

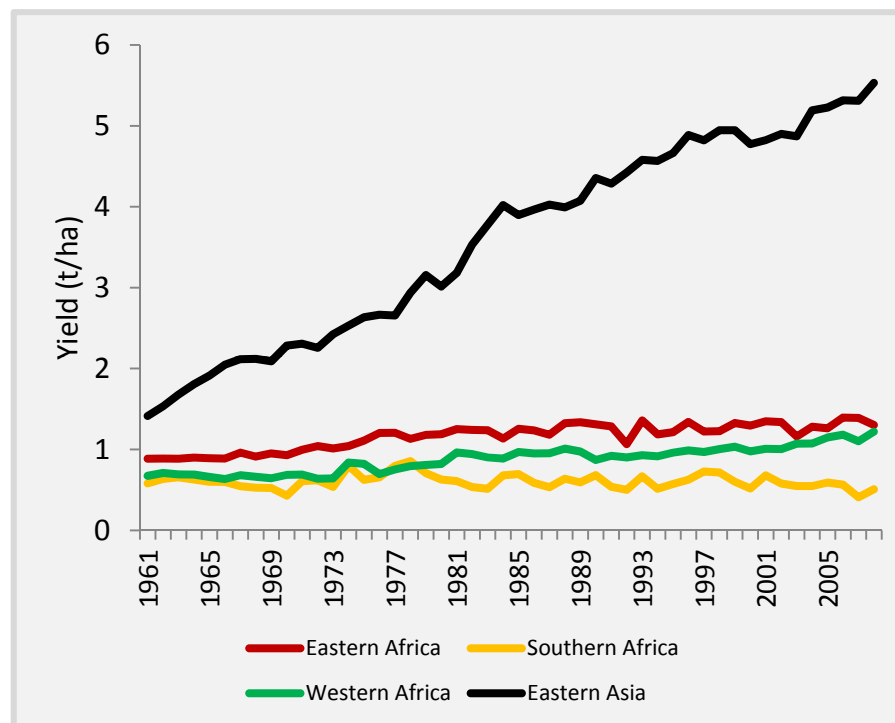
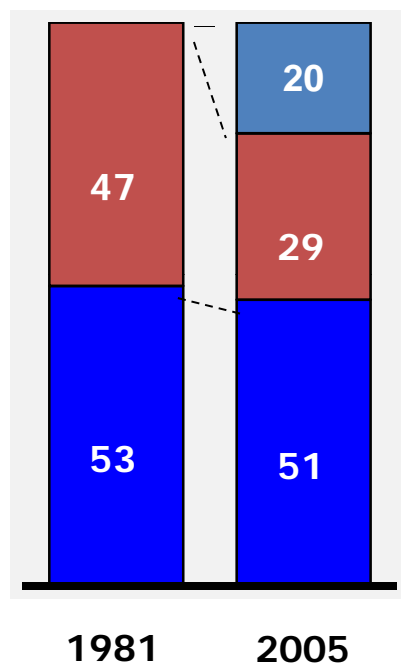
Status and challenges of soil health management in Africa

Launch of Global Soil Partnership in Eastern and Southern Africa
Jacaranda Hotel, Nairobi
25-27 March 2013

