

FERTILIZERS: KEY TO ACHIEVING HUNGER AND POVERTY GOALS IN AFRICA

**by
Amit Roy**

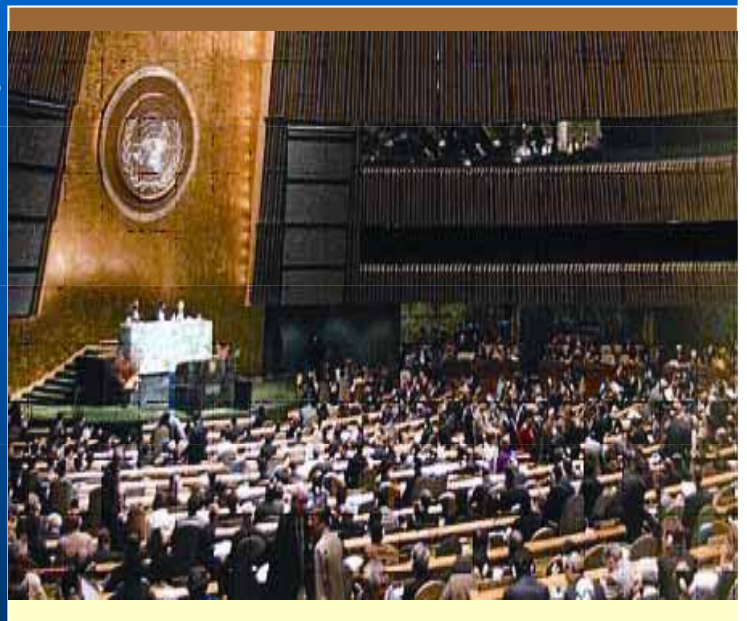
Presented at
The Fertilizer Outlook and Technology
Conference,
Tampa, Florida, U.S.A.
November 5-7, 2007

The Enormity of Africa



Millennium Declaration

- Adopted by UN Member States in 2000
- A set of 8 goals to reduce by 2015
 - Hunger
 - Poverty
 - Illness
 - Ignorance



MDG # 1:

**To cut hunger and poverty in half
by 2015**

Progress at the MDG midpoint?

- Modest results
- Under 5 underweight declined 33% → 29%
- Earning under \$1/day declined 46% → 41%

