



# D-Lab

## Fall 2008

Development

Design

Dissemination

# World Agricultural Facts

- In sub-Saharan Africa, women grow ~80% of the food
- Worldwide, women represent ~60% of the farmers in the developing world, yet receive only 5% of agricultural extension services
- There are 450,000,000 smallholder farms (< 2 hectares) in the world

# World Agricultural Facts

- 75% of the world's food comes from rice, corn, wheat, potatoes, barley, cassava and sorghum
- Agriculture is responsible for 70% of global water withdrawals.

# Case 1: Haïti

**Agriculture, which is the main source of the Nation's wealth, is a guarantee of the well-being of the people and socio-economic progress of the Nation.**

**Title IX, Chapter 1, Article 247  
Haitian Constitution**

# Some Basic Facts: Haiti

- 67% of the work force involved in agriculture
- 555,000 hectares under cultivation
- Only 75,000 under irrigation
- 70% of farmers work marginal, severely eroded hill-side farms
- Average farm size: <1 hectare

# Case 2: Bangladesh

# Some Basic Facts: Bangladesh

- 65% of the work force involved in agriculture
- 1% of farming households own 15% of cultivated land
- Average farm size is  $< 0.59$  hectares
- 58% of farmers are tenant farmers
- 47.2% of land is irrigated



# The Agricultural Technology Showcase

Part 1:

Post-Harvest Processing

# Cereal Processing

- Drying
- Threshing
- Winnowing
- Dehulling
- Grinding
- Sifting

# Traditional Milling

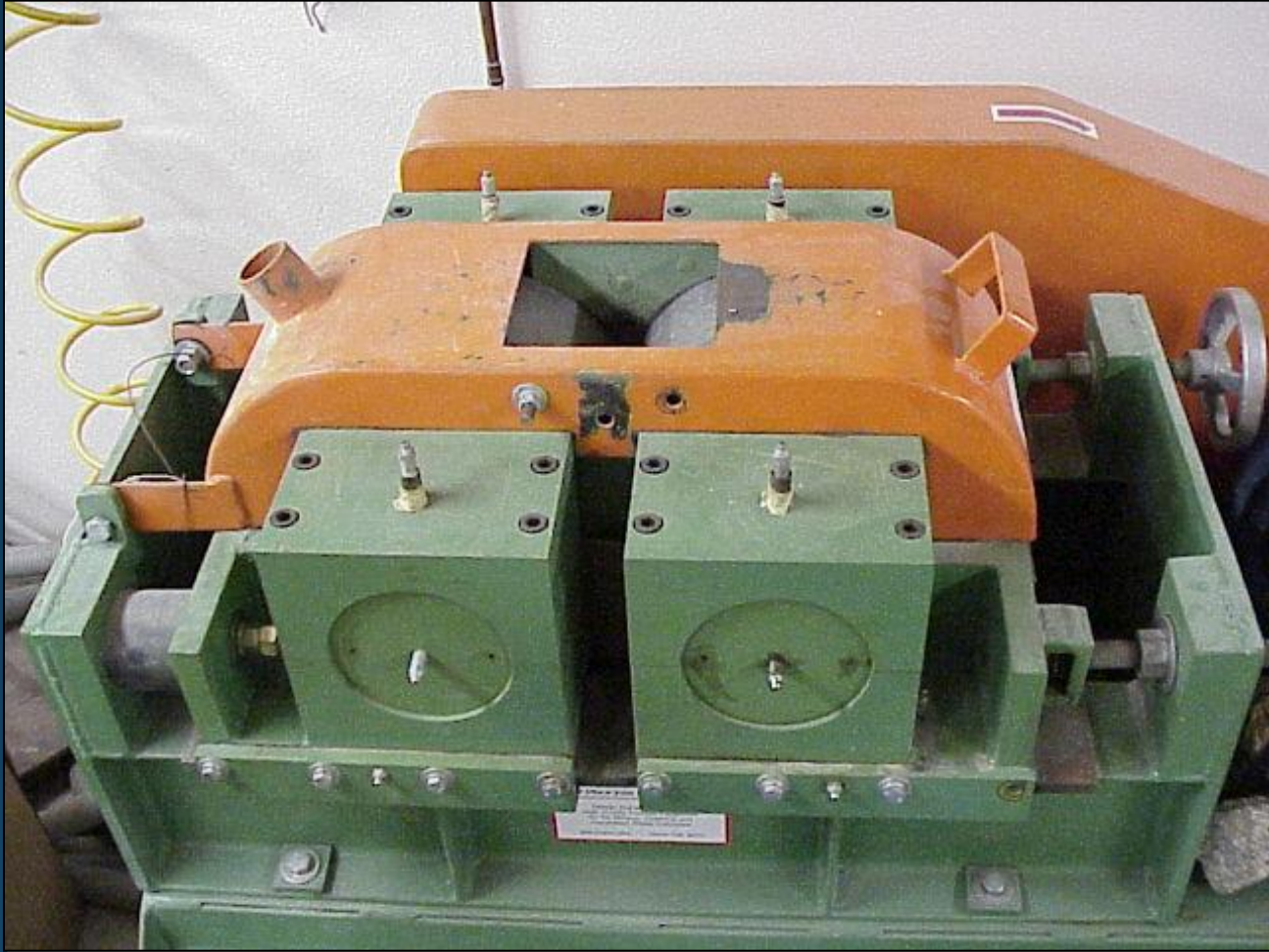


- Women spend 1 - 3 hours every day grinding grain for their families
- Mills are one of the most highly requested items from development organizations

