

How to Pollinate a Clivia Plant and Store Pollen



What you will need:

1: A good set of tweezers

2: A Pollen Storage Tube, Matchbox, or something to hold any pollen you might want to store.

2a: Something to label your pollens with, be it a sharpie, a grease pencil, or a label maker.

3: Plastic straws from your local supermarket.

4: Some cotton balls or some form of heat source that can be used to close one end of the straw.

5: Some form of label for the plant itself. We use a hanging label on a string. note this sort of tag is NOT weatherproof.

6: A small disposable paintbrush, preferably a new one for every cross or plant you wish to pollinate.

So! You have a great Clivia and you are looking to Pollinate it! But you need to know how to do so.

Self-Pollination

Pollen Storage

Cross Pollination

Pollination is easy with a little bit of preparation and a steady hand. Let's get started.

This guide will be for pollination of a potted plant, but you can easily use it for garden plants as well.

First things first, we should be starting to think about this before the flowers ripen and open.

SELF POLLINATING A PLANT

"Selfing" is the easiest pollination method, and in some cases your best choice for pollination. It does not require stored pollen, only the pollen on the plant. Also emasculating the plant (Removing its pollen prior to ripening) is not required.

We like to pollinate right after the flower opens. This WILL shorten your bloom times on the flower however it is the most certain method of being sure your chosen pollen is the pollen that the plant uses for fertilization.

The Female part of a flower is called a Pistil, it is made up of the stigma, which is the 3 tiny prongs on the end of the stem, called a style, and the ovary, which is the bulbous shape under the flower petals.

If you are pollinating outdoors are near other plants that are in bloom, it is important to make sure no stray pollen gets on the stigma. To do this you are going to use those straws and the cotton balls or heat source.

Take the straws, cut them into thirds. Stuff about 1/8th of the straw with cotton or Crimp the end of the straw closed and seal it with heat.

Put this over the end of your Pistil. It should stay there until the flower including the Stigma falls off completely. You want the stigma to sit in the straw below the cotton and not get stuck in the cotton.

Pollination should take place either in the early morning or around nightfall. We tend to pollinate multiple times just to be sure the "deed is done". The reason for this is that the female parts of the flower will exude a sticky substance during these times which catch the pollen.

The parts of the flower that hold pollen are called the Stamen, they are made up of an Anther of pollen and the stem they stand on, called the Filament.

Bring your plant into an area with no heavy airflow. Still air is the best for pollination. Barring that you can take a plastic bag and cover the flower you are working on.

Now, take off that straw. If you used cotton be careful not to break the Stigma in the cotton.

The first thing you need to do is take those tweezers and carefully snap the filament off around 1/4-1/3 of an inch from the base of your flower, being careful not to shake off the pollen. You can use your fingers to do this, but its very easy to accidentally break the Style/Stigma, so a good tweezers saves you some heartache.

Now, simply rub the stigma with the anther until you see pollen on the stigma. Congratulations you just fertilized your flower!

Do this for every flower you wish to pollinate. Use a new Stamen for every stigma for best results.

STORING POLLEN

Now, say you want to store some pollen from your Clivia blooms, either for use in the current blooming period or even years in the future. Pollen lasts up to 6 YEARS in cold storage, so even if you only get one great bloom from a plant, its genes could be used for years and years.

Storing pollen is very easy. We are going to go through the whole process here with pollens from a pre-emasculated plant, because that is the longest method. You can skip the portions that do not apply should you be storing pollens that have already opened.

Our method is simple and works for us. It is not the only method out there.

If you are going to be crossing 2 different flowers together, it is imperative that you remove the Anthers before they open. A closed anther and an open another look very different to the human eye. A Closed Anther looks smooth and an open one looks like a grainy yellow puffball. If you are going to pollinate a plant and the anthers have already opened, we recommend you go with self-pollination. The reason for this is that pollen is super tiny and it is nearly impossible to tell if pollen has shaken onto your Stigma once opened. If it does, it's possible that even a single one will fertilize your Egg. Remember those health education classes and the 1950s movies of how babies get born? Yeah. 1 Can indeed do it.

The Anthers will open usually the same day or the day after a flower opens. Sometimes they will open beforehand in the flowers, sometimes after. Once your buds start to colour up and start opening its important to sneak a peek inside and see how the anthers look. Hopefully they are closed. We tend to self the first few flowers on a plant simply to watch how long it takes for the anthers to open up...because we like enjoying our flower blooms! It is really easy to bust up a flower trying to get pollen anthers out of it before they open up.

So, let's hope your plant decided to act normal and stays closed until the flowers start to open. Once you can see inside your blooms without prying open everything, its time to Emasculate.

