

POTATO POLLINATION GUIDE

Solanum tuberosum



PETAL

ANTHERS

STIGMA

Potatoes are typically propagated clonally (via tubers), but their flowers are perfect, containing both male and female parts. Potatoes are sensitive to inbreeding and require outcrossing to form true seed.

Step ONE: Collect viable donor pollen



Four to eight potato flowers will typically appear on a cyme (aka inflorescence). Place the anthers of a mature flower over the rim of a plastic capsule to catch mature pollen. Use an electric toothbrush or finger tap to shake pollen from the flower into the capsule.

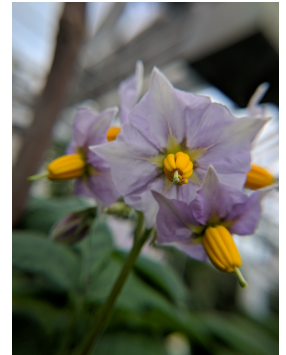
Step THREE: Prepare pollen for transfer

Close the top of the plastic capsule and gently tap the capsule to agitate the pollen. Carefully open the top of the capsule, which should contain pollen.



Step TWO: Identify receptive female flowers

Flowers on the cymes open two or three at a time, and the female stigma typically remains receptive for two days. Look for a cyme that is in its first flush of flowering. Remove the remaining unopened flower buds or save them to make more of the same cross in the near future. Emasculation is most often not necessary but can be performed if selfed seed is an issue.



Step FOUR: Transfer donor pollen to stigma



Gently dip the female stigma into the pollen-filled tube, covering the entire stigmatic surface evenly. Continue to pollinate all fully open flowers on selected inflorescence. Seal and store pollen for later use.

Step FIVE: Properly label cross



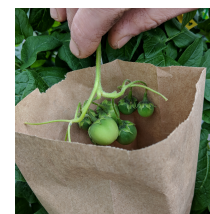
Using a durable tag, mark the entire inflorescence and cover with a pollen exclusion bag if outdoors. Additional crosses may be made when other



Young buds on the cyme open. Check back in two weeks to look for young berries.

Step SIX: Monitor and harvest mature fruit

Small berries will develop with successful fertilization, each containing <100 seeds. Place the entire inflorescence of berries in a brown paper bag. For good seed stewardship, use clean harvesting and storage practices to obtain high quality, safe seed.



TIPS FROM THE PROS:

- Plant clean, quality tubers to produce flowering plants
- Many modern cultivars produce little, even sterile, pollen
- Potato genetics are very complex - don't be surprised if something very different appears in the next generation!

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