

Geopolitics, genetics and genocide. Small seeds in world history

Den stora fröstölden. Svält, plundring och mord i växtfördlingens århundrade [The Great Seed Theft. Famine, starvation and murder in the century of plant breeding.]

Jens Nordquist.
(Lund: Historiska media, 2020), 333 pages.

Geopolitics, as defined by the controversial political Scientist Rudolf Kjellén (1864–1922), is the state's handling of its natural and cultural resources, leading to its growth or decline, to autarky, wealth or territorial expansion, in relation to competing territorial states.

Jens Nordquist's book focuses on a less known part of World War II history – the Nazi German appropriation (read theft) of a Soviet seed collection. However, this event had a long and intricate pre-history and a surprising unravelling, involving world leaders, renowned scientists and impostors.

Plant breeding may appear to be an uncontroversial and positive activity. With the insight of Darwin and Mendel, plant breeding changed from a traditional practice into a scientific endeavor, carried out at agricultural universities and state experimental farms. Improving yield became a national goal, in order to feed the domestic population, as well as to increase exports or reduce imports.

Nordquist's main figure is the Russian and Soviet geneticist Nikolai Ivanovich Vavilov, born in 1887. Inspired by the rediscovery in 1900 of Gregor Mendel's findings on heredity, Vavilov chose to study at the Agricultural University in Moscow, combining field studies with learning English, French and German. During his doctoral studies in St. Petersburg, he visited Great Britain, Germany and France, meeting their most prominent biologists and geneticists. Concerned about the recurrent famines in Russia, he sought to use the scientific insights of plant breeding, attempting to identify seeds suitable for crossbreeding, particularly species that were resistant to cold and draught. On a mission to Persia in 1916 in order to cure a disease among Russian troops caused by infected wheat, he crossed back into Gorno-Badakhshan in the Russian Pamir collecting wild, hardy species that would form the basis of his further collection of seeds.

VAVILOV'S CAREER was promoted by the new Soviet government. He was allowed to attend an international scientific congress in New York in 1921, touring the US in order to meet colleagues, including geneticist Herman Muller, and to collect seeds. Before returning, he also toured Western Europe, including the Swedish



The Russian geneticist Nikolai Ivanovich Vavilov starved to death in a Saratov prison in 1943.

plant breeding station at Svalöv, where he met the country's first Professor of Genetics, Dr. Herman Nilsson-Ehle. They would become leading Mendelian geneticists. However, Vavilov's fame, which peaked around 1929, would lead to his downfall. With Stalin as a dictator, cosmopolitan science and the slow progress in plant breeding was increasingly regarded as contradicting Marxism and the need for rapid development. A relatively young agronomist, Trofim Lysenko, promised great harvests based on a theory of genetic adaptation that had no scientific basis.

Lysenko's proletarian background and anti-cosmopolitan stance, together with his Marxist rhetoric led him to become Stalin's advisor on plant breeding, and eventually Vavilov was ignored, finally dying from starvation in a Saratov prison in 1943. His seed collection in Leningrad would be saved during the German siege by large sacrifices by his former colleagues. Other parts of the Soviet Union were under German occupation or annexation and would be used in different ways.

Both Germany and Russia lost territory after the Great War. While the Soviet Union could retain its fertile black soils in the Ukraine, Stalin's forced collectivization of agriculture led to the

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Maize diversity in Vavilov's office.

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Heinz Brücher.

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Sven Hedin.

destruction of yields, even leading to mass starvation, particularly affecting the Ukraine. In Germany, revanchists not only demanded the return of ceded territories; they began looking for further *Lebensraum* in Eastern Europe. *Lebensraum*, literally *living space*, was defined by geographer Friedrich Ratzel as a biological area necessary for survival but was increasingly interpreted as a German demand for territorial expansion. With the war shortages and post-war famine in mind, the Nazi regime rapidly took control of plant breeding, aiming at autarky. Soviet scientific genetics was regarded as an ideal since Vavilov had presented his ideas about the origin of wild seed at the 1927 Conference on Genetics in Berlin. Heinrich Himmler, an educated agronomist, was in charge of the SS and its cultural and scientific organization *Ahnenerbe* (*Ancestral Heritage*), a pseudo-scientific endeavor to revive old “Aryan” knowledge, including expeditions to Tibet to seek Germanic roots – and seeds. Swedish explorer of Inner Asia, Sven Hedin, who was admired by and also admired Hitler, was regarded as an ideal. The expeditions succeeded in collecting a large number of seeds, returning home a few weeks before September 1, 1939.

If German plant genetics observed the

rules of Vavilov, Muller and Nilsson-Ehle, Nazi ideology would require a racist interpretation on the human race. Among geneticists competing for Himmler’s protection, a young student was favored because of his admiration for Ernst Haeckel’s social Darwinist ideas about active eugenics in order to create a pure and vigorous race. Heinz Brücher is given much attention by Nordquist, but is less of a hero than Vavilov.

