

Hand Pollination

Gourd vines are monoecious - that is that there are both male and female flowers on the same vine. The male flowers will be found on the main vine and the females will be found on the lateral or side vines.

Hand Pollination can serve two (2) purposes. The primary reason to hand-pollinate is to increase the number of female gourd flowers that have received pollen from male gourd flowers during the 1–2-day window for successful pollination. The second reason to hand-pollinate is to help keep the gourd seeds “pure” or true-to-type. To achieve pure seeds, there is an extra step to keep insects from also depositing pollen from a different variety of gourd. This is discussed here as well.

Gourd Pollination – Basic Information

- Pollen must be transferred from the male to the female in order for a fruit to set. This is done by a number of different insects.
- Female blossoms can be found on the end of a small gourd (pepo or ovary) at the time of blooming.
- Male blossoms are on the end of a long stem and no gourd is present.
- It will be a couple of weeks before there will be any blossoms.
- Gourd flowers are night blooming and are pollinated by night-flying insects.
- When the flowers first come out it seems as though there are tons of male flowers and no female flowers. The females will soon follow...they just like to make an appearance.
- If the female is not pollinated, the young gourd will turn dark and drop off.
- Use extreme caution in applying insecticides to the gourd plants after blooming begins. Insecticides do not discriminate between the good and the bad bugs.

Hand Pollination

- At dusk, most gourd flowers will open. Some varieties (the banana and basketball gourds) open in the middle of the night and can be hand-pollinated in the early morning
- Remove several male flowers just after they open. Remove the petals from one male blossom at a time, being careful to not disturb the center.
- Gently brush the male stamen over the center of the female blossom (stigma) for 2-3 seconds, then discard the male stamen. Repeat with the second male blossom.
 - You can also use a Q-tip or small paint brush to take pollen from the center of the male flower and brush it gently onto the center of the female flower.
 - You may want to tape a cheap paint brush on a dowel to reach into the center of your patch if there are many leaves and/or if your patch is wide.

Tip 1: to keep track of which blossoms have been pollinated, cover the blossom with a net bag or tie a ribbon on the stem

Tip 2: to follow your success, add a tag with the date and variety to the stem of the pollinated flower

Tip 3: it isn't necessary to hand-pollinate every female blossom. Letting nature take its course is enjoyable too

- Doing this routinely most evenings for about one month from when the female blossoms first appear will increase your yield substantially.
- Pollen production drops when it is very hot and hand pollination in the rain doesn't work well, so those are the nights to take a break.

When to stop pollinating? There are two reasons to consider removing flowers/little gourds, One reason is that fewer gourds per vine may be beneficial to the plant and the quality of the other gourds on the vine. The other reason is gourds pollinated late in the season will not mature before the end of the growing season...taking them off lets the older gourds have the nutrients to be bigger and thicker.

- Two large African Kettles or 3-4 large Zuccas are enough for the vine.
- For a mid-sized gourd such as an average sized martin or apple stop pollinating at the beginning of August.

- For the smaller varieties you can continue with pollination through mid-August.
- For the very small ones, like banana and sub-mini gourds, you can continue hand pollination till early September.

Identification

For the beginner it will be hard to distinguish a male flower from a female but after two - three weeks of pollinating, you will be able to tell the difference from six feet away.

Female Gourd Flowers

- Female flowers always have a little baby gourd (a pepo) underneath the flower.
- If the female flowers are not pollinated the pepo will turn brown and die.
- The females have a raised, golden yellow center. There will always be a baby gourd or pepo directly under the bloom. Females like to hide under leaves so make sure to pick up the leaves and take a peek.

Male Gourd Flowers

- Males have a recessed pale-yellow center. They grow on longish stems and nine times out of ten, on most nights, there will be more males than females.

Hand Pollination for Saving Pure Seed Varieties

Why? Hand pollinating is essential for ensuring the gourd varieties are kept "true to type."

- Gourds easily cross-pollinate because insects that transfer the pollen have visited numerous gourd flowers. Unless the grower has only planted one pure variety and no one else in a 1+-mile radius has planted a different variety the chance of cross pollination is high.

How to Prevent Cross Pollination

- Isolation. You could grow only one variety
- Hand Pollination. You will know what male pollen was used to pollinate your female gourd flower
- Prevent Accidental Pollination. Cover the female flowers ahead of the evening when you will be hand pollinating
 - Recognize when a blossom is close to opening.
 - Cover female flowers with a light, mesh bag (wedding favor bags are one type) to keep insects out
 - Go to your gourd patch in the late afternoon or evening for most varieties.
 - Pick 3 male flowers for 1 female flower to have plenty of pollen
 - Label the stem with date and variety
 - Recover the female flower and watch it for a few days
- Save seeds from the mature gourd after it has fully dried.

For more information, read the 3-part [Pure Seed – Hand Pollination](#) article.



Pepo: unpollinated gourd below the female flower. This flower is closed because the photo was taken during the day.



Left: Female Flower; Right: Male Flower

- Females have a raised, golden yellow center. There will always be a baby gourd or pepo directly under the bloom.
- Females like to hide under leaves so make sure to pick up the leaves and take a peak.
- Males have a recessed pale-yellow center.
- They grow on longish stems and nine times out of ten, on most nights, there will be more males than females.



These gourds were pollinated early. The yield is greater and the early ones will have lots of time to grow and mature.