Growing *Theobroma Cacao* from seed need not be a questionable, did I do it right, what do I do next experience for those desiring to grow cacao. Adhering to some very simple steps will make your effort easy, rewarding and provide you with all the cacao trees you might need or want. All it takes is some patience, the right environment and lots of friends to give the extra seedlings to.

This is a photo step-by-step of the process I use to propagate cacao seed. The process has been refined over time by the failures and successes of many attempts. Tom Sharkey, who grows coffee and cacao on his farm, originally demonstrated his technique to me. This is a modified and adapted version of his methodology.

The purpose is not to provide a scientific dissertation on the embryonic processes involved in germinating cacao, but to provide a simple, practical layman’s guide to germinating and growing cacao from seed. It is not the most scientific methodology available, but you don’t have to be a scientist or professional grower to grow cacao. Now take a deep breath, relax and let’s proceed.

**Culture or Environmental Requirements**

Unfortunately, a very basic understanding of the growth requirements of the cacao is needed in order to understand and duplicate the natural germination process. The trees origin is thought to be from the wet lowlands of Central and South America. The warm wetlands are covered with a deep, rich, moist soil base with filtered light coming through the canopy. We need to duplicate this environment in order for the seed and plants to thrive.
In nature the seeds germinate in the shady, moist, mulch that covers the ground. Small animals, birds and natural causes normally propagate the cacao seeds, which germinate at or near the surface of the mulch. To duplicate this method, we must intercede and create a warm, shady, moist environment for the seeds. Hang in there, I will explain in a moment.

Once the seeds germinate, they need to be protected from the environmental issues. Birds, bugs, small mammals, wind, rain, excessive moisture and other exposures can be a deterrent to the germination and subsequent growth of the plant. (Note: If you have chickens or rats in your yard, don’t attempt to grow them where the chickens or rats have access to the seeds. The seeds will be become an easy food source and will be consumed immediately upon detection.)

It all seems pretty simple, so far. If you pretend to be a cacao seed, you will quickly figure out what you want in order to grow. You will want to feel safe, warm and comfortable, like in your bed under a down comforter on a cool night.

What do I need to get started?

The first thing you need to acquire is a fresh cacao pod. If you are lucky enough to have a friend with a tree, see if you can harvest a pod. The pods start out as tiny flowers and usually get pollinated by a midge fly or other insect. When they get a little older they look like little peppers attached to the trunk and branches of the tree. As the pod matures, it will take on a football appearance.

Otherwise, if you live in a tropical area, go to the open markets or farmer’s market and there you might be able to find someone that is selling the pods. In Hawaii, the pods at the farmer’s market will sell for $1.50 each. Since each mature pod will hold anywhere from 40-50 seeds, it is not too expensive per seed. If you need more beans to make a batch of chocolate, you will need to find a less expensive source. Most of the pod sellers do not know what type of cacao pod they are selling, as they usually get them from someone else.

To determine if the pod is mature, just shake it back and forth. You will either hear a rattle or feel the seeds moving back and forth in the pod. Immature or green pods will not exhibit this characteristic. Also, look at the color is it a nice yellow or red? Forastero pods are typically yellow or red.

If you do not have a ready source for a fresh pod your chances of a high germination rate diminish quickly. If your seeds are 3-4 weeks old, your chances of success are very slim. You will need to find a source for fresh seeds or pods. One online source for fresh cacao pods is www.montosogardens.com (Note: I do not have any first hand knowledge of this company, nor how viable the seeds are.)
**Harvest Time…**

Let’s assume you have a friend that will let you harvest a pod. There is a correct way to harvest the pod without damaging the tree.

First, select the pod you want to harvest.

Next, cut the pod at the stem just above the bark nodule. It is important not to damage the little stem mount, as this is where new fruit will grow. Do not twist the pod until it breaks off, this action will damage the tree.
It’s Time to Germinate..

Now that you have your pod(s), gather up some paper towels or a couple of disposable kitchen towels, a tray, a knife and some water.

Place the paper towels or a kitchen towel in the bottom of the tray. This is where you will be placing the seeds when the pods are opened.

Select your first pod and score the pod, with the knife, around the center. **DO NOT CUT THROUGH THE POD OR SOME OF THE SEEDS WILL BE DAMAGED.**
When the pod is scored completely around the center, gently pull it apart to expose the seeds.

Get your tray with the towel in the bottom and empty out the seeds from the pod onto the towel. This is like taking the seeds out of a pumpkin for Halloween.
Continue to do this with each pod. If you have different types of pods, it is a good idea to keep the seeds segregated so it will be easy to identify them later.

