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THE SUSTAINABLE AGRICULTURE TO REDUCE THE PESTICIDES USE IN UKRAINE

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Soil degradation and destruction in Ukraine, as in the rest of Europe, are caused by four factors: erosion, acidification and salinisation; desertification and aridity; pollution with anthropogenic substances; and direct losses due to land allocation for urban development and the construction of roads, airports etc. The most significant damage to the agronomic properties of soil is caused by water and wind erosion and the multiple cultivation of land with heavy and powerful tractors and other agricultural machinery. The biggest threat to the environment is soil contamination with radionuclides, heavy metals and pesticides. The shift towards intensive industrial technologies in agricultural production depletes the soil's humus content, while the excessive application of mineral fertilisers and of chemical herbicides and pesticides leads to soil contamination.

As UN Environment claims, in Ukraine, the share of illicit pesticides on the market may reach 25 % [1]. It is problem for a country with rich soils and large agricultural areas. Counterfeit pesticides cause a lot of damage. Manufactures of original crop protection products suffers reputation losses. The state does not receive taxes on such sales. What is more, illicit pesticides may destroy crop or spoil it and they harm the environment. Counterfeit chemicals may cause long-term pollution of soils, surface and groundwater as well as threaten biodiversity. Usually, illicit pesticides are cheaper, and people might not know about consequences.

A sustainable agriculture approach seeks to utilize natural resources in such a way that they can regenerate their productive capacity, and also minimize harmful impacts on ecosystems beyond a field's edge [2]. By designing biologically-integrated agroecosystems that rely more on the internal cycling of nutrients and energy, it is often possible to maintain an economically viable production system with fewer potentially toxic interventions. For example, farmers aiming for a higher level of environmental sustainability might consider how they can reduce their use of toxic pesticides by bringing natural processes to bear on limiting pest populations. This might happen, for example, by planting hedgerows along field edges, or ground covers between rows, thereby providing habitat for insects and birds that prey on the pests, or by planting more diverse blends of crops that confuse or deflect pests. Maintaining a high degree of genetic diversity by conserving as many crop varieties and animal breeds as possible will also provide more genetic resources for breeding resistance to diseases and pests.

Список літератури:

1. UN environment. Chemicals and Waste Reports for UNEA 5. 2020. 14 p.

2. Green and sustainable chemistry. Framework manual / United Nations Environment Programme, 2020, 106 p.