

CIMMYT and its work in Africa and Asia

Stephen Mugo

CIMMYT-Kenya Country Representative (CCR)

On behalf of CIMMYT-Kenya

Presentation during Exposure visit of OUAT and DoA, Odisha, India

To

CIMMYT-Kenya Regional Office - 28 Aug 2017

Outline

- **What is CIMMYT?**
 - CIMMYT in CGIAR
 - Mandate, Vision, Mission
- **CIMMYT work**
 - CRP/Platforms
- **CIMMYT partnerships**
- **CIMMYT Africa**
 - Why we need CIMMYT in Africa
 - Status and progress of CIMMYT work in Africa



CIMMYT®



CIMMYT is one of the 15 CGIAR Centers

CGIAR is the only worldwide research partnership addressing agricultural research for development, whose work contributes to the global efforts to tackle poverty, food and nutrition insecurity, and environmental degradation.

CGIAR research is carried out by the 15 Centers with hundreds of partners, including national and regional research institutes, civil society organizations, academia, development organizations and the private sector.

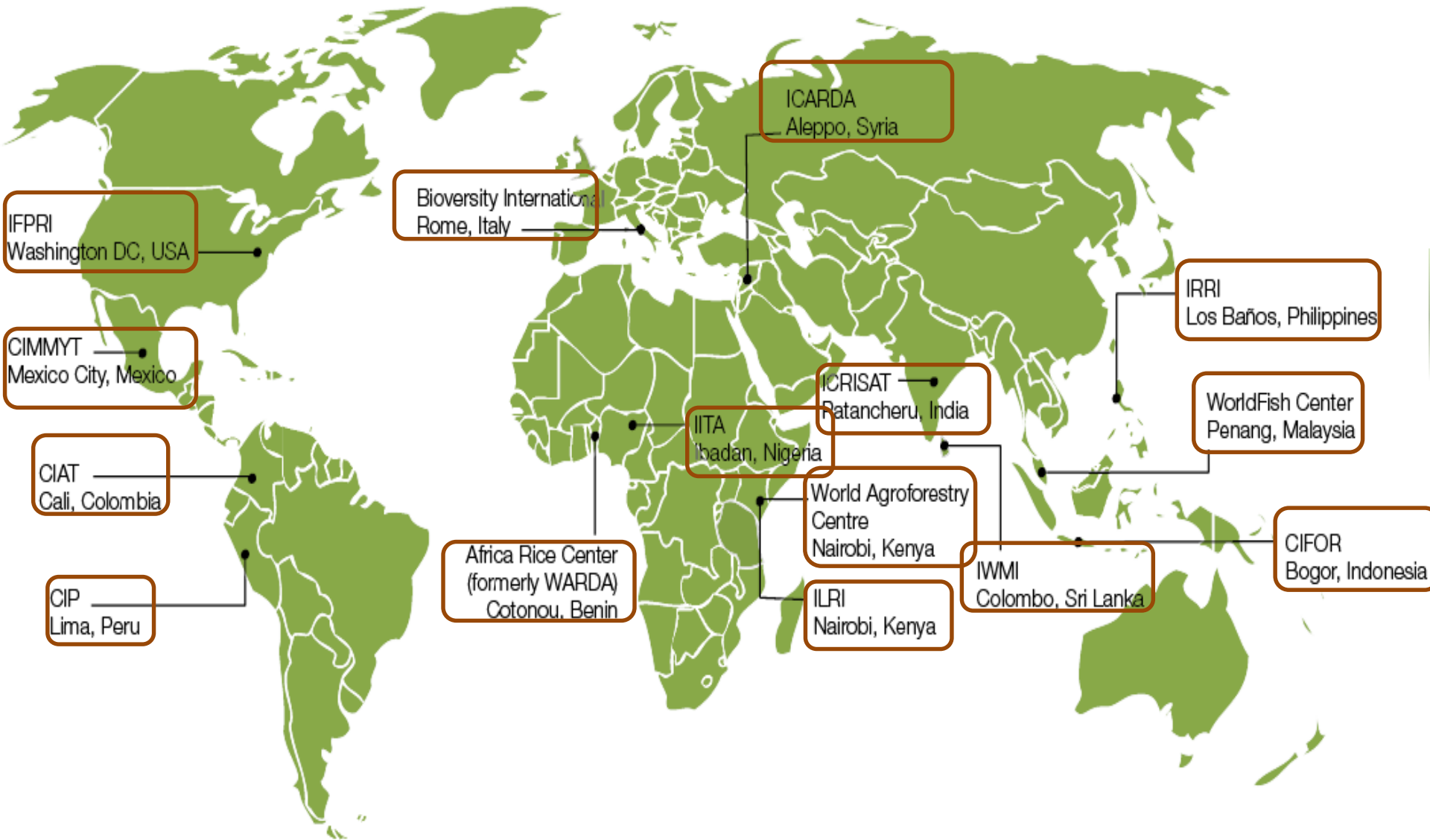


*CGIAR is a global
research partnership
for a food-secure
future*



CGIAR is a global research partnership for a food secure future

Location of CGIAR Centers



CGIAR is a global research partnership for a food secure future



CGIAR strategy 2016–2030

- Guides the development and implementation of an ambitious portfolio of “second-generation” CGIAR Research Programs ([CRPs](#))
- Focuses on selected grand challenges, and is articulated in 3 strategic goals, or System Level Outcomes (SLOs), which by 2030 will contribute significantly to the achievement of key Sustainable Development Goals ([SDGs](#))
- Highlights a return on investment evaluated at US\$17 for every US\$1 put into CGIAR over its lifetime

CGIAR
STRATEGIC
GOALS

REDUCE
POVERTY

IMPROVE
FOOD AND
NUTRITION
SECURITY

IMPROVE
