



## The biological correction is the new way of preservation of the Face of the Earth

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The major links of terrestrial ecosystems functioning are: composted organic material with mull humus type, nitrogen-fixing microorganisms and litholytic organisms, which capable of active biological weathering of minerals and/or rock in the soil. Now the main ways of influence on plant-soil system functioning are physical and chemical correction.

Physical correction is the system of different soil cultivation and land reclamation. It directed on creation and maintenance of favorable water, thermal and air regimes and also the biological activity of soils for crops. Although the general tendency of agriculture is minimized of tillage (strip-till, mini-till and no-till), nevertheless the intensive cultivation is widely used in modern agriculture.

Chemical correction is the agriculture chemicalization. It directed on regulation of plant producing by replenishment of plant, mineral nutrition elements in soils, by foliar nutrition using water solutions of macro- and microelements, and by regulation of acidic and salt soil regimes. In this case the plant protection against the pests and infections is carried out by various pesticides. This way of correction is completely realized in agriculture, but it doesn't consider the natural laws due to plants together with the soil from the interconnected and interdependent system.

The continuing increase of agriculture chemicalization simultaneously with a repeated tillage is led to loss of the major links of plant-soil systems functioning and to the degradation of a soil cover. Such way of plant productivity is a deadlock.

New evolutionary way of preservation of the Face of the Earth is biological correction of plant-soil system functioning. A gist of this correction is the replenishment of the lost plant-soil system links. Biological correction leans on scientific achievements of modern biotechnologies, such as: vermicomposting, microbiologic specimens, physiologically active substances, biological agents of plant protection, etc. Methods of biological correction are exact biological analogs of natural links and so they can't cause the negative phenomena of plant growth and development. The principle of biological interrelationship is the base of these methods. At the heart of these methods the principle of biological compliance lies. Herewith, physiological features of plants are considered necessary.

There are following main biological correction methods of plant productivity: (i) biological amelioration of soils (using of vermicomposts, earthworms, microbiologic specimens, organic and green manure, etc.); (ii) infection of plants by cultures of living microorganisms (for plant nutrition and protection); (iii) inputting of biological insecticides into plants (allows to fight even against larvae of mining insects successfully); (iv) influence on a plant metabolism by physiologically active substances (such as solutions of humic substances in particular); (v) creation of multilayered mats for gardening of deserts.

The field experiments in working conditions, which were carried out in different climatic zones, bear evidence of efficiency of biological correction methods. In our opinion biological correction methods are capable to support and/or restore land-cover, to stop a degradation, and by that to prevent a disfigurement of the Face of the Earth.