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MillionsFed

PROVEN SUCCESSES IN AGRICULTURAL DEVELOPMENT

Late 1950s: 1 billion people go hungry every day

Scientists, policymakers, and farmers initiate push to boost agricultural production and productivity

- Global availability of food is increased
- Access to food improved
- Quality of food enhanced



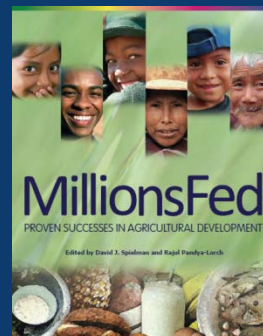
2009: 1 billion people go hungry every day

Why this initiative?

- Identify and examine successes
- Assess the evidence on what works
- Draw out the lessons they offer

How did we proceed?

- Throwing the net out
- Sorting the catch
- Selecting the most appropriate cases
- Synthesizing the evidence



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Global

- **Fighting a "Shifty Enemy"**
The international collaboration to contain wheat rusts
- **Conquering the Cattle Plague**
The global effort to eradicate rinderpest

South America



- **Innovating in the Pampas**
Zero-tillage soybean cultivation in Argentina

Africa

- **Resisting Viruses and Bugs**
Cassava in Sub-Saharan Africa



- **Re-Greening the Sahel**
Farmer-led innovation in Burkina Faso and Niger
- **Navigating through Reforms**
Cotton reforms in Burkina Faso
- **Breeding an "Amaizing" Crop**
Improved maize in Kenya, Malawi, Zambia, and Zimbabwe
- **Unlocking the Market**
Fertilizer and maize in Kenya

Asia

- **Transforming Agriculture**
The Green Revolution in Asia
- **Counting on Beans**
Mungbean improvement in Asia

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- **Leaving the Plow Behind**
Zero-tillage rice-wheat cultivation in the Indo-Gangetic Plains
 - **Seeing the Forest through the Trees**
Community forestry in Nepal
 - **Pushing the Yield Frontier**
Hybrid rice in China
 - **Crossing the River while Feeling the Rocks**
Land-tenure reform in China
 - **Exiting from Collective Agriculture**
Land-tenure reform in Vietnam
 - **Farming the Aquatic Chicken**
Improved tilapia in the Philippines
 - **Diversifying into Healthy Diets**
Homestead food production in Bangladesh
 - **Pumping up Production**
Shallow tubewells and rice in Bangladesh
 - **Connecting the Milk Grid**
Smallholder dairy in India
 - **Improving Crops for Arid Lands**
Pearl millet and sorghum in India



Fighting a “Shifty Enemy”

The international collaboration to contain wheat rusts

Jeremy Horner/PANOS



- **Challenge:** Stem and leaf rust destroying wheat fields around the world
- **Innovation:** Global effort leveraging modern science to breed rust-resistant varieties
- **Impact:** 117 million hectares of land protected from wheat rust; Food security for 60-120 million rural households

Resisting Viruses and Bugs

Cassava in Sub-Saharan Africa

Debbie DeVoe/Catholic Relief Services



- **Challenge:** Spread of mosaic virus disease and mealybug pest generating major losses for cassava, a staple food crop
- **Innovation:** Breeding of disease-resistant cassava varieties, and introduction of a parasitic wasp to destroy mealybug
- **Impact:** Breeding increased yields by 40%; Pest control prevented yield losses of 2.5 tons/hectare; 29 million additional people fed

Crossing the River While Feeling the Rocks

Land-tenure reform in China

Qilai Shen/PANOS



- **Challenge:** Widespread food shortages after more than 30 years of collective agriculture
- **Innovation:** Policy reforms reintroducing household farming, returning more than 95% of farmland to 160 million rural households
- **Impact:** 1978-84: increase in grain production by 34%; increase in rural incomes by 137%; reduction in rural poverty by 22%

Diversifying into Healthy Diets

Homestead food production in Bangladesh

Helen Keller International



- **Challenge:** Micronutrient deficiencies, such as Vitamin A, resulting in night blindness
- **Innovation:** Home gardening of micronutrient-rich vegetables, small livestock production, and nutrition education
- **Impact:** Tripling in vegetable production; 73% of gardens managed by women; improved food security for 5 million people

Why did it work?

- Science and technology
- Complementary investments
- Private incentives
- Cooperation and collaboration
- Timing and planning
- Experimentation and evolution
- Community involvement
- Leadership and dedication



What can we learn?

- Success is not unambiguous
- Success is a process
- Success is not a substitute for strategy
- Success is recognizable

More successes are needed

- **Persistence of hunger**
 - ✓ A billion people still go hungry today
- **New stresses**
 - ✓ Climate change
 - ✓ Market volatility
 - ✓ Demographic changes
- **Keep food security and agriculture high on the global agenda**



**Investing in agricultural development is
more important and urgent than ever.**

