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CHANGES IN FERTILITY AND SOIL INDICATORS DURING LONG – TERM LAND USE

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Relevance: Comparing the performance of long-term soils with rangelands can reveal changes in soil properties and help maintain fertility and nutrients.

Grasslands that are the main part of the global ecosystems occupy 37% of the area Earth, make a significant contribution to food security, providing most of the energy and proteins needed by ruminants animals for meat production and dairy products. It's believed that good pasture management and improving the condition of degraded pastures can play fundamental role in mitigating consequences of greenhouse emissions gases, especially with regard to the accumulation and absorption of carbon [1, 2].

However, pasture load increased in recent years changed the balance of nature and links with heightened vulnerability semiarid and arid ecosystems, contributes to their degradation and desertification. All this could not but affect state of semi-desert pastures. These processes threaten livestock welfare and destabilize the environment population, and worrying trends require deep analysis of the state of semi-desert pastures, identifying the causes, causing their degradation and development of effective measures for rational use with taking into account the features of the main types pasture ecosystems [3].

The data obtained can be used to compile a fertilizer application system and select the right equipment to maintain and improve soil fertility for further work. Agrochemical indicators allow you to determine the level of fertility soils. For growing crops, it is important to use fertilizers if soil nutrients are below normal. It is also important to know the agrochemical composition soil after harvest. When developing fertilizer systems, it is very important to establish optimal rates mineral fertilizers for each crop. These rules are adjusted according to on the following conditions: planned yield and product quality, soil properties, the level of fertility, the quality of predecessors and their fertilization, the introduction of organic fertilizers and chemical ameliorants both directly under the crop and their consequences, the residual effect of previously applied fertilizers, as well as the biological characteristics of crops [4].

Object and methods of research: The experiments were carried out on pastures and potato fields near the agricultural enterprise "Naydorovskoye" LLP. Soil samples were taken from the horizons of chernozem soils, agrochemical and physical-mechanical analyzes were carried out to compare the results of the data. Using the data obtained, there will be opportunities for compiling a technology for using soils to improve performance, compiling crop rotation.

Methods of nitrate nitrogen analysis, Determination of mobile compounds of phosphorus and potassium by Chiricov method modified by CINAO, determination of acidity and sulfur in salt extract were used.

References

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