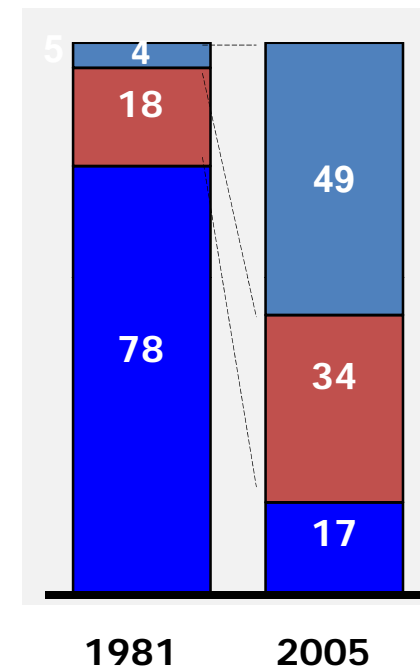


Agricultural productivity and poverty reduction

Sub-Saharan Africa



East Asia



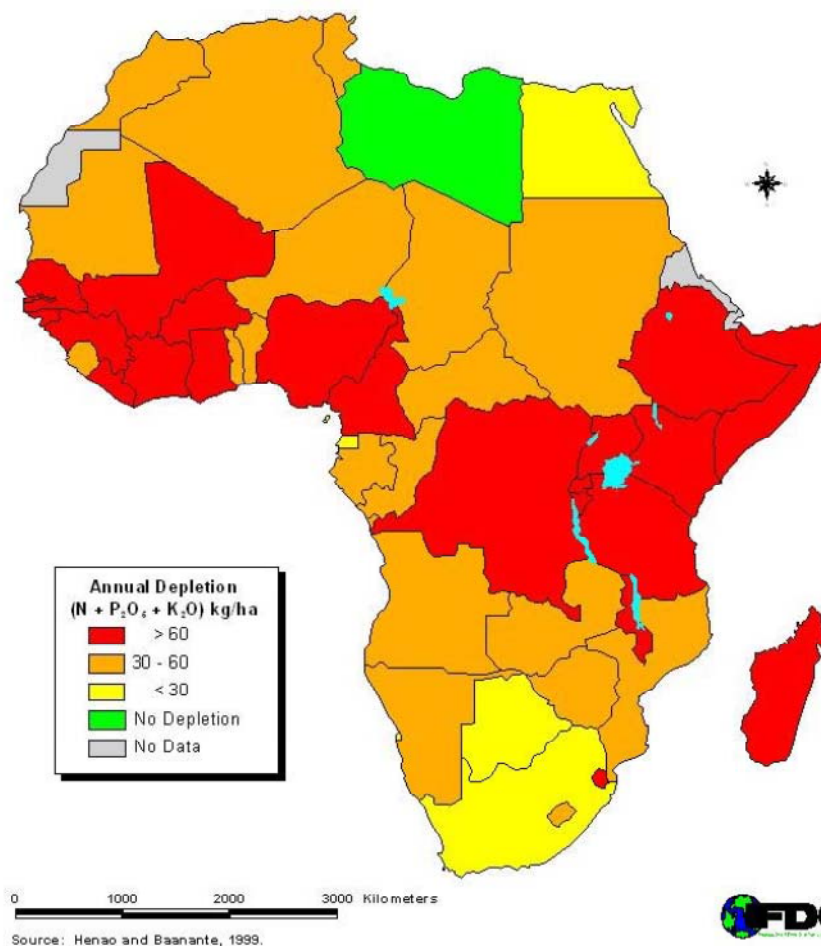
Total no of people (m) **212** → **388**
<\$1.25/day

 >\$2.5/day
 \$1.25-\$2.5/day
 <\$1.25/day

107 → **31**
1 → **6**

On average 43 million tons of food costing about \$7.5 billion is imported annually to feed the hungry in Sub-Saharan Africa

