

Millions Fed: Proven Success in Agricultural Development **Case Studies Summaries**

Asia

The Green Revolution in Asia (1965 to 1985)

As the Green Revolution spread across Asia, increases in food production pulled the region back from the edge of famine. Within 20 years, cereal production and yields doubled, reducing the price of food and improving livelihoods for an estimated 1.8 billion people. This success took place in Bangladesh, China, India, Indonesia, Republic of Korea, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, and Vietnam.

Improved varieties of mungbeans (1980s to the present)

The cultivation of mungbean, a crop high in protein, iron and other micronutrients, and useful in maintaining soil fertility, has grown dramatically since the 1980s. Improved varieties have contributed to yield gains of 28-55 percent that benefited an estimated 1.5 million farmers and were key factors in the 35 percent increase in Asian mungbean production between 1985 and 2000. This success took place in Bangladesh, Bhutan, China, India, Nepal, Myanmar, Pakistan, Sri Lanka, and Thailand.

South Asia

Irrigating rice (1989 to the present)

Market liberalization in Bangladesh during the mid-1980s to ease restrictions on the importation and sale of irrigation equipment stimulated the growth of irrigated rice farming. Rice production nearly doubled, benefitting about 22 million people a year.

Community Forest Management (1978 to the present)

During the last three decades, Nepal has introduced innovative policy reforms that encouraged participatory, community-based governance of Nepal's forests. Today, an estimated one-third of Nepal's population is directly managing more than one-fourth of Nepal's forest area as a means of improving and diversifying household livelihoods.

Homestead gardening (1990 to the present)

Homestead food production programs in Bangladesh, which encourage food-insecure households to grow micronutrient-rich foods, have reached 5 million individuals and contributed to combating micronutrient deficiencies, particularly among women and children.

Zero-tillage farming (1995 to the present)

An estimated 620,000 wheat farmers in the Indo-Gangetic Plains in Pakistan and India have adopted some form of zero-tillage cultivation to conserve soil fertility, improve water management, and lower their costs. These practices cover about 1.8 million hectares of land, and generating average annual income gains of US \$180-340 per household.

Seed marketing (mid-1960s to the present)

Policies and investments in India have encouraged development of improved seeds for pearl millet and sorghum— two crops that constitute the principal source of energy, protein, vitamins, and minerals for millions of the poorest people in these regions. These efforts have brought the public and private sectors together to provide estimated 6-9 millions farmers with access to modern varieties that have increased yields by 85 percent in recent decades.

Dairy sector development (1970 to 1996)

Operation Flood, a dairy development program in India, brought significant technological, infrastructural, and marketing advances to the rural milk sector. India has been transformed from a dairy-importing nation to a top producer and exporter of milk globally; millions of consumers now have better access to milk and other dairy products.

China

Land reform (1978 to 1984)

China returned more than 95 percent of the nation's total farmland (collectivized beginning in 1949) to some 160 million farm households. These large-scale reforms directly contributed to an increase in rural incomes by 137 percent, a reduction in rural poverty by 22 percent, and a 34 percent rise in grain production.

Increasing rice yields (1977 to present)

China was the first country to develop and commercialize hybrid rice – a variety that exceeded yields of other cultivated varieties by 15-31 percent, and has fed an additional 60 million people per year.

Southeast Asia

Breeding improved tilapia (1988 to 1997)

In the Philippines, tilapia bred as part of the Genetic Improvement of Farmed Tilapia (GIFT) project boosted fish yields and outputs. The project increased the availability of fish for consumers, reducing market prices and providing a cheaper source of protein for the country's poor people.

Exiting from collective agriculture (1988 to 1993)

In Vietnam, policy reforms that included a return of collectivized land to farm households shifted the country's economy to a greater market orientation, and stimulated growth in the agriculture sector at a rate of 3.8 percent per year between 1986 and 2005. Vietnam shifted from being a net food-importing country to the world's third largest exporter of rice in 1989, while dramatically reducing poverty throughout the country.