

ABSTRACT

Master's dissertation: 86 p., 20 figures, 20 tables, 1 supplement, 31 sources.

Topicality. The question of the introduction of a full-fledged land market in Ukraine is now the subject of sharp political discussions both among people's deputies and among ordinary citizens. At the same time, there is a lack of economic substantiation of a decision, supported by mathematical calculation. The problem of soil degradation has become world-wide. This was a concern of the international community and the UN Convention to Combat Desertification (UNCCD), which was ratified by almost 200 countries of the world [1]. At the same time, the effect of land ownership forms on the problem of soil degradation seems to be not well understood.

Relationship of work with scientific programs, plans, themes. The work was carried out at the Department of Computer-Aided Management and Data Processing Systems of the National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» within the framework of the topic «Investigation of the influence of ownership forms on the economic behavior of business entities».

The purpose of the research is to substantiate the advantages of private ownership of land, in comparison with the lease, by comparing the behavior of business entities, in order to maintain the productivity of land resources in Ukraine.

To achieve the goal, you must accomplish the following tasks:

- carry out an overview of existing modern methods of maximizing profits from the fields;
- formalize the task of building crop rotation for two cases;
- to determine the forecasting method;
- predict data for calculations;
- make calculations for comparing profits;
- perform the analysis of the obtained results.

The object of research - the process of building crop rotation for a limited and unlimited time interval.

Subject of research - user behavior strategies, depending on their ownership.

The research methods used in this paper are based on optimization and forecasting methods.

The scientific novelty of the obtained results consists in the construction of models for optimizing the crop rotation of users of various forms of ownership of land and conducting calculations, taking into account the forecasting of agricultural crop yields.

Publications.

Троцюк А.Р., Попенко В.Д. Дослідження стратегій поведінки землекористувачів у сільськогосподарському виробництві залежно від форм власності на землю / Інформатика та обчислювальна техніка – ІОТ-2018. – С. 79-81.

Троцюк А.Р., Попенко В.Д. Аналіз структури сівозмін за різними формами земельної власності в Україні / Всеукраїнська науково-практична конференція молодих вчених та студентів «Інформаційні системи та технології управління» (ІСТУ-2018) – м. Київ.: НТУУ «КПІ ім. Ігоря Сікорського», 29-30 грудня 2018 р.

CROP ROTATION, FORMS OF THE LAND PROPERTIES, CROP CAPACITY PREDICTION, LINEAR REGRESSION, BRUTE FORCE, DISCOUNTING COEFFICIENT, OPTIMIZATION PROBLEM