

Cleaning Seeds: The Fermentation Technique

Sally Ransom

Ransom Gardens, Houston, Texas, USA. webmaster@ransomgardens.com

When it comes to cleaning *Passiflora* seeds, we all hope that we didn't have to deal with the tedious task of separating the fruit from the seeds. Compared to seeds taken from a dry flower, cleaning seeds from fruit is a very messy job and very time consuming. If we mean to clean only a dozen or so seeds from a small fruit the good old paper towel comes in handy to make the job quick and easy. You merely rub each seed in the fold of a paper towel until the seed is clean from pulp and its capsicule. Then you leave the seeds out to dry for a day or two. This technique is fine for a small solitary fruit, but what if you want to clean the seeds from a large fruit that is full of a large number of seeds such as *P. edulis*? What if you have hundreds or thousands of seeds to clean? Or even worse, as Jean-Jacques of Barbadiene Seeds mentions, what if you have to clean *P. suberosa* seeds that are very small and whose pulp stains easily?

The answer is simple. Use the fermenting technique to conquer the task of cleaning seeds. This technique is widely used by many seed suppliers who quite often deal with collecting seed that are encased in a fruit of some sort. The name may give the impression that the technique is difficult, but it is actually a very easy, logical, and a much better alternative to using paper towels only. Generally, one uses the natural power of fermentation to decompose a fruit's capsicules and pulp for easy removal. Only five easy-to-find tools are needed to complete the technique: 1) plastic baggie, 2) warm water, 3) a glass jar with a lid, 4) a kitchen sieve with a fine mesh, and 5) paper towels.

Begin by collecting fresh ripe fruit. Slit one side of the fruit and squeeze the seeds and pulp into a plastic baggie leaving the fruit empty with just its skin. Do not worry if the fruit is too small to slit. Fruit skin can be removed later, but it makes things easier if the skin is removed first. Gently mash the pulp by squeezing the baggie with your hands until it has the texture of jelly. Be careful not to crush or crack the seeds. After this is acquired you will pour the mixture into the glass jar and add warm water until the jar is $\frac{3}{4}$ full. Swish the seeds in the warm water to disperse them, affix the lid, and then leave the jar in a warm spot out of direct sunlight for approximately three days. Be careful to not go more than a few days to prevent accidental germination.

After three days have passed, pour your fermented concoction through the sieve in the kitchen sink. Yes, there will be a bit of a stench but that smell is a good sign that fermentation has been achieved. Use a strong blast from the faucet to remove the pulp and capsicules. You will find that the fruit matter practically melts away and disappears beyond the sieve down the drain. If your mixture had some fruit skin in it, the skin may remain in the sieve along with the seeds. This is fine.

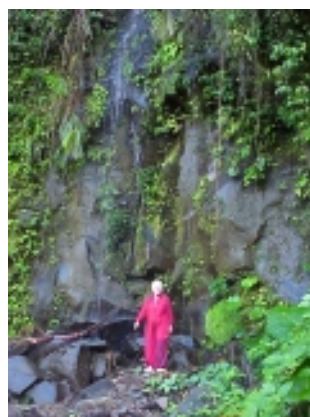
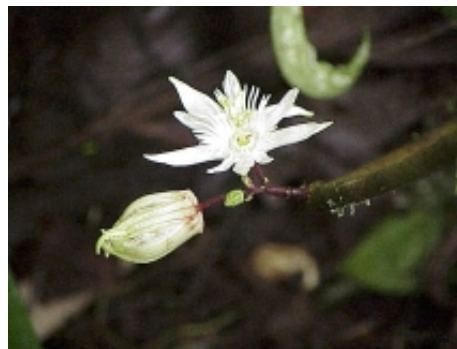
Now gently rub the seeds between the folds of a paper towel or two until they are moderately dry. After this is done you can leave them on a separate dry paper towel in an isolated space to dry completely for one day. Fruit skin can be easily removed at this point. When the seeds are completely dry, store them in a container at room temperature out of directly sunlight. *Passiflora* seeds can remain viable for up to one year and sometimes longer.

Cleanup is simple. While you are at the kitchen sink, use a couple of drops of antibacterial dishwashing liquid and warm water to clean the sieve and jar for future use. The used paper towels and plastic baggie can simply be thrown in the trash.

Technically, the fermentation technique takes more time than the good old paper towel technique. Fermentation takes about four days for one batch of seeds to be cleaned and dried compared to four hours of the paper towel technique (considering the time it takes for the pulp mixture to ferment).

However, the bonus of the fermentation technique is that it is not messy and it is considerably less time consuming of your hands-on time. For a large batch of seeds, you will only need about ten or fifteen minutes of your own personal time to complete the job whereas using only a paper towel can take several hours and can leave your hands stained and smelly.

Photos (top right, left to right): Seed, fruit pulp and water mixture in glass jar; Sieve and wash the seeds after three days; Dry the seeds, moderately, with paper towels. All photos by Sally Ransom.



Costa Rica Photos...

Top row, left to right: Balconies at Selva Verde; *P. capsularis*; Cor Laurens and Tim Skimina. **Center row, left to right:** Book presentation to Carlos Alexandros by Ron Boender and John Vanderplank at Fabio Baudrit; a Trogon; Penny and John Vanderplank. **Bottom row, left to right:** Cam Ryan at fruit stand enroute to Fabio Baudrit; Cor Laurens with *P. apetela*; Giovanna Holbrook at Braulio. All photos by Ron Boender.