



Protecting Our Environment

Why We Grow



You won't be surprised to hear that we're big believers in advancing the science of farming. In fact, we think it's some of the most important work there is. You gotta eat!



We all need food — both to stay alive (important) and to get the most out of lives (also pretty important). We bond over meals, we connect to the land through what we grow, and we reflect what we believe in what we choose to eat. Eating is good.

If you're a fan of eating, thank a farmer. Farming has been a major part of civilization for millennia, and today's farmers continue that legacy. Over thousands of years, farmers and scientists have guided the development of new crops, created new tools, and pioneered new techniques. We've expanded what's possible in creating safe, **sustainable agriculture**.

Here's why we at Bayer keep working to make farming better.



Global Trends in Nutrition 1:24 min

Our World is Changing

With all due respect to our noble ancestors, most of us would pass on the chance to swap lives. Today, we enjoy choices that would boggle our great-great-grandparents' minds — in how we live, what work we do, how we relax, and how we eat. Most of our families moved away from the farm ages ago, so far fewer people are involved in growing food. Despite that, our grocery stores are serving up a larger variety of nutritious, affordable food than ever before.

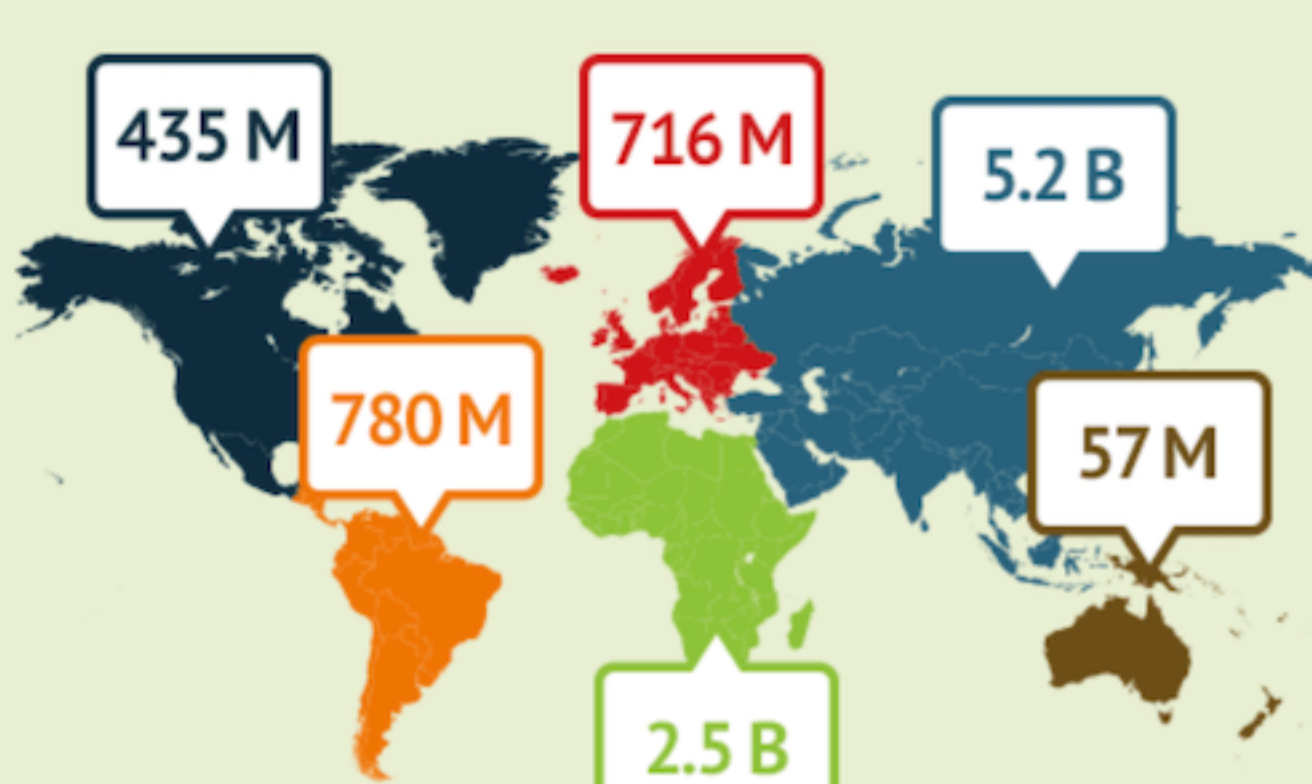
How is that possible? Science!

Advances in **plant breeding**, **crop protection**, and **farming technology** have made it possible for farmers to produce way more food on the same amount of land, boosted the nutritional content of food, improved taste, and extended shelf life, all while keeping costs down.

We should note that we've changed in another important way, too: There's a heck of a lot more of us. In 1950, 2.5 billion people lived here on Earth. Now, there are roughly 7.5 billion of us, and by 2050, the **United Nations projects** that we'll hit nearly 10 billion. The world's population is going to quadruple in just 100 years.

How do we keep up with these changes? How do we make food available and affordable for everyone while protecting our planet's resources? We need new, brilliant ideas.