Annual Nutrient Depletion



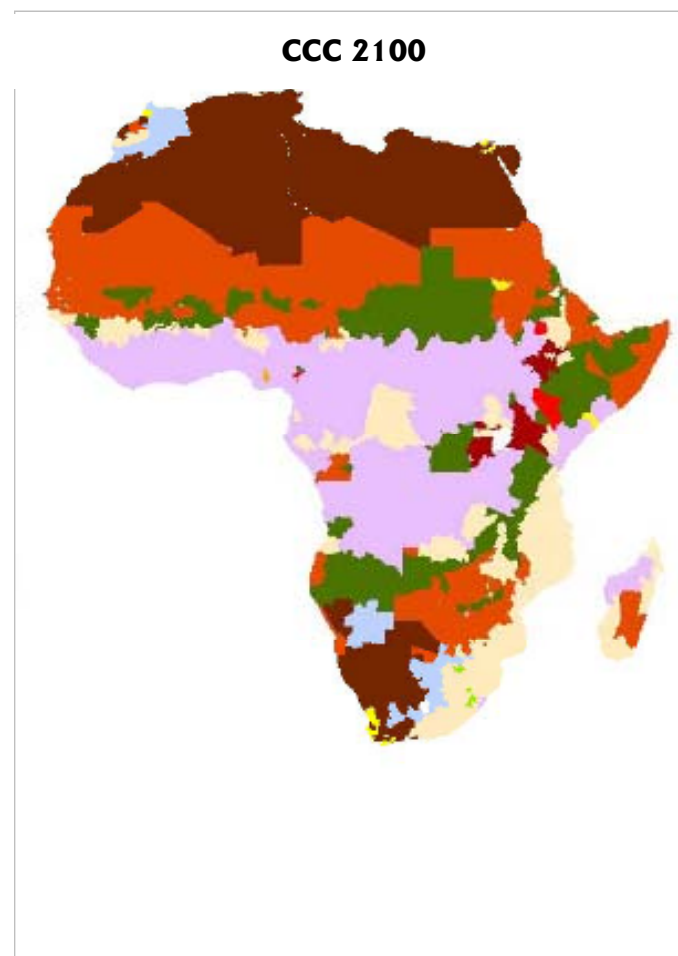
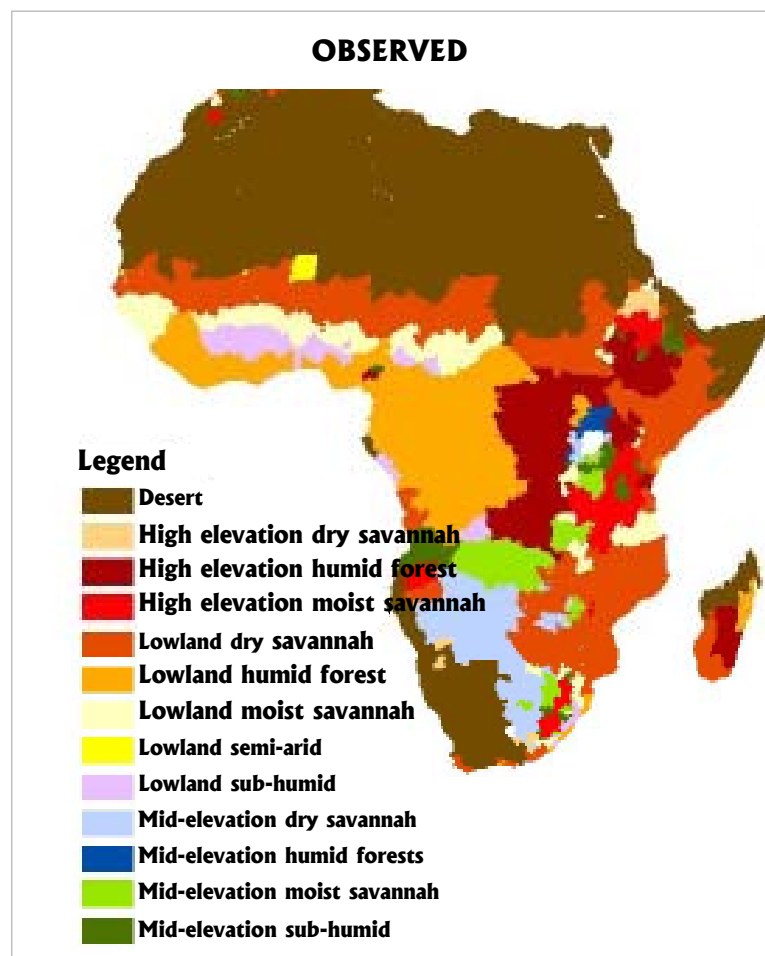
Unhealthy soils Untamed water



Climate Change is affecting African Agriculture



Predicted Change in Distribution of Agro-ecological Zones with (CCC Scenario), 2003 – 2100e



