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FORMATION OF THE LAND REGIME OF RESEARCH FIELDS OF SCIENTIFIC AND RESEARCH INSTITUTIONS AND EDUCATIONAL INSTITUTIONS

O. Raksha, *Ph.D. student,*

National University of Life and Environmental Sciences of Ukraine,

Kyiv

e-mail: o.raksha@nubip.edu.ua

T. Ievsiukov, *Doctor of Economics, Professor of Department of Geodesy and Cartography,*

National University of Life and Environmental Sciences of Ukraine,

Kyiv

e-mail: ievsiukov_t@nubip.edu.ua

Abstract. *Particularly valuable lands (hereinafter referred to as 'PVL') play an important role in the conservation of natural biodiversity, national spirituality and food security. They are rightly regarded as the most valuable part of Ukraine's land fund. At the same time, the land plots of research fields of research institutions and educational institutions used for long-term scientific research, dissemination of best practices and implementation of the latest scientific achievements play a unique role among the protected areas. Ukrainian legislation does not contain a definition of the concept of 'experimental field land', nor does it establish a clear classification and procedure for determining land or land plots as experimental fields. There are no clear criteria for classifying certain lands or land plots as experimental fields. The publication attempts to reveal the essence of the concept of experimental fields, their main functions and types of use. It is noted that the main problem is that the land plots of research institutions and educational institutions may include both particularly valuable land and other types of land, since the land may be used for research purposes for a certain period, and in other years - for growing crops. The author proposes the definition of 'research field land' and the criteria by which certain lands or plots can be classified as research fields.*

Keywords: *experimental field, research institutions, educational institutions, especially valuable lands, land protection, experimental field lands, State Land Cadastre, agricultural lands.*

Statement of the problem. Ensuring the rational use and protection of the land of research fields of research institutions and educational institutions is an extremely important task. This is due to the fact that PVL a growing socio-economic and environmental role. After all, they play an important role in the conservation of natural biodiversity, reflect national spirituality and contribute to food security, and are the most valuable part of the land fund. PVL include the lands of research fields of research institutions and educational institutions, which are used for long-term scientific research, dissemination of best practices and implementation of the latest scientific achievements. At the same time, there are still unresolved issues with regard to the definition of the concept, legal regime and protection of this category of PVL caused by various regulatory, environmental, economic, organisational and other problems. One of such issues is the lack of a clear definition of the concept of ‘experimental fields’, criteria for their allocation and the legal regime of their use in the regulatory framework.

Analysis of recent research and publications. First of all, it should be noted that the theoretical and methodological substantiation of the special value of land resources is devoted to the works of many domestic scientists, in particular Novakovsky L.Y., Tretiak A.M., Dorosh Y.M., Dobriak D.S., Kanash O.P., Martin A.G., Oleshchenko M.A. [2, 3, 18]. Along with this, the development of theoretical and methodological foundations of research, the development of networks of experimental fields and their formation in agricultural research were studied in their works by Vergunov V.A., Stanislavsky V.V., Komlykova G.I., Shchebetiuk N.B., Bokshits O.M. [7, 8, 19] and others.

In addition, the issues of the legal regime of lands of this category were in the field of view of scientists of the legal scientific school and were covered in the works of Murakhovska O.O., Miroshnychenko A.M., Ryshkova L.V., Stupen' M.G. [4, 5].

In particular, the studies of L.Y. Novakovsky and M.A. Oleshchenko [2] substantiate the ways to improve the processes of formation, protection and efficient

use of particularly valuable land plots, and also study measures to protect them from unconfirmed seizures.

A.M. Tretiak and Y.M. Dorosh [3] note that ‘the belonging of a land plot to a certain category is determined in several ways, which, we admit, may give different results: 1) by the actual situation (for example, if there is a building or a water body on the plot); 2) according to the data of the state land cadastre, which may contradict the existing actual situation and land management documentation, etc.; 3) according to land management documentation (allotment projects)’.

In defining the concept of ‘particularly valuable land’ in Ukrainian legislation, O. Murakhovska [4] emphasises that the main basis for classifying land as particularly valuable is its high market value compared to other land plots. In addition, such land should have a high intangible value. However, this approach is not always justified.

Ryshkova [5], analysing the issues of legal regulation of protection and use of PVL, focuses on clarifying their composition and defining the concept of ‘especially valuable lands’ as ‘a set of land plots included in different categories of land, satisfying common interests and subject to enhanced protection’. It explored the scientific and methodological aspects of legal regulation of the conservation and use of especially valuable land plots and tried to consider the classification of these plots as a basic prerequisite for the emergence and formation of their legal status.

