Laws for the organic world system

What are the rules for organic?

**Products sold, labeled, or represented as organic must have at least 95 percent certified organic content**. Products sold, labeled, or represented as “made with” organic must have at least 70 percent certified organic content. The USDA organic seal may not be used on these products.

The Principles of **Health, Ecology, Fairness, and care** are the roots from which organic agriculture grows and develops. They express the contribution that organic agriculture can make to the world, and a vision to improve all agriculture in a global context.

**Vladimir Ivanovich Vernadsky** -To collect facts for their own sake, as many now gather facts, without a program, without a question to answer or a purpose, is not interesting. However, there is a task which someday the human mind will solve, and which is extremely interesting. Minerals are remains of those chemical reactions which took place at various times on earth; these reactions take place according to laws which are not always known to us, but which, we are allowed to think, are closely tied to general changes which the earth has undergone as a planet. The task is to connect the various phases of changes undergone by the earth with the general laws of celestial mechanics.

While trying to find a topic for his doctorate, he first went to [Naples](https://en.wikipedia.org/wiki/Naples) to study under [crystallographer](https://en.wikipedia.org/wiki/Crystallography) [Arcangelo Scacchi](https://en.wikipedia.org/wiki/Arcangelo_Scacchi), who was [senile](https://en.wikipedia.org/wiki/Dementia) by that time. Scacchi's condition led Vernadsky to go to Germany to study under [Paul Groth](https://en.wikipedia.org/wiki/Paul_Groth), curator of minerals in the [Deutsches Museum](https://en.wikipedia.org/wiki/Deutsches_Museum" \o "Deutsches Museum) in Munich. Vernadsky learned to use Groth's modern equipment, which included a machine to study the [optical](https://en.wikipedia.org/wiki/Optical), [thermal](https://en.wikipedia.org/wiki/Heat), [elastic](https://en.wikipedia.org/wiki/Elastic_(solid_mechanics)), [magnetic](https://en.wikipedia.org/wiki/Magnetic) and electrical properties of [crystals](https://en.wikipedia.org/wiki/Crystal). He also gained access to the physics lab of [Leonhard Sohncke](https://en.wikipedia.org/wiki/Leonhard_Sohncke) (Direktor, Physikalisches Institut der Universität Jena, 1883–1886; Professor der Physik an der Technischen Hochschule München 1886–1897), who was studying [crystallisation](https://en.wikipedia.org/wiki/Crystallization" \o "Crystallization) during that period.

In his childhood, his father had a huge influence on his development, he very carefully and consistently engaged in the upbringing and education of his son. It was he who instilled in Volodymyr interest and love for the Ukrainian people, their history and culture. The future scientist recalled that before moving from Kharkiv to St. Petersburg, he and his father were abroad and in Milan, they read about a circular in [Pyotr Lavrov's](https://en.wikipedia.org/wiki/Pyotr_Lavrov" \o "Pyotr Lavrov) newspaper "Forward" that forbade printing in Ukrainian in Russia. In his memoirs, he wrote:

*This made a huge impression on my father, and the conversations related to this had a strong effect on me at the time. My father told the history of Ukraine in a completely different way than it was taught in the gymnasium. He often mentioned that Petersburg was built on the bones of Ukrainians (Cossacks from Ivan Mazepa's regiments built Petersburg). After returning to St. Petersburg, I tried to familiarize myself with Ukrainian literature. In his father's library, he found scattered issues of Osnovy and other Ukrainian publications. Obtained Ukrainian books from second-hand booksellers, and received some from abroad. He asked his father in detail about Shevchenko, Kulish, Maksymovich, Kvitka-Osnovianenko, whom he knew personally, as well as about the Cyril-Methodiev brotherhood, about Kostomarov, etc.*

Vernadsky first popularized the concept of the [noosphere](https://en.wikipedia.org/wiki/Noosphere) and deepened the idea of the [biosphere](https://en.wikipedia.org/wiki/Biosphere) to the meaning largely recognized by today's scientific community. The word 'biosphere' was invented by Austrian geologist [Eduard Suess](https://en.wikipedia.org/wiki/Eduard_Suess), whom Vernadsky met in 1911.

