

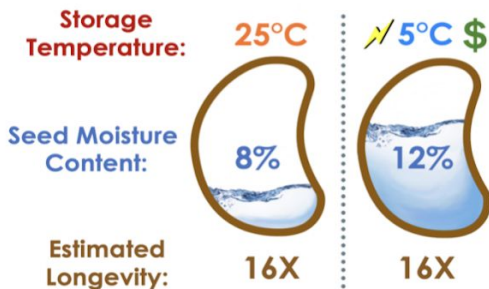
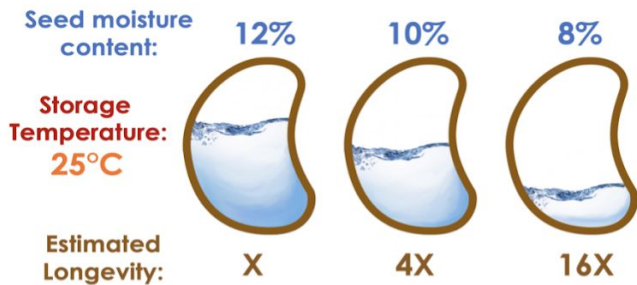
Seed Drying Resource Sheet

Keeping seeds dry in our tropical climate is a challenge! Just leaving them on our counters to admire in the house is not ok unless you are planning to just use those seeds the following season. Even still, getting them into a **STABLE** environment to rest is critical. Especially if you want to keep them for a few years. Many garden seeds will be fine for 3-10 years if you can get them **cool, dark and dry** and keep them stable until you plant. Anything different will encourage decay.

Kept well, many garden seeds can last for years. After spending money on packets, or time on saving your own, don't skip here! We have found excellent germination rates on seeds many years old because we have kept them well. The most important thing is to get your seeds **DRY!!!** In the Southeast this is the biggest challenge. It means you can't just air dry your seeds and stick them in an envelope. **Humidity is the #1 killer of seed longevity.** Aim for **35%** relative humidity or lower. Our ambient conditions in Florida range throughout the year from 50%-100% depending on the season! Seeds will equilibrate with their environment and look what high seed moisture content does for longevity! We borrowed this graphic from our friends at Dry Chain America.

Relationship between seed moisture content and longevity

Low seed moisture content maximizes seed viability and shelf life. Every 1% decrease in seed moisture content or 6°C decrease in storage temperature the storage life of the seed is doubled.



Low seed moisture content x low temperature during storage

Seeds with low moisture content can be stored at ambient temperatures. A similar seed longevity benefit can be achieved by lowering the moisture content and storing seeds at ambient temperatures instead of using refrigeration. Substantial savings with energy input and when compared to cold storage.

Some of our simplest tools for the job:

- **Box fans** are great for blowing over your seeds for a few days to get bulk material dried down. Often we have a huge mound of mustard or bean seeds we've pulled from the field that need to dry down before we can pull the seeds off and start cleaning them up. We place them in front of box fans and rotate the pile every day.
- We will put piles of seeds over a **tarp or sheet** to collect the falling seeds and keep them clean from our dirty floors.
- Drying wet seeds on a **paper plate or coffee filter** that is labelled are the only two kinds of paper we recommend. All other types end up with seeds stuck to the paper which is a huge pain! We collect an assortment of **flour sac towels and cloth napkins** that work wonders and are very affordable! Every day as seeds dry you can easily scrape them free and move them around till they are fully dried.
- For larger seeds like a pumpkin, if you can **easily snap it in half**, it is pretty good and dry. You've done well! Get them in a tight jar, label and store. If it bends or resists a snap, you have more work to do.
- For seeds like corn or beans, if you put one seed on a hard floor and **smash it with a hammer** and it shatters, it is pretty good and dry. You've done well! If it smooshes, you have more work to do!
- Very small seeds tend to dry fairly well in ambient conditions compared to large ones, but still benefit from a full dry down. They are too small to snap or smoosh.
- **Mason jars** or other tight fitting jars and containers with a rubber seal are inexpensive and infinitely re-usable. Keeping out air and moisture are important and so those with lids that have a rubber seal or gasket are excellent. We like clear jars because we can stick drying beads and tape inside to help us gauge our dryness, and look at our pretty seeds! However they must be kept somewhere dark since continual light exposure is not recommended.
- **Humidicator strips.** This simple and inexpensive roll of tape can be cut off into small pieces and put inside your seed storage jars, giving you an indicator of how dry they are. You want to shoot for being in the blue range. [Here is a link](#) where you can buy the tape.
- **Hygrometer.** We keep a couple of these hygrometers around, one in the open air just as a frame of reference and one inside our seed storage room so we know how dry it is in there. [Here is a link](#) where you can buy this hygrometer. Of course there are many different options, choose your favorite!
- **Drying beads.** We have used silica beads over and over again for years. Place beads inside a mesh bag and inside a tight jar with your seeds. Approximately the same weight of beads to seeds. With a humidity strip also placed inside the jar you can watch the humidity drop. Beads are removed when seeds are dry, and you can replenish them by baking in the oven. A safer and more environmentally friendly option are [clay zeolite beads](#).
- Once your seeds are dry, they can safely go inside a tight fitting container somewhere cool, dark and dry. A home refrigerator is really not necessary and in fact **may cause more harm**. They tend to be humid and the continual opening and closing of the door is a lot of fluctuating

temperature and humidity that confuses the seed. A home freezer is great. A dark closet in an air-conditioned home is also good. Try to keep them stable.

- If you freeze your seeds, when you remove them let the container **come to room temperature BEFORE** opening the jar. The dried out seeds will act like sponges for moisture so let them rest and thaw and then open. If you are very quickly just getting out a small sample to return the rest to the freezer that's fine.

Simple things from left to right that we use: hygrometer, humidicator strips, zeolite beads, silica beads, and good old fashioned mason jars and masking tape.



Our seeds are mostly in jars with masking tape labels. Buckets have tight fitting lids with rubber gaskets. A little piece of humidicator tape inside lets us know if they are dry enough. If not, we'll throw in some beads in a breathable sachet and dry them down more. The beads are removed once seeds are dry enough. Beads are re-charged later for re-use.



1. A simple seed drying cabinet with box fans at Seed Savers Exchange. Seed varieties are held in mesh bags to keep them separated, and are individually labelled. **2.** Old window and door screens make excellent drying racks that allow air to move through. An assortment of tupperware bins and boxes are also helpful. **3.** This is a stacked and rolling seed drying rack that Bruce built for us. It holds fans on either end and screens are fine enough that all but the smallest of seeds don't fall through. We will sometimes put a sheet like that pictured here below the seeds just in case. We label each lot somehow so we don't lose track. After a few days of bulk material getting to a good enough dry point, we process them further and then put the smaller amount into a jar with silica or clay beads for a full dry-down before storage. **4.** Daikon radishes drying down on a tarp for several days before we pull the seeds for further processing.