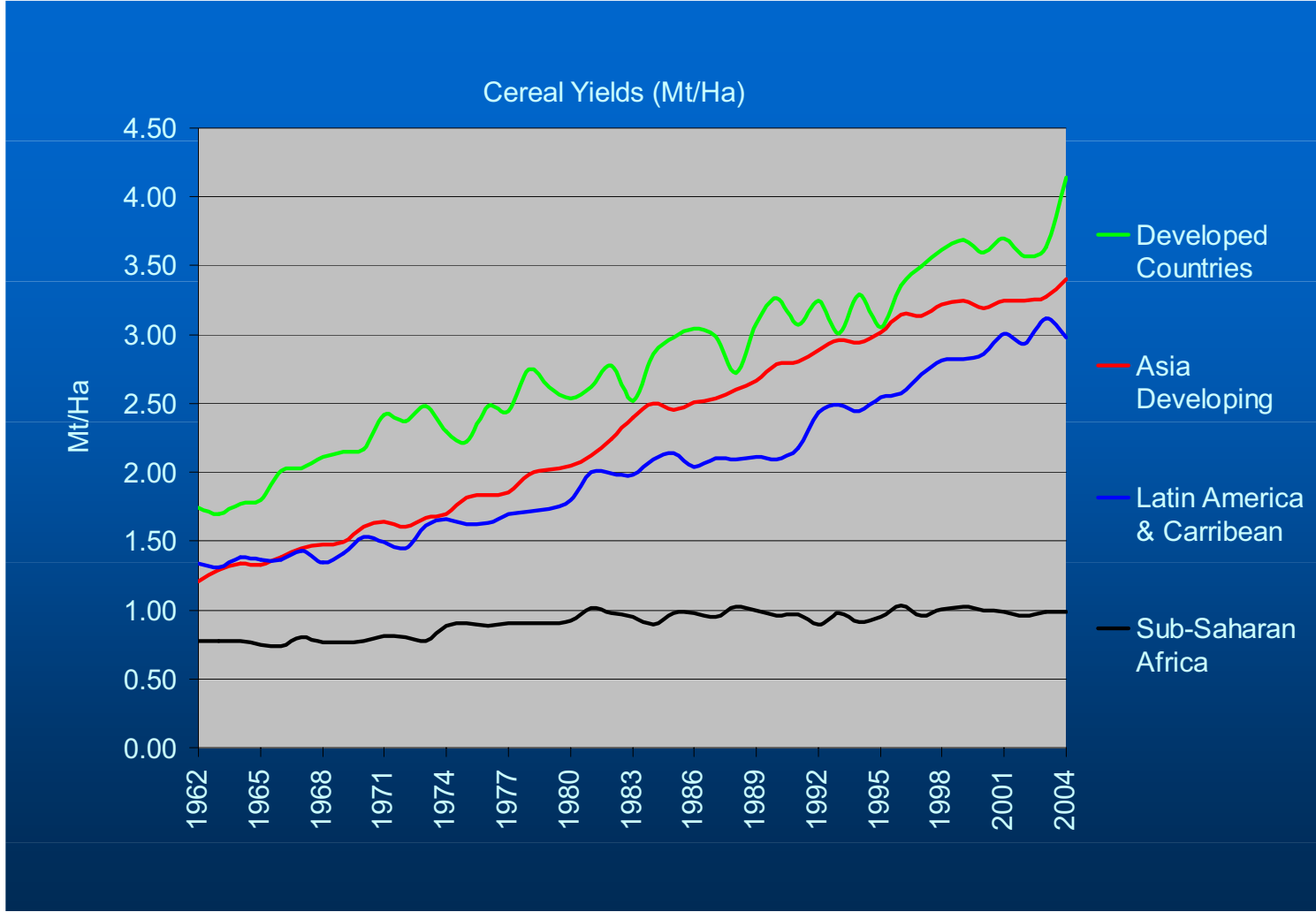


Sustainable increases in output per hectare of 2-3 times present levels will be required by 2050—NRC



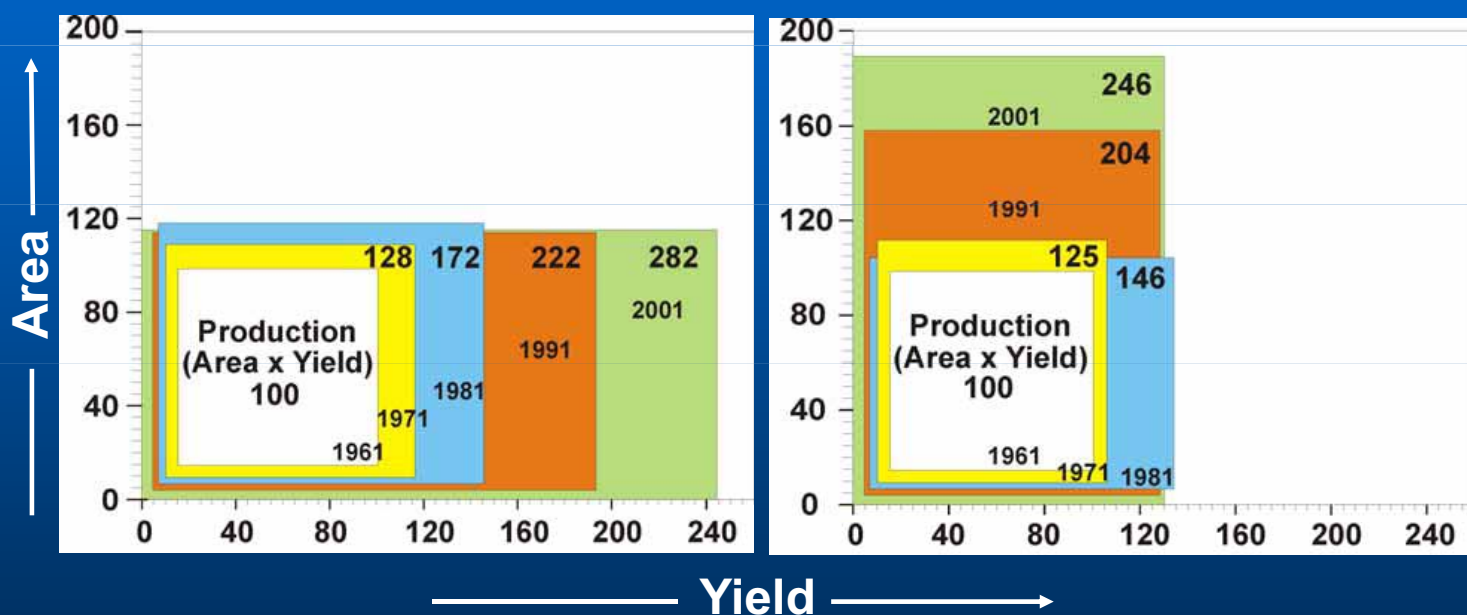
Africa's Agricultural Situation

- **Three ways to assess:**
 - **Production (positive)**
 - **Per Capita Production (negative)**
 - **Productivity (negative)**



