



ISSUES IN AGRICULTURE

Key issues in the agricultural sector

Linkage between agriculture and poverty

- **Locational characteristics.** In most developing countries, people are disproportionately concentrated in rural areas, are poor and depend on agriculture
- **Agriculture vs industrial growth.** Agricultural growth is more effective in reducing poverty compared to industrial growth
- **Policies for poverty alleviation** should include developing the agricultural sector



Agricultural growth reduces poverty

Investing in
growth and
productivity



- Enables subsistence farmers to increase their farm outputs
- Strengthens rural labor markets and generates non-farm work which can be used to invest in improved farming
- Enables migration to the urban economy; remittances back to rural areas can support household consumption and investment

The Green Revolution

Boost in grain production and farm yields with the discovery of new hybrid seed varieties, improved agricultural inputs and substantial increases in agricultural productivity through scientific methods

Initiated in the 1940s by Norman Borlaug, a US agriculture scientist; intensified in the 1960s



Background

- Low productivity/yield using traditional technologies and crop varieties
- Food production not keeping up with rapid population growth; after World War II many countries were poor
- A “feed the world” strategy: needed so that less-developed countries will not fall to socialism
- Increased food production will enable developing countries to increase national output and reduce poverty

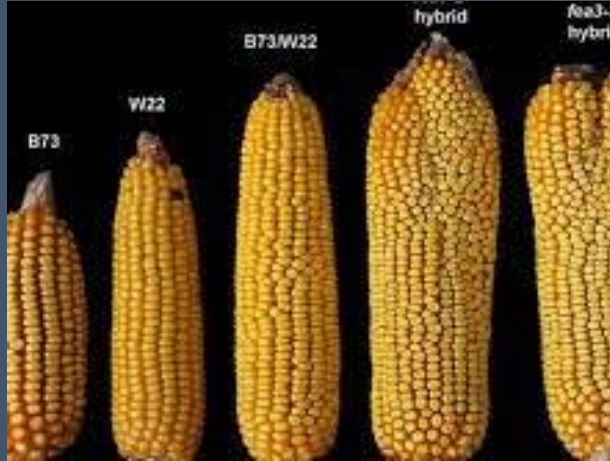


Outputs of the Green Revolution



Disease resistency

mostly staple crops such as rice, wheat and maize which can withstand pest diseases, parasites and weeds



Higher yields

high-yielding crop varieties, with substantial increases in crop yield per hectare



Improved agriculture inputs

Better mechanical equipment, application of chemical fertilizers, and improvement of other farm inputs

