

Table S1. Morphological and horticultural characteristics of rose genotypes used in cryopreservation studies.

| Character description | <i>Rosa x hybrida</i> (L.) genotypes | | |
|---|---|--|---|
| | 'Ioana' | 'Mariana' | 'Vulcan' |
| |  |  |  |
| Plant habitus | upright | upright | upright |
| Plant height (cm) | 91 ± 1.52a* | 90 ± 1.55a | 79.6 ± 1.62b |
| Young shoot (20 cm in length) | strong | strong | medium |
| Leaf length/color | medium/medium | high/intense | high/intense |
| Leaflet: undulation of margin | weak | strong | strong |
| Leaflet transversal section | slightly concave | slightly concave | straight |
| | weak | strong | strong |
| Glossiness of the upper surface of the leaf |  |  |  |
| Thorn shape at top/base | curved/curved | curved/curved | curved/curved |
| |  |  |  |
| Number of short thorns (length < 5 mm) | small | small | very high |
| Number of long thorns (length > 5 mm) | medium | medium | medium |
| Flowering shoots (number of flowers) | medium (5) | medium (5) | very high (9) |

| | | | |
|---|---|--|---|
| |  |  |  |
| Flowering | early blooming; flowering period 104 days | early blooming; flowering period 96 days | late blooming; flowering period 87 days |
| | small | small | medium |
| Flower peduncle (number of hairs or thorns) |  |  |  |
| | ovoid | ovoid | globose |
| Floral bud |  |  |  |
| | semi-double | double | double |
| Inflorescence type |  |  |  |
| Corolla shape | irregularly rounded | irregularly rounded | irregularly rounded |
| Flower color | white | pink | red |
| Diameter of flowers (cm) | 10.3 ± 1.74a | 11.6 ± 1.52a | 7.8 ± 1.83b |
| Number of petals/flower | 20 ± 1.55b | 35 ± 1.73a | 34.4 ± 2.15a |

| | | | |
|--|---------------------|---------------------|---------------------|
| Petals size/shape | medium/obovate | high/obovate | medium/round |
| Sepals | short | medium | medium |
| Stamen (predominant color of filament) | pink | pink | yellow |
| Style (size/color) | medium/green-yellow | medium/green-yellow | medium/green-yellow |

*Values represent means \pm standard deviation (SD); Values followed by the same letter within a row are not significantly different ($P \leq 0.05$).