장미 공장생산시스템 적용을 위한 Single-node 삽목묘의 잠재생장

Estimating Potential Growth of Single-node Cuttings for Applying Single-stemmed Rose to Factory System

김완순[1*], 이용범[2], 남윤일[1], 김형준[1]
[1]원예연구소 시설재배과, [2]서울시립대학교 환경원예학과
Wan Soon Kim[1*], Yong Beom Lee[2], Yoon Il Nam[1], Hyung Jun Kim[1]
[1]*Protected Cultivation Div., National Horticultural Research Institute, RDA, Suwon 441-440, Korea*
[2]*Dept. of Environmental Horticulture, Univ. of Seoul, Seoul 130-743, Korea*

Abstract

This study was conducted to estimate rooting and shooting in single-node cuttings (SNC) of roses 'Rote Rose' and 'Teresa' to several conditions: growth stage, node position, and leaf area of cutting, so that single-stemmed roses (SSR) could be used in rose factory system. There was no effects of growth stage of flowering shoots for cutting on the rooting and shooting of SNC in both of the two cultivars. However, the node position and leaf area of cuttings significantly affected the rooting and shooting of SNC: the speed was accelerated with larger leaf area and upper node cuttings, but the rate showed little difference as above 95%. Based on above results, rooting and shooting in SNC was forced by leaf area mainly, followed by node positions. On the other hand, flowering rate of shoots from SNC was improved mainly with larger leaf area in cuttings. Shoots of 45㎝-longer, qualified for rose factory system, increased with lower node and larger leaf area significantly. Therefore, it could be said that the potential growth of shoots from SNC would be influenced mainly by leaf area, followed by node position on cutting.

Table and Figure

Table 1. Inter-significance of growth stage, node position, and leaf area of cuttings on the days to rooting and shooting of single-node cuttings of *Rosa* hybrida 'Rote Rose' and 'Teresa'.

Sigificance (Prob>F)	Days to rooting		Days to shooting	
	'Rote Rose'	'Teresa'	'Rote Rose'	'Teresa'
Growth stage(GS)	0.5248[z]	0.0139	0.0887	0.4436
Node position(NP)	0.0001	0.0001	0.1227	0.0001
Leaf area(LA)	0.0003	0.0052	0.0001	0.0115
GS×NP	0.0001	0.0001	0.0711	0.0001
GS×LA	0.0012	0.0009	0.0001	0.0305
NP×LA	0.0001	0.0001	0.0001	0.0001
GS×NP×LA	0.0001	0.0001	0.0001	0.0001

[z] Probability of significant F values: $0.05<P$, $0.01 \leq P \leq 0.05$, or $P \leq 0.01$ is non-significant, significant, or highly significant, respectively.

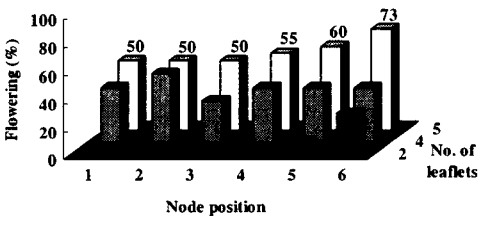

Figure 1. Effect of node position and leaf area of cuttings on flowering of shoots in SNC 'Teresa'.

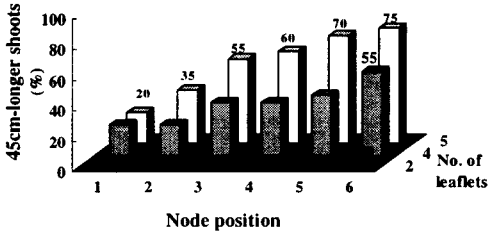

Figure 2. Effect of node position and leaf area of cuttings on 45cm-longer shoots among total flowering shoots in SNC 'Rote Rose'.