



'Maxifort' Rootstock Tomato: Steps to Optimize Seed Germination Rate and Seedling Uniformity

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As is the case with most tomato rootstock varieties bred for the US, 'Maxifort' is an interspecific cross — the product of traditional plant breeding crosses between a domesticated tomato parent and a wild tomato parent. This particular type of wide cross can create a tradeoff between characteristics: on the one hand significantly increasing hybrid offspring vigor, while on the other decreasing seed germination percentage and seedling uniformity.

To improve germination rate and uniformity, all of our tomato rootstock seeds are primed. The process of priming involves hydrating seeds in a solution within a controlled environment, allowing the initial phase of germination to take place, then arresting the process at a certain point, at which time the seeds are dried down to moisture levels conducive to storage.

While priming greatly improves seed performance, it can also substantially reduce seed shelf life. To achieve optimal germination rate of your 'Maxifort' seed and resulting seedling uniformity, we recommend considering the following measures.

SEED GERMINATION

- Over-seed up to 25% higher than your desired number of plants based on your grafting experience. This buffer will account for potential losses during both seedling production and the grafting healing phase.
- Sow seeds into a high-quality seed-starting medium, as you would for any tomato crop.
- Using a germination chamber to maintain appropriate temperatures and humidity may help improve your germination success on high-value seeds. Research suggests:
 - First 3 days: Keep tomato seed trays in a dark location, ideally at 74°F (23°C), with a relative humidity of 90–95%.
 - After 3 days: Move seed trays to propagation area or greenhouse, ideally at 78°F (25°C).
- We recommend avoiding heat mats with tomato rootstocks, as they can cause uneven

heating and drying of the planting medium, especially when you are starting seeds very early in the season, when temperatures are likely to drop to a lower extreme. To the extent possible, it's preferable to maintain the environment surrounding the plants at the optimal temperature and humidity, rather than to add heat mats in a space that is perhaps not as warm as it should be.

SEED STORAGE

- Because primed seeds are sold in a germination-ready state, we recommend purchasing only sufficient primed seeds for your current growing cycle and using within one year of purchase if possible.
- Any extra primed seeds should be stored in your most optimal seed storage conditions: preferably cool (40–46°F / 5–8°C) and dry (in a Ziploc bag or glass jar) to ensure optimal shelf life.

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