

**National Academy of Agrarian Sciences of Ukraine
National Scientific Center «Institute of agriculture of NAAS»**

**EFFICIENCY OF DEVELOPMENT AND PROSPECTS
OF IMPLEMENTATION OF INNOVATIVE TECHNOLOGIES
IN ORGANIC FARMING IN INDEPENDENT UKRAINE**

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INTRODUCTION

- ▶ The activation on the processes of intensification of agrarian production in independent Ukraine has led to a negative impact on soil structure and the environment, as well as the quality of agricultural products. During 1991–2021, rational land use in various soil-climatic conditions of independent Ukraine, which includes natural, regenerative, soil protection, adaptive and organic components, became relevant;
- ▶ The importance of innovative technologies in organic farming is that they are competitive, ensure high productivity and quality of agricultural products, help restore and increase soil fertility and improve the environment in independent Ukraine and the world.

Carrying out long-term research to determine the effectiveness of development and prospects for the implementation of organic technologies, which include natural components for different soil-climatic conditions of independent Ukraine during 1991–2000.

- ▶ During 1991–1995, the implementation of the first Republican Scientific-Technical Program "Develop the fundamental foundations of full provision of the population with high quality food with optimal energy consumption and environmental well-being";
- ▶ During 1991–1995, the implementation of the first Republican Targeted Comprehensive Scientific-Technical Program "Food-95" began;
- ▶ During 1996–2000, the research was performed according to the Scientific-Technical Program "Develop zonal systems of renewable farming with different forms of production organization".

Conducting long-term research to determine the effectiveness of development and prospects for the implementation of organic technologies in different soil-climatic conditions of independent Ukraine intensified during 2001–2020.

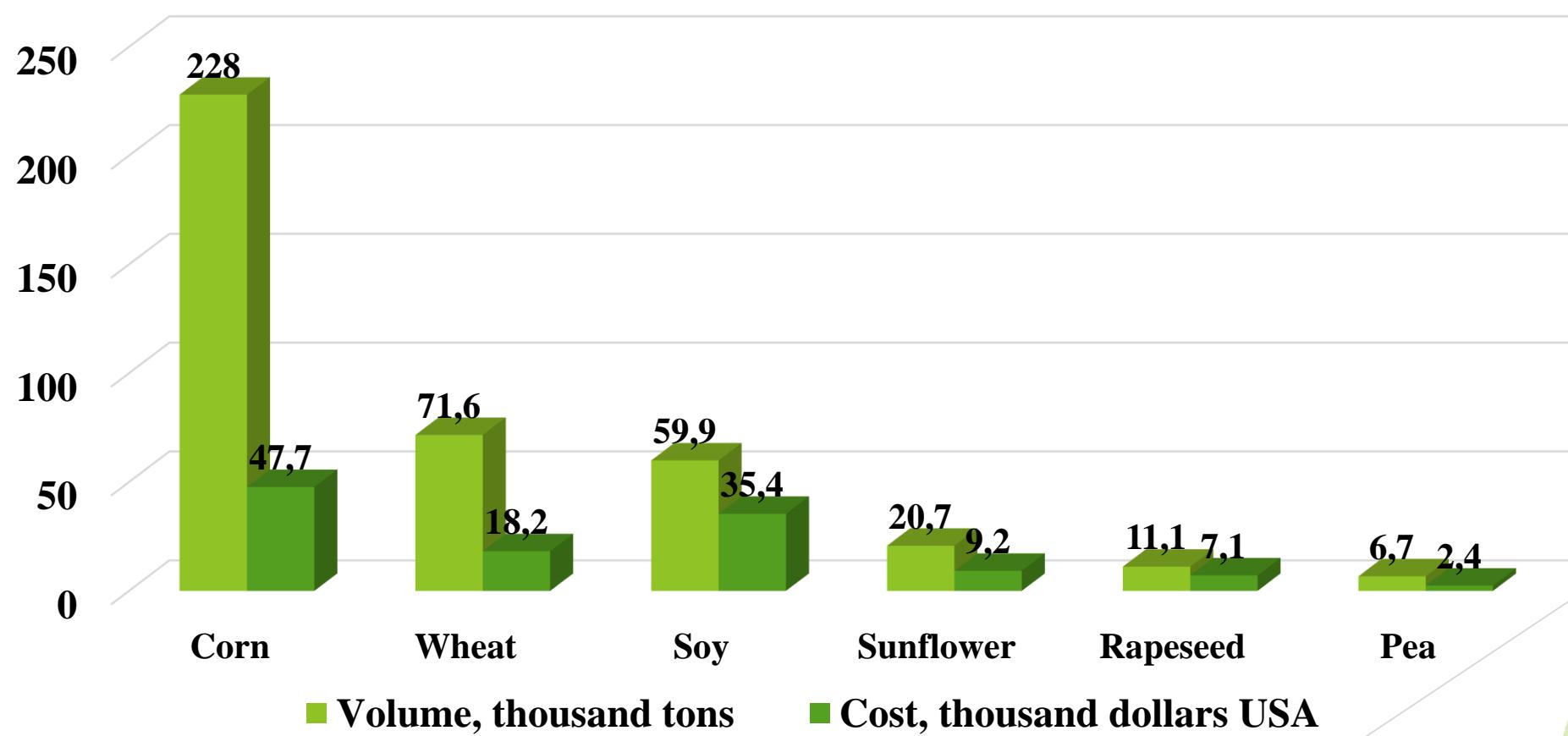
- ▶ During 2001–2005, the research was carried out under the Scientific-Technical Program "Develop zonal farming systems that will ensure the rational use of agricultural land, expanded reproduction of soil fertility and protection from erosion, increase productivity and sustainability of agrocenoses in the Forest-Steppe and Polissya";
- ▶ During 2006–2010, the research was performed under the Scientific-Technical Program "Develop scientific bases for farming, adapted to the natural environment and market conditions";
- ▶ During 2011–2015, research was conducted under the Scientific-Technical Program "Develop scientific foundations for the development of farming by stabilizing land use and natural land structure, the use of competitive technologies for crop production, preservation and reproduction of soil fertility";
- ▶ During 2011–2015, the research was performed under the Scientific-Technical Program "Scientific basis for the development of organic agricultural production and mechanisms of its functioning in Ukraine";
- ▶ During 2016–2020, research was conducted on the topic: "Theoretically substantiate and develop crop rotation systems to ensure the reproduction and preservation of fertility and productive functions of soils".

