THE CONCEPTUAL-THEORETICAL FRAMEWORK FOR THE APPLICATION OF BIOPHYSICAL AND BIOGEOCHIMICAL INDICES OF AGRICULTURAL ADAPTIVE-LANDSCAPE SYSTEMS

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Abstract

The imperative of biologization and agroecosystems greening approach requires adaptation to landscape of agricultural systems. The concept of landscape adaptation come to substitute the concept of the regional systems and involves the principle of adaptation to concrete landscape conditions and systemic approach to soil-plant interactions. In this sense the landscape adaptation of agroecosystems involves taking into account the adaptation capacity of agricultural crops and their adaptive potential to the landscape. Adaptive capacity does not require only crops features to capitalize the functional reserves of the soil, as well their ability to model the soil in accordance with their needs. Adaptive potential of the landscape in this case, involves the ability of its component firstly to model the soil by plants. Through this prism of ideas, the focus is displaced to landscape adaptation from soil modeling through works for crop needs to self-modeling in the phase of crop development. This leads to renaturation of functioning process of soil ecosystem and the characteristics and dynamics of soil regimes. In this sense the evaluation of degree of correspondence of the agroecosystems to landscape conditions and monitoring of adaptive landscape agroecosystems is recommended the application of agrophysics indices materialized in the physical condition of soils and biogeochemical indices materialized in the components and biogeochemical cycling volume of substances.

Key words: agricultural systems, landscape adaptation, agroecosystem.