Feeding the World

Why We Must Rethink the Global Food System

With some 821 million people worldwide going hungry each day, we need to make dramatic changes in the way we produce and distribute food.

Solving hunger and food insecurity is a prerequisite to solving other pressing global challenges. Improving the global food ecosystem will have profound ripple effects.
Ingredients of change

**Democratized tech tools.** Poor subsistence farmers in developing areas with inexpensive mobile phones are accessing data that helps them make better planting decisions—potentially producing 550 million more tons of food by 2030.

**Precision agriculture methods.** The Internet of Things and machine learning will help optimize land and water use, which will lower costs, increase production, and conserve resources.

**Renewable energy.** Advanced batteries and other off-grid storage and generation systems will reduce farming’s expenses and environmental impacts while making power an additional “crop.”

**Sensors and blockchain technology.** Greater transparency in the food supply chain, from farm to store, will reduce food waste and loss while preventing tampering, counterfeiting, and mislabeling.

Future food and farming

To feed 8.5 billion people by 2030, we need innovative ways to think about food—as well as how we produce it.

- **New sustainable foods.** A growing human population may not be able to sustain the environmental footprint of commercial livestock production. Instead, we’ll enjoy plant-derived or engineered foods like lab-cultured meat; plentiful, protein-rich insects as ingredients; and milk made from genetically modified yeast.

- **New farming methods.** From “plantscrapers” that tuck vertical farms into urban buildings to bacteria selected by AI to make plants hardier to robotic bees that can supplement or replace nature’s pollinators, we’ll grow more food in more places that previously weren’t friendly to agriculture.

Food for thought

Addressing food insecurity will make a substantial difference in other global challenges.

- **Broadening economic development.** In less-developed countries, where agriculture employs 60% of workers, increasing farming efficiency will free many people to enter other industries.

- **Reducing political instability.** Food insecurity comes from, creates, and exacerbates conflict, from food riots to mass refugee migrations. Less hunger means greater stability.

- **Cutting down on food waste.** Installing sensors and Big Data analysis along the agricultural logistical pathway has great potential to limit food lost or spoiled (1.3 billion tons per year) while reducing fraud.

Read More in *The Future of Feeding the World*

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