

REPRODUCTION SPECIES OF THE GENUS SWEETSHRUB (*CALYCANTHUS*
L.) GREEN CUTTINGS IN VOLYN FOREST
STEPPE OF UKRAINE

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The data about the results of breeding plants of the genus Calycanthus L. by rooting green cuttings. The possibility of increasing the ability of cuttings rizogennoy with different rooting stimulants.

Calycanthus L., sweetshrub, vegetative propagation, rooting stimulants, root formation

Introduction to landscaping and extensive use kalikantiv in green construction as valuable in ornamental plants is limited regarding the lack of planting material. For their mass cultivation and introduction of improved methods of breeding is important.

Underlying unsexual or vegetative reproduction, is the ability of the new plant organism, which is part of the parent body, restore independent body similar to the parent [3]. The main advantage of the method of vegetative propagation of seeds can not only save valuable economic characteristics of selected species or forms, but also accelerate the entry of plants and fruiting stage kvituvannya. It is very important that when vegetative propagation new body can be changed by the environment, adapt [1].

There are many ways of vegetative propagation. All variety of ways vegetative propagation of plants are divided into groups [3]:

- 1) plant propagation specialized bodies, rhizomes, tubers, bulbs and whips;
- 2) plant propagation parts of stems, roots or leaves, branches (puff, stem and root cuttings) or neviddilenny (jigging, root sprouts) from the mother's body;
- 3) plant propagation by grafting.

For most types of shrubs preferred method of vegetative propagation are cuttings.

This method allows the reproduction in a reasonably short time to get a considerable amount of planting material, which is very important for introduction. The ability to reproduce vegetatively historically occurred in these climatic conditions as an expression of plant adaptation to these conditions [1]. The biological basis of plant propagation by cuttings is their ability to regenerate lost organs formed during phylogeny [4]. Experiment with vegetative propagation kalikantiv conducted in 2012.

Among the various methods of vegetative propagation is common for the production of green cuttings received. Features of this method of reproduction illuminated in the works of many local and foreign authors (Vehov, Ilyin, 1934; Tarasenko, 1967, Turkish, Polikarpov, 1968, etc.). [1, 4, 5]. The main feature of green cuttings is that using functions provided by the leaf regeneration to separate from the mother plant cuttings root system and sometimes the kidneys.

In the green building is especially important to have developed techniques for growing rooted green cuttings with the least cost time and money.

Our long-term monitoring of plants of *Calycanthus* L. showed that the most favorable for green cuttings is a state of maximum saturation moisture escape all tissues. It promotes the active role of the cambium and the high rate of photosynthesis and displayed on the speed of the process root. So we shoots harvested in the cool morning foggy days or cloudy days and placed in a damp plastic bags. The period of maximum capacity for rooting in different plants can not link the specific calendar dates, because depending on the weather conditions the phase shift is 2-3 weeks.

The purpose of research - finding out the impact of growth factors on rooting green cuttings kalikantiv.

Materials and methods research. Research conducted during the 2005-2012 biennium. The objects of research are 3 species of *Calycanthus* L. : *C. fertilis* Walt. - Kalikant fertile, *C. floridus* L. - blooming K., *C. occidentalis* Hook. et Arn. - K. western belonging to the family Calycanthaceae Lindl.

In studies of vegetative propagation method used BC Turkey (1963) [5]. Green cuttings harvested from different parts of the shoots. To improve the efficiency rooting used such growth substances (growth promoters), "Ivin", "Charkor", "heteroauxin", "Ivinor», «á-NUS", "gibberellins" and "Nortiol." When inventory into account the

percentage of rooting. The experiment was performed in triplicate, and 30 cuttings each. Cuttings cut health scalpel. The upper cut above the upper pair of kidneys 0.3-0.5 cm perpendicular to the longitudinal axis did escape, the lower oblique cut - below the lower pair of buds to 0.5-1.2 cm. Green cuttings taken from a part of the leaf blade to ensure formation organic matter in regenerating tissues.

Cuttings cut a length of 1-2 internodes and cuttings soaked in an aqueous solution root stimulants for 24 h. (Control and soaked in distilled water for 24 hrs.) And landed in a cold greenhouse 20.06.2012. Substrate - black soil + peat + coarse sand. Further care of cuttings was in regular watering, shading wooden boards and weeding.

Conclusions

1. To improve the rooting of cuttings plants of *Calycanthus* advisable to use only some root stimulators. Most stimulant effect better, but only slightly increase the percentage of rooting cuttings from plants kalikantiv vegetative origin.

2. The best results are obtained after processing rooting cuttings kalikantiv certified agents "Ivinor" and "Nortiol." Due to the action of stimulants including managed to increase the percentage of rooting cuttings in *Calycanthus occidentalis* (which is an important achievement, given the rarity of species in botanical collections). Other drugs, although slightly improved the ability ryzohennoyi kalikantiv, but proved ineffective.

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