In Vernadsky's theory of the Earth's development, the noosphere is the third stage in the earth's development, after the [geosphere](https://en.wikipedia.org/wiki/Geosphere) (inanimate matter) and the biosphere (biological life). Just as the [emergence](https://en.wikipedia.org/wiki/Emergence) of life fundamentally transformed the geosphere, the emergence of human [cognition](https://en.wikipedia.org/wiki/Cognition) will fundamentally transform the biosphere. In this theory, the principles of both life and cognition are essential features of the Earth's [evolution](https://en.wikipedia.org/wiki/Evolution), and must have been implicit in the earth all along. This systemic and geological analysis of living systems complements [Charles Darwin](https://en.wikipedia.org/wiki/Charles_Darwin)'s theory of [natural selection](https://en.wikipedia.org/wiki/Natural_selection),[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)] which looks at each individual species, rather than at its relationship to a subsuming principle.

Vernadsky's visionary pronouncements were not widely accepted in the West. However, he was one of the first scientists to recognize that the [oxygen](https://en.wikipedia.org/wiki/Oxygen), [nitrogen](https://en.wikipedia.org/wiki/Nitrogen) and [carbon dioxide](https://en.wikipedia.org/wiki/Carbon_dioxide) in the Earth's atmosphere result from biological processes. During the 1920s he published works arguing that living organisms could reshape the planets as surely as any physical force. Vernadsky was an important pioneer of the scientific bases for the environmental sciences

**Carl Linnaeus-** In botany and zoology, the abbreviation **L.** is used to indicate Linnaeus as the authority for a species' name. n older publications, the abbreviation "Linn." is found. Linnaeus's remains constitute the [type specimen](https://en.wikipedia.org/wiki/Type_(biology)#Lectotype) for the species [*Homo sapiens*](https://en.wikipedia.org/wiki/Homo_sapiens) following the [International Code of Zoological Nomenclature](https://en.wikipedia.org/wiki/International_Code_of_Zoological_Nomenclature), since the sole specimen that he is known to have examined was himself. In *Flora Lapponica* Linnaeus's ideas about [nomenclature](https://en.wikipedia.org/wiki/Nomenclature) and [classification](https://en.wikipedia.org/wiki/Biological_classification) were first used in a practical way, making this the first proto-modern [Flora](https://en.wikipedia.org/wiki/Flora_(publication)). The account covered 534 species, used the Linnaean classification system and included, for the described species, geographical distribution and taxonomic notes. It was [Augustin Pyramus de Candolle](https://en.wikipedia.org/wiki/Augustin_Pyramus_de_Candolle) who attributed Linnaeus with *Flora Lapponica* as the first example in the botanical genre of [Flora](https://en.wikipedia.org/wiki/Flora) writing. Botanical historian [E. L. Greene](https://en.wikipedia.org/wiki/Edward_Lee_Greene) described *Flora Lapponica* as "the most classic and delightful" of Linnaeus's works. It was also during this expedition that Linnaeus had a [flash of insight](https://en.wikipedia.org/wiki/Eureka_effect) regarding the classification of mammals. Upon observing the lower jawbone of a horse at the side of a road he was travelling, Linnaeus remarked: "If I only knew how many teeth and of what kind every animal had, how many teats and where they were placed, I should perhaps be able to work out a perfectly natural system for the arrangement of all quadrupeds." In August 1735, during Linnaeus's stay with Burman, he met [George Clifford III](https://en.wikipedia.org/wiki/George_Clifford_III), a director of the [Dutch East India Company](https://en.wikipedia.org/wiki/Dutch_East_India_Company) and the owner of a rich botanical garden at the estate of [Hartekamp](https://en.wikipedia.org/wiki/Hartekamp" \o "Hartekamp) in [Heemstede](https://en.wikipedia.org/wiki/Heemstede" \o "Heemstede). Clifford was very impressed with Linnaeus's ability to classify plants, and invited him to become his physician and superintendent of his garden. Linnaeus had already agreed to stay with Burman over the winter, and could thus not accept immediately. However, Clifford offered to compensate Burman by offering him a copy of [Sir Hans Sloane's](https://en.wikipedia.org/wiki/Hans_Sloane) *Natural History of Jamaica*, a rare book, if he let Linnaeus stay with him, and Burman accepted