The New York Times | https://www.nytimes.com/2025/03/22/opinion/doge-elon-musk-usda-crops.html

GUEST ESSAY

Why Did Elon Musk Go After Bunkers Full of Seeds?

March 22, 2025

Listen to this article · 5:49 min Learn more

By Iago Hale and Michael Kantar
Dr. Hale is a professor of specialty crop improvement at the University of New Hampshire. Dr. Kantar is an associate professor of plant genetics at the University of Hawaii, Manoa.

In a climate-controlled bunker in an unremarkable building in rural Aberdeen, Idaho, there are shelves upon shelves of meticulously labeled boxes of seed. This vault is home to many of the United States' more than 62,000 genetically unique lines of wheat, collected over the past 127 years from around the world.

Though dormant, these seeds are alive. But unless they are continually cared for and periodically replanted, the lines will die, along with the millenniums of evolutionary history that they embody.

Since its establishment in 1898, the United States Department of Agriculture's National Plant Germplasm

System and the scientists who support it have systematically gathered and maintained the agricultural plant species that undergird our food system in vast collections such as the one in Aberdeen. The collections represent a towering achievement of foresight that food security depends on the availability of diverse plant genetic resources.

In mid-February, Trump administration officials at what has been labeled the Department of Government Efficiency fired some of the highly trained people who do this work. A court order has reinstated them, but it's unclear when they will be allowed to resume their work. In the meantime, uncertainty around additional staffing and budget cuts, as well as the future of the collections themselves, reigns.

This should unnerve every American who eats. Our food system is only as safe as our ability to respond to the next plant disease or other emergent threat, and a strong N.P.G.S. is central to our preparedness.

Across its 22 stations nationwide, approximately 300 N.P.G.S. scientists maintain more than 600,000 genetic lines of more than 200 crop species. The collections of some crops, like wheat, are in the form of seeds. But others, like apples (2,664 lines), must be maintained as living plants in the open field. The scientists who care for them must follow strict requirements for sustaining genetic purity so they can provide healthy viable seeds or plants to the tens of thousands of researchers and others who request them each year.

But isn't it overkill to maintain more than 62,000 different varieties of wheat? The thing is, the N.P.G.S. collection of plant genetic diversity is not just a snapshot of what is currently grown to meet today's demands. It is more like a survivalist cache: our nation's safeguard against all future challenges to growing the food we need.

For example, when a newly evolved form of stem rust — a devastating fungal disease infecting wheat — emerged in East African fields in 1999, an international group of plant breeders turned to the N.P.G.S.

collection for help. There, among the tens of thousands of patiently maintained lines, they discovered previously unknown genetic sources of resistance to the disease. Those genes now protect wheat varieties around the world, silencing for the moment the alarm of a feared global pandemic. (Just like human diseases, plant diseases do not respect borders.)

Such stories are common. In the 1980s, scientists at a gene bank in Geneva, N.Y., helped identify genetic traits that made apples resistant to several destructive diseases, including deadly fire blight. Those traits have since been deployed in the rootstocks of over 100 million apple trees worldwide, not only generating more than $91 million annually in tree sales, but also directly supporting the nearly $23 billion American apple industry.

This is how the system is designed to function. Whatever your diet, from chicken nuggets to organic tofu, the food you consume is the result of generations of work by agricultural scientists and plant breeders to meet the ever-changing needs of farmers and consumers. This work is only possible because of the availability of the N.P.G.S.'s extensive collections of plant genetic resources. Such collections are the raw materials for plant breeders' craft, and therefore of agriculture itself. They exist thanks to federal support stretching back generations.

The future will certainly bring new crop diseases and pests, as well as greater environmental stresses on our crops from heat, drought and flooding. In the face of such uncertainty, it is wise to gather and maintain as much genetic diversity as possible so that we'll have the resources to sustain the food system most of us take for granted.

Even in the best of times, the N.P.G.S. budget is shoestring and its staffing minimal, given the magnitude of its mandate. And yet, with a trivial investment of 0.0008 percent of the federal budget, N.P.G.S. scientists

quietly enable and safeguard our food system, worth around $1.5 trillion. Talk about return on investment.

Moving fast and breaking things may work in some sectors. But the disruptions underway threaten irreversible losses of crop genetic diversity. Such losses directly undermine the United States' ability to ensure continued food security and dietary diversity amid challenges to our agricultural systems.

For the sake of all Americans, we denounce any attempts to weaken the N.P.G.S. The generations before us understood that it is the minimum function of a responsible government to invest in the long-term ability to feed its citizens.

Iago Hale is an associate professor of specialty crop improvement at the University of New Hampshire. Michael Kantar is an associate professor of plant genetics at the University of Hawaii, Manoa.

The Times is committed to publishing a diversity of letters to the editor. We'd like to hear what you think about this or any of our articles. Here are some tips. And here's our email: letters@nytimes.com.

Follow the New York Times Opinion section on Facebook, Instagram, TikTok, Bluesky, WhatsApp and Threads.

***A correction was made on March 24, 2025**: An earlier version of this article misstated the percentage of the federal budget that the National Plant Germplasm System amounts to. It is 0.0008 percent, not 0.000008 percent.*
