Table 1

Morphological composition of wastes

Solid waste fraction	Content, percentages
paper and cardboard	6,5
plastic	7,6
glass	6,6
textile	1,5
metal	2,0
organic	39,0
other	36,8
All	100,0

Exploitation of the solid waste landfills of the Minsk region has some problems. One of the main problems is that part of the landfills have practically exhausted their designed capacity, and therefore in some areas the issue of creating additional capacities (Minsk, Borisov, Pukhovichi, Slutsk and Smolevichi districts).

Another important problem is that many landfills are sources of groundwater pollution. The highest level of pollution of groundwater in all indicators is observed at the landfill in Borisov. High-level impact landfills include landfills in the towns of Vileika, Krupki, Molodechno, Naroch, Nesvizh, Slutsk, Soligorsk, Cherven.

DATA OF TAXONOMIC, CHOROLOGICAL, ECOLOGICAL-GEOGRAPHICAL, BIOMORPHOLOGICAL, ECOLOGICAL ANALYSIS OF FLORA OF ZHODINO

V. Kanapelka, A. Boltik

Belarusian State University, ISEI BSU,

Minsk, Republic of Belarus

goncharova@iseu.by

The aim of the work is to develop a method for assessing the state of the environment in urbanized areas based on the ecological and floristic classification of ruderal vegetation.

Keywords: ruderal vegetation, urbanized areas, monitoring, flora, synanthropic vegetation.

Zhodino city is located in the north-east of the Smolevichsky district and is a city of regional subordination. The city is characterized by rapid growth, high productivity of the economy and in general is important for the Republic of Belarus. The city's largest heavy industry enterprise, the BelAZ engineering plant, attaches particular economic importance to the city.

The classification of synanthropic vegetation of cities is one of the most relevant areas of phytocenology. The results of syntaxonomy of ruderal communities are the scientific basis for the monitoring of disturbed human lands, allow to increase the effectiveness of measures to optimize urban vegetation [1, 2]

The object of the study is the ruderal vegetation of Zhodino. We studied the areas occupied by natural grassy vegetation in the central areas of the city. Pa of each trial plot, a series of survey plots (6 plots) of 25×25 cm in size determined the species composition and projective cover of each species. The description of the vegetation and the processing of the material were carried out in accordance with the methods adopted in the school of ecological and floristic classification [3]. The collection of material was carried out in the period from May to September 2018. The determination of plants was carried out according to the determinant [4]

In drawing up the outline of the flora of Zhodino, a high percentage of ruderal plants in the city was noted.

Ruderal plants are plants growing near buildings, on wastelands, dumps, in forest belts, along roads and other secondary habitats. As a rule, ruderal plants are nitrofiles (plants that are abundantly and well growing only on soils that are sufficiently rich in assimilable nitrogen compounds). Often they have various devices that protect them from being destroyed by animals and humans (spikes, burning hairs, toxic substances, etc.). There are many valuable medicinal plants (dandelion, common tansy, heartwort, large plantain, horse sorrel, etc.), melliferous (tributary medicinal and white, Ivan narrow-leaved tea, etc.) and fodder (bezosty bonfire, clover, creeping, wheatgrass creeping and others) plants. Communities (ruderal vegetation) formed by species of ruderal plants, often developing in places completely devoid of ground cover, give rise to regenerative successions.

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INDIVIDUAL PLANNING AND IN VIVO DOSIMETRY OF RADIATION THERAPY FOR CANCER OF THE CERVIX AND BODY OF UTERUS

N. Karaliova[1], V. Piskunou[1], T. Chikova[2]

[1]Vitebsk regional clinical oncology dispensary,
Vitebsk, Republic of Belarus
natali-1393@mail.ru
[2]Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus

Modern methods of combined radiation therapy of patients with cervical and uterine body cancer are considered. The results of *in vivo* dosimetry carried out in Vitebsk regional clinical oncological dispensary to check the correctness of the dose in brachytherapy of oncogynecological patients are analyzed.

Keywords: cervix uteri and corpus uteri, beam therapy, intracavitary radiotherapy, 2D-planning, 3D-planning, in vivo dosimetri.

Radiation therapy as an independent method or as a component of combined treatment is used in more than 90% of cases of cervical and uterine body cancer [1]. Planning of oncogynecological patients consists in selection of optimal standard techniques for each specific clinical situation.

High quality of pre-radiation preparation and radiation treatment of oncogynecological patients with the use of conformal irradiation is possible in the presence of modern radiotherapy complex. In the Vitebsk regional clinical oncology center (Vitebsk, Belarus) is used for this radiotherapeutic complex manufactured by VARIAN MEDICAL SYSTEMS, which includes linear accelerators, Clinac iX and Theeven with multileaf collimator and Brachytherapies apparatus 200e VariSource and GammaMed.

Radiation therapy of patients with cervical and uterine body cancer includes remote and intracavitary radiation. Control of the correctness of remote radiation treatment and patient styling is carried out using the OBI system or Portal Vision, by comparing the images with the planned. This creates favorable conditions for subsequent intracavitary gamma therapy. The advantage of contact radiation therapy is to obtain high doses of radiation, locally in the target volume, with a rapid dose decline in the surrounding healthy tissues. 2 orthogonal x-rays are used in 2D brachytherapy planning. The difference between the dose received by the patient and the planned dose is assessed by *in vivo* dosimetry [2].

In Vitsebsk regional clinical oncology center with the help of in vivo dosimetry, the correctness of the dose in brachytherapy was checked for 14 patients (Table 1). For this purpose, we used a KIT for *in vivo* dosimetry firm PTW, which includes an applicator with five consecutive detectors for the rectum and a detector for the urethra. In the process of radiotherapy sessions was filmed doses of data from these detectors and compared with the data in the same points calculated on the planning system.

Table 1

№	Absorbed dose of ionizing radiation												Error, %					
	The value of the sensors from the plan, Gr.						The measured value, Gr.											
	R1	R2	R3	R4	R5	Bladder	R1	R2	R3	R4	R5	Bladder	R1	R2	R3	R4	R5	Bladder
1	1,496	2,329	2,888	3,735	4,320	2,089	2,210	2,567	2,644	2,328	1,902	2,302	32,3	9,3	-9,2	60,4	127,1	9,3
2	5,450	8,708	12,608	13,354	10,071	6,620	5,735	7,155	8,118	7,858	6,916	7,203	5,0	21,7	55,3	69,9	45,6	8,1
3	3,044	5,136	7,484	7,198	4,259	12,830	5,170	6,606	-	6,128	4,928	8,104	41,1	22,3	-	17,5	13,6	58,3
4	1,371	2,017	2,958	3,346	2,237	2,194	1,681	2,216	2,310	2,088	1,591	1,979	18,4	9,0	28,1	60,2	40,6	10,9
5	3,200	4,401	6,096	6,369	4,156	12,403	3,766	4,796	5,534	4,989	3,476	7,785	15,0	8,2	10,2	27,7	19,6	59,3
6	3,049	4,120	5,003	4,131	2,492	6,736	3,858	4,574	4,381	3,335	2,097	5,818	21,0	9,9	14,2	23,9	18,8	15,8
7	2,544	3,982	5,803	4,894	2,911	6,552	4,153	5,781	5,509	4,810	3,079	4,951	38,7	31,1	5,3	1,7	5,5	32,3