Cereal Production, 1961–2001

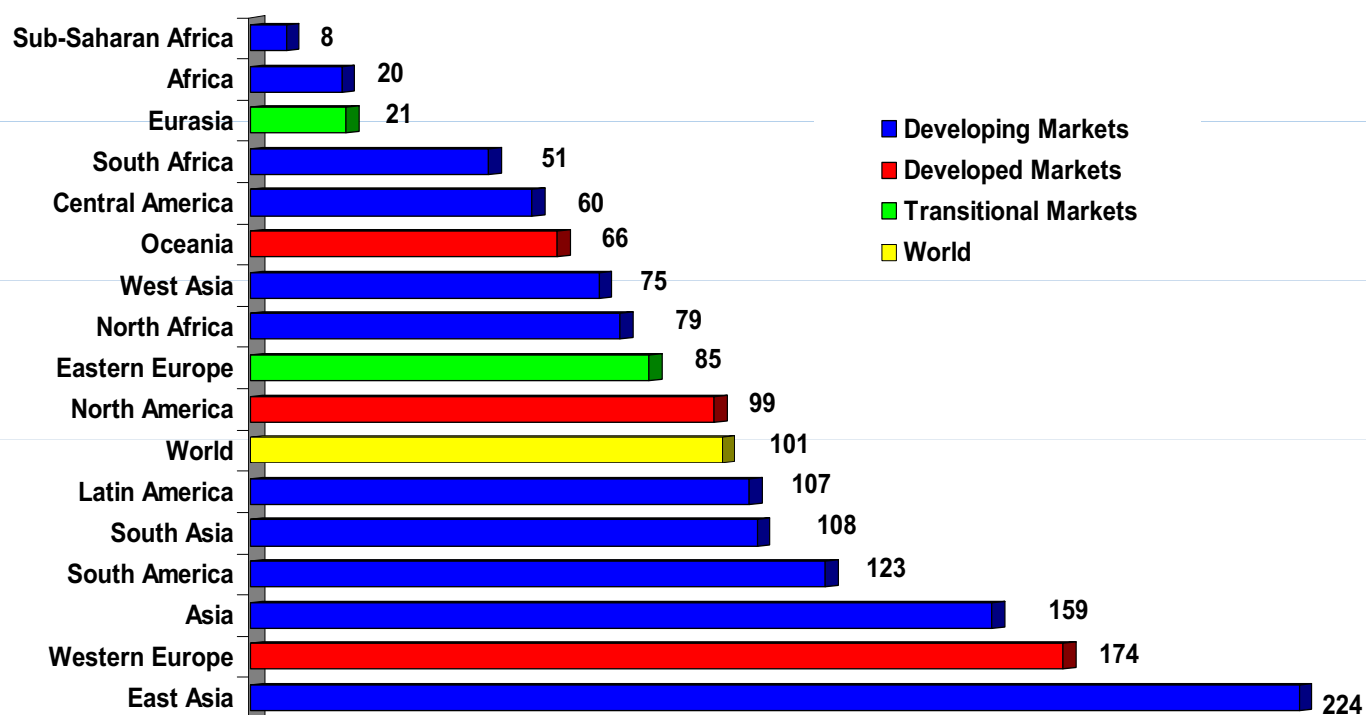
(% change)



