade Adviser, USAID Kenya and East Africa

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## COMESA SEED SUPPLY AND DEMAND

- Total annual seed production in COMESA averages <500 thousand metric tons (tmt)
- Total demand for seed in COMESA is **>2 million metric tons**
- Seed production in COMESA:
  - Zambia: 120 tmt
  - Zimbabwe: 55 tmt
  - Kenya: 45 tmt
  - Malawi: 40 tmt
  - Uganda: 15 tmt
  - Rwanda: 8 tmt
  - Burundi: 5 tmt

### COMESA Member States



Graphic credit: COMESA





## SEED HARMONIZATION IN COMESA

- COMESA Seed Harmonization Regulations were gazetted in May 2014
- With a directive from COMESA Council of Ministers in February 2014, the COMESA Seed Harmonization Implementation Plan (COMSHIP) was commissioned, established, and validated by technical experts
- The harmonization process continues to benefit from wide donor support; including from USAID, DFID, AusAID, AGRA, and others
- Private sector and other stakeholder buy-in and commitment has proven critical





## WHY HARMONIZE?

- Smallholder farmers will benefit from increased availability of a wide range of new and improved seed varieties at market-based prices
  - Increased smallholder productivity as seed of consistent and higher quality will be traded in the COMESA region
  - Incomes and numbers of smallholder out-grower seed producers will increase as they join regional value chains
- Opportunity for expanded seed ventures will improve as seed companies benefit from reduced business costs
  - Reduced time and cost of seed certification, seed in transit, certification/inspection of quarantine pests
  - Research and Development pace and breadth could increase

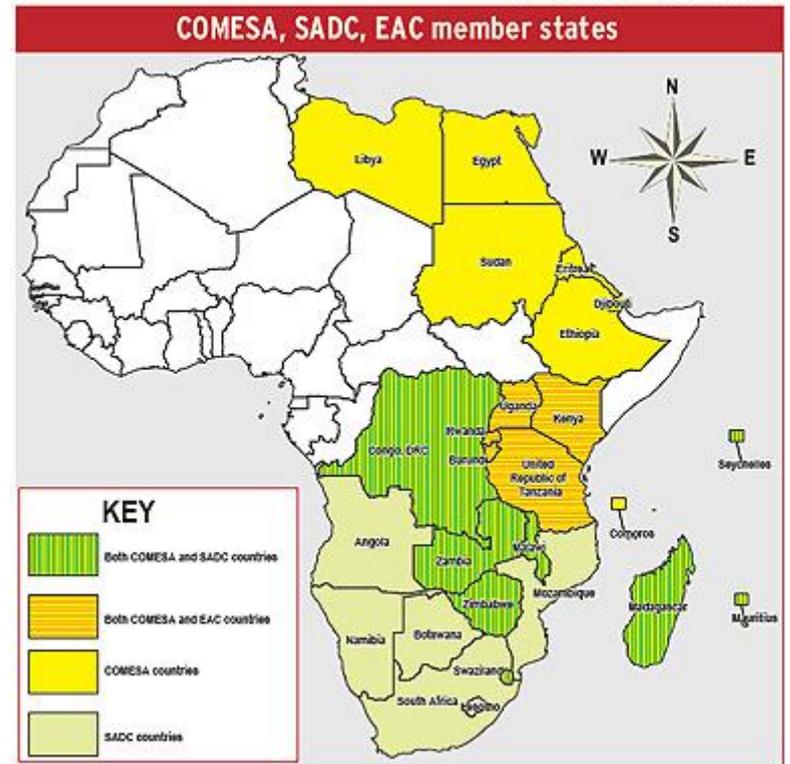




## HARMONIZATION IN OTHER REGIONS

- Seed policy harmonization underway in ECOWAS and SADC
  - West Africa Seed Program
- COMESA-EAC-SADC Tripartite Free Trade Area launched on 10 June 2015

Graphic by Brian Ssekamatte





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# Top Take-Aways

1

**Different types of seed fall into discrete economic archetypes**

2

**Across all archetypes, actors need to make strategic trade-offs in a way that results in a more efficient allocation of resources for all stakeholders**

3

**For seed harmonization, private sector and other stakeholder buy-in and commitment is critical**

4

**Harmonization is beneficial to smallholder farmers and expands seed ventures**

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# Questions and Answers

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