

**FEATURES OF FORMATION OF LIVESTOCK
AGROECOSYSTEMS IN THE CONTEXT OF A STRATEGY
OF SUSTAINABLE DEVELOPMENT**

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Agriculture is a powerful factor in environmental impact. Intentions of Ukraine on the choice of sustainable development as a strategy on the 21st century. Only in the case of adoption of the concept of sustainable development of the agrosphere, which covers more than 70% of the territory of our country. In this context, the development and implementation of approaches to the formation of stable local and regional agro -ecosystems is important for Ukraine. The limit of sustainability (stability) of the agroecosphere to anthropogenic loads is the consumption of 1% of pure primary products of biota. However, now, according to experts, direct consumption of bioproduction is 7-12%, that is, 10 times the critical limit of the stability of the biosphere and its components (taxonomic units), which leads to an irreversible violation of the balance of environmental components. And this can disrupt environmental balance.

Under natural conditions, the ecological equilibrium is achieved by the ecosystem's ability to self -balance. If we consider intensive livestock enterprises as powerful agro -ecosystems, they have a relative ecological equilibrium is determined by the conditions of an environmentally balanced technological process of growing farm animals. The stability of the livestock farm is, first and foremost, the stability of agrobiocenosis, which depends on the technology of keeping animals, the ability to withstand a complex of external and internal adverse factors, to ensure a sustainable volume of production. Due to the deep transformation of the environment, which is carried out under the action of anthropogenic influence, which reaches the global level, exacerbated and become relevant problems of conservation of ecosystems and the biosphere as a whole. Modern agriculture is built on the simplification of ecosystems, the replacement of complex natural biological communities with simpler

biogeocenoses, which dominates only a few varieties of plants or species of animals.

In a well-integrated agricultural system, animals are part of a food (nutritious) cycle. But in the industrial production of this cycle does not exist because it is associated with the transportation of all resources. The litter becomes a "departure", as well as by-products, the dead of the animal. There are acute problems with their disposal. But based on the basic principles of sustainable development, it is advisable to propose the ecological paradigm of dynamic stabilization of agrobiogeocenosis, where farm animals occupy a trophic level - first order consumables. Livestock is considered as a component of the biosphere, so the concept of "litter as a waste of production" is incorrect. It is an organic substance that is essential to improve soil fertility and again involves the global colobig of substances.

One of the ways of greening livestock is to improve technologies for the utilization of by-products and livestock waste in the direction of full use of physical mass and nutrients of manure and litter, which allows to reduce pollution. The utilization of livestock products into organo-mineral fertilizers [1]. Particular concern of the international scientific community is caused by the surrounding environment of chemical pesticides and xenobiotics used in the production of livestock products. This is related to the conduct of veterinary, preventive and therapeutic measures in the conditions of maintaining a large number of poultry, pigs and cattle [2]. Currently, the issues of excessive use of antibiotics and the development of antibiotic resistance are extremely relevant and need to be resolved in ecology, medicine, agriculture, veterinary medicine [3].

The ecological state of soil microbiocenosis is one of the indicators of the environment. Therefore, a microbiological analysis of soil in areas of intensive production of poultry products was carried out in the department of agrobiorecources and environmentally safe technologies of the Institute of Agroecology and Environmental Management. There is a change in the quantitative structure of the microbial coenosis of the soil, depending on the location of pollution with waste and by-products of production. The minimum amount of organotrophs is evidence of significant inhibition of microorganisms under the influence of toxic substances of the waste filtrate. At the same time, the composition of spore bacterial microflora changes: most of it in contaminated metabolites of the waste of the

slaughterhouse and contaminated with filtrates from the poultry house. The enlargement of the micromycetes is explained by the entry into the soil of the residues of litter from sawdust, leads to activation of cellulose microflora. Also in contaminated variants, the number of oligotrophs capable of developing on depleted soils increases compared to control. The amount of pedotrophs decreases, which is evidence of a decrease in nutrients in the soil [4]. Therefore, microbiological analysis of soil microbiocenosis, contaminated with waste from poultry production, indicates its significant transformation under the influence of toxicants.

The prospects for further environmental studies in animal husbandry are to solve the problems of biosecurity in the conditions of martial law in Ukraine, to find ways of remediation of contaminated by side products of soil in areas of intensive cultivation of farm animals, to develop measures to contain antibiotic resistance in animal husbandry, to optimize the methods of livestock.

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