



SEED GERMINATION OF WILD AND CULTIVATED ROSES

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Rose species vary in their seed germination requirements. Nearly all species germinate best with a period of cold stratification, while others benefit from a warm stratification period followed by cold stratification. Below is a general outline of some methods for germinating rose seeds. Keep in mind that each batch of seeds will vary in germinability based on growing conditions during seed maturation, seed ripeness, seed storage time and presence of disease or insect pests.

1. Harvest rose hips that have just begun to turn red or orange and before the pulp becomes soft.
2. Seeds from just a few hips can be extracted by hand by cutting into each hip and digging out the seeds. Larger quantities require maceration and floatation. Soften the hips in a container of water for 1-2 days at room temperature. Macerate the hips by rubbing them against a metal screen or soil sieve or mixing in a blender with water. (Caution: blenders can injure seeds if run too long.) Wash the pulp thoroughly, and most seeds will float to the top where they can be separated from the heavier hips. The cleaner the seeds, the less contamination you will get during germination.
3. Dry the seeds on absorbent paper for 1-2 days.
4. **For most cultivated species and varieties** of roses, mix the seeds into a plastic bag containing moistened, clean, washed quartz sand or vermiculite. Very clean sand and vermiculite are essential to avoid disease. It is important that the seeds never dry out once they are put in the bag, but avoid standing water. Seal the bag and place in a refrigerator at approximately 4°C (40°F) for 4 months of cold stratification. After stratification, remove the seeds from the sand or vermiculite by hand or by sieving through a screen. **DO NOT ALLOW SEEDS TO DRY OUT.** Sow immediately in a good potting soil or into prepared field soils.
5. **For wild rose, *Rosa acicularis*,** seeds require a 2-month period of warm stratification followed by three months of cold stratification for complete germination. The extracted, dried seeds can be mixed with sand or vermiculite as outlined above or sown into flats of sterilized potting soil. Keep the flats or bags at room temperature (approx. 21°C, 70°F) for two months of warm stratification. **NEVER ALLOW THE SEEDS TO DRY OUT!** Move the flats or bags to a cold root cellar or refrigerator (4°C, 40°F) for 3 months of cold stratification. Return the flats to warm temperatures or remove the seeds from the sand or vermiculite and sow in flats of potting soil. Seeds begin to germinate within 2 weeks. If not enough seeds have germinated after 30 days, try repeating the cold stratification for 30 days, and return to warm temperatures. Repeat the cold/warm cycle until most seeds germinate.

