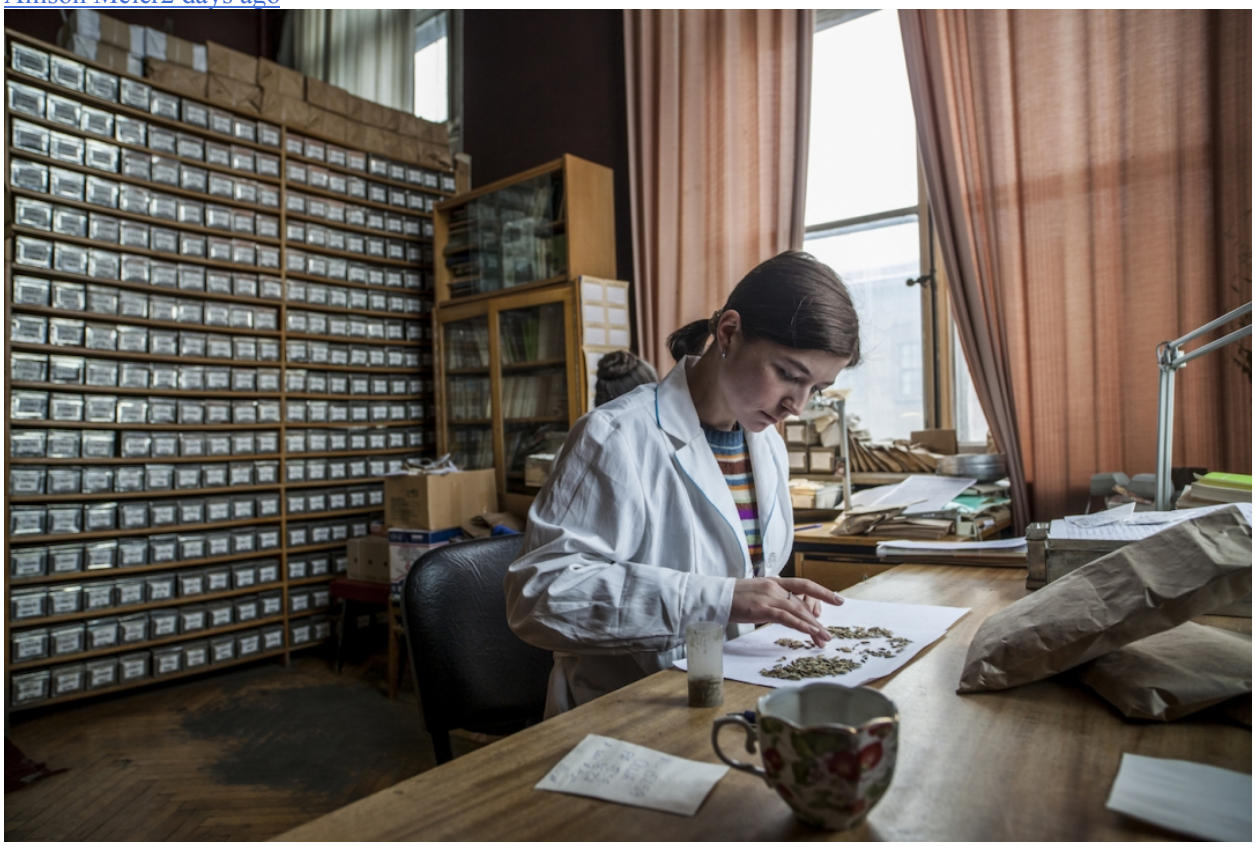
Retracing the Steps of a Pioneering Seed Collector Who Starved in a Stalinist Prison