NATURAL
RESOURCES AND
ECOSYSTEM
SERVICES



CGIAR is a global research partnership for a food secure future



The CGIAR Phase II Portfolio 2017 - 2022

8 Agri-Food System programs

Dryland Cereals and Legumes systems

Fish agri-food systems

Forests and Agroforestry landscapes

Livestock agri-food systems

Maize agri-food systems

Rice agri-food systems

Roots, tubers and bananas agri-food systems

Wheat agri-food systems

Nutrition and Health

Policy, Institutions and Markets

Water, Land and Ecosystems

Climate Change

4 Global Integrating Programs

3 Platforms

Genebanks

Excellence in Breeding

Big data & ICT



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CIMMYT

turning research into impact



CIMMYT's Historical Legacy

OSS develops high-yield, disease-resistant, semi-dwarf wheat and shuttle breeding



Norman Borlaug is awarded the Nobel Peace Prize



CIMMYT scientists win the World Food Prize



1940s

1950s

1960s

1970s

1980s/1990s

2000s

2010s



The Office of Special Studies (OSS) is created



The Green Revolution in India and Pakistan

CIMMYT is officially founded



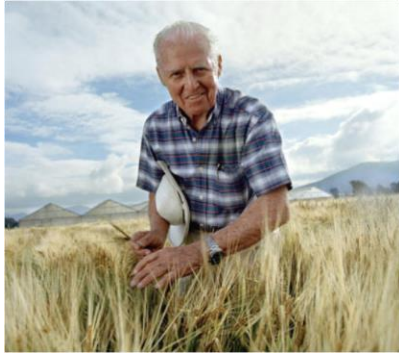
The Wellhausen-Anderson Plant Genetic Resources Center opens



CIMMYT responds to the food price crisis and expands globally



What Makes CIMMYT Unique?



Historical legacy



World-class scientists and committed staff



Germplasm collection



Global impact in farmers' fields



Next-generation research



Global network of partners



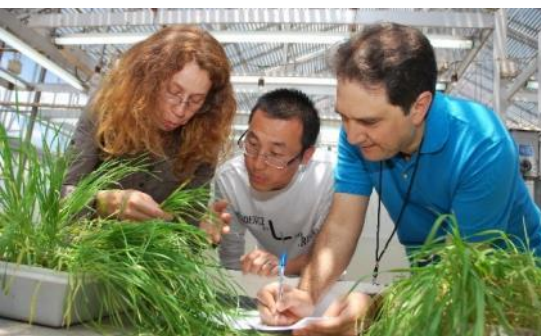
CIMMYT's Major Achievements



Generate \$3.5 – 4.5 billion in annual benefits to farmers in developing countries.



50% of maize and wheat grown in the developing world based on CIMMYT varieties.



10,000 researchers and professionals worldwide alumni of CIMMYT training.



