Working with the Private Sector

Reaching Unreached Farmers Through Collaboration
with Small and Medium Sized Seed Companies:
What Are We Doing?

Arturo Silva H.
IMIC Lead LatAm

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Video: Maria Esther Rivas from Bidasem Seed Company

http://www.youtube.com/watch?v=TZhlhY3SzXE

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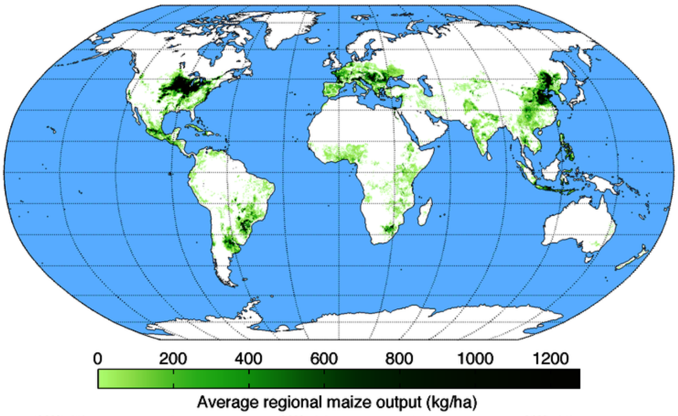
World Maize Production

- 967 million metric tons
- Maize estimated supply 2013/14



Maize Consumption is Rising Faster Than Yield!

Yield +38%

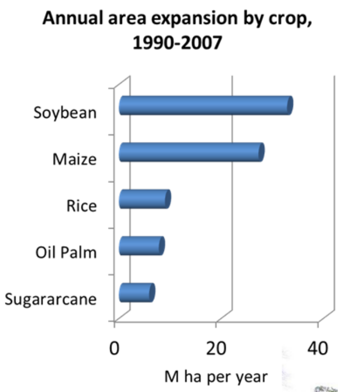
1990	2010
Average yield: 3.7 t/ha	Average yield: 5.1 t/ha
	Biofuel 10%
Food 30%	Food 30%
Feed 70%	Feed 60%

In order to meet global demands, we will need **to double maize production** by 2050.

Consumption +77%

Source: UNEP

What Happens if we do not Increase Maize Productivity …



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Maize in the Developing World (1/2)

- **170** countries globally growing maize; **50%** of the area is in the developing world
- Preferred staple food for **900 million poor** people (< 2 USD per day)
- Provides **15-56% of total calorie intake** in Sub-Saharan Africa, Latin America and Asia

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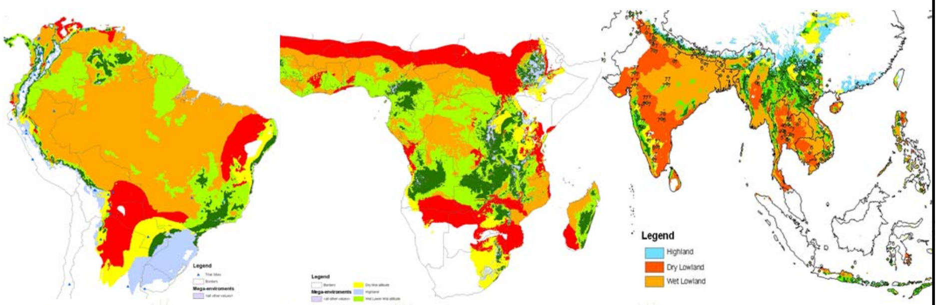
Maize in the Developing World (2/2)

- Different types of maize: tropical maize ≠ temperate maize
- Multinationals focus on high potential (dark green) or irrigated markets, PROVIDED they are commercially connected (eg not Angola)
- Tropical areas receive **less than 5-7%** of the private R&D investment in the developed/temperate world.



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Maize in the Developing World

\+ Ecologies are diverse

\+ Diverse germplasm needs

\+ Smaller markets

\+ Difficult traits (drought, heat, waterlogging, certain diseases)

= Comparative advantage of smaller seed companies with diverse products

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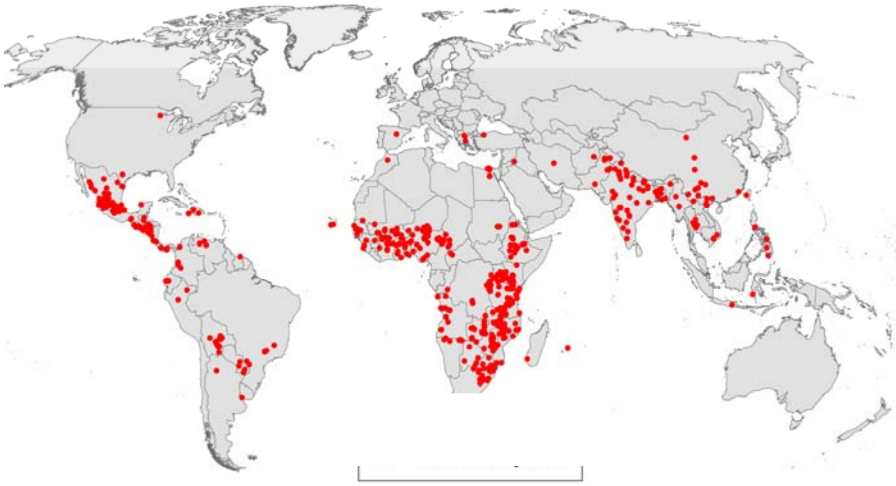
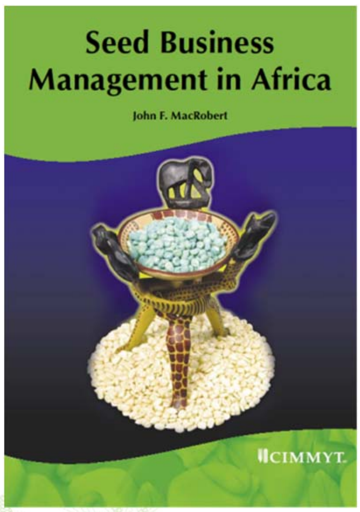
Demand for CGIAR Maize Germplasm (CIMMYT & IITA)