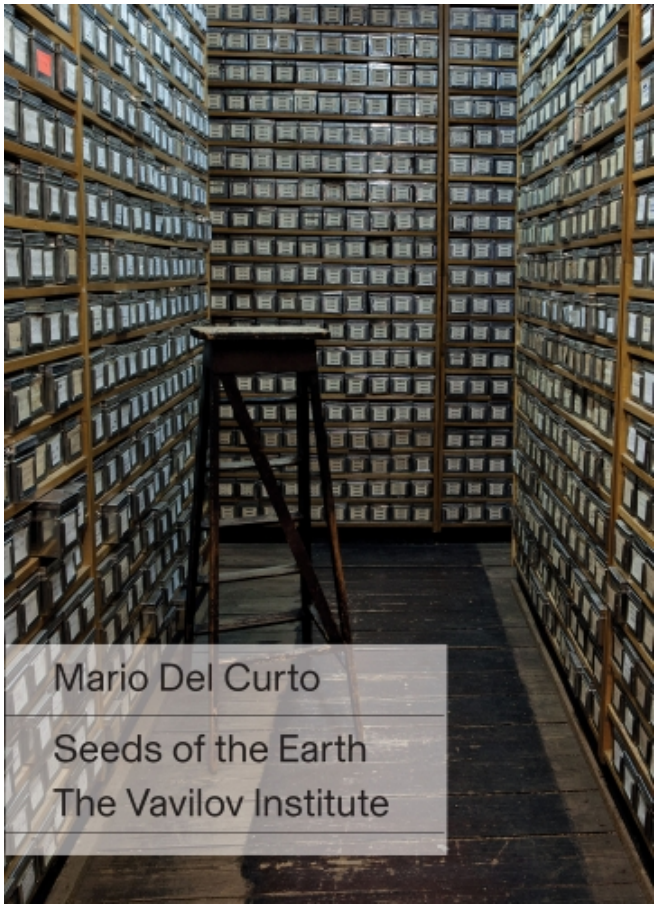
Mario Del Curto photographed the Saint Petersburg seed bank founded by Nikolai Vavilov, and the scientists who carry on his legacy of protecting plant diversity.

Allison Meier2 days ago



Lyudmila O. Smirnova, a doctoral candidate, in the Department of Genetic Resources for oats, rye, and barley, identifying seeds sent from the research stations to the Vavilov Institute (from Seeds of the Earth: The Vavilov Institute, © Mario Del Curto)

Nikolai Vavilov was among the first scientists to anticipate the disappearance of plant diversity, and recognize its potentially catastrophic impact on our food production. In the early 20th century, he witnessed severe famines in Russia, and in Leningrad (now Saint Petersburg) he spearheaded the largest seed bank in the world. He and his team traveled all five continents, collecting thousands of specimens. Yet he would die of starvation in prison in 1943, condemned to death under Stalin as a scapegoat for the Soviet Union's agricultural failures. (continues…)



Cover of Seeds of the Earth: The Vavilov Institute by Mario Del Curto (courtesy Actes Sud)

Still, his legacy survives, both at the N.I. Vavilov Institute of Plant Industry in today's Saint Petersburg, and in the 12 satellite research stations scattered in different climate regions of Russia. Swiss photographer Mario Del Curto spent four years retracing Vavilov's steps, from the wild apple forests of Kazakhstan, to the remote Polar Experimental station where potatoes, gooseberries, and other crops are studied in the Arctic climate. *Seeds of the Earth: The Vavilov Institute,* out now from Actes Sud, features his photographs alongside essays on Vavilov's legacy and career. Along with meditative shots from the Institute, such as the herbarium specimens, protective metal containers for seeds, and incubator glasses for germination tests, are portraits of the people who continue and protect this work.

"Until Vavilov's map of the centers of plant diversity, no scientist had physically experienced and intellectually grasped the patterns of biological diversity across the face of the entire earth," writes Gary Paul Nabhan, author of *Where Our Food Comes From: Retracing Nikolay Vavilov's Quest to End Famine*, in a book essay. "Because of his capacity to travel by train, boat, aeroplane, automobile, and mule, Vavilov not only witnessed natural and cultural landscapes which no other scientist had set foot in, but he also absorbed them into a theory of biogeography that remains with us today."

The Vavilov Institute now has around 325,250 samples of seeds and their wild counterparts, including 25,000 varieties of barley, 1,000 varieties of strawberry, 3,300 varieties of grape, and 800 varieties of blackcurrant. The seed bank was nearly lost during the September 1941–January 1944 Siege of Leningrad. Vavilov was arrested on August 6, 1940 while collecting grain in Ukraine, and sentenced to death in July 1941. Still, faced with the bombardment and loss of their leader, many scientists chose to stay and guard the specimens. Even when food ran out, they did not eat the grains that could have saved them. By the Siege's end, nine scientists had died from starvation.

