



Biogeosystem technique as a method to overcome the Biological and Environmental Hazards of modern Agricultural, Irrigational and Technological Activities

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Modern challenge for humanity is to replace the paradigm of nature use and overcome environmental hazards of agronomy, irrigation, industry, and other human activities in biosphere. It is utterly reasonable to stop dividing biosphere on shares – the human habitat and the environment. In the 21st century it is an outdated anthropocentrism. Contradicting himself to biosphere Humankind has the problems.

The new paradigm of biosphere control by methods of Biogeosystem technique is on agenda of Humankind.

Key directions of Biogeosystem technique.

Tillage. Single rotary milling 20...30-50...60 sm soil layer optimizes the evolution and environment of soil, creates a favorable conditions for the rhizosphere, increases the biological productivity of biosphere by 30-50% compared to the standard agricultural practices for the period up to 40 years.

Recycle material. Recycling of mineral and organic substances in soil layer of 20...30-50...60 sm in rotary milling soil processing provides wastes clean return to biosphere.

Direct intrasoil substances synthesis. Environmentally friendly robot wasteless nanotechnology provides direct substances synthesis, including fertilizers, inside the soil. It eliminates the prerequisites of the wastes formation under standard industrial technologies.

Selective substance's extraction from soil. Electrochemical robotic nanotechnology provides selective substances extraction from soil. The technology provides recovery, collection and subsequent safe industrial use of extracted substances out of landscape.

Saving fresh water. An important task is to save fresh water in biosphere. Irrigation spends water 4-5 times more of biological requirements of plants, leads to degradation of soil and landscape. The intrasoil pulse continuous-discrete paradigm of irrigation is proposed. It provides the soil and landscape conservation, increases the biological productivity, save the fresh water up to 10-20 times.

The subsurface soil rotary processing and intrasoil pulsed continuous-discrete irrigation provide environmentally safe disposal of municipal, industrial, biological and agricultural wastes. Hazardous chemical and biological agents are under the soil surface. It provided a medical and veterinary safety of environment.

Biogeosystem technic controls the equilibria in the soil and soil solution, prevents excessive mineralization of organic matter in the surface layers of soil. Simultaneously a soil chemical reduction excluded, biological substance do not degrade to gases. Products of organic matter decomposition are directed to the food chain, 100% waste recycling is obtained.

Biogeosystems technique allows producing more biological products hence to recycle excessive amount of man-made CO₂ and other substances.

Biogeosystems technique increases the rate of photosynthesis of the biosphere, the degree of air ionization. This enhances the formation of rains over land, ensures stability of the ionosphere, magnetosphere and atmosphere of Earth.

The nowadays technologies allow applying technical solutions based on Biogeosystem technique, there is unique opportunity to accelerate the noosphere new technological platform.