

Установлено, что видовой состав гельминтов в демонстрационном вольере был более чем в 3 раза беднее, чем в охотничьем вольере (3 и 10 видов паразитов, соответственно). Только два вида нематод – *D. eckerti* и *Mecistocirus digitatus* – зарегистрированы у благородного оленя в обоих типах вольеров. Среднее значение экстенсивности инвазии гельминтами в демонстрационном вольере более чем в 3,5 раза выше, чем в охотничьих вольерах. По-видимому, это связано со средней плотностью животных на гектар (4,0 и 0,3 особей/га соответственно). Сравнительный анализ зараженности благородного оленя гельминтами, зарегистрированными в обоих типах вольеров, показал, что экстенсивность инвазии *D. eckerti* животных в 1,3 раза выше в охотничьем вольере, в то время как зараженность нематодой *Mec. digitatus* держится примерно на одном уровне.

Разработаны биотехнические и противопаразитарные мероприятия для диких парнокопытных животных при вольерном содержании в Беларуси, опубликованные в открытой печати.

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BIOEKOLOGY OF WEIGELA (*WEIGELA*) AND USE IN LANDSCAPING

Weigela (*Weigela*) is an ornamental shrub from the honeysuckle family (*Caprifoliaceae*), widely used in landscape design due to its aesthetic and ecological properties. Native to East Asia, this plant has successfully adapted to various climatic conditions, making it popular in many regions worldwide, including Uzbekistan. Modern studies confirm the high adaptability of weigela to different environmental conditions. For instance, the research by Hovakimyan Z. H. et al. (2024) highlights the potential of using introduced representatives of the genus *Weigela* in regions with diverse climates [1]. Additionally, studies by McNamara and Pellett (1998) demonstrated the cold hardiness of certain weigela cultivars [2]. From a bioecological perspective, weigela is characterized by its adaptability to various soil and climatic conditions, resistance to air pollution, and exceptional decorative qualities. These attributes make it indispensable for urban landscaping, including hedges, group plantings, and the beautification of parks and gardens. In Uzbekistan, where combating desertification, improving the microclimate, and enhancing the ecological sustainability of urban environments are pressing issues, weigela plays a particularly important role.

The state policy of Uzbekistan actively supports the development of

green infrastructure. For example, Presidential Decree No. UP-5863 of October 30, 2019, "On measures for radical improvement and enhancement of the system for environmental protection and natural resource management," emphasizes the importance of sustainable approaches to landscaping.[3] Furthermore, Presidential Resolution No. PP-4610 of January 18, 2020, outlines objectives for increasing the area of green spaces in urban areas to improve environmental conditions and create comfortable living environments for the population [4]. Thus, the bioecology of weigela and its use in landscaping are closely tied to addressing the urgent tasks of creating sustainable ecological infrastructure, offering significant prospects for its wide application in Uzbekistan and other regions with varying climatic conditions. The genus Weigela is native to East Asia, specifically to regions of China, Korea, and Japan. It thrives in temperate climates, where it benefits from well-drained soils and moderate rainfall. Over the years, Weigela has been successfully introduced to different parts of the world, including parts of Europe, North America, and Central Asia, where it has adapted to a wide range of environmental conditions. In particular, the shrub is resilient in urban environments, where it withstands air pollution and varying soil types.

Ecological Characteristics Weigela is known for its ability to thrive in various soil conditions, from sandy to loamy. Its adaptability to different moisture levels, from moist to moderately dry, makes it suitable for diverse landscapes. In terms of temperature, some cultivars exhibit cold hardiness, tolerating low temperatures down to -25°C , which is crucial for regions with harsh winters. Studies by McNamara and Pellett have confirmed the cold hardiness of several Weigela cultivars, supporting its use in colder climates.[5] **Distribution and Adaptability** In Central Asia, particularly in Uzbekistan, Weigela has been successfully introduced into urban greening projects, benefiting from its aesthetic qualities and environmental resilience. Recent research, such as by Hovakimyan et al. (2024), highlights the potential for Weigela to adapt to different climatic zones, including arid and semi-arid regions, where water scarcity and high temperatures are common challenges [6].



Figure 1 – General appearance of Weigela

Deciduous erect shrubs, not forming stolons. Winter buds with several pointed scales. Leaf arrangement is opposite. Leaves petiolate, rarely almost sessile, serrate or serrate-dentate, without stipules. Flowers solitary or one to six (rarely more), on young, elongated, leafy shoots in the axils of the upper leaves, white, yellowish, pink, purple or dark red, almost sessile or on more or less developed peduncles, sometimes fused into a common peduncle. Calyx with five lobes, connected at the bottom or separate; corolla tubular-bell-shaped or funnel-shaped, bilabiate or slightly zygomorphic, with five lobes, the tube is significantly longer than the lobes. Stamens five, they are shorter than the corolla; anthers linear, free or fused under the stigma around the style, the style sometimes protruding; stigma capitate or cap-shaped; ovary bilocular, oblong. Capsule woody or cartilaginous, from narrowly cylindrical to ovoid-ellipsoid, narrowed at the top into a beak formed by the upper part of the ovary, opening in two valves, with a placenta remaining in the form of a central column. Seeds angular, small, often winged. The natural habitat of the shrub includes the east and southeast of Asia, Java Island, the Far East of our country. Nature has created 3 types of weigela, but breeders have bred several more (about 15), which differ in the color of flowers, height, resistance to low temperatures, and decorativeness. The upright shrub with drooping branches is very unpretentious. It feels good in sunny areas with light fertile soils, but can also grow in the shade. The plant loves moisture. In a dry, hot summer, it must be watered periodically, otherwise the process of flower formation will slow down and the plant will lose its attractiveness. (Fig2.)



Figure 2 – Weigela flowers

Depending on the variety, the oppositely arranged leaves can be sessile or with petioles. Bright green leaf blades of weigela without stipules with a serrated (dentate-serrate) edge. Twice a year, in May-June and from mid-August until the onset of cold weather, the bushes are covered with flowers of various colors from yellow to dark, carmine-red. Funnel-shaped or bell-shaped flowers are about 5 cm in size, collected in loose inflorescences of 5-6 pieces, but can also be single. The sepals have 5 petals connected at the bottom or separated. In some varieties, the color changes dur-

ing flowering from pale to bright, saturated tones. The stamens inside the flower are colored yellow.

In summary, the distribution of Weigela has expanded significantly beyond its native range due to its high adaptability. It can be found in temperate zones, but it has also successfully integrated into regions with more extreme climatic conditions, demonstrating its potential for wider use in landscaping, particularly in urban greening projects aimed at improving environmental sustainability.

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СОСТОЯНИЕ ПОЖАРНОЙ ОПАСНОСТИ ЛЕСОВ БЫХОВСКОГО ЛЕСХОЗА

Быховский лесхоз расположен в южной части Могилевской области на территории шести административных районов (Быховского, Славгородского, Кировского, Могилевского, Рогачевского и Чауского). Общая площадь лесхоза составляет 113476,5 га из них 109117,6 га лесные земли (96,2%) и 102345,1 га (90,2%) покрытые лесом.