It should be emphasised that PVL are ‘the centre of the highest concentration of the state's land and resource potential, and they can be a potential resource for guaranteed maintenance and improvement of national security in the face of a significant number of challenges associated with incomplete economic transformations, as well as the aggravation of the global food, energy and environmental crisis’ [6].

Despite the in-depth study of the concept and legal status of PVL, there are currently no perfect mechanisms for the economic and legal protection of these lands [18]. There is an urgent need to specify the definition of ‘research field lands’ of research institutions and educational institutions in the context of PVL and determine their legal regime.

The purpose of the study is to define the definition and legal regime of the lands of 'research fields' of research institutions and educational institutions. It is also aimed at forming the author's vision of the concept of 'research field lands' and proposals for improving the legal regime of their use and regulation as a category of particularly valuable lands.

Materials and research methods. The following research methods were used in the study: monographic - for reviewing scientific sources on the legal regime of especially valuable lands; abstract and logical - to substantiate the purpose, objectives and conclusions of the study; graphical - to visualise the classification of field research. The method of analysis was used to analyse legislative and regulatory acts relating to the legal regime of especially valuable lands and lands of research fields of research institutions and educational institutions.

Research results and discussion. Ukraine is an industrial and agricultural country with a particular focus on the production of agricultural products (raw materials). It is also one of the key leaders in the export of certain agricultural products. Relations in the field of growing highly productive crops, including grain, have been established for a long time. However, when examining the historical origins of the research business, we note that the first experimental farm engaged in growing various crop varieties was established in 1840 at the training farm of the Hory Hory Agricultural Institute and operated until 1863. Later, thanks to the initiative of agricultural societies, the first research institutions were founded [7]. 'Experimental stations were institutions that used mainly laboratory research methods, which included a chemical laboratory, plant and animal physiology rooms' [19]. In 1901, the Regulation on Agricultural Research Institutions was adopted, which set out two fundamental points regarding research: budgetary funding and state orders for priority research areas [8].

'The Regulation on State Variety Testing Plots of Cereals, adopted in 1937, provides for the creation of plots for comparative testing of grain varieties in the relevant soil and climatic zones. The land legislation of the 1930s introduced a special section on the use of land by research, educational and other agricultural institutions, specifying their rights to use land plots. The Code also defined the legal status of land

granted to educational and research institutions, including the possibility of leasing it, in accordance with statutory plans and programmes of research, experimental and educational work, as well as plans of production activities. In addition, the Land Code mentions that enterprises involved in the production of elite seeds are subjects of the right to agricultural land plots [7].

The Land Code of Ukraine of 1992 (no longer in force) emphasises that 'agricultural land shall be transferred for use to agricultural research institutions and educational establishments, rural vocational schools and general education schools for research and educational purposes, promotion of best practices, and for farming. It is also noted that these lands cannot be transferred to collective or private ownership' [9]. The definition of 'experimental fields' was not provided in this code, as well as in the current Land Code of Ukraine, adopted in 2002.

At present, according to Article 150 of the Land Code of Ukraine, 'land granted for permanent use to the Massandra and its member enterprises; research fields of research institutions and educational institutions' belong to the PVL [10]. The classification of lands in this category is based not only on their natural properties, but also takes into account their use for important social needs. For example, Annex 59 of the Resolution of the Cabinet of Ministers of Ukraine 'On Approval of the Procedure for Maintaining the State Land Cadastre (Annexes 2-64 to the Procedure)' states: 'agricultural lands for research and educational purposes with the designation code 01.09, as well as land plots within which there are natural objects of special scientific value and which are provided for the preservation and use of these objects, scientific research, educational and upbringing work, are classified as lands of other environmental purpose with the designation code 05.01', so these category codes can be attributed to the lands of research fields [11].

At the same time, the current legislation of Ukraine does not provide for a clear definition of the concept of 'land of experimental fields'. There is also no clear classification or procedure for classifying land or land plots as experimental fields. There are no clear criteria by which certain lands or land plots will be classified as experimental fields.

First of all, when studying the content of the concept of ‘experimental field lands’, it is necessary to understand their structure, and secondly, it is important to understand what tasks are assigned to them, as well as to take into account the key components and problems of formation.

