



An Overview: Smallholder Farming



Around 550 million smallholder farmers worldwide work to meet food demands in their communities, and are critical to meeting the demands of our growing world population, but they need support.

The Basics

- // **What:** An incredible 97 percent¹ of the world's farms are smaller than 10 hectares (about 25 acres) and produce 80 percent of the food in developing regions of Asia and Sub-Saharan Africa. These farms are often family-run businesses that have a long history in the communities where they live.
- // **Why:** Farmers all over the world face challenges, but many small farms have limited access to the solutions they need. From extreme weather to pests, crop disease and uncertain markets, farming is as risky as it is vital. With a collective impact on our environment, and an exponential effect on livelihoods all over the world, small farms can drive big change. When we equip these farmers with the insights and innovations to grow more using less, they can collectively help the world make big leaps in conserving resources, fighting climate change, providing food security and improving lives.
- // **How:** At Bayer, we have been working with smallholder farmers challenged by subsistence farming for many years to provide tools and education that can help empower them to grow and support their farms, families and communities. We have committed to supporting more than a 100 million smallholder farmers in low-and-middle income countries around the world by improving access to agronomic knowledge, products and services. Together with partners, we aim to multiply the social and economic impact smallholder farmers can have in tackling poverty and hunger, improving health, and spurring economic development for their families, communities and nations.

The Background

Smallholder farmers often lack access to the resources, agricultural know-how and markets they need to support their families and communities. Stuck in subsistence farming, many farmers suffer from hunger or malnutrition themselves. That's why it's more important than ever that they receive the resources needed to produce more food for a growing population and ensure economic viability for years to come. When we help these farms become more resilient, food accessibility and nutrition aren't the only differences we see. Education rates increase. Businesses and communities grow. Poverty declines. And low- and middle-income countries become more active participants in the global economy, which is good for us all. Bayer is uniquely positioned to help. We're making a commitment to empower 100 million farmers in developing regions with the information, products, services and partnerships they need to help us all move forward, sustainably.

The Highlights

Better farms lead to better lives.

- // Through initiatives like our AfriCare IMPACT Program, which works with farmers and communities to improve access to diverse, nutrient-rich foods, we're enabling smallholder farms around the world to play a key role in tackling malnourishment and ensuring food security.
- // For many smallholder farmers, it's not always easy to find banks, loans or fair pricing. Initiatives like myAgro provide prepaid cards that offer farmers security and flexibility as they prepare for planting season. Through this bankless savings system, myAgro farmers have experienced average harvest increases from 50-100 percent, and net farming income increases of \$150-\$300 per farmer, improving livelihoods and communities.
- // Through the Better Life Farming Alliance, we're partnering with other global and local leaders to provide farmers with financial opportunities and the means to work more efficiently, so children who used to work in the fields can go to school instead.
- // To make great strides in improving public health around the world, we're working outward from small farms through programs like WASH – a partnership with Effortin – to educate communities throughout India about proper water usage and sanitation.
- // Family planning not only helps break the cycle of poverty, but also moves agriculture forward, as 50 percent of farmers in developing countries are female. Bayer is setting out to provide 100 million women with contraceptives.

References

1. The State of Food and Agriculture 2014, Food and Agriculture Organization of the United Nations.



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The Highlights

Climate change affects us all, but it can be especially devastating for small farms.

- // With innovations like Arize hybrid rice, individual farms are reducing their methane emissions by up to 49 percent compared to conventional varieties.²
- // The FarmRise free mobile application provides small-scale farmers with accurate weather information and farming advice directly on their mobile phones, allowing them to prepare for more extreme and less predictable weather events, and make informed decisions to reduce costs, increase yield and get better price for output.
- // Water Efficient Maize for Africa (WEMA) public-private partnership is committed to improving food security and livelihoods among smallholder farmers in Sub-Saharan Africa by combating the impacts of droughts and insects on maize crops, which is the main source of food for more than 300 million Africans. To address these challenges, Bayer provides drought-tolerant and insect-resistant plants without royalties. Additionally, we contribute research and technical expertise to help WEMA develop locally-adapted maize hybrids and make them available to all seed companies in Africa.

We're taking steps to preserve precious natural resources on farms around the world.

- // We're helping smallholder farmers scale in sustainable ways by sharing how other farmers around the world are using new resources and technologies to feed more using less energy.
- // Innovations like aerial drones that are helping farmers across Asia precisely apply crop protection tools to a broader area in a fraction of the time, helping entire crops and ecosystems thrive and accomplishing more on less land.
- // Initiatives like Gram Unnati in India help smallholders efficiently manage water. By collecting rainwater and improving irrigation in their millet fields, we're helping farmers in India make the most of every drop, so we all have more to go around.

Key Things to Remember

- // Smallholder farmers produce 80 percent of the food that is consumed in Asia and Sub-Saharan Africa.³ They are key to reducing poverty and hunger as well as improving the health and nutrition of millions of families.
- // Our world is increasingly interconnected. And when it comes to our planet, we all share the same resources and responsibilities. Every time we help even one farmer improve how they farm, those benefits reach us all.
- // At Bayer, we have committed to empowering 100 million smallholder farmers in low-and-middle income countries by 2030 by increasing access to sustainable agriculture solutions, including agronomic knowledge, products and services.
- // We collaborate with smallholders to develop holistic and scalable approaches with a focus on education (e.g., agricultural know-how, safe use of products, entrepreneurship and access to resources and to market), tailored solutions (e.g., high-quality seeds and traits, chemical and biological crop protection products, soil nutrition, precision irrigation and digital solutions) and additional support through global and local partnerships.

References

2. Estimating Spatial Differences in Methane Emissions to Identify Sustainable Rice Sources", Crop Economics, Production, and Management, February 15, 2018.
3. Food and Agriculture Organization of the United Nations, The State of Food and Agriculture. 2017. <http://www.fao.org/3/a-i7658e.pdf>