

Creating New Possibilities and Solutions for Big Challenges

There has never been a more important time for innovation in agriculture as it is the key to addressing the challenges facing the global food system.

At Bayer, we're committed to delivering better solutions for all farmers, to help them, consumers and our planet thrive.

Today, we offer thousands of seed varieties to farmers around the globe in dozens of the world's most important crops. And we are continually introducing innovation that makes growers more confident in their seed decisions – and satisfied by their results.

Innovations in plant breeding help enable more choice for consumers while addressing the challenges farmers face in the field every day. That's why we invest more in plant breeding research and development annually than we do any other agricultural research and development platform.

Plant breeding is the process of crossing two plants to produce offspring that share the best characteristics of their parents. Today, plants are bred to improve a variety of important characteristics, from improved agronomic performance to more consumer-facing qualities, like size, taste, or color. By capitalizing on the genetic diversity that naturally exists within each crop family, plant scientists can identify which plants carry the features – or traits – they're looking for and design new varieties with those traits built right in. Efficient and productive plant breeding involves advanced scientific knowledge and complex decisions. Identifying and isolating the genetic characteristics that help solve farmers' challenges can be difficult and time-consuming. Through generations of research and discovery, plant breeding has advanced beyond selecting a parent plant simply based on its appearance. It now includes an in-depth understanding of the genetic makeup of a plant, giving scientists the ability to better predict which plants will have the highest probability of success in both the field and the grocery store before making a cross.

These innovations have opened the door to new opportunities for agriculture. Plant scientists today routinely advance solutions that help farmers combat environmental challenges, such as pests, disease, or drought. Plants bred to be better adapted to certain climates or more resistant to changing environmental conditions can have better chances of survival in the field, which leads to more productive harvests.

But plant breeding is not just about addressing environmental challenges. Plants can be bred to improve quality and to meet consumer preferences leading to a reduction in food loss and waste.

Plant breeding advances are within every seed we sell. This helps farmers continue to improve upon what they've done for thousands of years, even in the face of significant challenges like a changing climate, limited natural resources, reduced arable land, and increased consumer demands like size, color, storability, and taste.

From <https://www.bayer.com/en/agriculture/plant-breeding>