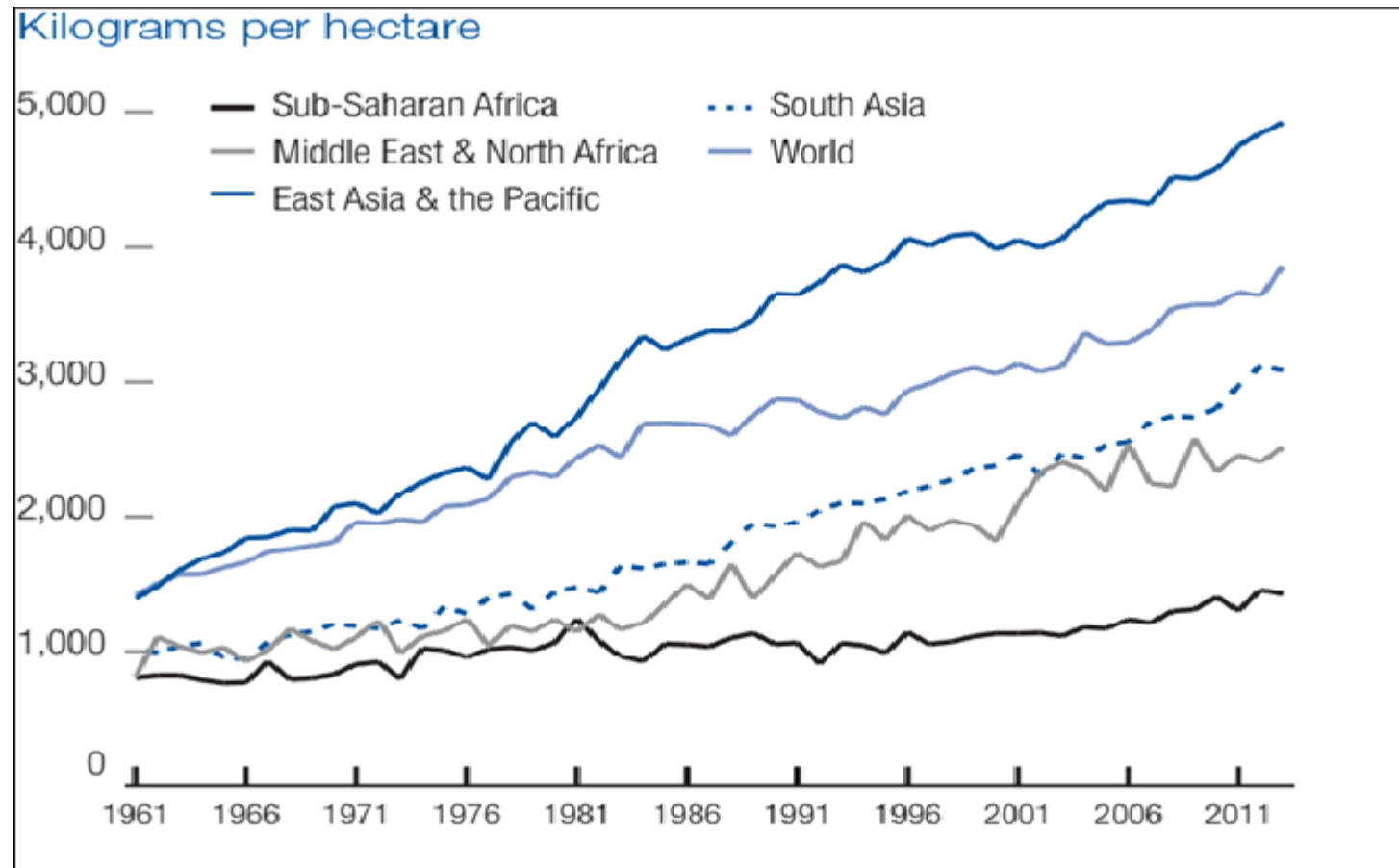


Improved farming practices

innovative crop breeding, and improved farm practices

Cereal yield worldwide, 1960-2011

- Worldwide, food production has been increasing
- Cereal production rate (and productivity) has increased faster than population growth rate, particularly in East Asia and the Pacific



Negative impacts

- Overuse of pesticides and chemicals: soil and water pollution
- Over adoption of the use of agricultural methods
- Overproduction; sometimes farmers are unable to market their supply of produce
- Increased incidence of human and livestock diseases
- Farmers do not necessarily have the money to buy seeds, fertilizers, machinery,



Land Reform

Background

- Land is the only fixed factor of production; as many poor farmers have limited land, equitable redistribution of land could improve agricultural output
- Land reform involves: changes in laws, regulations or customs regarding land ownership; and redistribution of land from wealthy landowners to farmers who work the land



Land Reform

Land reform takes a variety of forms:

- reform of rent contracts: increases security of tenure
- rent reduction
- land to the tiller with compensation
- land to the tiller without compensation

Implementation of land reform:

- often controversial
- difficult where land is given to the tiller without compensation



Land Reform in South Korea and Taiwan

Case of successful land reform: South Korea and Taiwan after World War II

- Korea and Taiwan were under Japan occupation before the war
- Following Japanese defeat, land holdings were re-distributed
- Farmers were given the rights of ownership
- Agricultural production and productivity increased



Land Reform in Soviet Union and China

Case of reforms in the context of socialism

- Land reform preceded by foreign invasions that destroyed the agrarian order followed by revolutions
- Land confiscated from rich landlords and distributed to peasants
- Similar cases experienced by Cuba, Ethiopia, Nicaragua and Viet Nam



