

## Not just GM seeds: Monsanto innovates in traditional plant breeding

After a decade concentrating on seeds and genetically engineered “traited” crops, Monsanto is broadening its focus.

In a July [article](#) for Bloomberg Businessweek, staff writer Drake Bennett takes an “inside look” at the ongoing research efforts by America’s third-most-hated company.

Bennett summarizes Monsanto’s research efforts aside of genetically modified seeds in three categories – traditional plant breeding, biological farming technologies and Big Data:

Much of its \$1.5 billion research budget goes into traditional plant breeding, the same craft the botanist Gregor Mendel pioneered on his pea plants a century and a half ago, though at a scale and speed that would boggle the friar’s mind. Monsanto is also researching the targeted use of bacteria, fungi, and other living organisms to protect and nourish seeds: farming technologies that borrow, at least conceptually, from organic agriculture.

In perhaps the biggest shift, Monsanto is moving into computing. Through the purchase of two companies, Precision Planting and the Climate Corporation, Monsanto has begun offering software and hardware products that gather and process information relevant to a farmer—data about temperature, rain, soil, seeds, and pests. Big Data has already transformed everything from retail logistics to dating; Monsanto believes it can do the same for farming.

Climate Corp.’s co-founder David Friedberg has had to [deal with](#) criticism over his company’s partnership with Monsanto. In Bennett’s article, Friedberg argues that Monsanto is like a technology company, similar to Google:

Technology has already dumbed down everything from flying an airliner to filing one’s taxes, and in so doing made those tasks safer and more efficient. But food feels different to many people. ...

Friedberg, Climate Corp.’s 34-year-old co-founder and CEO, is aware of this concern. He’s a lifelong vegetarian who will talk with little prompting about the environmental cost of meat and the great benefit of adding quinoa to North American crop rotations. He hadn’t heard many good things about Monsanto before he started negotiating with the company. What he realized, though, is that the best way to think about Monsanto is as a technology company. Its technology “just happens to take the form of a seed,” Friedberg says. “As I got to learn about it I was like, ‘Wow, this company is as innovative and as impressive as Google.’ ”

Watch a [video](#) of Bennett's interview with Betty Liu on Bloomberg TV's [In The Loop](#) about Monsanto's research efforts to expand into big data and its notorious practices for suing farmers.

Bennett shares his surprise at learning that a significant amount of Monsanto's research is in traditional plant breeding:

Part of it is that a lot of the research that they do is not genetically modified seeds; it's in conventional breeding, which is what farmers have done for thousands of years. But what they're doing in Monsanto is an incredibly sped-up version of it using robots and gene sequences and computer simulations and these crazy devices they built. So a lot of the research, almost as much of it as is going into the biotech stuff, is going into this other sort of breeding.

**Read the full, original article:** [Inside Monsanto, America's third-most-hated company](#)

**Additional Resources:**

- ["Moving past GMO debate: Monsanto executive, organic farmer and anti-industrialist activist agree on future for agriculture,"](#) Grist
- ["Progressive's dilemma: Can Big Ag Monsanto shed it's bad guy 'evil' reputation?"](#) Progressive Contrarian
- ["Madagascar student prank shows March Against Monsanto has heartless agenda,"](#) Genetic Literacy Project