Market and Institutional Reforms to Enhance Technological Change in Agriculture: The Malian Experience

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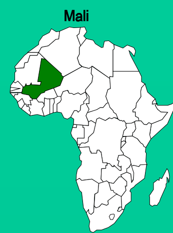
Outline of Presentation

- The setting
- The context
- Pre-reform marketing policies
- Marketing policy reforms
- Lessons learned
- Conclusions and Implications

The Setting



- Climate: 60% desert and semi-desert
- Low Incomes: less than $300 per capita
- Structure of the economy
  - Agriculture (50% of GNP)
    - Cereals
    - Livestock
    - Cash Crops (cotton, horticulture)
  - Mining
  - Remittances and regional trade
  - Member of the CFA franc zone

The setting (cont'd)

- Cereals account for over 70% of total calories
  - Coarse Grains
  - Rice
- Semi-subsistence production

The Context: *Creating the incentives for farm-level productivity growth*

- Importance of technology and resources
- However, productivity growth depends on:
  - access to improved resources
  - technology
  - AND incentives to adopt them
- Need to focus on:
  - how policies and institutions affect productivity growth
  - complementarity of market reforms and technological change
- The Malian rice sub-sector as an example

Pre-reform marketing policies

- Objective – Providing cheap grain to select urban consumers
- Marketing arrangements:
  - State monopoly of national grain board
  - Official fixed prices—No variation over time, space, or quality
  - Ban on private marketing
- Consequences for:
  - producer prices
  - technological innovations & productivity growth
  - government budget,dependency on food imports
  - market access for farmers

Marketing reforms

- Rationale: Create price incentives for farmers to adopt technological innovations to increase farm-level productivity
- Objective: increase producer incomes thereby spurring investment in productivity-increasing technologies.
- Gradual process – began in 1981 and continued for nearly 20 years
  - Removal of legal constraints to private cereals marketing
  - Increased role of the private sector
  - weekly village markets linked to urban centers and export markets

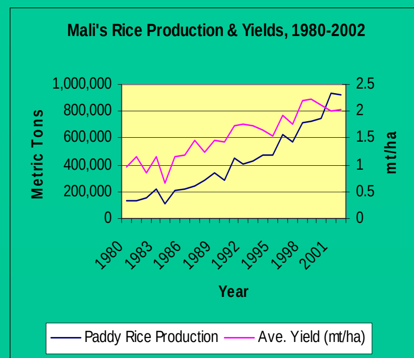
Marketing reforms (cont'd)

- Creation of MIS (OMA) in 1989 to:
  - Level the playing field
  - Improve farmers' market access
  - Increase government's capacity to evaluate policies

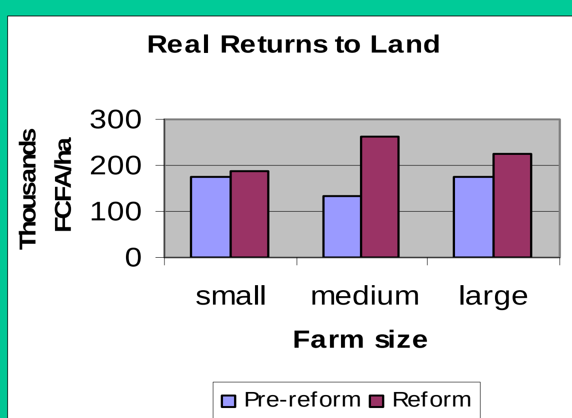
- Sector-level reforms were combined with a major macro-economic reform: 50% devaluation of CFA franc in 1994, which greatly increased returns to tradable goods, including rice.

Impact of reforms on agricultural productivity: Example of Malian rice farmers

- Evolution of production and yield
  - Production went up 7-fold between 1980 & 2002
  - Yields more than doubled on average, and tripled in most intensive systems
- Market reforms assured that higher prices were "competed back" to farmers



Benefits to Farmers



Factors contributing to high payoff to market information in the rice subsector

- CFA franc devaluation
- Competitive market structure
- Existence of high-yielding rice varieties, combined with new cultural practices
  - Transplanting
  - Increased use of organic and chemical fertilizers
- Spread of new post-harvest technologies, especially small rice mills

Lessons learned

- Market reforms as a long process
- Complementarity of market reforms and technological innovations (rice vs. coarse grains)
- For this process to work well, one needs:
  - Investment in market development activities such as MIS
  - Empirical research to feed reform process