

Harvesting

- Having nurtured the plant, cared for the flowers, avoided cross-pollination it's now time to harvest the seed!
- First of all cut the whole flower stems off, and pile them on an old sheet somewhere airy to dry.
- Birds love seed so make sure you keep the seed heads away from hungry beaks.
- Lots of seed comes in pods or with feathery bits attached. So we must separate the seeds from the bits we don't need.
- We do this first of all by **THRESHING**.

Threshing

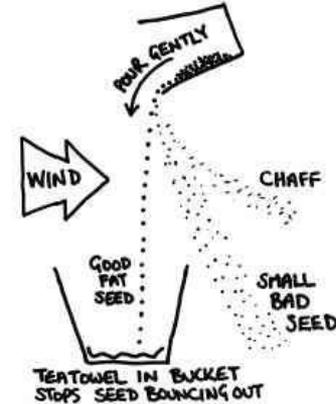
- Threshing is the process used to remove the seeds of crop plants by hitting them, using either a machine or a hand tool ... or your feet!
- Once the seed stalks are dry, jump all over them and you'll get lots of seed mixed with broken up stem and pods and other bits that you don't want (chaff).
- A great trick is to use a rubber mat (car mats work well). The rubber grips the plant material but is soft enough to stop the seeds being damaged.
- Once you've got this mix of stems and stalks and seeds, shake the pile and the seeds will fall to the bottom, and you can pull off most of the big bits of rubbish.
- If you have a garden riddle, a large holed sieve, it can sometimes help to pour the mixed seeds and debris through it, to get out the bigger bits of rubbish. If not, just pick them out by hand.
- Putting threshed seeds and debris in a bucket and tapping the sides works well too – the bigger bits rise to the surface and can be picked out. Just be patient.

Winnowing

- **Winnowing** is a method developed by ancient cultures for separating seed from chaff.
- In its simplest form it involves throwing the mixture into the air so that the wind blows away the lighter chaff, while the heavier grains fall back down for recovery.

Pour the seeds and chaff from one bucket to another in a breeze - the bits will blow away, and the seed will remain.

The first time, do it over an old sheet, so you can try again if you make mistakes.



Removing Seed from Tomatoes

Seeds can be removed by squeezing them out onto a paper napkin and then air drying them, before drying more thoroughly, see later.

Fermentation is a better option as it removes germination inhibitors and the gelatinous sheath from seeds.

- Rinse tomatoes in water to remove dirt
- Cut open ripe tomatoes one variety at a time and squeeze the pulp, juice and seeds into a container
- Cover and set aside the containers for three days at a temperature not more than 70°F (21°C).
- Stir the fermenting juices to submerge the pulpy material, once or twice daily
- After three days decant into a larger container that allows you to add three or more times the volume of water
- Pour off the pulpy water, leaving the seeds at the bottom. Viable tomato seeds will sink
- Repeat two or three times until seeds are clean

The clean seeds can then be dried.

This method is also best for extracting seeds from cucumbers.

Drying seed

This is a really important bit.

Now that you have your seed, you need to dry your seed out, or it will not keep

- Seed that is air-dry is not really properly dormant - its just napping!
It is still burning through its stored reserves of energy and will soon run flat - like a mobile phone left on.
- And you can't put napping seed in a sealed container as it is still breathing - it would suffocate.
- Without a sealed container, napping seed will soon reabsorb water from the air and start getting ready to germinate.

When dry isn't dry

- When you harvest seeds from your garden, they should be fully ripe.
- For podded or headed plants such as beans or onions that means the pods and seed heads should be fully brown and dried on the plants. The seeds might feel dry at this point, but they still contain a lot of moisture.
- For seeds from fruit, such as tomatoes or melons, they are obviously not dry at harvest.
- In all cases, seeds must be properly dried before they can be safely stored.
- Bean seeds, freshly harvested, seem dry to the touch but if you put them in a sealed jar or plastic bag, they soon turn mouldy because they aren't dry inside.
- Flower seed heads may seem dry when you take them from your plants on a sunny day, but if you put them straight into a plastic bag, you'll find them glued together with mould a few weeks later.

Drying in the air

- In many countries it is possible to dry the seed in the open air but here in Scotland the air is seldom warm and dry enough for long enough to make this a viable option.
- Air drying can be used to dry seeds prior to drying fully, more of which later.
- If you are drying wet seeds, for instance, from tomatoes, you should aim for them to be fully dry within three days. Longer than that, and you risk them sprouting in your drying tray.
- Spread seeds on a plate or tray so the air can get at each one.
- You may want to dry on waxed paper or parchment paper, because the seeds are easily removed, or on paper towels because they draw moisture away from the seeds.
- Stir the seeds while they dry. This helps uncover any seeds that have less air contact, and even out the drying. This also helps to break up clumps of seeds that stick together.
- If seeds aren't drying quickly enough, run an electric fan somewhere in the room. Even a small amount of air movement can make a huge difference.

