

loss of decorative and yield of tree crops, and is also the cause of a decrease in the lifespan of plantations-leads to partial or continuous drying of trees.

Currently, there is a distribution of *v. album* L. throughout the country. This may be due to environmental degradation, soil pollution, climate change. For the most part, mistletoe grows on roadside plantations, worsening their condition. The reason for this can be the exhaust gases of cars, road cleaning products, pollution of roadsides with garbage [1].

Numerous publications indicate that *v. album* L. is widely distributed in Ukraine, in particular in the city of Kharkiv. Its study in this territory is carried out by I. Yu. Vergeles, I. O. Rybalka, O. M. Ignatyuk and others. There are isolated publications from other countries, such as the Russian Federation, Germany, the United States of America, Australia and others, which investigated its environmental impact on the host.

The growth of the parasite population within the city limits has negative consequences for trees, and the only method of control is mechanical removal. Complete removal of *v. album* L. from biocenoses also has negative consequences. In this regard, a scientific approach is needed in terms of the gradual liberation of trees from *v. album* L.. At the same time paying attention to possible negative moments that may arise during this period.

It is possible to stage elimination in one, the most affected area, with 100% release of trees from the parasitic plant.

In this case, monitoring of all both positive and negative aspects occurring in such an area is mandatory.

Currently, it is necessary to develop methods to control the number of *v. album* L., as well as, in the case of cleaning the territories from the parasitic plant, to determine the direction of biological monitoring of the consequences. Registration and analysis of positive or negative processes resulting from the decrease in the number of *v. album* L. will avoid unwanted biological manifestations [2].

BIBLIOGRAPHY

1. Юрель, В. А. Экологическое значение омелы белой (*Viscum album*) на территории Республики Беларусь / В. А. Юрель // От идеи – к инновации: материалы XXV Юбилейной междунар. студ. науч.-практ. конф. Мозырь, 26 апр. 2018 г. – Мозырь, 2018. – ч.1. – С. 244–245.

2. Юрель, В. А. Инвазия омелы белой (*Viscum album* L.) в Беларуси, определение ее численности и возрастной структуры / В. А. Юрель, Ю. Г. Лях // Сахаровские чтения 2019 года: экологические проблемы XXI века. Материалы 19-й междунар. науч. конф. – Минск, 2019. – Т. 2. – С. 222–226.

DISTRIBUTION OF WHITE MISTLETOE (*VISCUM ALBUM* L.) IN THE CENTRAL PART OF THE REPUBLIC OF BELARUS

V. Yurel

Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
vladislav.yurel@outlook.com

This publication presents the results of a study of the number of white mistletoe (*Viscum album* L.) on the in the city of Stolbtsy of the Minsk region. The city is located 65 km South-West of Minsk on the highway Minsk-Baranovichi (P-2).

The increase in the number of *v. album* L. is observed not only in the central part of the Republic of Belarus. Currently, it is spreading throughout the country, especially active in its southern regions.

Keywords: mistletoe white, *viscum album* L., invasion, invasive plants, influence, distribution.

Currently, *v. album* L. has acquired the status of an active invasive plant, in connection with which there was a need to control its number. This is necessary, first of all, for horticultural complexes, because of the ability of mistletoe to settle on fruit trees.

The first study of the number of *v. album* L. on the territory of the city of Stolbtsy was conducted. The study was carried out according to the original method of Yu. Vergeles and I. Rybalka [1]. As a result, the total number of *v. album* L. in the city was revealed, which is 5391 plants, the total number of infected trees – 573 plants, the most infected species of trees were birch and poplar (45 % and 43,8 %, respectively, of the total number of infected trees) (Fig. 1). The predominant age of *v. album* L. was identified juvenile (*v. album* L., age up to 5 years) – 59,6 % of the total number of parasites (Fig. 2).

One of the most effective ways to combat this parasite is mechanical pruning of the branches of trees on which *v. album* L. was found. However, the complete removal of *v. album* L. from biocenoses can lead to a reduction in the number and diversity of bird species. This will affect not only the mistletoe-eating or mistletoe-

dwelling species, but also the entire community. While the condition of the trees will improve no more than slightly over the same period of time.

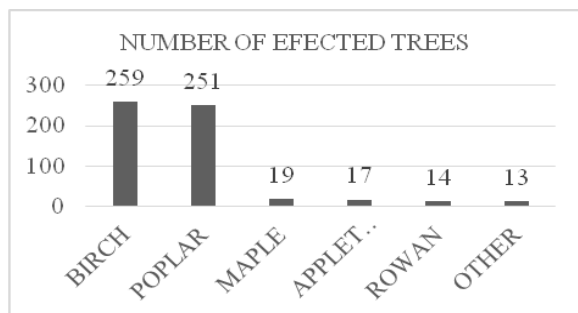


Fig. 1. – Number of effected trees



Fig. 2. – The number of mistletoe: j – juvenile plants, g – plants of the first generative age, s – plants of the second generative age

Currently, it is necessary to develop methods to control the number of *V. album* L., as well as, in the case of cleaning areas from parasitic plants, to determine the direction of biological monitoring of the consequences. Registration and analysis of positive or negative processes resulting from the decline in the number of white mistletoe will help to avoid undesirable biological manifestations [2].

BIBLIOGRAPHY

1. Вергелес, Ю. І. Методичні вказівки до виконання розрахунково-графічної роботи «Комплексна порівняльна ландшафтно-екологічна характеристика ділянок міської території, що належать до різних функціональних зон» / Ю. І. Вергелес, І. О. Рибалка. – Харків: ХНАМГ, 2011. 18 с.
2. Юрель, В. А. Инвазия омелы белой (*Viscum album* L.) в Беларуси, определение ее численности и возрастной структуры / В. А. Юрель, Ю. Г. Лях // Сахаровские чтения 2019 года: экологические проблемы XXI века: Материалы 19-й междунар. науч. конф. – Минск, 2019. – Т. 2. – С. 222–226.

APPROACHES TO CALCULATION OF WATER USE FOR ENTERPRISES OF DAIRY INDUSTRY

P. Zakharko

*Central Research Institute for Complex Use of Water Resources,
Minsk, Republic of Belarus
polina.k.85@mail.ru*

Peculiarities of development of individual technological standards of water use and disposal at enterprises of dairy industry have been shown.

Keywords: standards of water use, rate setting, specific character of the production process.

Development of individual technological standards of water use is one of the ways of water use and disposal volumes regulation at enterprises. Individual technological standards (ITS) of water use are worked out for the following purposes:

- planning of production activities by the enterprise;
- setting of limits for the enterprise for production (withdrawal) volume of water resources, effluents discharge to sewage networks, environment;
- design of water supply and sewage systems;
- control of the rational use of water resources at the enterprise.

Some factors should be taken into account during development of water use standards for enterprises of the dairy industry:

1. Butter milk, whey, cream, skimmed milk, whole milk powder, skimmed milk powder may be supplied as the source raw material, apart from raw milk.
2. A part of raw milk delivered to the enterprise can only pass primary treatment (separation, pasteurization, cooling) and be transferred for further treatment to another enterprise without the use of this milk for domestic production.
3. Formation of by-products of milk processing.