

The Superior Tree Breeding of *Rubus coreanus* Miq. Cultivar "Jungkeum" for High Productivity in Korea

Sea Hyun Kim, Hun Gwan, Chung and Jingyu Han

Division of Forest Genetic Resources, Korea Forest Research Institute,
Suwon, Korea

Objective

This study was conducted to select and cultivate superior tree for high productivity of *Rubus coreanus* Miq. (Korean black raspberry) which has useful values for medicinal and edible purposes through research and analysis of flowering and fruiting characteristics.

Material and method

There was made the clone reserve orchard for high productivity superior tree breeding of *Rubus coreanus* Miq. in 1998 and that orchard composed of collected 227 clones from 15 regions. In 2001, 17 clones were selected the first superior trees and 2002, those were tested for regional adaptability from 4 different regions. For this study, we researched and analyzed number of flower per fruit petiole (NFFP), number of fruit per fructify lateral (NFFL), fruit weight (FW) and yield of individual per fructify lateral (YIFL) about clones and regions, respectively.

Result and conclusion

The selection level based on major fruiting characteristics, which were the number of fruit petiole per fructify lateral (NPFL) over 20, FW over 1.4g and YIFL over 30g, were applied on whole clones, and 10 clones were selected (priority of 10% rank). NFFP, NFFL, FW and YIFL values of the selected clones showed 24.4, 24.0, 1.48g and 35.4g respectively, and those values were evaluated as 141%, 145.8%, 120.3% and 171.8% compared to the mean of whole clones, respectively. 17 clones were selected and their selection effects of NFFP, NFFL, FW and YIFL were 140.1%, 142.2%, 116.3% and 163.6% when the selection level were applied on NPFL, FW and YIFL over 20, 1.3g and 25g, respectively. The selected superior trees, 17 clones, appeared regional differences for amount of fruiting among 4 different test sites. When number of fruit per fruit petiole (NRFP), FW, yield of individual (YI) and sugar content which over 20, 1.4g, 6kg and 9.5 brix, respectively, were applied to select among 17 clones, 5 clones were reselected the superior trees for YI and YI values of those (S-4, S-7, S-2, S-15 and S-9) showed 6.12~8.74kg, 5.95~7.62kg, 6.03~7.45kg, 6.19~6.28kg and 4.81~6.77 respectively, for 3 years.