In 2021, to improve the development and prospects of innovative organic technologies, research was continued on the topic: «To determine the scientific basis of ecologically and biologically balanced crop rotations and farming systems adapted to different soil-climatic conditions of Ukraine and climate change in the world".

During 1991–2021, due to the introduction of innovative ecologically safe technologies in different soil-climatic conditions of independent Ukraine, the production of quality agricultural products increased and its exports increased.

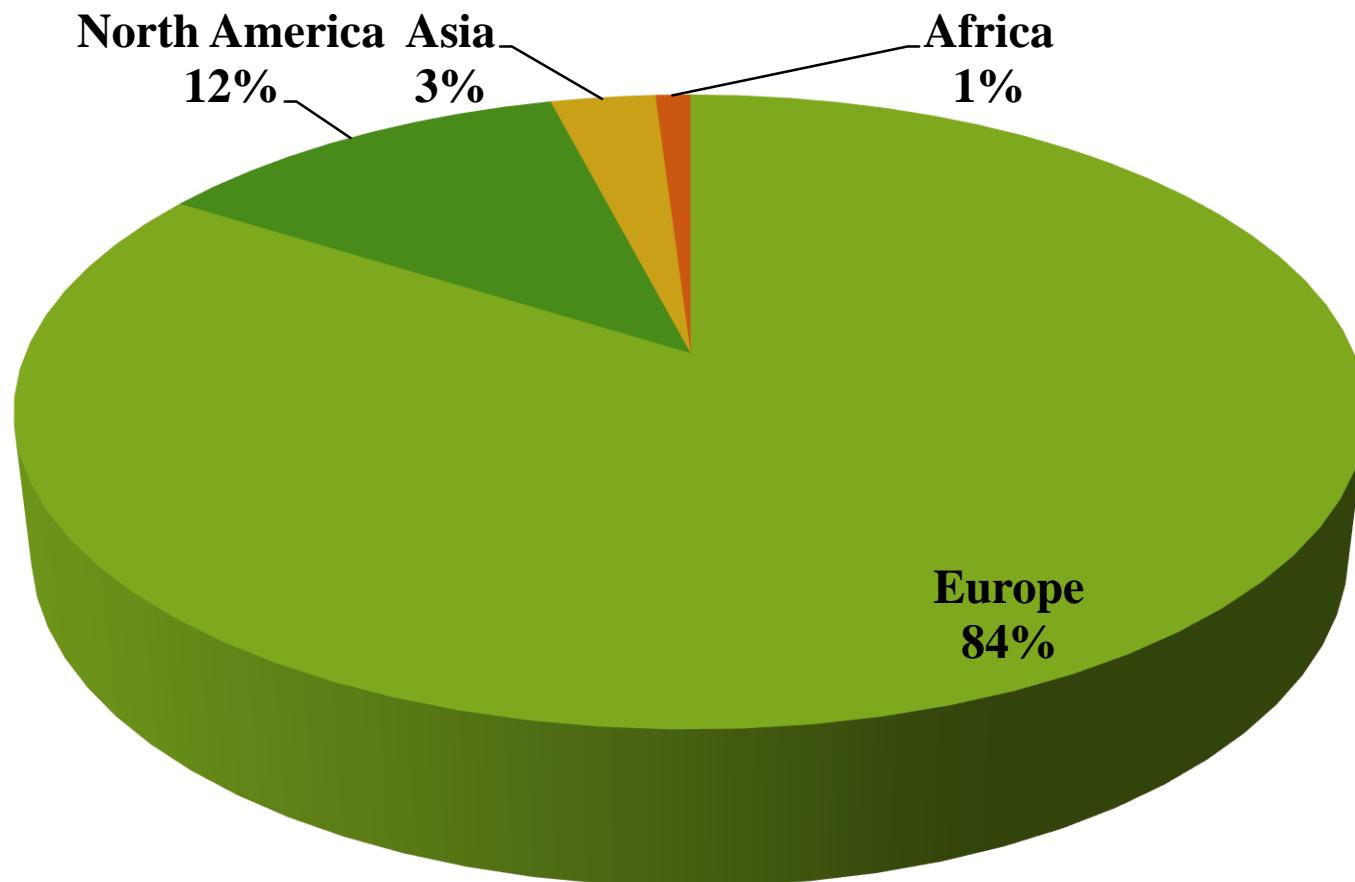
DISTRIBUTION OF EXPORTS OF UKRAINIAN ORGANIC PRODUCTS BY TYPE IN 2019

