

Journal

Journal of Japanese Society of Revegetation Technology 35: 432-439.

Title

Growth characteristics and water response of reed (*Phragmites australis*) strains derived from different conditions.

Author

Takashi Nomiya, Azusa Ban, Yuuki Miyakado, Akisa Nomiya and Hiroshi Hasegawa¹

Affiliation

1 The University of Shiga Prefecture, JAPAN

Abstract

For restoration of destroyed natural environment along the lake side, characteristics and water response of common reed (*Phragmites australis*) strains, derived from different habitats, were determined. Three strains were planted under the upland or lowland condition in the experimental field. From the results for two years, all strains grown under upland condition showed better growth as evaluated by growth parameters such as total shoot length, the number of shoots and leaves than those under lowland condition. To determine water response, reed strains were also cultivated in the pots with dry soil or under flooded condition. Under dry condition, all plants reduced their total shoot length and the number of shoots in comparison with those under wet condition, but the growth response to water condition depended on the strains. In particular, most plants of a strain derived from the wetland died under heavy dry condition. These results suggest that appropriate genotypes of reed adapted to suitable water condition must be used for the establishment of reed stands. However, it is necessary to cultivate under dry condition for one or two years for stimulation of early growth.