Source: "How Will Climate Change Shift Agro-Ecological Zones and Impact African Agriculture?" , P.Kurukulasuriya & R. Mendelsohn

Relative cost of food aid



- To increase farmers access to seeds fertilizers for them to produce an extra ton of maize (\$135)
- To buy a ton of maize locally and distribute it (\$320)
- To buy, ship and distribute a ton of US maize in Africa (\$812)

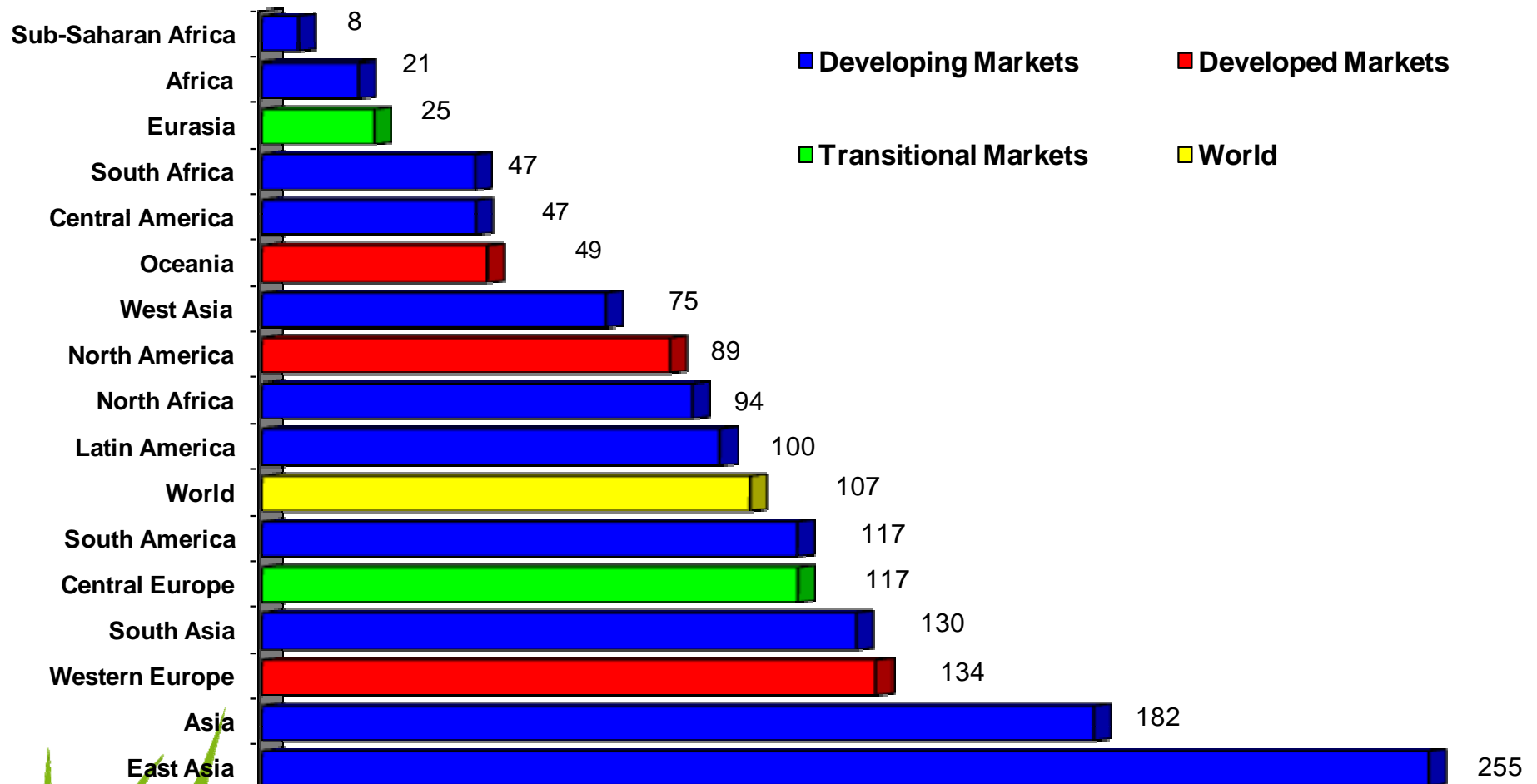
Source: Sanchez, P. 2009: A smarter way to combat hunger. Nature, 458, 12.