(source: Federation of Organic Movement of Ukraine)



DISTRIBUTION OF EXPORTS OF UKRAINIAN ORGANIC PRODUCTS BY PARTS OF THE WORLD IN 2019

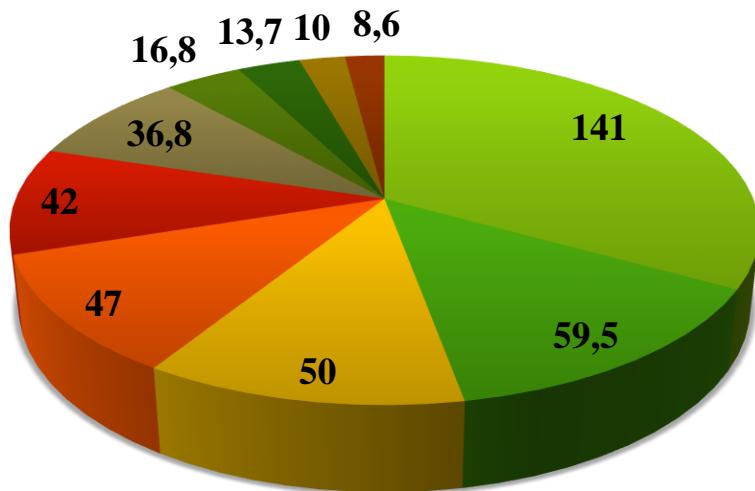
(source: Federation of Organic Movement of Ukraine)



THE WORLD'S LARGEST IMPORTERS OF UKRAINIAN ORGANIC PRODUCTS IN 2019

(source: Federation of Organic Movement of Ukraine)

Volume of imported Ukrainian organic products,
thousand tons



- Netherlands ■ Switzerland ■ USA
- United Kingdom ■ Austria ■ Poland
- Lithuania ■ Germany
- Denmark ■ Italy

CONCLUSIONS

- ▶ Thus, during 1991–2021, the development of innovative technologies in organic farming of independent Ukraine was marked by the achievement of a qualitatively new theoretical level of knowledge, the active search for new methodological foundations.
- ▶ The development and implementation of energy-saving and resource-saving technologies have become especially important, which has significantly increased the production of quality products and increased the profitability of the country's agrarian sector.
- ▶ Ukrainian scientists have developed and improved scientifically sound crop rotations with the cultivation of legumes and sidereal cultures, perennial legumes herbs and their mixtures and post-harvest crops. Innovative technologies have been developed with the use of soil-protective tillage, organo-mineral fertilizers, biological protection against weeds, pests and diseases.
- ▶ Their practical implementation has provided an increase in soil fertility, improved phytosanitary conditions and the environment in different soil-climatic conditions of Ukraine and the world. Due to the growth of crop yields and the quality of organic products, there was an increase in the export potential of independent Ukraine.

Thank you for listening!