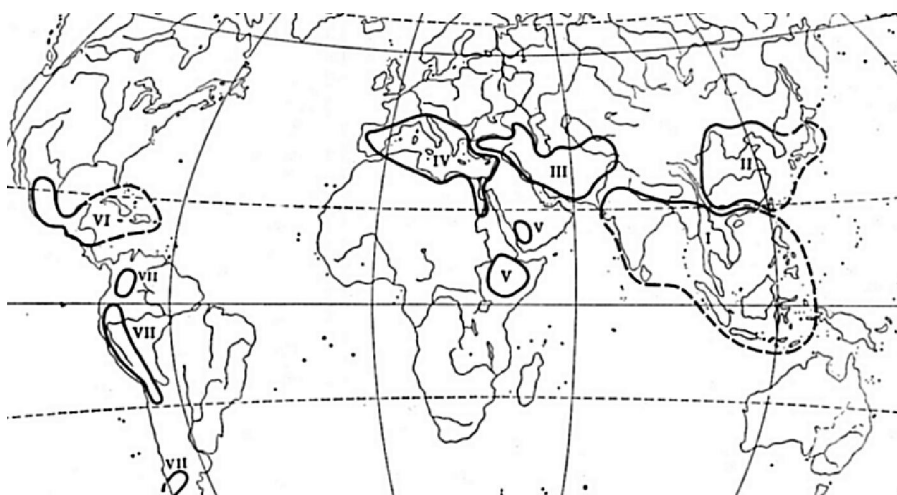


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Nicolay Vavilov:
*«I wouldn't hesitate to give my life for the sake
of a small advance in science...»*



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Nicolay Ivanovich Vavilov (1887-1943) was one of the most outstanding scientist of the twentieth century: a biologist, geneticist, geographer, agronomist and plant breeder. During three decades of tireless scientific work he travelled over five continents, amassed the largest collection in the world of species and strains of cultivated plants, and developed theories on how utilize them for breeding new strains. The activities of Vavilov were extraordinarily varied, but they were all focused on one single objective: to increase agricultural production and to provide humankind with more food.

N.I. Vavilov was a person of many and varied interests. He was a geographer (the President of the National Geographic Society), a geneticist (Director of the Institute of Genetics), a plant-breeder (Director of the All-Union Institute of Plant Breeding), and an organizer (the first President of the Lenin All-Union Academy of Agricultural Sciences). He was a person of inexhaustible energy and unbelievable efficiency. During his relatively short life he accomplished a surprising amount: in his expeditions he travelled all over the world, he formulated very important postulates in genetics, he wrote more than ten books, and carried out the gigantic task of organizing a system of agricultural institutions in the USSR.

Beginning in his student years, N.I. Vavilov studied cultivated plants. His aim was to increase the productivity of agricultural plants, and, thus, to eliminate famine in his long-suffering and huge country. In pursuing this goal, N.I. Vavilov directed his work towards solving two interrelated tasks, importance of which was foreseen by him already in his early years. The first task was the mobilization of the genetic resources of all cultivated plants and also of their wild relatives, i.e. identification, study and collection of plant samples in their native habitats. The second task was the conservation of all the diversity of cultivated plants and of their wild relatives (grown in experimental fields and conserved in special storehouses), a diversity that is being constantly diminished with the elimination of natural habitats and primitive agricultural systems, but the involvement of which in breeding is extremely important in secure consistently high yields.

After graduating from the Moscow Commercial College, N.I. Vavilov entered the Moscow Agricultural Institute (now the Timiryazev Agricultural Academy in Moscow), from which he graduated in 1910. As early as in his student years, N.I. Vavilov showed scientific interests that determined his future lines of research: in 1908 he took part in the student expedition to the Caucasus; in 1909 he made a report on Darwin's Theory; in 1910 he completed and published his diploma work devoted to protection of agricultural plants from pests; in 1912 in his pioneering paper "Genetics and Agronomy" he outlined a program which implied application of genetics to the improvement of cultivated plants. Thus, from his very first steps in science N.I. Vavilov showed himself as a geographer, an evolutionist and a specialist in plant protection. It is noteworthy that all his scientific interests were interrelated; he was the first to see the possibility and the vital necessity of investigations into the cultivated plants from the viewpoint of genetics, evolution and geography. N.I. Vavilov managed to implement this scientific synthesis concurrently with his tremendous organizational work in the field of agricultural science.

In 1913-1914 N.I. Vavilov worked in the best laboratories of Great Britain (in the laboratory headed by W. Bateson), France and Germany. In 1916 he went to Iran and to the mountains of Middle Asia to study cultivated plants growing there. From 1917-1921 N.I. Vavilov was a lecturer at the Department of Agriculture of the Saratov Agricultural Institute, and in 1918 he became a Professor of this Institute. There N.I. Vavilov gave lectures and carried out research into the peculiarities of cultivated plants growing in the region of the Volga and also studied the variability of plants. At that time he made one of his major scientific discoveries - in 1920 he formulated the Law of Homologous Series in Hereditary Variation, which made it possible to systematize the data on variation and to forecast the possibility of finding new plant varieties.

The significance of Vavilov's theory has become especially important nowadays, with the occurrence of mass elimination of natural habitats and primitive agricultural systems. Not only specialists in this field but also the public at large have been attracted to the problems connected with the conservation of genetic pools of cultivated and wild plants. The impoverishment or loss of this hereditary potential can cause irreversible damage to all humanity.

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