**UDC 712.41:482.685.4:632.111.8**

# Diagnosis eco tolerance of staghorn sumac (*Rhus typhina* L.) to changes in the water regime in urban environment

**M.O. Borshchevskyi, N.O. Oleksiychenko**

National University of Life and Environmental Sciences of Ukraine

In terms of urbanization increases the relevance of rational and aesthetic use of plant resources. An important role in solving this problem plays introduction of ornamental plants, which makes it possible to enrich the floral resources of the region and improve anthropogenically-transformed landscapes. Decorative plantings in towns and villages perform a variety of functions. They improve their architectural appearance, reduce wind speed, regulate the thermal regime, clean and humidify the air, absorb noise.

Most species of the genus *Rhus* L., that introduced in Ukraine have all the above mentioned qualities. Members of the genus are particularly valuable in terms of decoration, as recently widely used in the system of planting. Kyiv. Staghorn sumac (*Rhus typhina* L.) – one of the most popular ornamental species of the genus *Rhus* L. in Ukraine. *Rh. typhina* and its forms are cultivated in many botanical gardens, dendro different decorative areas Ukraine. Today, the amounts can be found in many cities of Ukraine, so study its adaptive features to the terms of the urbanized environment is important.

Using a sensitive and informative biophysical methods to diagnose the state of plants, such as determining the electrical conductivity, are quickly set the level of functional and structural balance of plant body.

The least relative change in conductivity characterized amounts trees that grow in the "street". In leaves of trees observed decrease in conductivity within 40%, while in the stands of the most favorable conditions this figure fell by almost 60%.

According to the results obtained can talk about high adaptability to *Rhus typhina* L. strenuous conditions of the urban environment, greater ability disadvantaged trees retain water in the tissues of leaves and thus higher drought. We

think that it is caused by thickening of the cell wall layers and decrease the number of stomata to reduce transpiration and assimilation of pollutants from the air.