Drying seed using rice

We'll use dry rice to suck the water out of the seed and get it really dry. When the seed is really dry it will hibernate completely.

You will need: a big jam-jar with a good lid, an old pair of tights, a rubber band, and some rice. You need at least twice as much rice as you have seed. It doesn't matter if you have too much rice, but too little won't work.

- Bake the rice on a tray in the oven for 45 minutes until it is bone dry. While it is still hot, put it in the jam-jar, about half full, and screw the lid on
- Wait patiently until the rice is cool. (If you rush this you'll cook your seeds.) So you now have a jam jar 1/2 full of very dry, cool rice
- Put your seed in a bag made by cutting off the foot of the tights, and tie it in with a rubber band.
- Put it in with the cool dry rice. Put the lid on tightly, so damp air can't get in
- Leave your seed sealed in the jar with the dry rice for a fortnight, and the dampness in the seed will be drawn out into the rice



You now have bone-dry seed that you can safely seal in a plastic bag, and it will keep for several years.

Drying seed using silica gel

- Silica gel is available as clear beads or as indicating beads which change colour according to moisture status. For example, methyl violet indicator is dark green when wet and orange when dry. Fill a container approximately 20% by volume with oven-dried silica gel beads. A mix of 10% indicating to non-indicating beads is recommended.
- Put seeds held in cloth or paper bags, into the container, maintaining a minimum weight ratio of 1:1 silica gel to seed material.
- Place the drying container out of direct sunlight, in a cool place.
- Once a week, mix the silica gel in the bottom of the container. As the silica gel absorbs moisture from the air in the container, the indicator will change from orange to green. At the same time, mix the seeds.
- The seeds can take at least one month to dry, but this depends on the initial moisture status, number and the type of seeds. Small seeds will dry more quickly so will need to be monitored more regularly.
- When the seeds are dry, seal collection in an air-tight container and store in a freezer or cold room. Add a dry indicating silica gel sachet to the seeds to monitor moisture status during storage.

Drying seeds with charcoal

- Dried charcoal absorbs moisture from the air if sealed in a container with seeds.
- Dry the charcoal before use by spreading it out on a metal tray and leaving to dry in the sun, or dry at a low heat in an oven, then cover the tray (preventing moisture uptake) and allow to cool.
- Place the dried, cooled charcoal into a sealable container.
- Spread air dry seeds above the charcoal in the drying container, on a sheet of newspaper or in paper bags.
- The wetter the seeds, the more charcoal is required. Use a minimum weight ratio of 3:1, charcoal to seed .
- Seal the drying container and keep in a cool place (avoid direct sunlight).



CONGRATULATIONS!

You can now store your seed

REMEMBER

You can only save seed from NON-HYBRID varieties.
ONLY save seed from healthy plants that are true to type.

Sharing Abundance

- By now you will have huge amounts of seed. You have created a valuable resource
- If you planted kale, you will get about two and a half kilos of seed from a 20-foot-long bed of 30 plants. That's three-quarters of a million seeds - and if every one of those was given away or swapped, and then grown, you will have created more than 500,000 kilograms of kale! More than enough to feed all your friends and neighbours, and their families.
- So you can see that even one person, on a small scale, can make a real contribution to local food security.
- Take your spare seed to a local seed swap, or even better, organise your own.
- Join a seed-circle: one person can grow kale seed, another parsnips, another cucumber, etc, etc. You'll all have bags of seed - you can all just swap with each other, so no-one has to save seed from more than a couple of things, yet you all get seed of lots of different plants.
- It will save you a fortune, and you'll get great, locally-adapted varieties. Just remember, all this is only possible because you are growing real, open-pollinated seed.
- You can't do this with hybrid (F1) varieties. Funny how the seed companies are so keen on selling you hybrid seed, isn't it?





If you have enjoyed reading about seed saving, why not join a SEED-CIRCLE and share your interest, enthusiasm, and of course your seeds, with others in your area.

Contact robin@abundantborders.org.uk

BIBLIOGRAPHY

Realseeds.co.uk

The website has lots of great information on how to grow, save and store seeds. They also sell seed to get started! We owe them special thanks for allowing us to use a lot of their information in these pages.

Back Garden Seed Saving – Sue Stickland

A fascinating book with lots of detail about saving seeds and it has easy to follow crop-by-crop guidelines.

Abundant Borders

There is lots of great information on our website at abundantborders.org.uk
We are happy to answer your questions through our Facebook Group
(<https://www.facebook.com/groups/virtualcommunitygarden/>)

Videos

A great selection of videos from DIY seeds
(<https://www.diyseeds.org/en/films/>)

On-line

Royal Botanic Gardens, Kew.
(<http://brahmsonline.kew.org/Content/Projects/msbp/resources/Training/08-Small-scale-drying-methods.pdf>)