If you cut one of the seeds in half, the color will vary from a deep purple to white depending on the type of bean. (Forastero, Triniterio, Criollo)
When you have all the pods emptied, spread the seeds into a single layer and cover the seeds with the second kitchen towel or paper towels.

Once the seeds are covered, you will need to water the towel to create the moist environment of the wetlands. The towels should be wet, but there should not be any standing water. Pat the towel down so it will be touching the seeds.
To create the filtered light or shady environment, place the tray under a table or in a shady spot that will not get direct sunlight. You do not want the towels to dry out, so you must check them every day to make sure they are wet. The seeds need to be kept warm with the temperature maintained above 80° F. If you are in a colder area, put a heating pad under the tray and set it on low to keep the seeds warm. The seeds will germinate in 4-10 days, but lose viability quickly if they dry out.

Now you need to exercise some patience and wait!
At about day 3 or 4 you will notice a small white or red dimple forming on the seeds. This is the start of the root. Don’t worry about the moldy looking stuff; it does not appear to bother the seed or the subsequent growth.
Since cacao has adapted to humid tropical climates, and grows best in deep fertile, well-drained soils, the next step is to provide the newly germinated seeds a nice place to grow. The seeds need to be planted in a deep pot, as the root will take advantage of the fertile environment.

To plant the seed, fill the pot with a good soil conditioner or fine mulch. That’s it! Keep it simple. There are a lot of opinions on adding perlite, sand, and all types of different stuff to the mix. Just fill the pot with fine mulch, which retains moisture and drains well. The seed will need to be watered twice a day with a fine spray of water, so don’t be too concerned with creating a soil cocktail.
There will be a lot of seeds to plant, so get a square pail or bucket and place several of the tall pots into the bucket. Fill all the pots to the top with mulch and pick up the bucket about a foot off the ground and then bounce the bucket once to settle the mulch. Or, shake the container back and forth a bit to get the mulch to settle in.

Find the seeds that have the new root turned down toward the bottom of the tray. The root has sensed enough light to determine its orientation and is attempting to grow down. This is a good sign.

Select the pot you want to put the seed in and make a small birds nest about the size of a teaspoon in the surface of the mulch. Set the seed into the center of the indentation with the root pointing down. Now just cover the seed with a light covering of mulch from the displaced mulch. That’s it! You have just planted your first cacao seed.
Continue to do this with all of the sprouted the seeds. It may take several days to plant all of them because they will not all sprout at the same time. Don’t plant them if the root is not visible or has not started turning down. It will most likely not grow. I have planted seeds that have sprouted, but the seed had not determined its orientation and most of them did not grow. The seed needs to figure out which way is down and if you cover it up with mulch too soon it will not be able to get enough light to figure this out.

Place the pots in a shady area (about 50%) protected from rain, wind, and predators. Do not fertilize at this time. I place mine on the floor of the greenhouse between the hydroponics grow tables. The seeds get some sun during the day, but don’t have the opportunity to dry out. You must keep the plants moist. Lightly water in the morning and afternoon to simulate the rain pattern in the wetlands.
The seeds need to get settled in their new home and get their second set of leaves before you think about giving them any fertilizer. Some folks say that you should only use organic fertilizer on cacao. I have used many different types of fertilizer and have never noticed any problems with any of them. Just select a good general-purpose fertilizer and don’t over fertilize. I tend to stick to the organic fertilizers, so fish emulsion is my first choice. The pictures above are seeds that were put in the pots about a week before. Some of the seeds have already set their root and lifted up the seed. It won’t be long before the seed leaves break out.
If you don’t have a lot of time, use a general-purpose slow release fertilizer and just sprinkle about a teaspoon on the surface of the mulch. These plants are 4, maybe 5 weeks old. (Note: The little dots are a slow release fertilizer)
All you have to do now is water and give them a little fertilizer from time to time. Don’t spray the leaves with the water it is too heavy for the new plants. Use a fine spray nozzle and water plants by placing the nozzle below the leaves and watering the mulch. Watering in this manner will prevent damage to the young plants. Don’t have the water pressure too high you don’t want to blow the mulch out of the pot.

Despite all your best efforts, some will still not grow. Enjoy the ones that did and plant some more. You will then have plenty to share. Remember, the key to growing cacao is warmth, moisture and patience.

Once the plants have gotten bigger, you can gradually move them into full sun, but you must keep the soil moist. If the soil dries out, the plant will probably die.

That’s about it…enjoy the cacao plants and have fun.