



Effect of high temperature on the production of 2n pollen grains in diploid roses and obtaining tetraploids via unilateral polyploidization

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Mots-clés	2n gametes [6], genetic improvement [7], induction [8], Rosa [9], sexual polyploidization [10], tetraploid [11]
Résumé en anglais	<p>To integrate the gene pool of a wild species (primarily diploid) into a cultivated pool (primarily tetraploid), a crossing between a dihaploid cultivated rose and a hybrid of <i>Rosa wichurana</i> allowed to obtain interspecific diploid hybrids that produced 2n pollen grains. A return to a tetraploid level sought by breeders can then be considered using sexual polyploidization, obtained by crossing a tetraploid cultivated rose with these hybrids. Application of a high-temperature regime led to a small but significant increase in the percentage of 2n pollen grains in these hybrids of up to 4.6%. This result was obtained by applying high temperatures close to 32°C during the day to plants cultivated in a glasshouse during recurrent cycles of bloom. Crosses were made between an unreleased tetraploid hybrid tea rose, as a female, and the diploid hybrid that produces the most 2n pollen grains. Tetraploid (42.1%) and triploid (57.9%) offspring were obtained. The use of these 2n pollen grains of the first division restitution type should facilitate the introgression of complex traits of interest.</p>
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