

## 백산차(*Ledum palustre* var. *diversipilosum*) 종자의 형태적 특성 및 발아조건 분석

최영민<sup>1</sup>, 조승주<sup>1</sup>, 이현지<sup>1</sup>, 김명자<sup>1</sup>, 성정원<sup>2</sup>, 윤정원<sup>3\*</sup>

<sup>1</sup>국립수목원 DMZ산림생물자원보전과, 연구원, <sup>3</sup>임업연구소, <sup>2</sup>국립한국농수산대학교 조경학과, 교수

### Analysis on Morphological Characters and Germination Conditions of Seeds in *Ledum palustre* var. *diversipilosum*

Young-Min Choi<sup>1</sup>, Seung-Ju Jo<sup>1</sup>, Hyun-Ji Lee<sup>1</sup>, Myung-Ja Kim<sup>1</sup>, Jung-Won Sung<sup>2</sup> and  
Jung-Won Yoon<sup>3\*</sup>

<sup>1</sup>Researcher and <sup>3</sup>Forestry Researcher, DMZ Botanic Garden, Korea National Arboretum,  
Yanggu-gun 24564, Korea

<sup>2</sup>Professor, Korea National University of Agriculture and Fisheries Landscape Architecture,  
Jeonju-si 54874, Korea

The Hairy labrador tea (*Ledum palustre* L. var. *diversipilosum* Nakai) is a evergreen small shrub, belonging to the Ericaceae and mainly distributed along the alpine areas of Hamgyeong-do in North Korea. Through seed physiological research on North Korean plants, we intend to obtain basic data for the development of mass propagation methods and use them for vegetation restoration. The internal and external morphological characters of the seed were observed using scanning electron microscopy or stereoscopy, and full seeds were selected through X-ray test. Seeds were cultured on a growth condition at 15/6°C and 25/15°C to examine the germination response according to temperature, and the number of germinated individuals was examined every 24 hours to calculate germination percentage and mean germination time. Low-temperature treatment (4°C) and hormone treatment (GA<sub>3</sub>) were performed to investigate the effect of dormancy breaking, and analysis of variance (ANOVA) was performed on the experimental results using SAS 9.4. The seeds of the Hairy labrador tea were elliptical-narrow in shape, and the epidermal cell wall pattern was reticulated. The final germination rate (FGP) was the highest at 58.9% under the condition of low temperature treatment at 25/15°C. The average number of days to germination (MGT) was the highest at 25.1 days without treatment at 15/6°C, and the average of the last germination days was confirmed to be about 13 days. As a result of low temperature treatment, it was confirmed that the final germination rate (FGP) increased by 43.3%. The significance of the final germination rate (FGP) was verified according to the pretreatment at 25/15°C.

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\*(Corresponding author) kokokoss@korea.kr, Tel: +82-033-480-3040