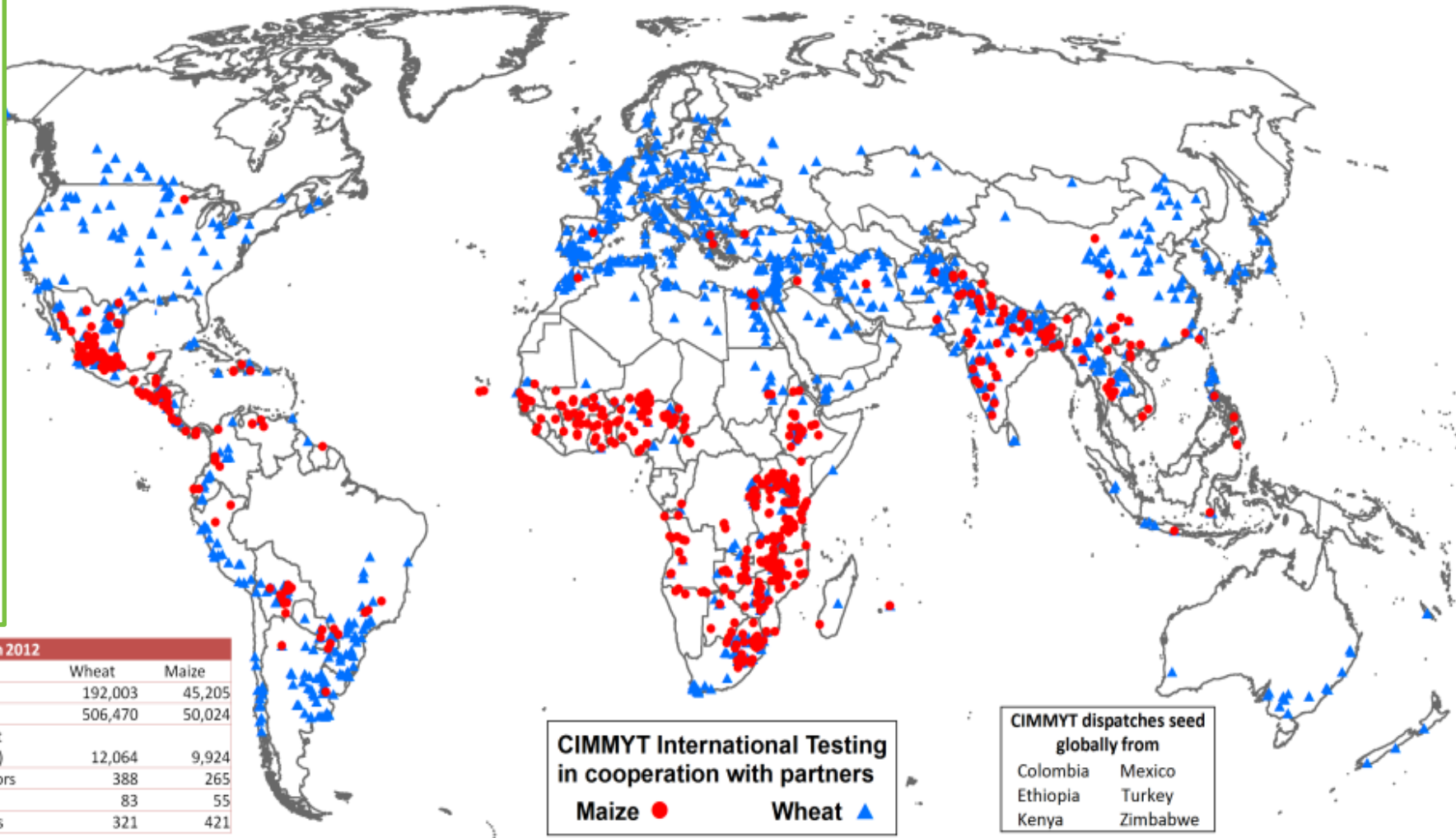
CIMMYT Around the World

1200 staff from over 50 countries!



CIMMYT's Global Seed Distribution Network

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Distribution 2012		
	Wheat	Maize
# Entries	192,003	45,205
# Packets	506,470	50,024
Total weight shipped (Kg)	12,064	9,924
# Cooperators	388	265
# Countries	83	55
# Shipments	321	421