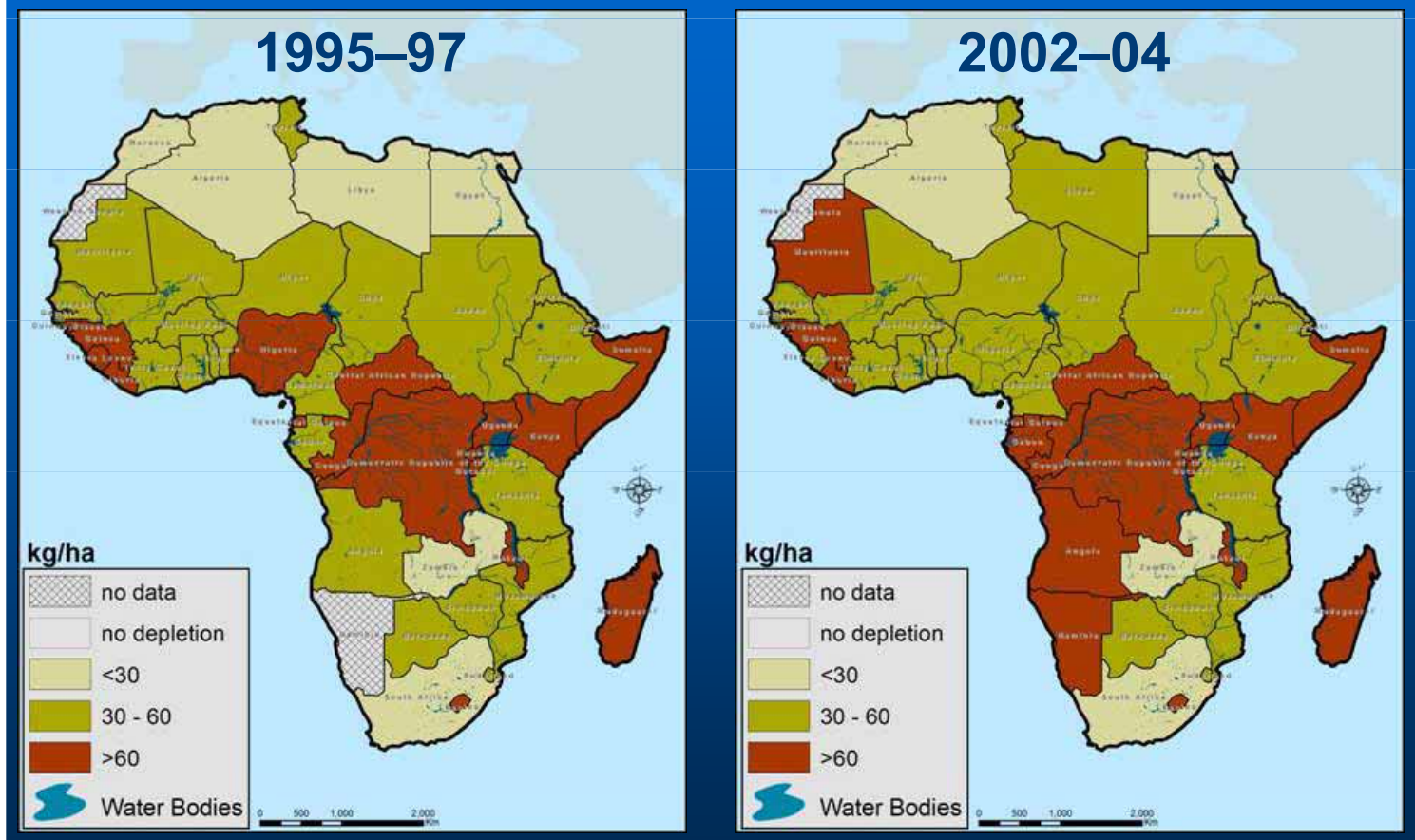
South Asia

Sub-Saharan Africa

Per Hectare Fertilizer Use by Markets, 2004/05 (kg/ha)



