

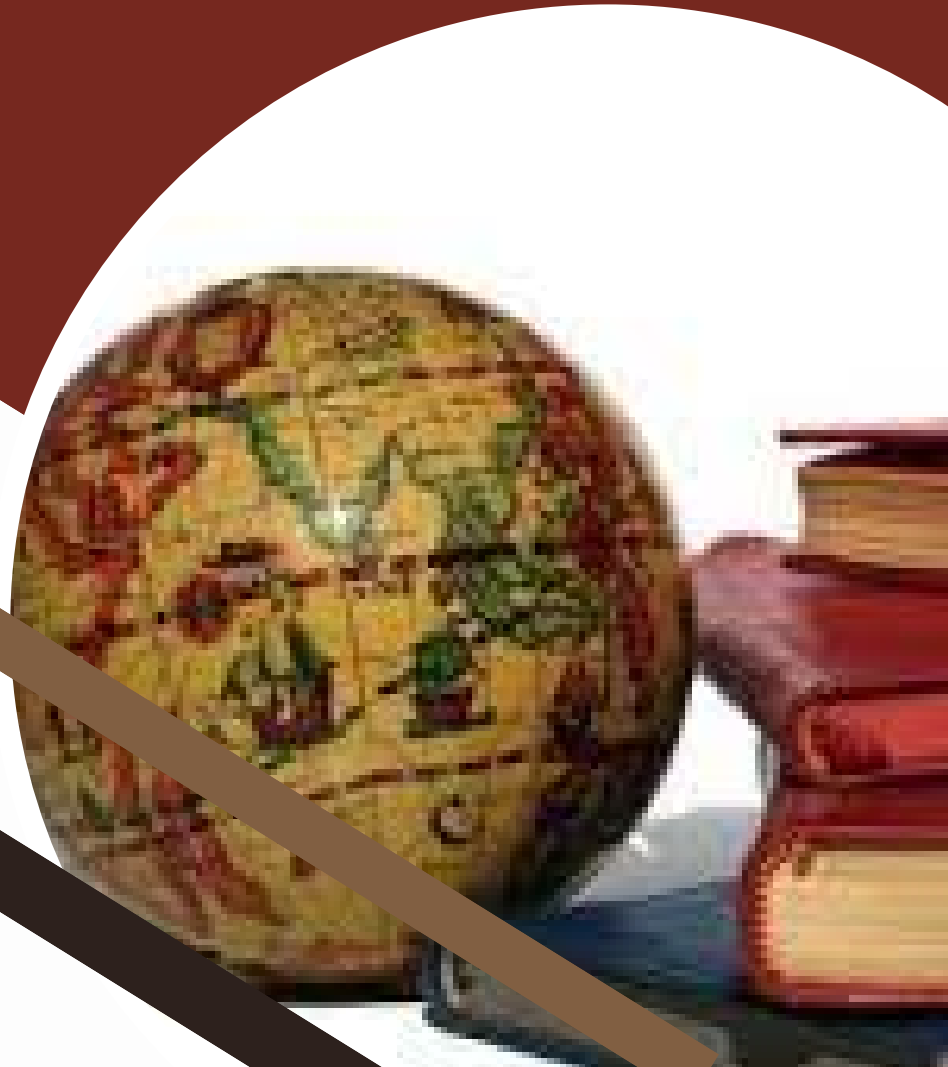
11. INTERNATIONAL SUMMIT SCIENTIFIC RESEARCH CONGRESS

December 15-17, 2023
Gaziantep, Türkiye

FULL TEXTS BOOK

Editor:
Assoc. Prof. Dr. Hasan BÜYÜKASLAN
Assoc. Prof. Dr. Hasan ÇİFTÇİ
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**RESOURCE-SAVING APPROACHES TO INCREASING THE PRODUCTIVITY OF
AGRICULTURAL CROPS IN THE SOUTHERN STEPPE OF UKRAINE IN THE POST-WAR
PERIOD**

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ABSTRACT

The conditions of the Southern Steppe of Ukraine are characterized by droughts, which pose a challenge for agricultural producers to ensure the formation of an optimal leaf surface area for field coverage, increase the use of photosynthetically active radiation, reduce the number of weeds, and effectively use moisture. One of the resource-saving elements in the technology of growing agricultural crops is the use of bio-preparations. Studies have shown that treating wheat, triticale, barley, sunflower, and other crop seeds with bio-preparations provides an increase in grain yield. The highest efficiency of bio-preparations is achieved by combining seed treatment before sowing and plant sowing during the main periods of vegetation. The selection of varieties and hybrids adapted to the conditions of the zone is another cost-free element of cultivation technology that can help increase production with relatively little additional cost.