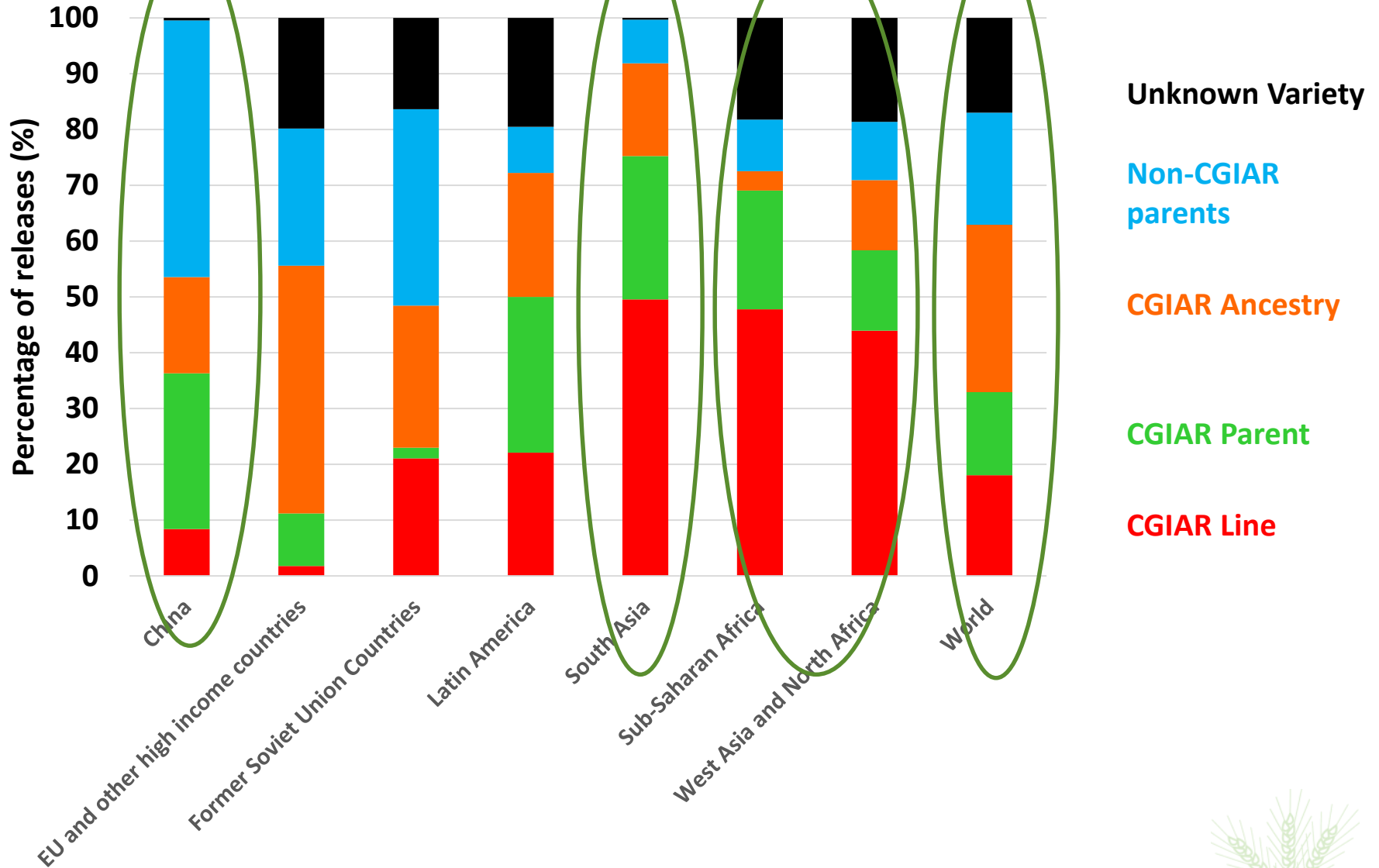
CIMMYT International Testing in cooperation with partners
Maize ● **Wheat ▲**

CIMMYT dispatches seed globally from
 Colombia Mexico
 Ethiopia Turkey
 Kenya Zimbabwe



Wheat varieties releases by region and origin

1994-2014



Maize and Wheat Production in Eastern Africa (2013)