Fertilizer use



Average per hectare fertilizer use rates as kilograms of nutrients (NPK) by fertilizer markets in 2008/09



Source: IFDC; derived from FAO data

As AGRA's largest program, the Soil Health Program (SHP) plays an integrative role in promoting soil health and farmer productivity



AGRA, founded in 2006 in partnership between the **Bill & Melinda Gates Foundation** and **The Rockefeller Foundation**, is focused on catalyzing an African green revolution by promoting rapid and sustainable agricultural development among Africa's smallholder farmers.

AGRA's **organization-wide goals for 2020** are:

- 1 Reduce food insecurity by 50% in at least 20 countries
- 2 Double the incomes of 20 million smallholder families
- 3 Put at least 15 countries on track for attaining and sustaining an *African Green Revolution*

AGRA's **Soil Health Program**, was set up in early 2008 and became operational in 2009, with the following **primary goals**:

- 1 Efficient and economically sustainable supply of fertilizer to farmers in Africa
- 2 Uptake of appropriate ISFM technology packages by smallholder farmers
- 3 Create an enabling environment upon which other organizations can build and engage

AGRA programs



13 countries and counting ...



New countries –
Liberia
Sierra Leone
South Sudan



**Some early
successes**

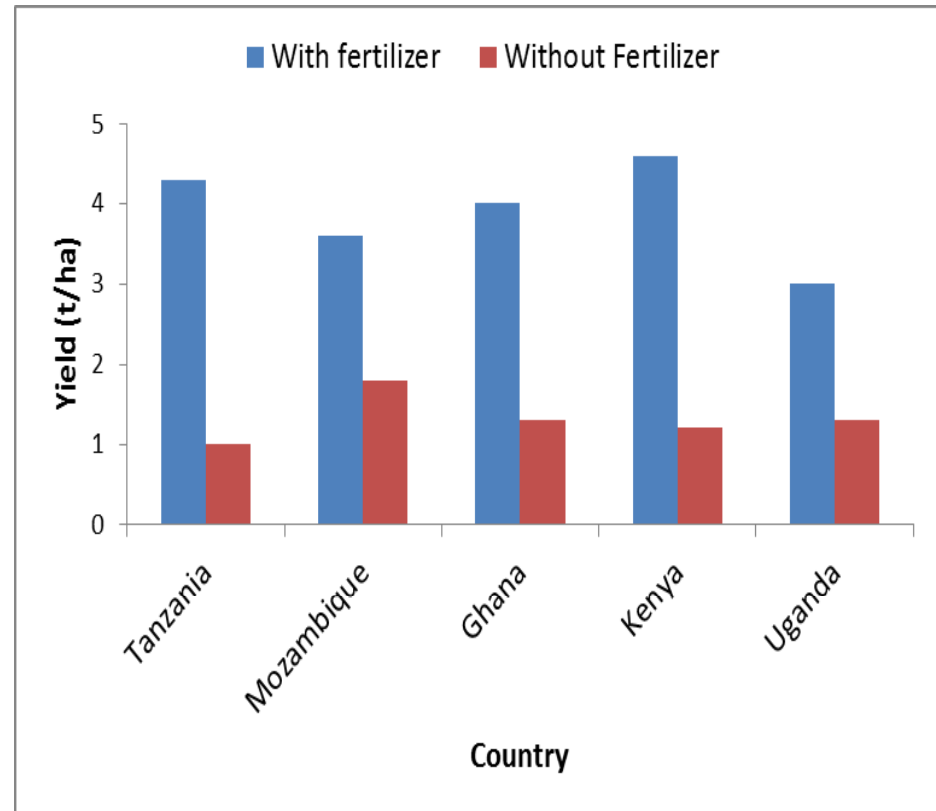
Micro-dose technology has great potential