Without Successful Seed Businesses, Excellent Germplasm has Little Impact

New germplasm

- Drought Tolerant
- Disease resistant



Time to the Market / Time to Impact

- More rapid variety registration
- More rapid seed scale-up
- Wider scope = more farmers

The sooner the farmers have access to improved varieties, the greater their opportunity to increase productivity.

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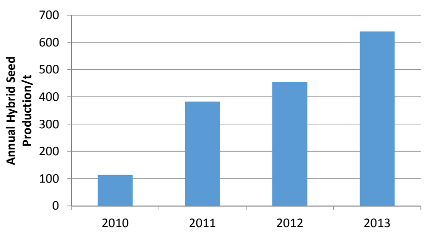
Example: Partnership with Seed Companies in Africa

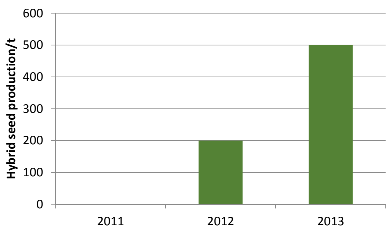
Type	AO	BN	ET	GH	KE	ML	MW	MZ	NG	TZ	UG	ZM	ZW	Total
Small national	2	1	5	5	7	1	5	9	6	7	11	5	8	**72**
Medium national			3		1		1	1	1	1	1	2	1	**12**
Large national			1											**1**
Regional			1	1	3		2	1	1	2	2	3	2	**4**
Inter-continental			1	1	3		1					1	1	**3**
Grand Total	**2**	**1**	**11**	**7**	**14**	**1**	**9**	**11**	**8**	**10**	**14**	**11**	**12**	**92**

Impact evidence

An Ugandan Seed Company



A Tanzanian Seed Company



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Supporting Seed Companies for Improved Adoption of Maize Products

Equity ≠ Equality

Large Medium Small

Large Medium Small

Improved Maize Seed to the Market

Our Model for Partnership with Seed Companies

Support Services	NARS	Multinational	Regional	Large Nationals	Medium Nationals	Small Nationals
Breeding populations	Yes	Yes	Yes	Yes	Yes	Yes
Varieties for testing	Yes	Yes	Yes	Yes	Yes	Yes
Variety Registration	Yes	No	No	Yes	Yes	Yes
Breeders' Seed	Yes	Yes	Yes	Yes	Yes	Yes
Pre-basic Seed	Yes	No	No	No	Yes	Yes
Basic Seed	No	No	No	No	No	Yes
Certified Seed	No	No	No	No	No	No
Demonstrations	Yes	No	No	No	Yes	Yes
Field Days	Yes	No	No	No	Yes	Yes
Capacity Building	Yes	Yes	Yes	Yes	Yes	Yes

Partnerships with Seed Companies in Asia

- 35 seed companies as partners
- Client-oriented product development
- Collaborative testing
- Capacity building
- CGIAR/NARS alliance = research department for SMEs that reach many diverse markets not targeted by multilaterals

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Community Based Seed Production in Micro-Environments… Nepal

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Partnerships with Seed Companies in Mexico
68 NARS & SME partners, 155 testing sites

Highlands | Subtropics | Lowland Tropics

Why Work with so Many Seed Companies?

- Competition spurs faster delivery
- Diverse products for diverse markets
- Some seed companies will not be able to successfully grow; others will
  - 50 tons … 30 tons … 40 tons
  - 50 ton … 100 tons … 200 tons … 500 tons

Accountability for Impact: Seed Road Maps

In the past:
Number of improved crop varieties generated

Shift to

Today:
Demonstrated impact in farmers' fields

Bakir Lozane with CZH0511 seed production in Mozambique (Photo: Ken Rice)

Mr Faceira with pilot CZH03030 hybrid seed production in Angola

Community Seed Production of ZM309 in Zimbabwe, 2009

Agriseeds stock of ZM401 in Zimbabwe, 2010

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Seed Road Map: Company > Country > Region

