The Dairy Sector & Poverty Reduction: A FAO Perspective

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Outline

- Incidence of extreme poverty & the role of livestock
- Global dairy developments
- Characteristics of smallholder dairy production
- FAO’s smallholder dairy development work
The Extent of **Extreme** Poverty

- Globally 1.2 billion **extreme** poor (<1USD/day)
- 800 million **extreme** poor in agriculture
- 600 million **extremely** poor livestock keepers
Regional Incidence of Extreme Poverty

Proportion of people living in extreme poverty (<1$/day)

- < 10
- 10 - 25
- 25 - 50
- 50 - 75
- >75
- No data

Source: World Bank 2003
Number of Poor (Millions) by Region

- **People below US$1 a day**
- **People below US$2 a day**

Source: World Bank 2003

Global Poverty

- East / South Africa
- Central / West Africa
- North Africa / Near East
- China
- East Asia excl. China
- India
- South Asia excl. India
- Central Asia
- Central America
- Caribbean
- South America
Average Incomes by Region

Annual per capita income in USD ppp

Proportion of population in agriculture (%)

26,000 Richest quintile (Q1)
7,000 Q2
4,000 Q3
2,000 Q4

Global Poverty

A Living from Livestock
Pro-Poor Livestock Policy Initiative
The Role of Livestock

- Agricultural populations are still growing
- Little scope for expansion of agricultural land
- The value of produce per area needs to increase
Value of Livestock Products 2000

Milk cow 24%
Cattle meat 21%
Pig meat 17%
Poultry meat 15%
SR meat 4%
Other meat 2%
Eggs 9%
Other 1%
Milk other 7%

538 billion Int$

Source: FAOSTAT
Dairy Production Trends

Million MT

Index 1980 = 100

Source: FAOSTAT 2005
India: Dairy Stock by Herd Size (2001)

- **Smallholder Dairy**: 85 million dairy households

**Pie Chart**
- 73% of herds have 1 to 2 cows
- 23% of herds have 3 to 4 cows
- <20% of herds have 5 to 20 cows
- >20% of herds have >20 cows

Source: IFCN 2003
India: Dairy ‘Farm’ Income Structure

Source: PPLPI Working Papers
India: ‘Dairy’ Return to Labour

- Landless and marginal smallholders gain most income from off-farm sources.
- Return to labour for landless and marginal rural smallholders is often below local wage rate.
- Larger farms make a profit from dairying and often generate employment for non-family members.

**Return to labour minus local wage rate**

- **Landless**
- <= 1 ha
- > 1 ha

Source: PPLPI Working Papers

USD cents / hour

Farm number

Smallholder Dairy

A Living from Livestock
Pro-Poor Livestock Policy Initiative
Milk: Cost/Unit and Prices Received

Source: PPLPI Working Papers
India: Dairy Market

Source: Staal et al. (in prep)
India: Milk Price by Market Channel

Source: Saha and Hemme, 2003
Dairy Development ‘Ladder’ for AP

- **MN3**: 3 local buffaloes in Mahboobnagar district
- **Top MN3**: Productivity increase through improved management
- **3-Grade**: Productivity increase through genetic improvement
- **3-Murrah**: Productivity increase (milk yield) by further genetic improvement
- **5-Murrah**: Economies of scale (in labour use) through herd expansion

Source: Garcia et al. (in prep)
Production Costs

USD/100 kg milk

Smallholder Dairy

Probability of cost being:

Source: Garcia et al. (in prep)

1 minus non-milk returns
Conclusions

- Almost 1 in 3 farmers lives in extreme poverty
- **Livestock** offer the potential for farmers to increase returns to shrinking land
- **Milk** is a highly valued livestock commodity
- Growth in demand for and production of milk is high in most developing countries

- Increasing demand from low-income households met largely by increasing production of **small-holder** farmers
- ‘Median’ smallholders are cost competitive (produce at or below international price)
- Ample scope for low-cost **productivity** increases and welfare improvement
FAO’s Roles

- Field projects (production / processing)
  - Short term (FAO TCP funded)
  - Long(er) term (Extra-budgetary)
- ‘Normative’ actions
  - Lessons learned
  - Information dissemination (technical, production & processing)
  - Lactoperoxidase network

FAO’s Roles

FAO & Smallholder Dairy

A Living from Livestock
Pro-Poor Livestock Policy Initiative
Pre-requisites for Engagement

- Stable demand
- Market access
- Local feed resources
- Support services
- Institutional capacity
  - Communal
  - Private sector
- Processing tradition

Employment generation along value chain
References & Further Reading

Links to PPLPI Working Papers

#2 A Review of Milk Production in India with Particular Emphasis on Small-scale Producers
#3 A Review of Milk Production in Pakistan with Particular Emphasis on Small-scale Producers
#7 A Review of Milk Production in Bangladesh with Particular Emphasis on Small-scale Producers
#16 The Economics of Milk Production in Orissa, India, with Particular Emphasis on Small-scale Producers
#20 The Economics of Milk Production in Chiang Mai, Thailand, with Particular Emphasis on Small-scale Producers
#33 The Economics of Milk Production in Hanoi, Vietnam, with Particular Emphasis on Small-scale Producers
#34 The Economics of Milk Production in Cajamarca, Peru, with Particular Emphasis on Small-scale Producers

For more information please visit the PPLPI website:
www.fao.org/ag/pplpi.html