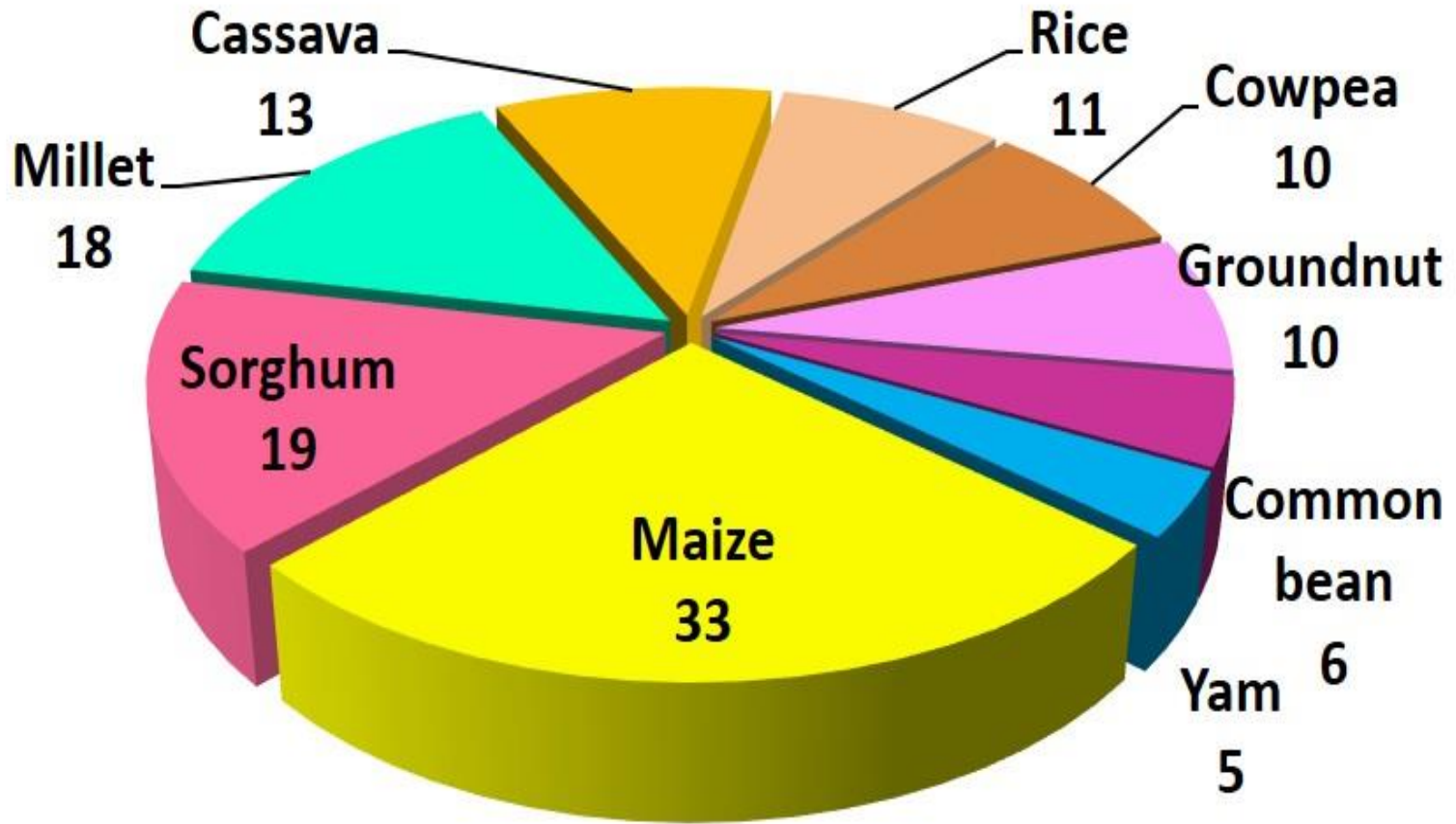
Country	Production (Tons)		Productivity (t/Ha)		Area Harvested (Ha)	
	Maize	Wheat	Maize	Wheat	Maize	Wheat
Ethiopia	7,234,955	4,231,589	3.42	2.54	2,114,876	1,663,845
Kenya	3,513,171	328,637	1.66	2.23	2,116,141	147,210
Burundi	127,829	5,628	1.32	0.58	97,242	9,766
Rwanda	480,000	67,730	1.92	2.19	250,000	30,990
Tanzania	6,737,197	167,000	1.60	0.97	4,200,000	171,380
Uganda	2,763,000	22,000	2.50	1.57	1,105,000	14,000