2050 World Population: 9.8 Billion



Safe, Nutritious Food Leads to Prosperity and Opportunity

Good food isn't just tasty: It helps children develop healthy brains, it makes our bodies capable and strong, and it fuels our productivity. So, we definitely need to protect it.

Meet the nefarious super villains of the plant world:



Diseases can kill plants or make them unsafe to eat.



Insects feed on crops, killing them or making them produce less food.



Weeds compete with crops for nutrients, light, and space.



Drought and other harsh conditions can wipe out entire crop yields.

The stakes are pretty darn high. Every potato killed by the potato blight contributed to the starvation of one million Irish citizens. Every banana killed by fusarium wilt (a nasty fungal disease) is one that won't feed a hungry mom in Eastern Africa. Every orange tree killed by the Asian citrus psyllid (a small but mighty sap-sucking bug) is one that won't make orange juice for a kid's school lunch in Virginia.

We can't just watch that happen. We do what we do because we want everyone to thrive.

A 2009 study found that every year, weeds cause \$95 billion worth of crops to be lost around the world. The United Nations reports that 155 million children under the age of 5 are still stunted by malnutrition and hunger.

We're Using New Ideas to Protect Our Environment

Of course, people can't thrive in an unhealthy environment, and farmers can't help when the environment is hurting their crops. We need to protect the environment and even make it healthier.

We work to:



Keep drinking water clean.



Conserve water with more efficient **irrigation**.



Keep soil healthy.



Support **biodiversity** on farms and surrounding lands.



We're Supporting Workers and Communities

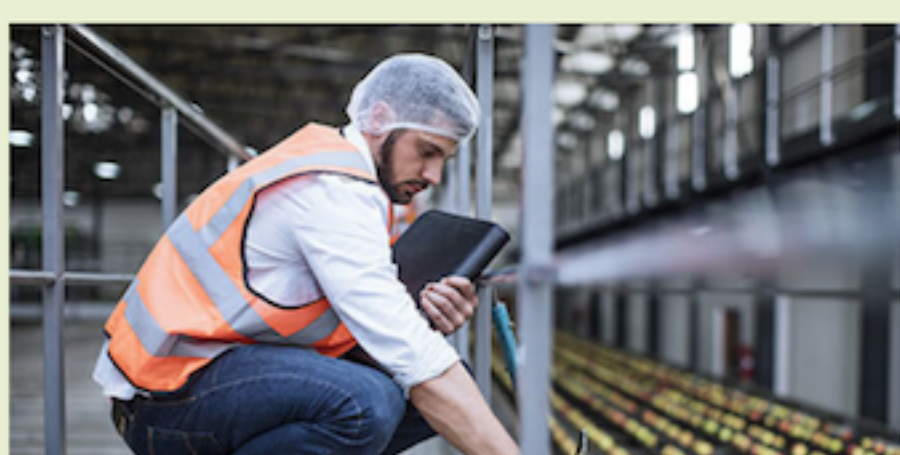
They say it takes a village to raise a child — and it takes way, way more people to make sure everyone is fed. Farmers depend on a diverse, talented community to grow their crops:



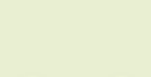
Workers cultivate and harvest crops.



Scientists and advisors improve efficiency and productivity.



Processors turn raw ingredients into the food on store shelves.



The agricultural industry is facing a labor shortage that can drive up costs and reduce supply. Groups like **4-H**, **CEJA**, and the **National FFA** and events like the **Youth Ag-Summit** are addressing these challenges and fostering the next generation of farmers.



"Agriculture is more than farming; more than development. It is not just working in fields, growing plants, or raising animals. Agriculture is about starting cool new businesses, curing sick patients, finding smarter ways of adapting to **climate change, showcasing innovative technologies — and so much more. Agriculture is about feeding a hungry planet."** - Pramisha Thapaliya, Nepalese Youth Ag-Summit delegate

In the developing world, farmers face different challenges. The **United Nations reports** that more than 80 percent of food comes from small farms with 5 acres or less. There are 500 million **smallholder farmers**, but on average, they reach only 20 percent of the productivity of their counterparts in the developed world. At Bayer, we **support these** communities through better access to technology, know-how, and markets.

When everyone who provides our food thrives, we all thrive.

But Safety Comes First

So, we believe it is crucial to advance the science of farming. But we never push forward unless it's safe to do so. In fact, **crop protection** products are among the best-tested chemicals in the world.

We put new chemical compounds through a gauntlet of computer simulations, residue tests, and comprehensive **toxicological** tests. The process can take up to 10 years to go from initial laboratory tests, through field testing, and all the way to approval by authorities. Only **one out of every 100,000** compounds created in the lab becomes a commercial product.



A compound goes through many trials before it is released on the market.

Bringing it All Together

At Bayer, we care about what you care about. We're tackling tough challenges and seizing opportunities to make sure that we can all choose nutritious, affordable food for our families. We want to make the world a better place by protecting our environment. We're supporting the people that feed the world. And most of all, we're committed to safety, for your families and ours.

Check back often as we explore specific challenges and the amazing ways we're coming together to solve them.