In the recent period, due to the duration of military operations, the presence of some agricultural land on which it is impossible to grow agricultural products, the weakening of the economic situation of farms, and the need to obtain a stable level of yields and production volumes becomes problematic. Therefore, scientists and producers should rethink previously known technologies for growing agricultural crops, develop and implement more resource-saving elements that will not only stabilize yields but also contribute to the preservation and improvement of soil fertility. After all, the development of competitive agricultural production in the current state of the economy requires a reduction in costs per unit of production (reduction in its cost), which can be achieved through the introduction of biological elements that are usually resource-saving. Moreover, they allow reducing the negative impact of chemical treatments, which will contribute to the improvement of polluted soils and ensure the preservation of the balance of the ecological state of the environment.

Among the elements that do not require additional costs is the selection of agricultural crops in crop rotation and their division into varieties and hybrids that are most adapted to the conditions of the cultivation zone and react slightly to adverse climatic factors by reducing yields [1]. The first and cost-free factor in agriculture is a return to scientifically substantiated crop rotation. Of course, they will not be as diverse as before with a certain (recommended) percentage of fallow for a specific zone, but leguminous plants, at least annual ones, should be included in the selection, which enrich the soil with valuable organic matter and free biological (symbiotic) nitrogen [2-4]. In the current period of management, legumes should be given more and more importance, as mineral fertilizers have significantly increased in price and plants are not fully able to use them, while nitrogen from legumes

is absorbed by them without loss, 100% for several years. Therefore, the benefit of leguminous crops for their inclusion in the selection of crops for cultivation is becoming increasingly important [5].

Another important role in the cultivation of agricultural crops on resource-saving principles should be given to growth regulators, bio-preparations, and microelements. Their use for seed treatment or plant sowing during the main periods of vegetation by conducting foliar feeding does not require significant costs while simultaneously increasing yield and quality of the cultivated products [6, 7]. These measures increase plant resistance to adverse environmental conditions, contribute to the optimization of their growth processes, significantly regulate water consumption, and ultimately increase productivity [8, 9].

Research in this direction has been widely conducted in the conditions of the experimental field of Mykolaiv National Agrarian University with many agricultural crops in different years. We will briefly present the results of resource-saving approaches to optimizing nutrition.

In the arid conditions of the Southern Steppe of Ukraine, from the very beginning of plant vegetation, it is necessary to provide them with the formation of an optimal leaf surface area (biomass) for field coverage, increased use of PAR, reduced weed population, and effective use of moisture. All these requirements can be met by improving their nutrition, including the use of bio-preparations.

For example, the treatment of wheat crops (2014-2016) with bio-preparations provided an increase in grain yield by 1.20-1.38 t/ha, and by conducting pre-sowing treatment of seeds (Escort-bio 50 g/t) - by 1.31-1.49 t/ha. In the same years, triticale crops showed yield increases of 0.84-1.11 and 0.92-1.20 t/ha, respectively.

Varieties of spring barley (Stalker and Vakula in 2016-2018) with an average yield of 2.37 t/ha in the control group provided an increase in yield to 3.60 t/ha when using bio-preparations for foliar feeding. In 2020-2021, the variety of spring barley Svyatohor increased grain yield by 0.11-0.15 t/ha.

Sunflower (hybrid Dragan) on average for 2016-2018, using bio-preparations, increased yields within the range of 0.38-1.01 t/ha, and in 2020-2022 (hybrid Mirage) - from 2.7 t/ha in the control group to 3.50 t/ha of grain with the use of bio-preparations. Similar results were obtained for the cultivation of legumes (chickpeas, soybeans, spring and winter peas), spring barley, safflower, flaxseed, potatoes, and other crops [10]. Depending on the predecessor, mineral fertilizers may not be applied at all. Studies have shown that the highest efficiency of bio-preparations is achieved by combining seed treatment before sowing and plant sowing during the main periods of vegetation.

The selection of crops that are adapted to the conditions of the cultivation zone and their division into varieties and hybrids that react slightly to adverse climatic factors is a cost-free element in agricultural technology. For example, over a long period of research (2007-2023), varieties under identical environmental conditions provide different grain productivity - from 2.12-3.71 t/ha in extremely dry years to 4.43-7.14 t/ha in favorable moisture conditions. The difference in yield levels is even greater for maize hybrids without irrigation: 2.43-3.94 and 4.82-7.24 t/ha depending on the hybrid maturity group. Similarly, the yield of sorghum varieties and hybrids changes depending on moisture conditions - in 2019-2023, on average, from 3.87 to 8.69 t/ha in unfavorable years and from 6.93-14.52 t/ha in optimal moisture years. Therefore, the implementation of resource-saving elements in the technology of growing agricultural crops, such as scientifically substantiated crop rotation, selection of adapted varieties and hybrids, and the use of bio-preparations, growth regulators, microelements, can significantly increase production while incurring relatively low additional costs.