This situation has to change and its changing



Major Staples of Africa

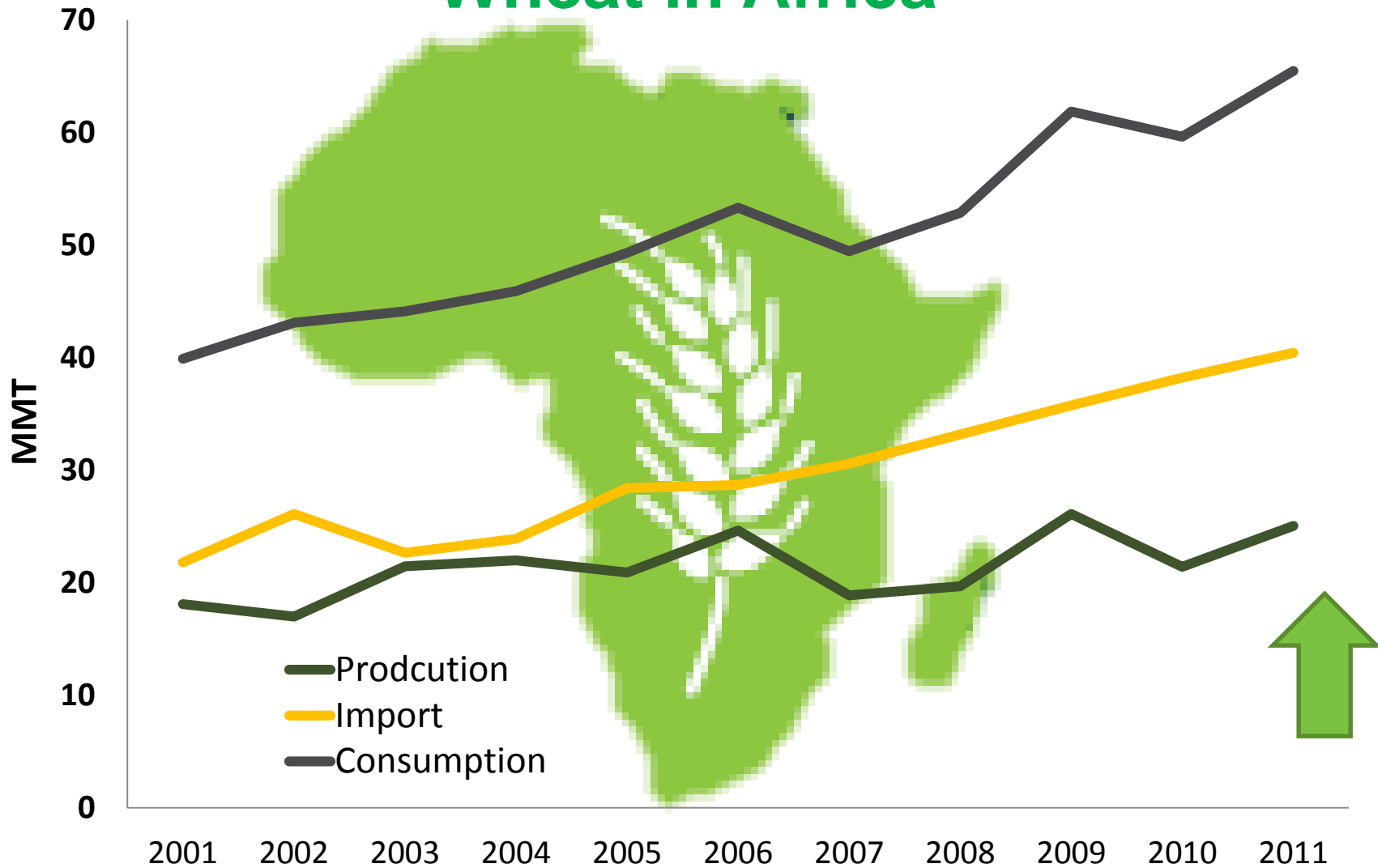
(Million Ha – FAO 2011 Data)



Where is wheat?

Africa spends its limited resources to import wheat

Wheat in Africa



Challenges faced in Maize and Wheat Production in ECA

- Yield potential
- Low soil fertility stress
- Drought stress
- Foliar and ear diseases (+ emerging)
- Stemborers, weevils and grain borers
- Non-optimal crop management practices
- Less than optimal seed systems to reach smallholder farmers
- Less than optimal nutritional content of current maize and wheat varieties

