



Food and Agriculture
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**Soils,
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food
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Proceedings
of the Global Symposium
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Current state and perspective of effective use of soils of Zaporizhzhia region

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Introduction, scope and main objectives

Undoubtedly, land resources are the most important object of the material world, an important national resource, the basis of food security of any country. Therefore, rational and efficient use of land resources should be a priority of Ukraine's state policy, as it means involving in the economic circulation of land and their efficient use for the main purpose, creating the best conditions for agricultural land to have high productivity and the possibility of obtaining per unit area the maximum number of products, compliance with scientifically sound production technologies. Zaporizhzhia region occupies a favorable economic and geographical position. It is located in the south of the Eastern European Plain and borders on Kherson, Dnipro and Donetsk regions. The climate is temperate-continental, characterized by a clearly defined aridity. Zaporizhzhia region is located in the steppe zone with a characteristic flat landscape dominated by chernozem soils (75 percent of the area), 10 percent of the area - saline chestnut and dark chestnut soils (south and southwest). Zaporizhzhia region is one of the largest producers of agricultural products and food products among the regions of Ukraine. The total area of land use is 99.6 thousand hectares. The main direction of development of the agro-industrial complex is to increase the pace of agricultural production, increase the profitability of enterprises. Agricultural lands in the Zaporozhye region occupy 83 percent, which is 2 242 thousand hectares, the region produces 7 percent of wheat, 8 percent of legumes, 7.6 percent of sunflower, 5.6 percent of barley, 6.9 percent of honey from the total production in Ukraine. Agri-environmental assessment of land is the first stage of a set of works to determine the suitability of agricultural land for growing biologically complete environmentally friendly products and raw materials, which is based on analysis of qualitative assessment of soil fertility, environmental and chemical characteristics and meteorological factors.

Methodology

Agroecological assessment of the conditions for growing crops in the Zaporozhie region was performed by the method of Medvedev V.V. The agro-ecological assessment is based on the principle of ecological correlation of environmental parameters that characterize the needs of agricultural crops for their cultivation.

Results

Arable lands of the northern and central part of Zaporizhzhia region are mainly represented by common and southern chernozems. To perform agri-environmental assessment, indicators of rationing of parameters of agri-environmental conditions for growing crops on the example of peas were determined. Values of ordinary and southern chernozems on arable land: thickness of humus layer 40-60 cm, particle size distribution 2-4, soil moisture 1.1 -1.4 g/cm³, content of mobile phosphorus 62-140 mg /kg, content of mobile forms of heavy metals 0.63 mg/kg, air temperature in the formation of generative organs, 16.8 - 18.3 oC, reserves of productive moisture in the soil layer

0-20 cm when the seedlings 30, reserves of productive moisture in the layer 0-100 cm during flowering or the formation of generative organs – 114.

Discussion

Analyzing and comparing the data obtained in our study, we see that the soils of the Zaporozhie region in most parameters are characterized by acceptable conditions, namely agrophysical, physicochemical and meteorological indicators. Intensive use of soils in the Zaporizhia region and reduction in the use of chemical ameliorants, organic and mineral fertilizers, has led to a decrease in the content of humus, mobile forms of potassium and some trace elements.

Conclusion

After conducting research, we see that the soils of the Zaporizhie region are suitable for growing biologically environmentally friendly products and raw materials, which in turn will have a positive impact on public health.

References

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