First of all, the Law of Ukraine ‘On Education’ stipulates that research institutes are subordinated to ‘the central executive body in the field of education and science, the National Academy of Sciences of Ukraine, and the national branch academies of sciences of Ukraine’ [1]. The Law of Ukraine ‘On Higher Education’ emphasises that research institutes and research stations are structural subdivisions of higher education institutions and provide practical training of specialists in certain specialities and/or conduct research [20].

For example, in the regulatory documents of Sumy National Agrarian University, the definition of ‘experimental field’ given in the Regulations on the subdivision is understood as a specially designated land plot with defined boundaries and location, which is provided for agricultural research and educational activities, where a field passport is required [12]. In our opinion, a research field serves as a living laboratory where scientists and students conduct controlled experiments, studying various aspects of agriculture, crop production, agrotechnologies, irrigation systems, types of fertilisers, tillage methods and other innovations.

Researchers monitor and measure various parameters, such as soil quality and type, nutrient availability, moisture levels, pest impact and other variables that affect crop yields and quality. Research fields are also used to train students/postgraduates and improve their practical skills by giving them the opportunity to work with real plants and research. It is a place where new ideas, methods and approaches to crop cultivation are tested, which can form the basis for further development of the agricultural sector [12].

Section IX ‘Final Provisions’ of the Land Code of Ukraine, as well as the Regulations of Polissia National University, stipulate that the main tasks of research fields of research institutions and educational institutions are:

1. Creating the necessary conditions for practical training of students and postgraduates (doctoral students) in accordance with curricula and educational programmes based on innovative and knowledge-intensive technologies;

2. Ensuring that research work is carried out by research and teaching staff, postgraduate students and undergraduates, as well as industrial testing, approbation and implementation of scientific developments;

3. Carrying out the necessary measures for the cultivation of environmentally friendly products, land protection and soil fertility restoration, rational use of natural resources, conducting research on crop breeding and seed production [13];

4. Cultivation of elite seed material, feed needs of livestock breeding stock;

5. Ensuring the educational process and resolving the issue of lands of scientific institutions and educational institutions that can be transferred for other uses [10].

According to the Regulation 'On the organisation and functioning of the collection and research field in the speciality "Agronomy" for agricultural higher education institutions of I-II accreditation levels', research fields can be divided into three main types by type of use [14]:

1. A stationary research field is a land plot where long-term field research is conducted to study the impact of various factors on the development of crops. The purpose of such research is to identify patterns of crop growth and development under different conditions, as well as the impact of factors such as soil characteristics, climatic conditions, fertilisers, plant protection products, tillage systems, crop rotations, etc.

2. Demonstration and research field is a land plot designed to familiarise students with modern achievements in agricultural science. Such plots are used for practical training, where students can see various agricultural methods, techniques and technologies in action. These fields serve as open-air laboratories where students can see different types of plants, compare different methods of soil cultivation, plant care, fertilisation and plant protection products. At the demonstration fields, students have

the opportunity to observe different phases of crop growth and development, as well as analyse the impact of various factors on yield.

3. Collection and research field - organised for the purpose of creating a collection of agricultural plants, studying their botanical and biological characteristics, cultivation technology operations, providing conditions for laboratory, practical classes, research work in accordance with the curricula, programmes of individual disciplines.

A field experiment is a key component of scientific practice that is conducted in the field on a specially designated site. Its main objective is to identify differences between different variants of factors affecting crops, as well as to assess the quantitative impact of different growing conditions and methods on product yield and quality.

Methodological requirements for a field trial are important to ensure the reliability and validity of the results [12]. These requirements are aimed at achieving the accuracy and objectivity of the experiment, as well as ensuring the possibility of interpreting and generalising the data. They include the following: the principle of typicality, the principle of a single logical difference, a designated and homogeneous plot of land, the reliability of the experiment in terms of accuracy and substance, control and repeatability, documentation and analysis.

Field experiments can be classified according to various criteria, including content, number of factors and duration (Figure 1). Each type of field experiment has its own characteristics and goals, and plays an important role in the development and improvement of agrotechnical practices, contributing to the efficiency and sustainability of agricultural production. These types of field experiments can be used as a basis for classifying the legal regime of specially valuable lands.

Figure 1. Classification of field experiments [12].