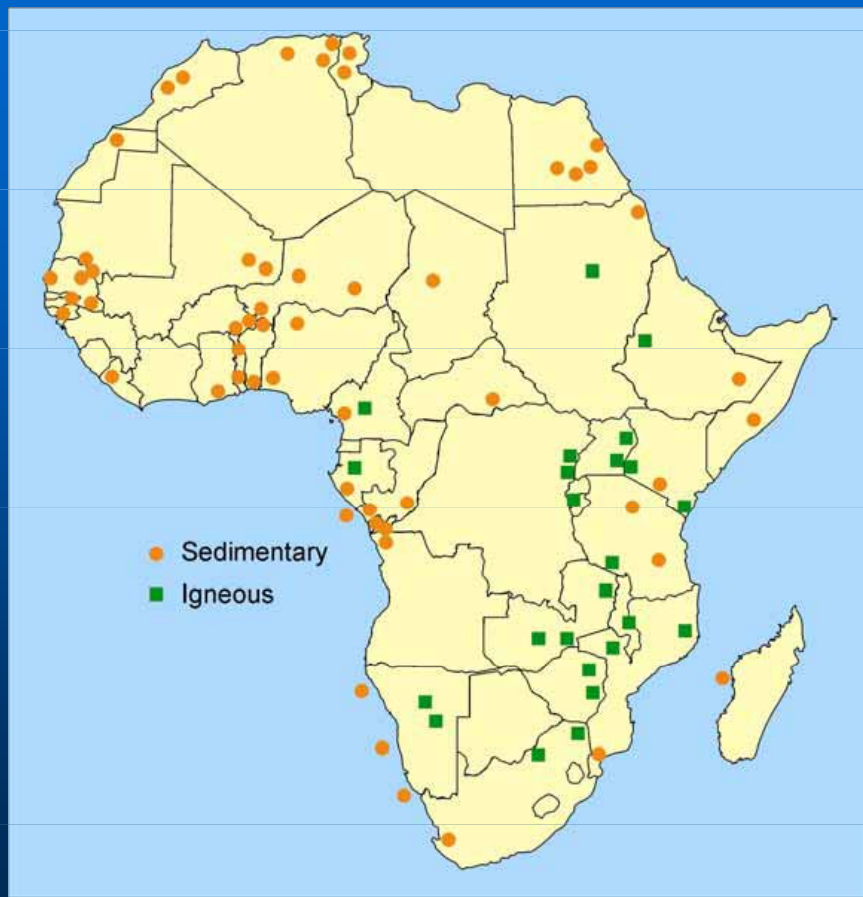
Nutrient Mining in Agricultural Lands of Africa



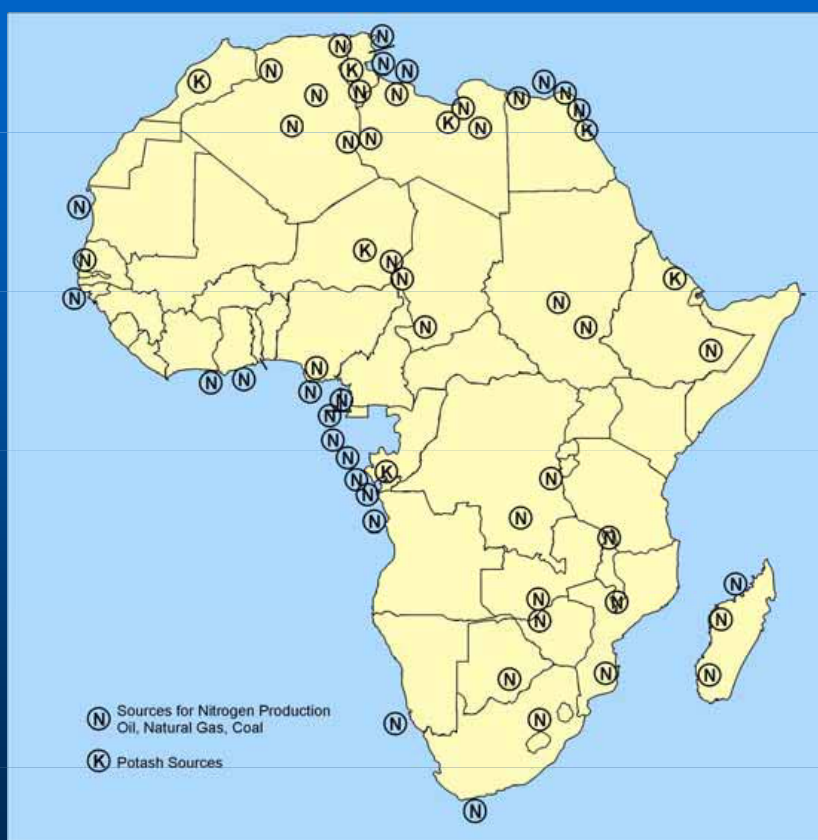
Soils in Africa are so severely depleted that they represent a major constraint to agricultural productivity.