First Things First: Let's put those straws over those Stigma! Same as above, this is simply to make sure no stray pollens get onto the stigma before you are ready to pollinate. Just because we are emasculating while the anthers are closed doesn't mean there is no other pollen source around or we didn't miss one of the anthers being open early.

Take your tweezers (A good long, thin, sharp nose pair is good for this, but a normal pair will work too and give you a better grip) and break the Filament of the Stamen about 1/4-1/3 of the way from the bottom of the flower. Now take that and put it somewhere cool and dry. The way we do it is we drop it into one of our Pollen Tubes, Stick the tube into the potting mix at the edge of the pot, and let that stay there open for a couple of days. This works because we are in a cool, dry, indoor environment with our blooming plants. If you are outdoors or in a greenhouse we

would tend to bring the pollen somewhere cool and dry. Over the next few days it should open up even though it is not on the plant.

You can use tin foil, wax paper, anything smooth that won't catch on the pollen to store the pollen. Just make sure you let it open up before storing it long-term.

Do this for all the Anthers on the bloom you are working with.

Now that you have your tube full of open anthers, close it up and put it in the freezer. (Freezer not Fridge) We pull off the Stems(Filament) of the anthers and only keep the anthers. Some will shake the anther itself once dry and store just the pollen. It's completely up to you how you do this, the more non-pollen you remove the easier it will be to pollinate later.

This should go without saying but each plants anther should be stored in a separate container.

CROSS POLLINATING YOUR PLANTS

Cross Pollination, Either from Stored pollen or from 2 plants blooming at the same time, is a bit more complicated.

By now hopefully you followed the Emasculation process shown in the Storage section. If not let's scroll back up and follow those instructions.

OK! We have our emasculated flowers, we have our stored pollen ready to go! Now what?

First things first, let's look at the environment your plant superstar is going to be making seeds for you in:

1: Is it wind free? Breeze Free? Strong Air Conditioning Free? Will people sneeze or even breathe on it funny? If not, you need straws just like in the section for Selfing plants. Cut them into 1/3s and have some method of closing one end of the straw. Hopefully you have the stigma protected from when you emasculated.

If like us you have a spot that has very still air, no other blooming Clivia, and you have emasculated your plant, you do not need straws.

2: You should have a new, clean, brush available to you for every pollen you are going to use. If not let's go get that now. Pollen is tiny, a used brush is not an option here. Every single pollination needs a new brush. you can use Q-tips or something of that type, but they will be fighting your Stigma for the pollen, a brush lets the pollen come off nice and clean.

3: You should, obviously, have some pollen ready to use. Ready to use means DEFROSTED. Let the pollen sit for an hour or so before use so that it is unfrozen.

4: You need some form of labelling system. This can be coloured ties, it can be some sort of dot code with an indelible marker, or like us you can use hanging tags.

OK! We are ready to go! Open up your pollen container, dab your small brush in the pollen just like with paint, and paint the pollen on the stigma. Yep it's that easy. Do this until you can visibly see pollen sticking to the stigma. This should be done either in the early morning or around nightfall, as the plant exudes a sticky substance to catch pollen around these times, making your job easier.

Another great method if you use our tubes is simply to shake the pollen onto the sides of the tubes and slide the stigma into the tube until it picks up the pollen.

Cover your Stigma and Style, label your Pedicel (The stem the flower stands on) and move onto the next one! If the next one is going to be the same pollen, keep going with your brush, if it is different pollen, different NEW brush. I would do this 2-3 times per stigma over the course of the next few days.

That is it! You just pollinated your plant! You virtually guaranteed that what you crossed is what you will get! Congratulations!

You will know very soon whether the pollen "took". Your plant will begin to grow berries, and within about a month the ones that were not fertile will fall off. This can be for many reasons. Sometimes the plant itself will be sterile, sometimes the pollen will be sterile, and sometimes the pollen/plant combination will simply not work. For instance, Tetraploid Plants often will not take non- Tetraploid pollens.

Assuming you followed our instructions here, we might even be willing to buy your seeds next year! We buy all our seeds from high end niche breeders with extremely high-quality parent plants. All our breeders need to use this method or better to assure that their seed is in fact going to be of the cross that they were trying to make in the first place. We generally will not buy open pollinations (where the Clivia plants were not protected in some manner during bloom and pollination from self-pollination or accidentally cross pollinating) unless we know prior to purchase and can disclose that to the customer. Send us pictures of your Clivia flowering, preferably with a colour chart in the picture. the cross name, and contact us. Maybe your cross will interest us!



Clivia USA