Considering **CIMMYT's Mission:**

Maize and wheat for improved livelihoods

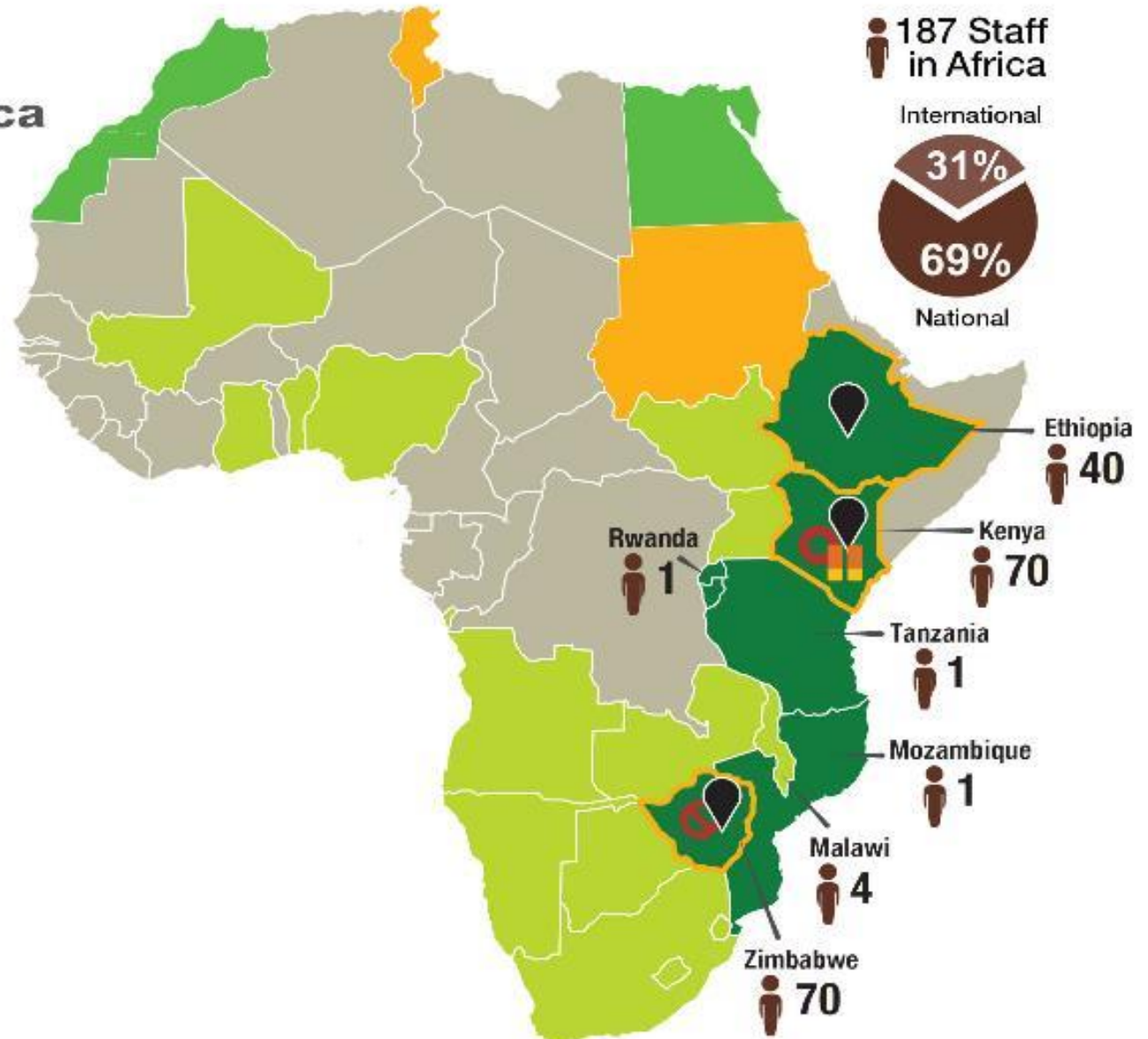
We address these constraints through projects



CIMMYT in Africa

CIMMYT in Africa

- Countries with CIMMYT Staff
- CIMMYT Project Countries
- Wheat Phenotyping Network:
 - Planned
 - Operational
- 📍 CIMMYT Office
- 🚫 MLN Screening Facility
- 🚫 MLN Quarantine Facility
- 🏗️ Doubled Haploid Facility
- 👤 # CIMMYT Staff



Partnerships in CIMMYT's Strategic plan 2017-2022



Through **collaborative research, partnerships and training**, CIMMYT works throughout the developing world to improve livelihoods and foster more productive, sustainable farming.

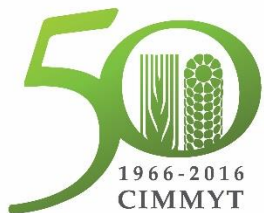


Regular Staff

69 members of staff
(50 Men/19 women)



Temporary field
staff
More than 300
per month



turning research into impact

KENYA STAFF 2016



CIMMYT Partnerships in Africa

- **Public sector partnerships model**
 - **CGIAR Partners**
 - Partnerships for germplasm improvement, product deployment and capacities development
 - **NARs Partners**
 - Partnerships for germplasm improvement, product deployment and capacities development
- **Private sector partners**
 - Partnerships for germplasm improvement, product deployment, capacities building and resource mobilization
- **Regional partnerships**
 - Public sector institutions at Regional and sub-regional levels
 - Research Networks

CIMMYT

+

Partners

=

Impacts



CIMMYT Achievements in Africa



USD 37 million

Yearly investment of CIMMYT's projects in Africa



CIMMYT-Africa maize breeding hubs in Ethiopia, Kenya and Zimbabwe help in exchanging huge amounts of maize germplasm across the world



Rapid response to tackle **maize lethal necrosis (MLN)** epidemic in eastern Africa. It has led to the release of MLN-tolerant varieties in Kenya, Tanzania and Uganda



650,000 farmers

in eastern and southern Africa will be supported to adopt sustainable intensification practices, (by 2023) improving productivity by at least 30 percent

In 2014, 52,000 tons

of certified drought tolerant varieties were produced under the Drought Tolerant Maize for Africa project



enough for

2 million hectares



benefiting

5.2 million households

in sub-Saharan Africa



Over **200 improved drought tolerant maize varieties** were released under the Drought Tolerant Maize for Africa project through over 140 national seed companies in 14 countries between 2007 and 2015