Field experiments can also develop knowledge about a particular crop that is difficult to convey through lectures and course materials. Other obstacles may include safety issues at research stations and in the field for students, uncertainty of schedules due to weather or illness, or transportation to research farms located far from their homes. Despite these challenges, supporting field experience is a worthy goal of agricultural education in Ukraine [15].

After a historical analysis of the development of experimental farming and experimental fields, it is possible to formulate criteria for identifying and classifying these lands as particularly valuable. One of the criteria is 'the classification of land by user: land of research fields of research institutions and educational institutions; land of the Massandra and its member enterprises' [3].

According to the aforementioned 'Classifier of types of designated purpose of land plots', land plots with the code 01.09 and 05.01 can be classified as research fields. However, in order to redistribute these lands and enter information into the State Land Cadastre regarding research fields of research institutions and educational institutions, it is necessary to study and analyse land management documentation, title documents or information from the State Register of Real Property Rights and Their Restrictions [6]. Information should be entered into the State Land Cadastre on the basis of the developed land management documentation.

As practice shows, registration of the land of research institutions in the State Land Cadastre is carried out on the basis of, for example, technical documentation on land management to establish (restore) the boundaries of the land plot in kind (on the ground). The first step is to analyse the title documents and spatially define the boundaries of the research stations on maps and plans. The next step is to develop documentation and XML files with the relevant information: land category, designated purpose, type of use, form of ownership, land plot area, location, etc. However, there is one criterion that is not taken into account in this methodology: when developing documentation, all land on the territory of the farm is classified as agricultural land, even if it is forest, water, or residential and public land (Figure 2).