'Coke
Cap' Microdosing



Yields of staple crops more than doubled

- Targets to increase cereal yields from 1 ton/ha to 3 tons/ha
 - Target has been achieved
- Targets to increase area under ISFM tech by 2 million ha, of which 1.2 million ha (60%) should be under cereal crops.
 - Achievement: 0.5 million ha under ISFM tech with cereal area being 340,000 ha and legumes area 160,000 ha

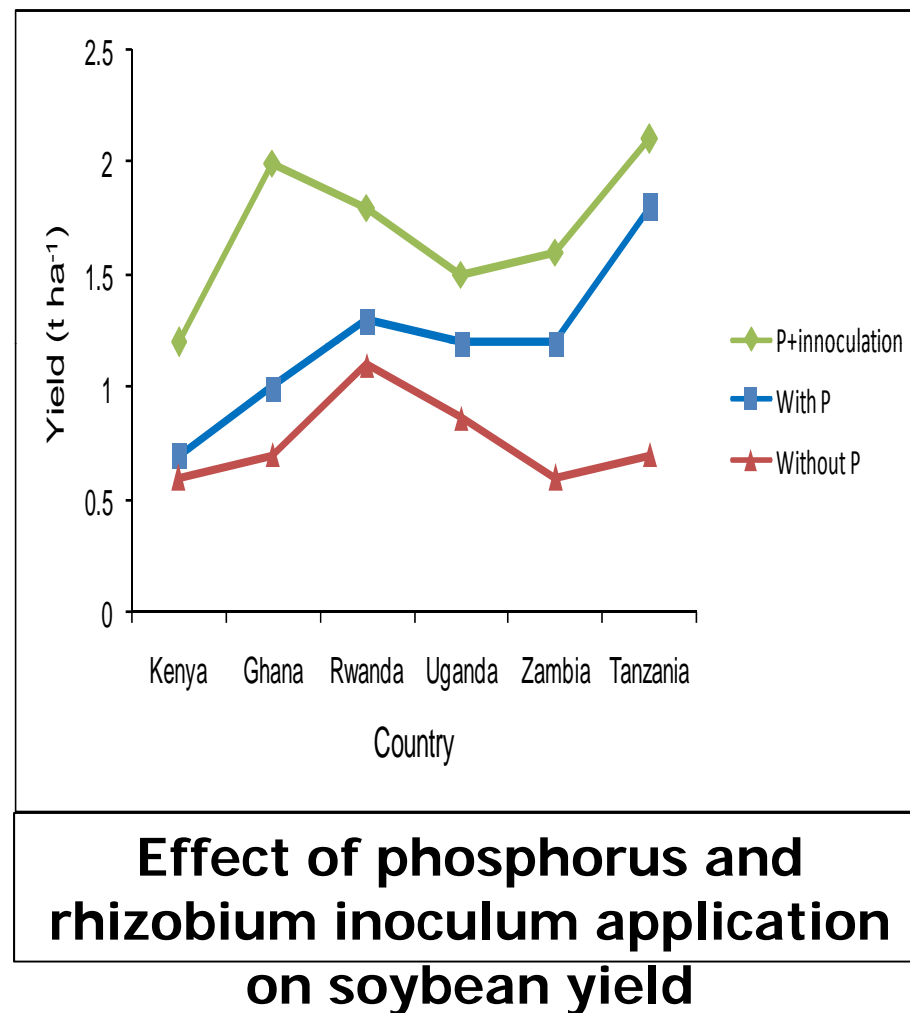


Effect of fertilizer use on maize grain yield across different countries

Yields of legumes increasing with ISFM interventions



- 50-100% increase
- 170,000 ha under legumes (22% of target)



Thank You

