

## Innovations in farming can help alleviate hunger

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Today, thousands of people around the world will participate in events to celebrate Earth Day, demonstrating their commitment to protect the environment. In Houston, more than 15,000 people are expected to attend events, including the Green Expo that showcases green consumer products. Changes in our everyday activities, including reducing pesticide use in our gardens or committing to eat more locally sourced foods, can make a big difference.

Although agriculture is often blamed for water scarcity and rising greenhouse gas emissions, farming is also emerging as a solution to global problems. Sustainable farming practices can help mitigate climate change, improve soil fertility and preserve biodiversity — not only on Earth Day, but every day.

Through our research for the Worldwatch Institute's Nourishing the Planet project, we traveled to 25 countries across sub-Saharan Africa, highlighting innovations that offer effective models that can be scaled up and replicated around the world.

On Earth Day, Nourishing the Planet offers three recommendations that showcase agriculture's untapped potential to address some of our most urgent environmental challenges, also included in our "State of the World 2011: Innovations that Nourish the Planet" report.

**Reducing food waste.** Roughly 40 percent of the world's food spoils before it reaches the dinner table. Much of this ends up in landfills, where it emits methane, a greenhouse gas that is more potent than carbon dioxide. Food waste also decreases farmers' incomes and increases malnutrition.

At Booker T. Washington High School for Engineering Professions in Houston, students are working with a professor from Texas A&M University to turn food scraps from their cafeteria into biofuel. This is just one sustainable way of making better use of the food we already produce.

And in developing countries, there are a variety of regionally appropriate storage and preservation techniques that can help farmers protect their harvests. In Pakistan, farmers saved 70 percent of their harvest by switching from jute bags and containers constructed with mud to

more durable metal containers. And in West Africa, farmers have saved around 100,000 fruits by using solar dryers to dry mangoes, papaya and other fruit.

**Increasing local food biodiversity.** The shift from local and indigenous foods to monoculture crops, including maize, wheat, soybeans and rice, reduces biodiversity, threatens local economies and undermines the community's cultural identity.

Some nine local Slow Food chapters are working in communities across Texas to celebrate local and traditional foods. The Dallas chapter works with local farmers and chefs to help promote growing and eating foods included in the U.S. Ark of Taste, a catalog of more than 200 foods in danger of extinction.

And in Senegal, women farmers are switching back to traditional varieties of fruit, including karkadè, pain de singe, tamarindo and ditakh, which they process into value-added products, such as juices and jam.

**Feeding our cities.** Urban populations are expanding at an unprecedented rate. The U.N. estimates that 70 percent of the global population will live in cities by 2050, increasing food insecurity for urban residents. In cities across Texas, and stretching from New York to Nairobi, communities are turning to urban agriculture as a solution to boost food self-sufficiency, raise incomes and improve urban environments.

In Austin, the organization Urban Patchwork Neighborhood Farms is encouraging residents to convert unused space in their yards to farmland. Neighbors work together to grow vegetables and fruits, and raise chickens that provide fresh eggs. The organization is bringing the community together and helping households cut down on their grocery bills.

And in Cape Town, South Africa, community-supported agriculture (CSA) programs are helping to raise incomes and provide produce for school meals.

By focusing on agriculture to not only alleviate hunger and malnutrition, but also to achieve our environmental goals, we can make every day Earth Day.

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