

STUDY REGARDING THE CONTENT AND PRINCIPLES OF ENVIRONMENTAL MANAGEMENT IN THE CASE OF ZOOTECHNICAL HOLDINGS

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***Abstract:** Environmental issues with global character essentially influence the domains of planetary social life and their failure to solve them in time can make it impossible to address the problems but also to solve other problems that manifest at the global level, in general and locally if we refer to breeding and animal exploitation holdings. In order to reduce the amount of waste and gas emissions in the case of livestock units through management plans developed we propose to be implemented measures that will help to improve the production management, human resources and especially the environment by reducing the amount of manure, implementation of modern technologies production, redesign of animal products, change production structure, improve the performance of manure management systems, reduce specific consumption, improve integrated production management, but also by introducing active circular management in production systems, by reusing treated wastewater. We recommend that preventive management of environmental protection, to be integrated into production management, by promoting managerial strategies that contribute to increasing the efficiency and economy of animal farms.*

***Keywords:** principles, management, environment, animal husbandry*

INTRODUCTION

The phenomenon of pollution has spread worldwide and ecological accidents, fossil fuel crisis, desertification and deforestation are research topics facing human civilization, topics in global debates and have enriched the literature through solutions and the measures that need to be implemented in certain areas, in order to preserve the biodiversity of aquatic, floristic and faunal ecosystems.

Problems related to environmental management, are at the level of animal breeding and exploitation holdings, an acute imperative, likely to determine the success or even failure of the application of a general

environmental mechanism. Solving major environmental problems requires substantial efforts on the part of farm managers and those concerned with protecting environmental factors (1, 5, 6, 8, 9, 16, 17). Today, the population must become aware of the fact that environmental management is an object of study, a discipline that must be learned, researched, developed, perfected and applied at the zootechnical unit level, in order to reduce the effects on environmental factors. The emergence and affirmation as a science, art and state of mind of environmental management, in the Romanian area, in a consolidated methodological and conceptual form, was possible due to (2, 3, 10, 14, 18):

- the development of study programs at university level for acquiring the capacity of expertise in this field of environmental management;
- improving ecological performance, by implementing modern production technologies, which reduce the amount of manure and the degree of pollution;
- improving production and financial management, by implementing on farms of the good environmental practices and best management;
- implementation of adaptive management, as an effective measure for the sustainable development of human communities in the area of livestock farms;
- improving environmental risk management, leading to minimization of anthropogenic effects on water, soil and air.

MATERIAL AND METHOD

Within livestock farms, in the current conditions of intensification of animal production, environmental protection is the most important issue for integrated management of goods production, which includes environmental management and preventive management, along with production management, human resources and total quality. For these reasons, in the research carried out in zootechnical units in this scientific approach we analyzed the content and specific principles of environmental management in order to develop solutions to improve the economic activity of farms and contribute to maintaining a healthy environment in the area of intensive animals breeding and exploitation farms with applicability in any intensive or super-intensive farm.

RESULTS AND DISCUSSIONS

Environmental protection at the level of livestock farms, in the current conditions of intensification of animal production, has become one of the most important issues, both at farm level and at the level of human communities in the area of farms and first order for integrated management of good production, which must include both environmental management and preventive management, along with human resource management and total quality (4, 7, 20, 22, 26). The environment itself is defined in terms of human understanding as an integral part of nature and general socio-economic development, today in line with sustainable development. Because the environment represents all natural factors and those created by human activities, which in close connection influence interaction (15, 19, 23, 25):

- ecological balance at the level of aquatic, faunal and floristic ecosystems;
- living and working conditions for humanity;
- the perspectives of the development of the society in conditions of sustainability.

For these reasons, environmental protection, through the implementation of environmental management in livestock farms, must be designed to ensure:

- a dynamic ecological balance;
- conservation of natural environmental factors;
- improvement of natural factors;
- optimal development of farms depending on the degree of environmental sustainability;
- ensuring adequate living conditions for communities in the area of livestock farms and plant and animal species;
- preserving resources for future generations, respecting the principle of sustainability.

Environmental protection regardless of the field of activity of the livestock farm, milk production, eggs, meat, must concern all social systems, because it involves:

- knowledge of the environment and the interactions between the economic and social system and the natural systems, as well as the prevention of the immediate or more distant consequences of these interactions;
- rational and economically use of resources;
- prevention of environmental degradation by elaborating environmental risk management plans;

- reconstruction of degraded areas;
- harmonization of the interests of the zootechnical exploitations with those of the communities from their neighborhood.

Due to the heterogeneity of the components of environmental management and the multitude and nature of the relationships between them, prevention means preventing irrational exploitation of resources, reducing waste and gas emissions, all in order to maintain the functionality of ecological systems. In order to reduce the amount of waste and gas emissions at the zootechnical units through the elaborated management plans, measures will be implemented to contribute to the improvement of the environmental management (figure 1):

- reducing the amount of manure, by using the most efficient nutrition and drinking management;
- implementation of modern production technologies, which reduce waste of resources;
- product redesign;
- changing the structure of production, depending on the indicators of sustainable development;
- improving the performance of manure management systems;
- reduction of specific consumptions;
- improving the integrated management of production, by increasing the compatibility between the principles of forecasting and organizing production, human resources and the requirements of better manure management.
- the introduction of active circular management in production systems, through the reuse of treated wastewater, for the hydraulic discharge of manure and solid manure as fertilizer, to increase production.



Figure 1. General measures to improve environmental management

At the level of zootechnical holdings, the preventive management of protection of environmental factors must be integrated in the production management, by promoting measures that will contribute to increasing its effectiveness:

- concrete programs for environmental protection;
- identification of pollution sources and hazardous substances from manure;
- monitoring the degree of management and administration of solid/liquid manure on the ground;
- measuring gas emissions from the area of livestock farms;
- informing the competent bodies;
- carrying out periodic controls on the management of manure from livestock farms;
- elaboration of reports on water, air and soil quality in the farm area;
- communication to those in law of the results regarding the environmental protection;
- highlighting the ecological performance of farms;
- developing measures to increase performance;

We consider that regardless of the specialization of livestock production, for environmental protection, the following aspects must be

subject to periodic evaluation, in order to improve the performance of integrated management, which also includes waste management:

- the negative effects of the zootechnical farm, on the environment in its area of action;
- prevention of environmental degradation through measures to improve environmental risk management;
- the use of modern means of treating animal manure;
- intensifying controls on activities specific to the preventive management of environmental pollution with animal manure.

CONCLUSIONS

Due to the fact that the environment is an area of common interests of natural and technical-economic and social systems, the responsibility for maintaining its functionality must be assumed by the whole community and communication in environmental management must involve each individual in local environmental issues and transmit a slightly perceptible image.

The main efforts of the management of intervention and environmental rehabilitation, in case of technological disasters on environmental factors, water, air, soil, by animal farms, must be directed to two directions: the management of the intervention in case of water, air and soil pollution and the implementation of measures for restoration and rehabilitation.

Perception of environmental risk issues is an important issue of analysis in integrated production management, which includes environmental management, taking into account: studies on aversion to major environmental risks and those related to perceived risk.

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