# Milling Technologies

- Roller Mills
- Burr Mills
- Hammer Mills

# Roller Mill



# Burr Mill

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# Hammer Mills

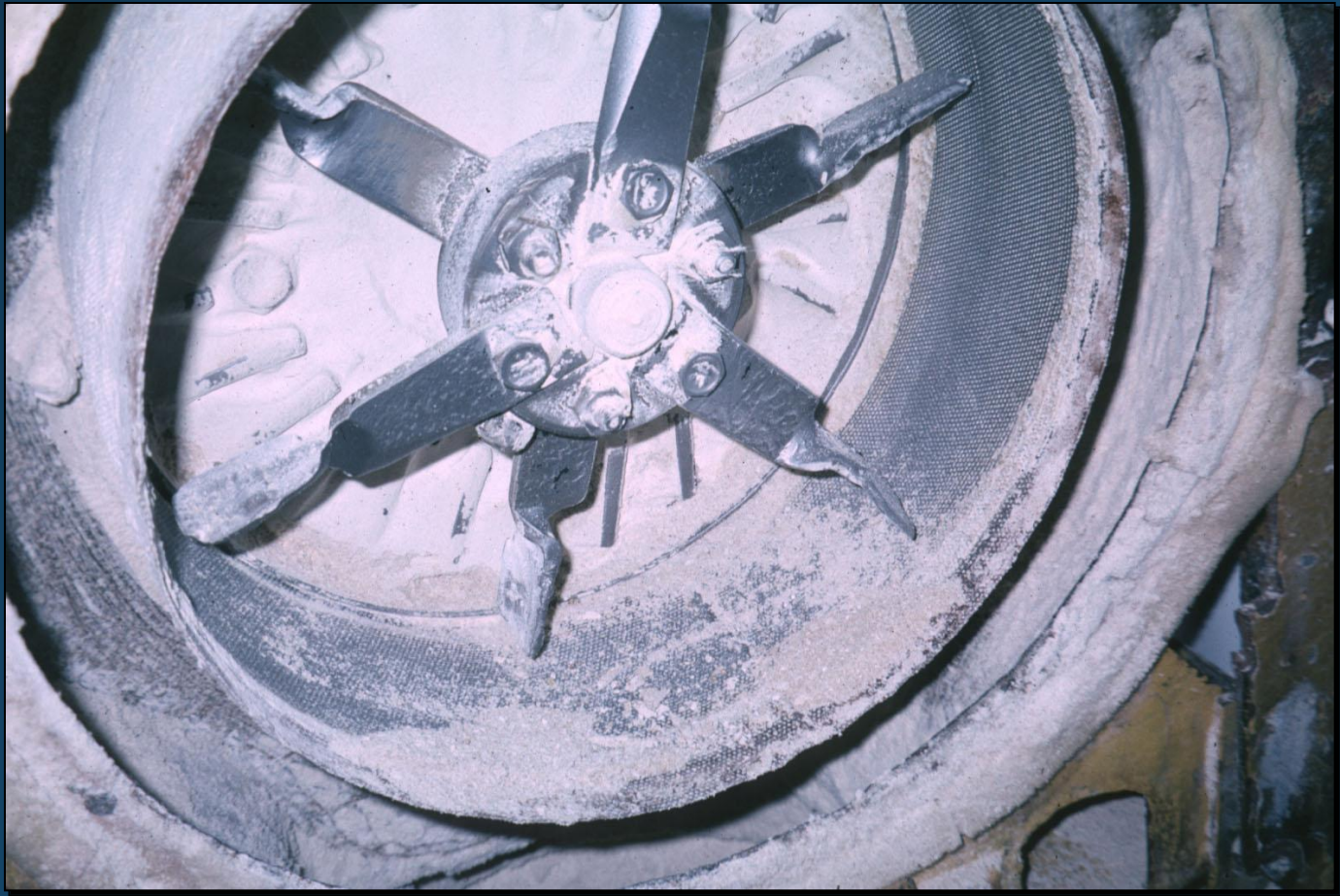




- Existing mills often break down, and are difficult to maintain



# Separating Screen



# The Screenless Hammermill



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