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**THE METHODOLOGICAL BASIS OF THE DEVELOPMENT OF THE WORKING DRAFT LAND ON REMOVAL, TRANSFER AND USE OF TOPSOIL**

***Statement of the problem***. The development of industry, transport, construction work, the development of mineral deposits is directly related to land disturbance. Violations referred to as the land of all categories that resulted from human industrial activities have lost their economic value or become a source of negative environmental impacts due to changes in soil and vegetation, hydrological regime and the formation of technogenic relief. They are often the source of contamination of soil, water and air to adjacent areas, worsening health conditions of the population and the general appearance of the landscape.

These violations occurred for the following reasons: mining and processing, mining, peatery, construction and other work.

It is necessary to establish the use of topsoil in agriculture. When the land use of agricultural object is organised on the lands with the fertile layer of soil, it must be removed, stored and used to improve the fertility of unproductive land under developed business projects.

***Analysis of recent research and publications.*** The issues concerning land use of unproductive land were researched be the authors: V. Andrienko, S.N. Volkov , A.P. Canas, A.O. Koshel, V.M. Krivov, S.A. Osypchuk, M.P. Stetsyuk, V. Pimenov [8] I. Shevchenko etc. At the same time, this problem has not been development yet.

***Problem.*** The purpose of this publication is to reveal methodological foundations of working out development land management projects, concerning removal, carrying and use of soil (topsoil).

***The main material of the study.*** Work project of land management - a complex work of lifting, transporting, applying topsoil and potentially fertile rocks on unproductive land and violation of land with a view to their improvement [1].

In market terms the concept of "work project of land management" expanded and includes the removal of topsoil and potentially fertile species during the construction of reservoirs, quarrying, construction work done with the removal of topsoil and applying it not only unproductive land in agricultural production, but also within city limits, the green areas of the industry (for planting area object), disaster recovery, etc. [2].

In these cases, soils with some potential fertility is a commodity which has a market demand and cost.

In order to increase the interest of the owners, tenants and users of land in preserved and restored soil fertility and protect the lands from the adverse effects of economic and other activities, such as human and technological developments, should be made of economic incentives and land use in agriculture in the manner prescribed by the relevant legislation.

Unlike other business projects developed in land management, work project of land management is the most difficult, due to the nature of multi kinds by land management projects.

During the construction of various facilities on agricultural land question for the conservation of the land and the use of topsoil that is removed from the construction site and transfer it to the ground, which have lower fertility or other conditions that determined by the owner of land, land users, and so on.

In market terms this question comes particularly acute, as affected by the economic interests of existing businesses and organizations that are engaged in agricultural production and other businesses that need improvement or change in soil.

Work on the project of land management unproductive land in a market economy must meet the following requirements:

- Comply with the existing laws of the land and the environment;
- To promote maximum conservation of the environment;
- Does not violate the general principles of area farms in matters of land use and protection.

Project organization in consultation with the customer is job design, where the formulated concisely the main tasks to be solved in preparing the site for construction and subsequent work project of land management unproductive land [3].

In technical terms specified area from which removed fertile soil, its power set location and use of topsoil , transportation and the need for warehousing, technology application and development of the biological conditions of unproductive land, production work (output layer is applied , the time year , etc.).

Development work project of land management unproductive land based on existing environmental, sanitation , building, water management , forestry and other regulations and standards taking into account regional environmental conditions and location of the affected area.

Working draft work project of land management must be developed in accordance with the Order of the State Committee of Ukraine of 04.01.2005 № 1 "The issuance and cancellation of special permits for the removal and transfer of soil (topsoil) of land" [7] and the current regulatory and technical regulations in the

field of and protection of land, including: "Improve the standard of the working draft unproductive lands the fertile layer of soil" (K. Ukrzemproekt, 1982), GOST 17.5.3.06-85 "The Nature Conservancy. Earth. The requirements for rulemaking removal of topsoil in the production of excavation", GOST 17.4.3.02-85 "The Nature Conservancy. The soil. Requirements for the protection of topsoil in the production of excavation", etc. [4, 5].

When developing your work project of land management should use materials technical reports on soil survey and preparation of agrochemical passport project land [6].

As part of your work project of land management be collected text, graphics and regulations regarding the current state of the project area. The project reflects the main technical and economic indicators (Table 1).