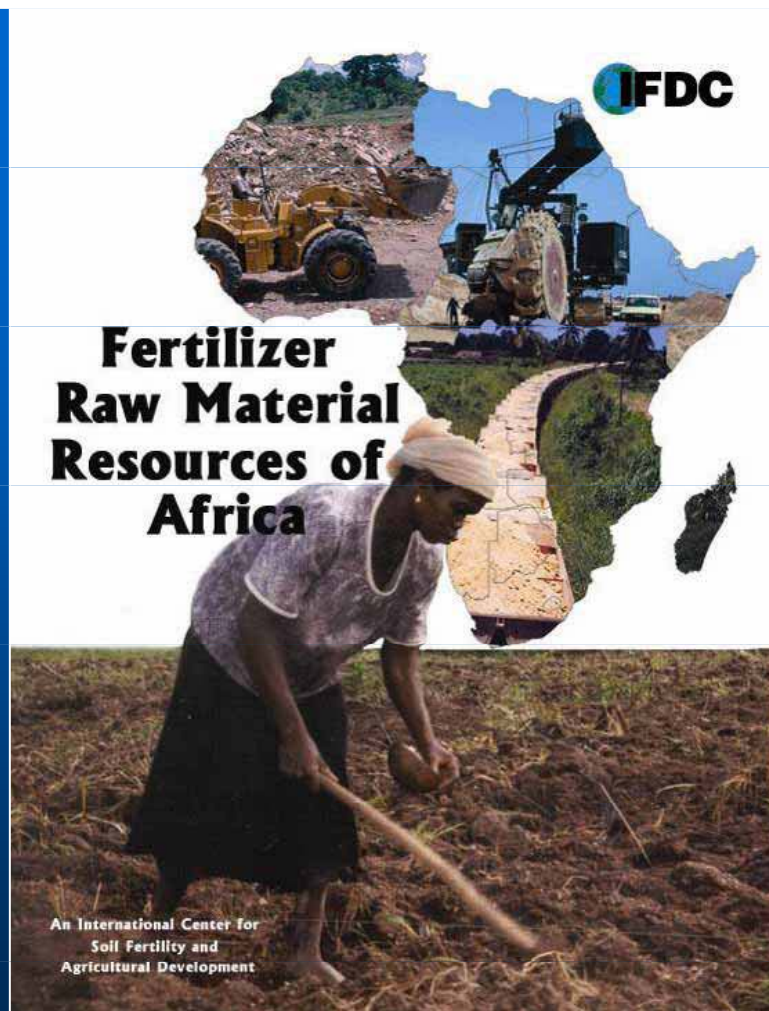
Continent in need of fertilizer is
well endowed with fertilizer
resources

Significant Phosphate Deposits of Africa



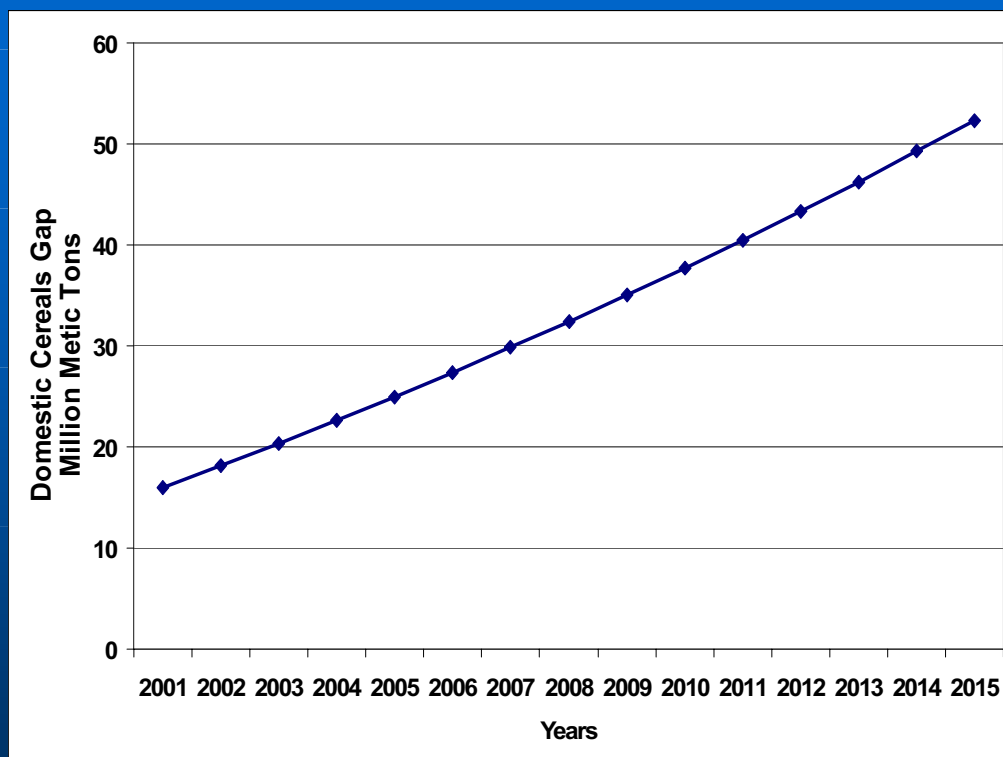
Significant Potential Nitrogen and Potash Resources of Africa





