

# PEPPER POLLINATION GUIDE

*Capsicum annuum*



PETAL

ANTHER

STIGMA

Peppers have a perfect flowers with both male and female structures. These plants are primarily self-pollinating, though cross-pollination can occur if pollinators are active in the surrounding environment.

## Step ONE: Identify immature female buds

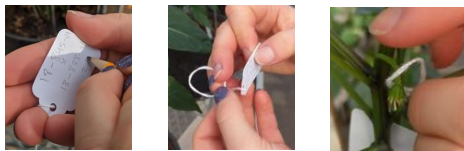


### CAYLX

Immature female buds appear on single pedicels. They are characterized by unopened flower petals, some color development, and a calyx lobe beginning to separate. Look for enlarged buds approximately 4-6mm wide and about one day away from fully opening.

### PEDICEL

## Step THREE: Properly label cross



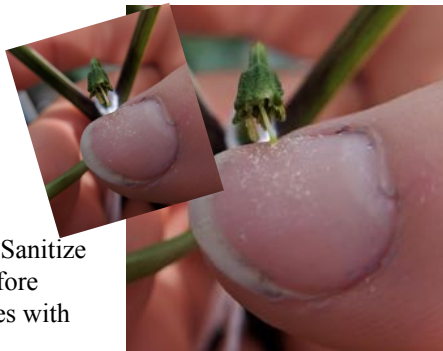
Label a small crossing-tag with female x male designators and the date of the cross. Carefully adhere to the single pedicel connecting the flower bud to the main plant stem.



## Step FIVE: Transfer donor pollen to stigma

Carefully transfer viable pollen to the stigmatic surface, making sure to not break or damage the stigma. Pollen should visibly stick

to the stigmatic surface. Sanitize all tools with ethanol before making additional crosses with different pollen.



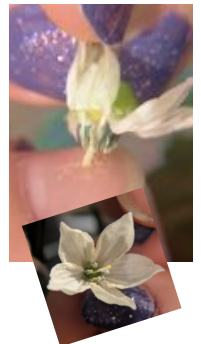
## Step TWO: Remove stamens on female bud

Stamens consist of pollen-bearing anthers and must be removed ( via emasculation) prior to pollen shed (anthesis). Carefully remove stamens without damaging the receptive female stigma (right). If stamens are shedding pollen, select a new bud.



## Step FOUR: Identify mature male flowers

Select fully opened flowers from a separate donor plant. Anthers should be actively shedding pollen, which can appear yellow-to-white in color. Avoid dark, clumpy pollen, as it is likely past its prime viability. Carefully peel back petals and agitate flower so pollen sheds onto a sanitized thumbnail or forceps. The anther itself may also be used as “paintbrush” to transfer pollen.



## Step SIX: Monitor and harvest mature fruit

Mature fruit will begin to develop and expand within a week of pollination.

Expect to see mature fruit 3-5 weeks after pollination.

Follow good seed stewardship practices, using clean harvesting and storage practices to obtain clean, safe seed.



## QUICK TIPS FROM THE PROS:

- Select female buds near the top of the plant and not under any flower opening in the next three days to avoid pollen dropping
- Ideal temperatures for pollination vary among pepper species and can even vary within a species – be aware!

## THIS PROJECT WAS SUPPORTED

BY:

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