VARIOUS PROPAGATION WAYS IN *ALNUS GLUTINOSA* WITH DIFFERENT SENSITIVITY TO *PHYTOPHTHORA × ALNI*

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The hardwood tree *Alnus glutinosa* L. (black alder) is a typical riparian plant and originally ranged throughout most of Europe and also into North Africa, Asia Minor, and Western Siberia. One of the most serious pathogens of *Alnus* is *Phytophthora × alni* causes a rapid necrosis of the inner bark of the collar, stems, and roots of infected trees. The identification of black alder genotypes resistant to the disease and successful propagation methods would be very beneficial in the rejuvenation of damaged riparian ecosystems and the prevention of possible losses in the future. In seeking to rapidly propagate plants possessing a rare but highly desirable character, it is more appropriate to use vegetative means. The feasibility of propagating mature *A. glutinosa* trees by vegetative means that could be used to propagate trees resistant to *P. × alni* was examined. Both softwood and hardwood cuttings were tested. The different treatments were employed, such as growth regulator concentration and method of application. The rooting success was highly dependent on the type of cuttings and treatments used. The softwood cuttings collected in the middle of July and then treated with 1 percent IBA rooted the best of all, with 42.5 percent of cuttings rooting successfully. Micropropagation is an effective and rapid propagation method for valuable genotypes of trees. An important role in the establishment of *in vitro* cultures of black alder plaid the physiological state of the donor trees, the time of explant collection and the composition of the nutrient medium, especially in terms of the content of the growth regulators.

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