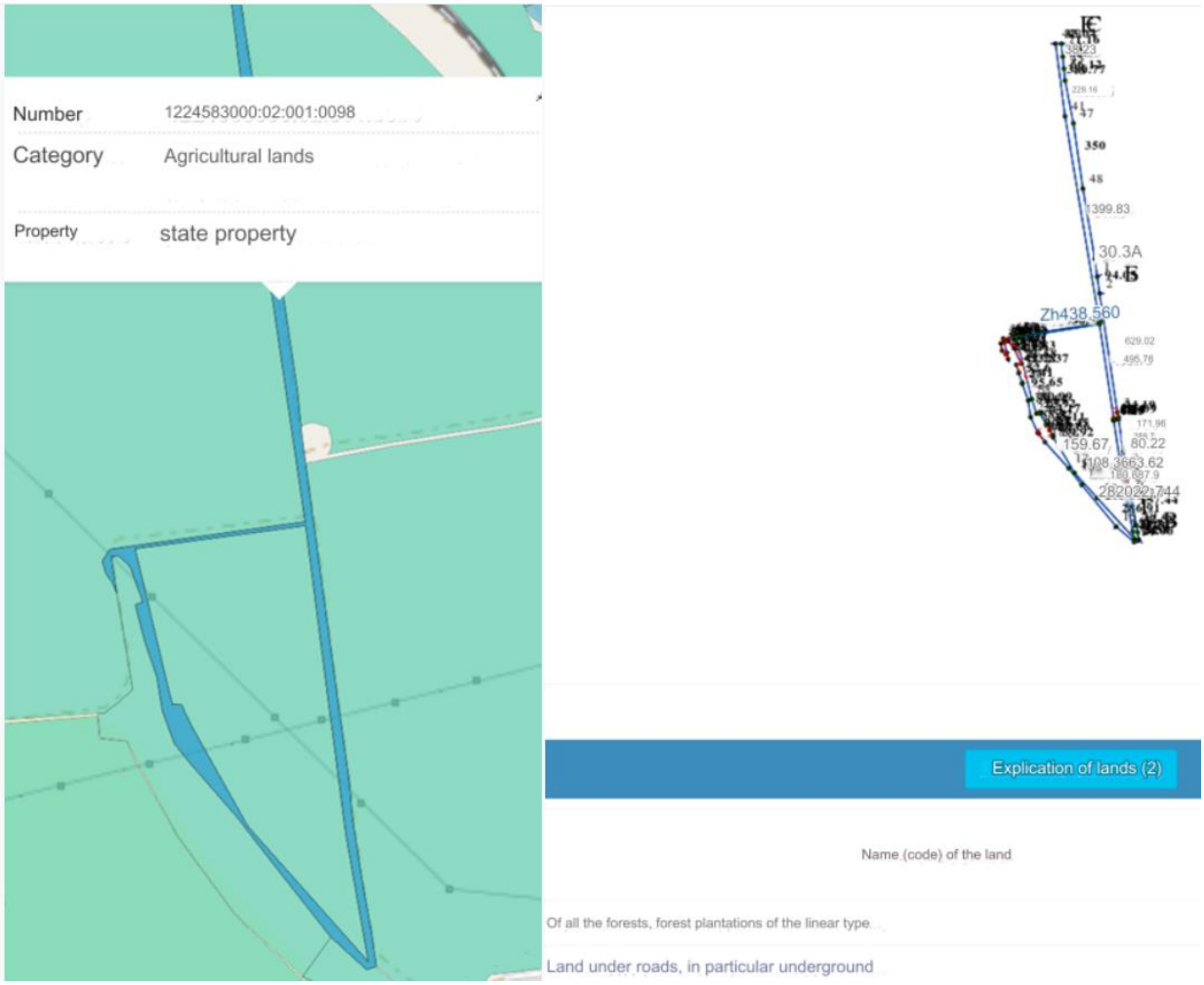

Figure 2. Inconsistency between the name of the land and the category of land according to the Classifier of types of land designation [16].

As can be seen from the example above, there is a large gap in the legislation, as land of different categories is being converted to agricultural land and may face problems with its intended use in the future. Therefore, this issue needs to be addressed at the legislative level by amending the legislative acts and regulatory framework.

Conclusion. Thus, it has been determined that the legal mechanism for regulating the lands of research fields of research institutions and educational institutions currently needs to be improved. The main problem is that the land plots of research institutions and educational institutions may consist of both particularly valuable land and other categories of land. The question is how to distinguish between land used as research fields. A plot may be used for research purposes for several years and for crop production in other years. This raises the question of whether it loses its status as a research field and, accordingly, as a particularly valuable land. In addition, it should

be noted that the State Land Cadastre does not provide for a separate record of experimental fields and there is no register of them [17].

In our view, the legal framework needs to be clarified in terms of defining the concept of research field land of research institutions and educational institutions. We propose that the Law of Ukraine 'On Scientific and Scientific-Technical Activities' define the concept of 'research field land' as land plots provided for use by research institutions and educational institutions for agricultural research and educational activities, promotion of best practices and implementation of the latest scientific research (programmes).

It is also necessary to prescribe the methodology for redistributing these lands and the procedure for developing land management documentation for further registration of land plots in the State Land Cadastre. Amend the 'Classifier of types of designated purpose of land plots' of the Cabinet of Ministers Resolution 1051b-2012-p so that land for research and educational purposes is included not only in the categories of agricultural and other environmental land, but also in all available categories.

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Ракша О., Євсюков Т.

ФОРМУВАННЯ РЕЖИМУ ЗЕМЕЛЬ ДОСЛІДНИХ ПОЛІВ НАУКОВО-ДОСЛІДНИХ УСТАНОВ І НАВЧАЛЬНИХ ЗАКЛАДІВ

Анотація. *Особливо цінні землі (далі — ОЦЗ) відіграють важливе значення у збереженні природного біорізноманіття, національної духовності і забезпеченні продовольчої безпеки. Вони справедливо віднесені до найціннішої частини земельного фонду України. Водночас, серед ОЦЗ унікальну роль виконують земельні ділянки дослідних полів науково-дослідних установ і навчальних закладів, що використовуються для довгострокових наукових досліджень, поширення передових практик і впровадження новітніх наукових досягнень. Законодавство України не містить визначення поняття «землі дослідних полів», а також не встановлює чіткої класифікації і процедури визначення земель або земельних ділянок як дослідних полів. Не існує чітких критеріїв, які дозволяють віднести певні землі чи земельні ділянки до категорії дослідних полів. У публікації здійснена спроба розкрити сутність поняття дослідних полів, їх основні функції та види використання. Наголошується, що головна проблема полягає у тому, що земельні ділянки науково-дослідних установ і навчальних закладів можуть включати як особливо цінні землі, так і інші види земель, адже ділянка може застосовуватися для дослідницьких цілей протягом певного періоду, а в інші роки — для вирощування врожаю. Запропоновано визначення «земель дослідних полів» за авторським трактуванням і критерії за якими можна віднести певні землі чи ділянки до категорії дослідних полів.*

Ключові слова: *дослідне поле, науково-дослідні установи, навчальні заклади, особливо цінні землі, охорона земель, землі дослідних полів, Державний земельний кадастр, землі сільськогосподарського призначення.*