THE SOVIET-NAZI PACT of 1939 and the ensuing land grab gave Germany access to Soviet raw materials. However, its experts soon realized the need for a political Nazi takeover of the mismanaged production of the Soviet black soils area and its oil fields. Plants breeding stations were established in the new Greater Germany, including the planning of a large agricultural station at Rajsko in annexed Poland, eventually depending on slave laborers from the neighboring Auschwitz concentration and extermination camp. With its invasion of the Soviet Union in 1941, Nazi Germany not only intended to secure food and fuel for its population at the expense of its victims; it also intended to get hold of the seeds and plants cultivated by Vavilov and his colleagues, but which had been deemed useless by Stalin and Lysenko.

Brücher, born in 1915, combined studies of biology with anthropology and had already joined the Nazi Party in 1934. He soon surpassed his professor in political status, adopting Haeckel’s ideas about eugenics. Serving in the German advance towards Moscow, he was called home to help in the plundering of Soviet plant breeding stations. In the summer of 1943, he was commanded by the newly established *Sven Hedin Reichsinstitut*

für Innerasien und Expeditionen, [Sven Hedin National Institute for Inner Asia and Expeditions] under Himmler's Ahnenerbe, and under the protection of the Waffen-SS, to explore the Ukraine and Southern Russia for seeds and experimental plantations. Brücher reached the Nikitsky Botanical Garden near Yalta and was impressed by the way Vavilov's gene bank was organized, but was also dismayed at how badly Germany had utilized it. He succeeded in bringing large quantities of different seeds back to the Sven Hedin Institute in order to be stored and cultivated at the Institute's derelict castle in Lannach, Austria. Brücher was promoted to head the SS Institute for plant genetics, the *Wildsippeninstitut* and, when the war started turning against Germany in 1944, he was saved from military service by Himmler and Göring so he could continue his work at the Institute. Thanks to a number of well-kept foreign female prisoners and a British prisoner of war, botanist William Venables, Brücher achieved good results and, in spite of tensions with his superiors, he was awarded an order. With the Red Army advancing, Brücher was ordered to destroy the castle and its treasures. However, he and Venables were able to leave the Institute intact for the British before Soviet forces took over.

AFTER THE WAR, Brücher hibernated. On July 19, 1946, Sven Hedin wrote in his diary about letters he had received from two Germans: one, a deeply anti-Semitic Nazi Party ideologist called Alfred Rosenberg, begging for help for his family; the other from "a Dr. Brücher, recommending Tibetan wheat to be planted here" (evidently meaning in Sweden). Hedin immediately contacted Nilsson-Ehle, his acquaintance from the National Union Sweden-Germany, which had started in 1937 with members ranging from outspoken anti-Semites to naïve fellow travelers. (Hedin, himself of partial Jewish descent, had made some futile attempts to defend and help German Jews during the war). In his correspondence, Brücher underlined the international composition of the workers at the Hedin Institute, not mentioning how it operated like a prison camp under the SS. As a prerequisite for transferring seeds, Brücher demanded help to leave Germany and to be hired as a researcher at the Seed Association. Professor Åke Åkerman (also with strong links to Germany) started legal

proceedings to get Brücher a permit to Sweden and applied to the Agricultural Research Council for a research grant, underlining the importance of both the material and the person. Brücher was granted a permit for a three-month stay in Sweden, arriving in February 1948, formally leaving the US Occupation Zone without permission. When interrogated by the Swedish Immigration Police, Brücher gave his life story but hid all the negative aspects of his appointments and tasks, and was granted entry to Sweden. He started working at Svalöv and in the late spring was able to show the participants at the 8th International Conference on Genetics his cultivation of Tibetan and Russian seeds. The conference chairman would have been Herman Nilsson-Ehle, but his recent past caused the other geneticists to protest. Muller was appointed chairman and Nilsson-Ehle refrained from participating. During the conference, Brücher visited the Argentinian consulate in Gothenburg to apply for a visa and in October 1948 he left Sweden with his bride, botanist Ollie Berglund. They would continue to conduct research in a country that welcomed high ranking Germans without asking questions about their past.

NORDQUIST'S LAST SECTION of the book is devoted to geneticist Norman Borlaug, his successful experiments with wheat and the geopolitical repercussions of the "green revolution".

Much of Nordquist's well-written and fascinating narrative is based on secondary sources, particularly the Soviet and Nazi German parts of the story. Hedin's role is based on Nordquist's own archival studies, while the story of Brücher and his SS connections is mainly derived from Dr. Carl-Gustaf Thornström's research in cooperation with German historians, which is gratefully acknowledged in the chapter on sources.

The great seed theft? Well, it was more about a number of changes of access to the seeds and their applications. Two structural agents were involved in the process: The various states, acting through national territorial regulations, or authoritarian leaders and individual geneticists, balancing between their own knowledge as international scientists and their livelihood positions under the restrictions defined by the state authorities. Geopolitics is not only about the brutal power of weapons; it is also about the handling of natural resources, like seeds, and of cultural resources, like geneticists. ✖

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