Land Reform in South Africa and Zimbabwe

Case of reforms post-apartheid

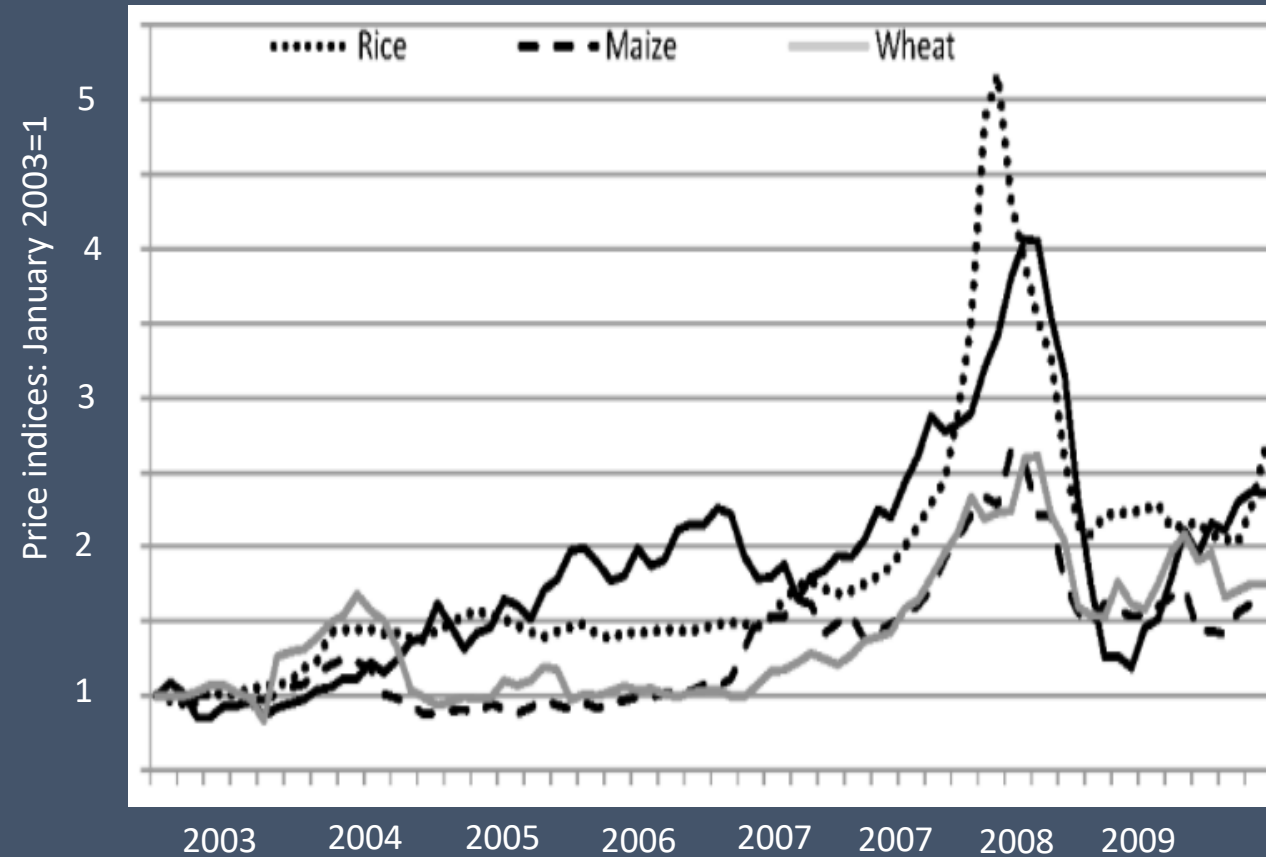
- Settler communities owned much of the prime land
- Apartheid was abolished in 1999; forced expropriation of white-owned farms and redistribution of land to black Africans
- Zimbabwe: reforms widely criticized because of violence and favoritism
- South Africa took a more cautious approach; redistributed 30% of white-owned land to black Africa



Global Food Crisis

Background

- 2005-2008: the world suffered its most severe food crisis
- rapid increase in food prices, triggered by a rise in petroleum prices
- 2007-2008: price of rice tripled from \$335 per ton to \$1,000; wheat and maize prices followed



Source: IMF, 2009

Global Food Crisis

Causes of the crisis: a confluence of several factors

- Growth in food demand from China and India
- Speculation on financial markets
- Hoarding and export restrictions, limits supply
- Rising oil prices increases transport costs
- Demand for biofuels, causes land competition
- Depreciation of US dollar

In US, 25% of corn production was dedicated to biofuels, thereby raising corn prices

In 2007, India banned rice exports

In Australia, severe droughts increased wheat prices

Global Food Crisis

Impacts arising from the crisis

- Increased worldwide poverty rates by 4.5%
- Shift in food consumption pattern (e.g., eating less rice or shifting from rice to tapioca)
- Increased worldwide poverty count by 105 million



Several policy implications from the crisis:

- the realization that agriculture sector is important
- government should step up to increase sector productivity
- incentives should be in place to ensure continuous and improved agricultural production

Policies to Create Incentives for Production

- **Regulate farm markets;** provide a mix of incentives and penalties
- **Invest in rural infrastructure:** irrigation systems, rural roads, and health and educational facilities
- **Food pricing:** if prices are set too low, there is no incentive for farmers to produce; if it is too high, then problems of hunger and malnutrition arise
- **Regulate land tenure and rights**



Policies to Enhance Productivity

- **Subsidize agriculture inputs** such as fertilizers, quality seeds, equipment
- **Provide institutional support for agriculture** such as microfinance credits and social protection
- **Introduce technology and know how** through dissemination of good agricultural practices and provision of extension services



Summary

- The green revolution, land reform and the global food crisis illustrate the importance of agriculture sector
- The green revolution succeeded in increasing agricultural outputs through research and technology, decreased food price and make food more available
- Land reform provides farmers with incentives to produce; however in reality it is difficult to implement



Summary

- The global food crisis points to the importance of stabilizing food prices and appropriate government policies to address the crisis
- Reducing poverty should address the problems that exist in the agriculture sector



THANK **Y**OU!