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On the necessity of development of metrologyprovision in sphere of quality of soils

Purpose. To analyze the current state of metrological support in the field of soil quality, to offer directions for its development. **Methods.** Analysis, synthesis, generalization, systematization. **Results** The necessity of improving the system of metrological maintenance of works in the field of quality of soils is grounded in order to increase the accuracy and accuracy of the results of measurements, and most importantly - to achieve the appropriate quality of analytical work in this area. **Conclusions** On the basis of the review of literary sources and own considerations, it is proposed to improve the system of metrological maintenance of works through the introduction of international requirements in the system of control over the quality of work performed in measuring laboratories.

Key words: metrological support, accuracy, measurement results, quality management system, soil quality.

The Land Code of Ukraine (2001) would take into account modern approaches, in particular inter-defined, that the protection of land presupposes people's experience in this direction. System of legal, organizational, economic-analysis of recent researches and publications. Environmental measures aimed at ra-metrological activity in Ukraine regulates the land use, prevention of the Law of Ukraine "On metrology and metro-groundless seizure of agricultural activities" [9], and in the field of scientific research and forestry for others Needs, studies and developments - Resolution of the Cabinet of Ministers on protection against harmful natural and anthropological ministers of Ukraine from April 1, 1999, No. 528 [8]. Genetic effects, reproduction of soil fertility-In accordance with these normative-legal acts, promoting the productivity of forest lands under metrological support is seen in the fund, ensuring the regime of land for the determination and application of scientific and organo-protective, recreational, recreational and nizational bases, technical means, Rules of historical and cultural significance [3]. And the norms necessary for achieving unity and the Guarantor for ensuring the protection of the land of the required accuracy of measurement. Is a state that is planning the appropriate zakh-problems of development and development of modern, determines the types and methods of their implementation. Th metrological support is considered Planning, implementation and evaluation of re-in works VA. Bolshakova, V.F. Kaminsky, the effectiveness of the above measures VM Lapina, MM Mikiychuka, P.G. Stolyarchuk is carried out on the basis of data obtained [1, 4, 5, 7]. Back in the 70s of the last century as a result of various measurements. Accuracy, Bolshakov VA [1] noted that the development of the quality and reliability of the results of soil science and agrochemistry is to a large extent a prerequisite for adoption, is determined by experimental data, grounded decisions regarding implemented ones, which characterize one or another of the measures aimed at securing or The state observed in the soil. Protection of land. In order to achieve this condition, the reliability of the information obtained during the development of a system of metrology-conducting of experiments and experiments and support in the field of soil quality, which on the basis of cooking on the basis of practical recommendations for production, depend on properly selected methods and tools that most respond Modern scientific level. In work VF Kaminsky, V.M. Lapina [5] states that inaccurate and erroneous measurements may lead to incorrect scientific decisions and financial losses. It is the objectivity of scientific research on the basis of the results of measuring information that enables to determine and implement in practice the optimum soil tillage technology, to make a forecast of agricultural crop yields and economic indicators of management [4]. The purpose - to analyze the current state of metrological support in the field of soil quality, to offer directions for its development. **Methods.** Analysis, synthesis, generalization, systematization. **Research results.** At present, much attention is paid to such areas as soil monitoring, agrochemical certification, land certification, large-scale soil cover study, soil diagnostics, etc. An integral part of these directions is the comprehensive control of soil condition, which can not be

performed at a high level without complying with modern requirements for the accuracy and reliability of the results obtained, for in-systolic-analytical methods, for the base base, for personnel, and therefore for general metrological Provision of laboratories that will be involved in the process of processing, transmitting, storing and analyzing information on changes in soil condition indicators and their fertility. One of the basic principles for the establishment and functioning of these areas is the consistency of organizational, methodological and metro-logical provision of conducting supervision. After all, the need for monitoring, agrochemical passportization, diagnostics, large-scale soil studies, land certification, accurate, high-quality and reliable information is not in doubt. For the results of, say, soil monitoring and agrochemical passportization of agricultural land are used in the process of regulating the legal bases of land resources, for conducting an economic and monetary (normative and expert) assessment of land, determining the size of the fee for Land, planning of measures to restore soil fertility and increase the productivity of agricultural crops, adjusting agrotechnologies, carrying out ecological and agro-chemical zoning (zonation) of the territory, defining Zones of production of agricultural products for the production of products for children's and dietary food, the development of recommendations for the rational and environmentally safe use of agrochemicals.

However, as practice shows, not only is the strict regulation of the requirements for measuring laboratories, devices, personnel exercising and strict responsibility for the reliability of the information received, but also the full implementation of these requirements in laboratories. In addition, soils as an object of the environment belong to the sphere of metrological supervision, and therefore, measuring laboratories conducting analytical works in the field of soil quality must meet certain requirements, that is to be certified or accredited. At the same time, it is noted in [6] that the results of measurements obtained in accredited laboratory laboratories according to proven methods, with established error characteristics, in the presence of a system for monitoring the quality of measurements (external and internal), are acquired for the purpose of further assessment of the state of soils. Currently, there are 19 accredited laboratories operating in accordance with the requirements of DSTU ISO / IEC 17025 [2] and carry out measurements on the composition and properties of soils, and a significant number of laboratories have the status of certified in the field and outside the scope of metrological control, Which makes it impossible to reach the level of competitive investment-friendly laboratories. Thus, today in Ukraine there has been a situation where metrological support in the field of soil quality is undergoing a transition period, and measuring laboratories that measure in this area are only at the beginning of the way of implementation of the international requirements for competence according to DSTU ISO / IEC17025 [2] and quality control systems in analytical laboratories according to DSTUIISO 9001 [10]. Therefore, an important task for the current transition period is the creation, on the basis of an explicit metrological system, of a new one that takes into account international requirements, with its further integration into a quality management system.

Conclusions

Today, for the development of metrological support with mandatory introduction, a transition from the old requirements of the international requirements to the analytical system that solves relatively narrow methods, accuracy and reliability of the problem of ensuring unity and the results of measurements and, in general, the system of initial accuracy of measurements, To fundamentally control the quality of work performed by the new effective metrological system in the measuring laboratories.

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