*Table 1*

**The main technical and economic indicators of the working draft land use**

| № | Index name | Unit of measurement | Value indices |
|---|---|---|---|
| 1. | Area of land, including the area from which removed and transferred topsoil | $m^2$<br><br>$m^2$ | -<br>- |
| 2. | The land area of unproductive land, including the area to be coated fertile soil | $m^2$<br><br>$m^2$ | -<br><br>- |
| 3. | The volume of excavation of lifting and carrying topsoil:<br>а) removal area<br>б) depth of removal<br>в) rate (volume) removal and transfer<br>г) rate (weight) lifting and carrying<br>д) distance transfer | <br>m²<br>m<br>$m^3$<br>tons<br>km | <br><br>-<br>-<br>-<br>-<br>- |
| 4. | The volume of excavation on the application of topsoil:<br>а) area of application<br>б) depth of application<br>в) rate (volume) of the application<br>г) rate (mass) causing | <br>m²<br>m<br>$m^3$<br>tons | <br><br>-<br>-<br>-<br>- |
| 5. | Term of excavation of lifting, carrying and use of topsoil | months | - |
| 6. | Consolidated estimated cost calculation excavation of lifting, carrying and use of topsoil (including VAT) | UAH | - |

*(author development)*

In the working draft work project of land management describes the location of the land , its purpose , structure of land. Marked cadastre number of the land plot and its area.

Marked related research area in terms of geomorphology , elevation , section of the circuit relatively natural and agricultural zoning. Describes soil cover and land code corresponding agroindustrial group of soils. Specified water-physical soil properties and grain size.

According to the physico-chemical analyzes indicated humus content in the plow layer of soil, soil reaction medium, the amount eaten foundations, mobile phosphorus and potassium content of contaminants, pesticide residues, etc. .

The basic design decisions, which I noted: the area of land from which is removed and transferred fertile soil, depth of topsoil removal, the method by which the removal of topsoil and the area and depth of application to land from unproductive land.

Calculate the normal removal of topsoil in accordance with GOST 17.5.3.06-85 and reported in Table 2.

*Table 2*

**Standards removal of topsoil**

| Code of agro-industrial group soil | The area where the fertile soil is removed, ml | The depth of topsoil removal, m | Rate (volume) removal topsoil, $m^3$ | The density of topsoil, $t/m^3$ | Normal (mass) removal of topsoil, tons |
|---|---|---|---|---|---|
| - | - | - | - | - | - |

*(author development)*

Upon removal of topsoil unacceptable mixing it with lingering mineral rocks below .

After applying the topsoil of the land of unproductive lands by disking and cultivation of land harrowing.

Based on the volume of the main types of work determined by the period of excavation of lifting , carrying and use of topsoil . Withdrawal , transfer and use of topsoil is recommended in the warm season.

Developed detailed design work project of land management must be transferred in kind (on location) in accordance with the stakeout drawing on conventional coordinate system. Realized transfer project in the nature of an act issued by the appropriate form. To start lifting and carrying topsoil only after obtaining permission from the territorial authority State Inspectorate for Agriculture Ukraine accordance with the approved "Of the issuance and cancellation of special permits for the removal and transfer of soil (topsoil) of land". The facility construction should be carried out technical quality control excavation, which is to systematically oversee compliance of work performed work project of land management and the requirements of SNIP III-8-76.

***Conclusions and further research.*** In Ukraine there are about 144.5 hectares of disturbed land to be restored to normal. The important conservation and improvement of soil fertility is a work project of land management. To make work project of land management developed a working draft land of lifting, carrying, storage and use of topsoil. Methodological approaches to developing business work project of land management can be used to develop benchmark project.

**References**


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**Koshel A.O. THE METHODOLOGICAL BASIS OF THE DEVELOPMENT OF THE WORKING DRAFT LAND ON REMOVAL, TRANSFER AND USE OF TOPSOIL**


**Purpose.** The aim of the article is elucidation of methodological foundations according to the development of working draft of land management, on removal, transfer and use of soil.

**Methodology of research.** The works of foreign and domestic scientists, economists and naturalists, their scientific development, legal documents, scientific and practical conferences, periodical publications constitute the methodological basis of the article. The article has been written on the basis of the dialectical method of cognition of environmental and economic effects, systematic approach to the analysis of the process of rational use and protection of land. In solving the tasks we used the following methods in the article: retrospective (to analyze the current state of the problem); monographic (to process the scientific publications on environmental and economic nature of land use and protection of land), analysis of domestic and foreign work experience in developing of land management projects, the nature and functioning of the sphere of land relations, regulations on the rational use and protection of land, encyclopedias), economics and statistics (in the analysis of land use in Ukraine).

**Findings.** The methodological basis for the development of land management projects on the removal, transfer and use of topsoil are the results of research. The structural elements of the working draft land with their meaningful description have been formed.

**Originality.** The methodological bases, unlike existing based on a market economy, allowing access to a new level of development of land documents have been proposed.

**Practical value**. The results can be used by The State Agency for Land Resources of Ukraine territorial authorities and entrepreneurs to develop land documents and creating a reference.



**Key words**. Stead, land management, work project of land management, rational use, land protection, topsoil.