Quality Protein Maize



Helping smallholders fight malnutrition in rural households in Benin, Ethiopia, Ghana, Kenya, Nigeria, South Africa, Tanzania, Uganda, Zambia and Zimbabwe

210 African students

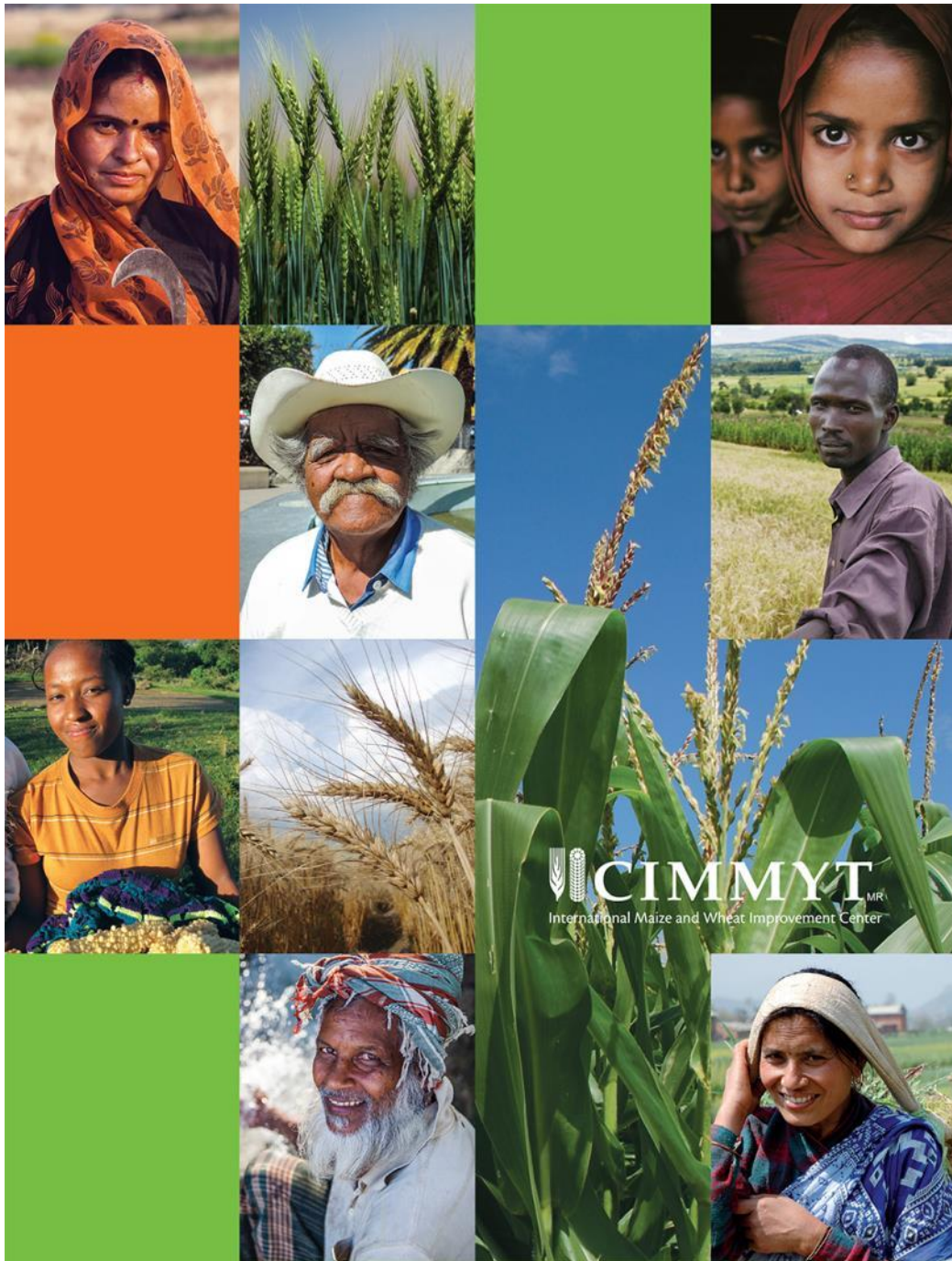


graduated from higher education after receiving sponsorship from CIMMYT between 2005 and 2014

Ug99 Wheat Rust Disease (the biggest threat to wheat)



Eastern Africa is at the center of CIMMYT's efforts to control the disease. It was first detected on CIMMYT nurseries in Uganda and now present in 13 African countries



**Thank you
for your
interest!**

