MONITORING OF FLOODPLAIN VEGETATION ON THE R. WESTERN DVINA

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The paper describes the importance of flood meadows, their species composition and productivity in selected areas near the Western Dvina River in Polotsk in 2017.

Keywords: floodplain meadows, floodplain phytocenosis, net productivity.

Floodplain meadows are an important source of cheap and biologically complete feed. Usually it located in the river valleys and along the coasts of lakes. A distinctive feature of this type of meadow is that in the spring period they are flooded with flood waters, after the recession of which there is silt enriching the soil with nutrients that create favorable conditions for the growth of meadow vegetation, often possessing medicinal properties or including species listed in the Red Book.

The aim of the work is studying the species composition and productivity of microgroups of plant communities as elements of the horizontal structure of the flood plain of the Polotsk District.

To carry out the research in 2017 at two selected sites the species composition was monitored, the productivity of floodplain phytocenosis was analyzed, and the net production of photosynthesis was calculated.

As a result of the study it became known that 34 species of higher vascular plants were registered in the two studied areas, which belong to 13 families. The most numerous in number of species were the families Cereals (Poaceae) – 20,5 %.

It was established that, in relation to soil trophicity, the dominant group was mesotrophic plants throughout the study period (56,4 %). With respect to the soil moisture in the phytocenosis, mesophytes predominated (54 %). Proceeding from the definitions of eutrophic and mesotrophic, it can be concluded that the soil of the studied area is quite fertile.

An analysis of the economic-botanical composition of the floodplain phytocenosis showed that forage value was dominated by plants with a medium and low fodder value (33 %).

The maximum productivity of phytocenoses at the first and second test sites of 2017 was registered in July (2,9 and 2,4 kg / m^2, respectively).

Net productivity of photosynthesis in the growing season of cereals in 2017 was maximal in May-June and amounted to 2,01 grams per day / m2 (on the first test site) and 2,21 g / day / m2 (at the second site).

THE METHODS OF LABORATORY DIAGNOSTICS AND EPIZOOTIC SITUATION ON TRICHINOSIS IN THE CITY OF GOMEL

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Material about the value of a trichinosis, the methods of laboratory diagnostics and its distribution in the territory of the city of Gomel is presented.

Keywords: Trichinosis, laboratory diagnostic, compressor trichinoscopy, biochemical study, Express- test.

Trichinosis is a biogelmintosis caused by Trichinellaspiralis from the family Trichinellidae. Despite the fact that trichinosis has been known since 1860, and the causative agent of Trichinellaspiralis was discovered more than 160 years ago, this helminthiasis is still an actual problem; therefore, the main method of the research is laboratory diagnostics, which includes three main methods: compressor trichinoscopy , biochemical, and serological studies. A special method is the an express test..

We conducted the research on the territory of the "Gomel Municipal Veterinary Station", where two main methods of diagnosing trichinosis were used: compressor trichinelloscopy and biochemical research.

The results of using the serological method for diagnosing trichinosis have made it possible to conclude that this method is the main one, as the most effective, especially in the case of mass study of the material. So, the initial stage for any diagnosis of trichinosis is the collection and transfer of material for the study, so there is no difference at the initial stage , as for the rest all methods have differences, as well as their positive and negative sides.

The results of using the serological method of diagnostics of trichinosis made it possible to draw a conclusion about the isolation of this method as the basic as most effective, especially with mass materials research.

Compressor trichinoscopy is the simplest well-known microscopic examination. The reliability of trichinelloscopy largely depends on both the choice of muscle groups for sample preparation and the correctness of the production of point cuts. In spite of the relatively low diagnostic effectiveness of compressor trichinoscopy, it remains one of the leading methods of trichinoscopy control. Moreover, this method is convenient for the individual study of corpse or small batches of meat raw materials or meat products.

A biochemical study is the method of the group for study of pork. Method is recommended to use also with the inspection control of the meat products, prepared from the pork: sausages, meat semifinished products, hams, since in these cases trichinoscopy by compressor method isn't so effective. This method uses as rechecking of compressor trichinoscopy, since with the weak invasion by trichinae of pig flourish can give sometimes negative results.

Biochemical research is a method of group research of pork for trichinosis. The method is recommended for use in the inspection control of meat products made from pork: a sausage, meat semi-finished products, hams, as in these cases trichinoscopy by the compressor method is ineffective. That is, this method is used as a check of compressor trichinoscopy, since with a weak trichinella invasion of pigs, carcases can sometimes give negative results.

Express test is the most commonly used method, which has spread in the private sector and during hunting for wild animals. It is worrying that almost all those who participate in the distribution of these kits emphasize that these kits are sensitive enough and reveal the presence of trichinella from the 12th day after infection In addition, as an argument, distributors use the fact that this method allows you to abandon expensive equipment, reagents and does not require special skills. However, they forget that specially trained veterinarians, in the process of carrying out studies on trichinosis, constantly pay attention to other factors, namely, epizootic well-being of the terrain, the degree of animal damage, morphological changes, and much more. And, nevertheless, the anonymity of using test strips is fundamental.

This fact can be formulated as a study of trichinosis corpses during poaching of animals. In the analysis of the results of corpses research for three years from 2013–2015 at the veterinary station of the city of Gomel the following regularity was observed: the peaks of delivery of corpses of domestic pigs and the carrying out of studies depended on the slaughter season animals and this is usually an autumn-winter period.

Reducing the number of studies conducted on trichinosis in 2013 is associated with measures to reduce the number of wild boars throughout Belarus.

In spite of the reduction in the number of block in the hunting land both the Gomel region, and as a whole in Belarus the cases of the appearance of trichinosis among the people are recorded.

THE DESTRUCTION OF THE OZONE LAYER AND THE PROBLEMS OF ECOLOGY

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Ozone absorbs part of the ultraviolet radiation from the sun. The concentration of ozone in the atmosphere is very small, and small changes in the amount of ozone lead to sudden changes in the intensity of ultraviolet reaching the earth's surface.

Keywords: ozone hole, Freon and halocarbon, photochemical processes, catalytic cycle, polar vortex, solar radiation, ultraviolet, stratosphere, turbulence.

The Earth's atmosphere is known to contain 21 % oxygen in the form of one-and diatomic molecules O2 and trihydric O3, called ozone. This an allotropic modification of oxygen was discovered in the middle of the last century, and scientists had long drawn the attention to its unique chemical and physical properties. Interest in gaseous ozone has increased significantly, following the determination of its prevalence in the Earth's atmosphere and