Zimbabwe

Indicators	National baseline and projections				
Seed market growth rate without DTMA	1.20%				
Current commercial seed sales	26				
Total seed planted	40.9				
Seed Volumes	2012	2013	2014	2015	2016
Seed market w/o DTMA	26.3	26.6	26.9	27.3	27.6
Replacement w/ new DT	14%	20%	25%	30%	40%
DT replacing existing var.	3.6	5.3	6.7	8.2	11
Purchase rate of new DT	1.00%	1.50%	2.00%	2.50%	3.00%
Additional new sales of new DT	0.15	0.21	0.28	0.34	0.4
Total DT Variety seed market	3.7	5.54	7.02	8.52	11.44
Total seed quantity	26.46	26.84	27.23	27.61	28
Commercial seed sales (BAU)	64%	65%	66%	67%	67%
Commercial seed sales (additional DT market)	65%	66%	67%	68%	68%
Projected share new additional DT in total DT seed volume	4%	4%	4%	4%	3%
Projected market share DT in overall seed market	14%	21%	26%	31%	41%

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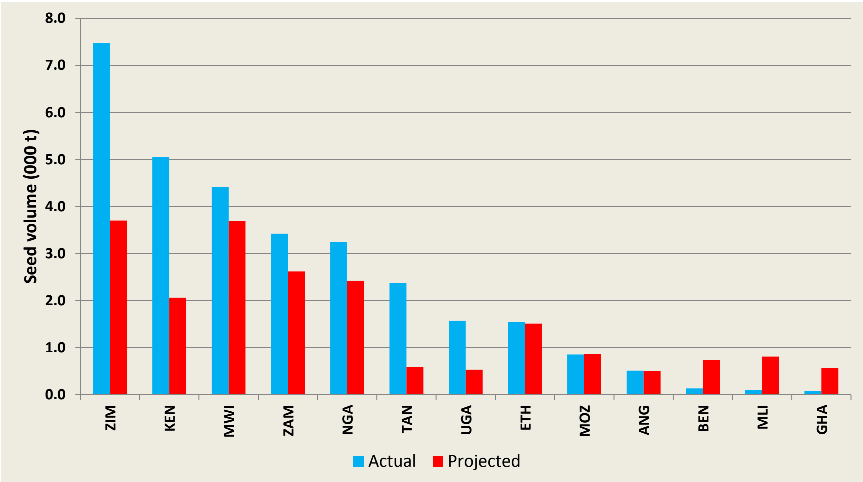
Tracking Success: Actual and Projected Seed Production



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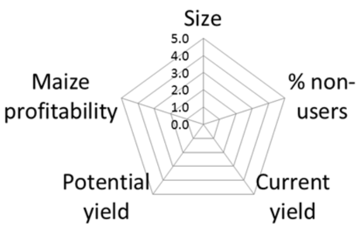
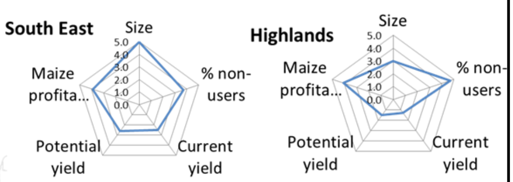
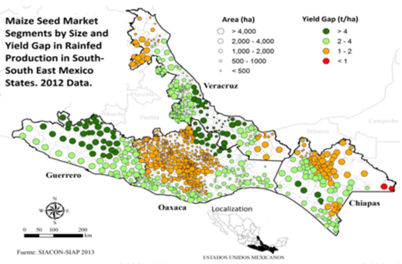
Target Seed Market Definition

Seed Market Potential



- Identify areas of greatest immediate potential
- Distinguish market profiles:





- Compare with current and projected sales of our partner seed companies

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Take Home Messages

- Tropical maize environments are diverse; many farmers have no access to improved seed
- Alliance of NARS/CGIAR/SME has become successful in not only producing excellent varieties but also ensuring that they get to farmers.

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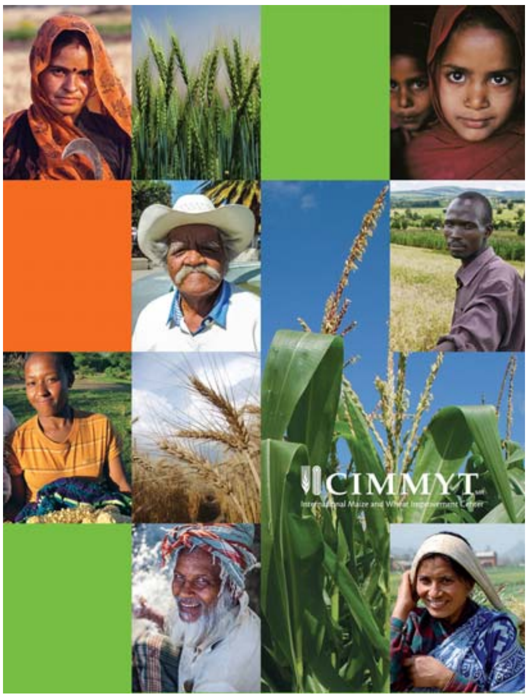

Thank you for your interest!