www.ifdc.org





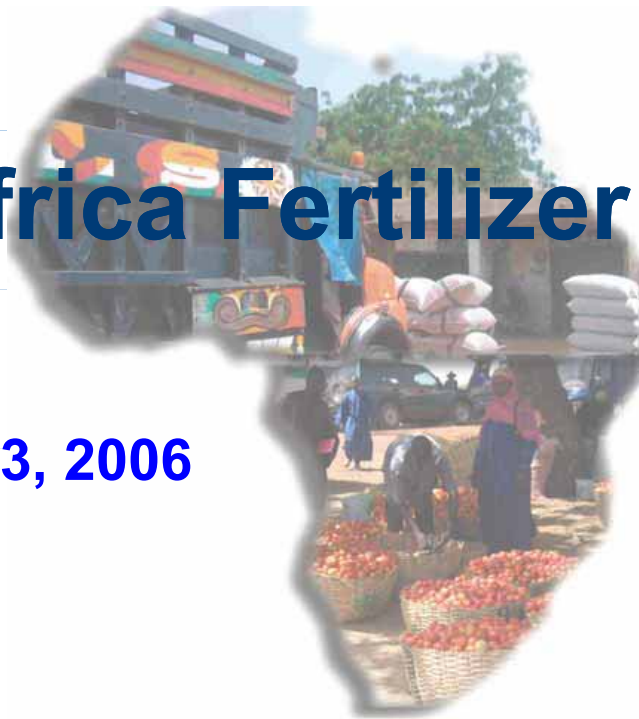
**36 million
metric
tons**

How can Africa close the cereal gap?

- **Expand land under cultivation** by 36 million hectares by 2015 (47% increase)
- **Import** 36 million tons **more of cereals** per annum by 2015 (\$7.2 billion @ \$200/ton)
- **Import** 7 million tons of **fertilizer** per annum by 2015 (\$2.5 billion @ \$350/ton)

The Africa Fertilizer Summit

June 9 – 13, 2006



www.ifdc.org



Guiding Principle

- Inorganic fertilizers are essential for agricultural growth to achieve African Green Revolution – but they are not enough
- Holistic approach needed to improve:
 - **Access:** Increase volume, range, and quality of inputs using commercial channels
 - **Affordability:** Reduce the price of all inputs
 - **Incentives:** Improve functioning of the output markets

Major Actors

- Summit Chairman: H.E. Olusegun Obasanjo
- Convened by AU/NEPAD, hosted by the Federal Government of Nigeria
- Organization and implementation facilitated
 - Eminent Persons' Group
 - Technical Committee
 - IFDC and NEPAD Summit Secretariats
 - National and Local Organizing Committees
 - Communications Strategy Group
- Sponsored by multi-donor group
- www.AfricaFertilizerSummit.org

Format

- June 9-10: Technical Session
- June 11: Stake Holders' Meetings
- June 12: Ministerial Meeting
- June 13: Meeting of the Heads of State

Abuja Declaration

**Fertilizer is Crucial for Achieving
an African Green Revolution**

**Fertilizer is a Strategic Commodity
Without Borders**

Twelve Resolutions Adopted

AFS- Priority Actions

- **Agro-dealer development**
- **National Agricultural Input Credit Guarantee Facilities**
- **“Smart” subsidies for the poor and vulnerable**
- **Regional procurement and production to realize economies of scale**
- **Fertilizer Development Financing Mech.**

Africa Fertilizer Summit Proceedings

Abuja Declaration On Fertilizer For An African Green Revolution

The New Partnership for Africa's Development has declared that the vision of economic development in Africa must be based on raising and sustaining higher rates of economic growth (7 percent per year). To realize this vision the African Heads of State and Government adopted the *Comprehensive Africa Agricultural Development Programme*, which calls for a 6% annual growth in agricultural production as a framework for the restoration of agricultural growth, food security and rural development in Africa.

Africa's farmers face a variety of constraints, including low productivity, limited access to new agricultural technologies and weak inputs. Without adequate inputs, farmers often cannot maximize their yields. In some cases, farmers are less productive than those in other regions. To overcome these constraints, farmers need access to modern knowledge, extension services, improved seeds, fertilizers and irrigation.

