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REVIEW

for the monograph

by Kucher A. V., Anisimova O. V., Ulko Ye. M. Efficiency of innovations for sustainable soil management: theory, methodology, analysis: monograph; edited by Corresponding Member of AESU A. V. Kucher. Kharkiv: Publisher Brovin, 2017. 275 p.



In the world literature, the question of evaluation of efficiency of innovations for sustainable soil management in agricultural sector is among the most topical academic and practical (farm, agri-business, policies forwarded) issues. Despite that there are practically no comprehensive studies on technological, energy, economic, social, ecological, etc. efficiency of different type of innovations for sustainable soil management in Ukraine, this problem becomes particularly relevant in the context of European integration. Currently, the problem of sustainable development of the Ukrainian agrarian sector is among the most relevant in agrarian science and practice.

Soil management plays an important role in sustainable agriculture as it can contribute to land conservation.

This monograph presents a holistic (complex) approach for assessing efficiency of innovations for sustainable soil management, based on systematic, situational, interdisciplinary and synergetic methodological approaches. Theoretical and methodological basis of estimation of efficiency of the use of innovations in the field of protection and rational use of soil resources are substantiated in the monograph.

The monograph is structurally composed of the introduction, the main part, the general conclusions, references and annexes. The main part of the monograph consists of four sections:

Chapter 1. Theoretical basis of estimation of efficiency of the use of innovations in the field of protection and sustainable use of soil resources.

Chapter 2. Methodological basis of estimation of economic efficiency of the use of innovations in the field of protection and rational use of soil resources.

Chapter 3. Economic and environmental efficiency of soil carbon management: the case of application of ecosystem approach.

Chapter 4. Economic efficiency of application of different agricultural technologies in the aspects of rational land use.

In the first chapter the provisions on the essence and hierarchical classification of the efficiency had further development. Author's collective clarifies plenty of scientifically based terms for various kinds of efficiency, such as «technological», «energy», «economic», «social» and «ecological» efficiency; classification (subkinds) of ecological efficiency, such as «soil protection», «agrochemical», «biological», «medical and biological» efficiency etc.

The methodological approaches and a system of indicators for estimation of the economic efficiency of land innovations are generalized and formed in the second chapter. Principles of constructing of the methodology for estimation the economic efficiency of application of innovations in the field of protection and sustainable use of soil resources are grounded.

In the third chapter it is proposed author's scientific and methodical approach to quantitative economic evaluation of the environmental effect from preventing carbon dioxide emissions from the soil of agricultural lands under different levels of anthropogenic pressure. Economic assessment of losses of carbon from chernozems by various methods of the basic soil tillage, fertilization systems and farming systems by influence the potential and effective fertility of the soil and the environment is interesting for various stakeholders.

The estimation of economic efficiency of land use for various technologies of

cultivation of crops is carried out in the fourth chapter. The scientific and practical approaches to the economic efficiency of innovations on the example of organic farming are considered.

Monograph «Efficiency of innovations for sustainable soil management: theory, methodology, analysis» meets the requirements applicable for this kind of scientific monographs. The monograph is a definite contribution to the development of modern agrarian economics in the part of justifying the efficiency of innovations for sustainable soil management.

The reviewed monograph introduces an interesting and valuable material for the wide scope of stakeholders. The monograph may be recommended for researchers, lecturers, managers and specialists of state administration, professionals of agricultural enterprises, graduates, students and anyone who is interested in economic issues of efficiency of innovations for sustainable soil management.