REFERENCES

1. Hamayunova V.V. Resource-saving elements of winter wheat cultivation technology as a measure of grain production / V.V. Hamayunova, I.V. Smirnova, O.T. Yevtushenko, T.V. Baklanova / Grain crops. Volume 6. No.2, 2022. - P. 135-143.
<https://doi.org/10.31867/2523-4544/0243>

2. Almashova V.S. The effect of microelements and rhizotorphin on the productivity of vegetable peas in the conditions of the Kherson region / V.S. Almashova, V.V. Hamayunova, S.O. Onyshchenko / Tavra Scientific Bulletin. - Kherson., 2007. - Issue 49. - P. 18-21.
3. Hamayunova V.V. Productivity and ability of soybean varieties depending on cultivation factors in the south of the Ukrainian steppe / V.V. Hamayunova, A.A. Nazarchuk / Scientific-theoretical collection "Bulletin of ZHNAEU". - Zhytomyr: Zhytomyr NAU, 2014. - P.17-23.
4. Karbivska U. Productivity and Quality of Diverse Ripe Pasture Grass Fodder Depends on the Method of Soil Cultivation / Uliana Karbivska, Volodymyr Kurgak, Valentyna Gamayunova, Andrii Butenko, Lesia Malynka, Ihor Kovalenko, Viktor Onychko, Ihor Masyk, Andrii Chyrva, Elina Zakharchenko, Oleksandr Tkachenko, Olena Pshychenko / Acta Agrobotanica. Volume 73. Issue 3. Publisher: Polish Botanical Society, 2020. - P. 1-11. Article ID: 7334. DOI: 10.5586/aa.7334
5. Burykina S. Influence of mineral fertilizers and inoculants on the yield and quality of chickpea grain / S. Burykina, A. Kryvenko, I. Gulyaeva, V. Gamayunova, A. Shepel. Ukrainian Journal of Ecology, 2021, 11(9). P. 150-158. (WoS). doi: 10.15421/2021_308
6. Panchenko T. Change of yield and baking qualities of winter wheat grain depending on the year of growing and predecessor in the central forestry of Ukraine / T. Panchenko, M. Lozinskiy, V. Gamayunova, L. Tsentilo, V. Khakhula, Y. Fedoruk, I. Pokatylo, O. Gorodetskiy / Plant Archives journal (ISSN: 0972-5210). 2019 (India). – 2019, №1 Plant archives vol.19 P. 1107-1112.
7. Gamayunova V.V. Increasing grain production in the Steppe zone of Ukraine through barley cultivation and optimization of its nutrition / V.V. Hamayunova, A.V. Panfilova, A.O. Kuvshinova, T.O. Kasatkina, T.V. Baklanova, V.V. Nagirny / Scientific Horizons Journal (Zhytomyr NAU), No.2(87), 2020. – P. 15-23. doi: 10.332491/2663-2144-2020-87-02-15-23.
8. Gamayunova V. Change in water consumption of spring cereals under the influence of nutrition background and biopreparation Escort-bio / V. Gamayunova, V. Dvoretzkyi, E. Sidiakina / Aekonomika: Economics and Agriculture, 2017. – No.8 (20). – Electronic resource. – Access mode: <http://aeconomy.ru/science/agro/izmenenie-vodopotrebleniya-yarovykh/>.
9. Gamayunova V. Current Trends in Sorghum Use, Grain Yield and Water Consumption Depending on the Hybrid Composition / V. Gamayunova, L. Honenko, T. Baklanova, T. Pilipenko / Ecol. Ecological Engineering & Environmental Technology 2023, 24(6), P. 211–220. DOI: <https://doi.org/10.12912/27197050/168451>
10. Gamayunova V. Influence of nutrition optimization on the productivity of spring oil crops on southern chernozem in the Steppe zone of Ukraine under the influence of biopreparations / V. Gamayunova, L. Honenko, I. Moskva, V. Kudrina, T. Glushko / Bulletin of Lviv National Agrarian University. Agronomy, No.23, 2019. – P.112-118. doi: <https://doi.org/10.31734/agronomy.2019.01.112>.