Africa must begin by addressing its severely depleted soils. Due to

Abuja, Nigeria, June 9-13, 2006



Environmental Sustainability

**Are MDG 1 (hunger and poverty) and
MDG 7 (environmental sustainability)
compatible?**

Environmental Consequences of Fertilizer Use

- **Overuse**
 - Groundwater/aquifer pollution
- **Underuse**
 - Poor yields
 - Nutrient mining
 - Land expansion
- **Smalling finds the latter more prevalent in Africa**

MDG 7 and Fertilizer

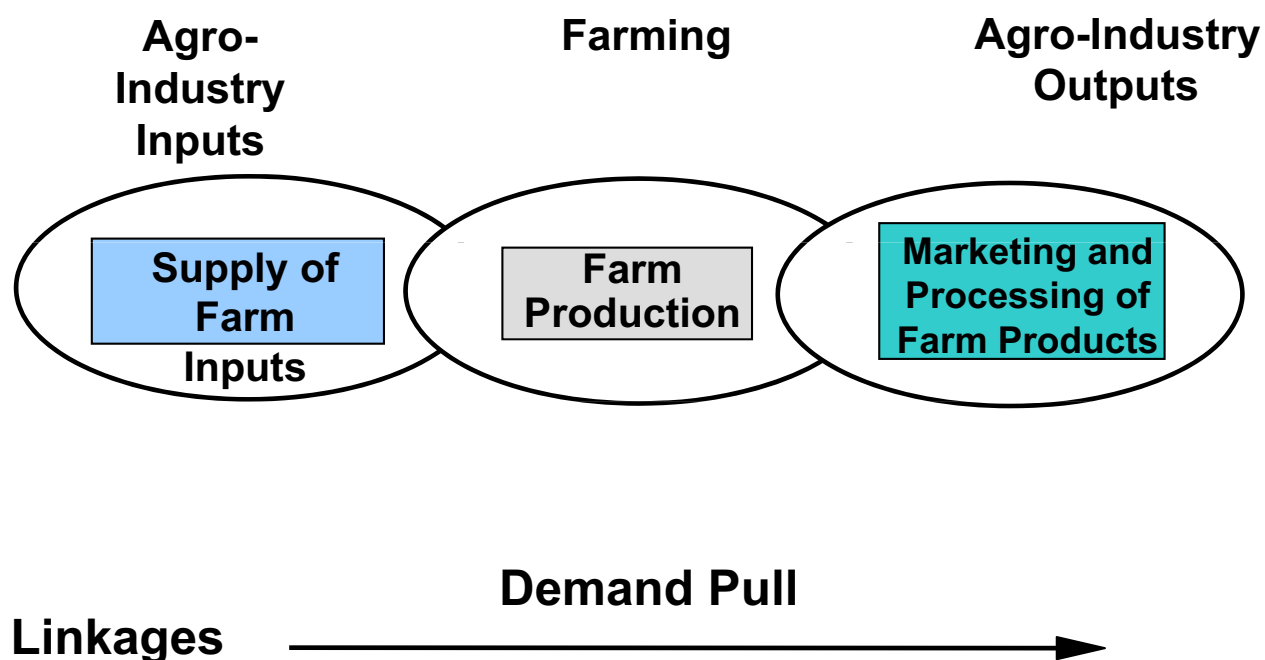
Continued removal of nutrients from the soil without replenishment and continued expansion into new lands is not sustainable.

Thus increased fertilizer use is not merely compatible with MDG 7, it is essential to its achievement.

How to Achieve a Green Revolution in Africa?

- Fertilizer alone is not enough.
 - High-yielding varieties, organic inputs, good management, and irrigation.
- Simple solutions are neither appropriate nor effective.
 - Fertilizer is a political commodity
 - Holistic approaches are required

The Agribusiness System: A Holistic Approach



Summary

- **Attaining MDG #1 requires additional action.**
- **Focus must be on agricultural productivity.**
 - yields only one-quarter of world average
 - continued expansion of cultivated area is ecologically and otherwise undesirable
- **Due to depleted soils, improving soil fertility is basic to the solution.**

Summary (continued)

- **To be effective, soil improvement must be accompanied by**
 - the use of high-yield varieties,
 - improved farm management techniques including better use of water resources
 - more efficient value chains.

Summary (continued)

- **This process is complicated**
 - millions of smallholder farmers involved
 - capital requirements high for investment in fertilizer and other inputs
 - cost of organization and training also high.
- **Perhaps this complexity has led to so many decades of inaction, but continued inaction is a recipe for disaster.**

Thank You



www.ifdc.org