Herbarium specimens of Aegilops ovata collected by Nikolai Vavilov in Spain (from Seeds of the Earth: The Vavilov Institute, © Mario Del Curto)

Del Curto is probably best known for his photographs of vernacular artists, such as Richard Greaves and his ramshackle architectural environment built from disassembled barns in rural Quebec, and the home of clay artist Stanislaw Zagajewski in Poland. In *Seeds of the Earth*, his portraits are the most moving. He photographed research scientist Gluhova Alevtina Petrovna, who specializes in cross-breeding by pollination, carefully blowing on a sieve to break lettuce seeds from their husks at the Volgograd station where she's worked since 1978, and where due to limited resources its orchard is now neglected. At the Kuban station, he captured cucumber researcher Yuri A. Yelatskov, standing against a simple wooden house in a sunflower field, an active outdoor lab that's had the majority of its staff cut. While the work continues to protect and understand plant diversity, struggles remain, and despite his tragic end, Vavilov's legacy endures as an inspiration.

"The memory of Nikolai Vavilov and his spirit remain alive in all the research stations and at the headquarters in Saint Petersburg," writes Del Curto. "During every visit that I made, whenever the opportunity arose, I was proudly shown the room reserved for Vavilov memorabilia, often referred to as 'the little Vavilov museum'." In Saint Petersburg, his old office is maintained, with photographs, tools from his expeditions, and seeds in glass cases. "Nearby, his desk is as he must have left it in 1940; a map of the country is spread over the wooden surface and, in a thick botany book, a dried leaf marks a page."

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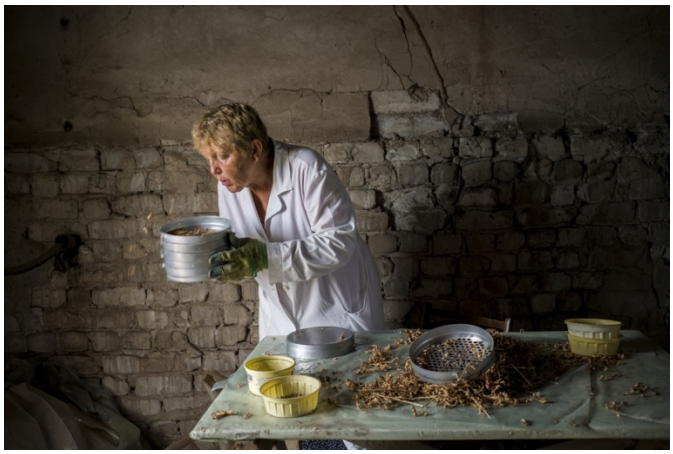
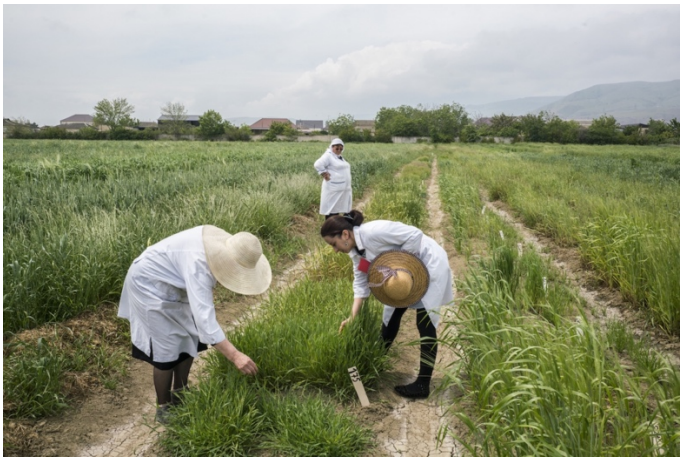


In a stone-built extension at the end of the greenhouse at the Volgograd station, research scientist Gluhova Alevtina Petrovna, an expert in cross-breeding by pollination, blows on a sieve to separate lettuce seeds from their husks. (from *Seeds of the Earth: The Vavilov Institute*, © Mario Del Curto)

Sunflower plant at the Kuban research station (from *Seeds of the Earth: The Vavilov Institute*, © Mario Del Curto)



Scientists working the fields at the Dagestan station. They are observing Aegilops for growth, quality, and resistance. (from *Seeds of the Earth: The Vavilov Institute*, © Mario Del Curto)

Bags tied around pollinated sunflowers to isolate them from contamination and collect seeds at the Kuban research station (from *Seeds of the Earth: The Vavilov Institute*, © Mario Del Curto)