NORFOLK Organic GROUP

We aim to promote the organic movement in Norfolk by encouraging people to grow organically and use resources sustainably, maintaining the link between people, food and the soil.

garden organic

Soil Association

Seeds are amazing!

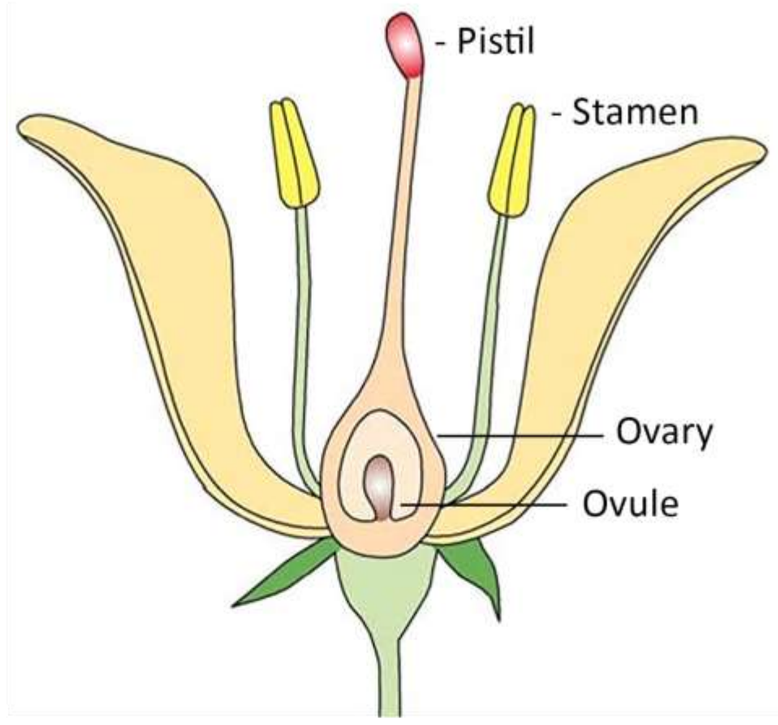
Flowers carry male and female reproductive organs.

The **stamen** is the male part of the flower, which produces **pollen grains**. The female part is called the **pistil.**

When the **pistil** receives a pollen grain a tube is formed which grows down until it reaches the **ovary**, where it fertilises one of the **ovules**. This then develops into a **seed** which the ovary encases in a fruit or seed pod.

Pods may be thick and hard as in a coconut, paper thin as in the peanut or fleshy as in the pomegranate.

The **embryo** within has all the genetic instructions to grow into a new plant, also inside is a supply of nutrients to get the seedling off to a good start.



Seeds lie **dormant** (resting inside their coat), usually waiting for optimal conditions. A seed needs water, air and warmth (but not light) to become a seedling.

Some seeds do not keep well, like the parsnip, other seeds survive for a very long time. The **oldest seed** that has grown into a plant was a 2,000 year old Judean date palm seed.

Some plants make thousands of seeds, others only a few. **Orchids** make the **smallest seeds** of all plants, they are just like specks of dust.

The **largest and heaviest seed** in the world is the **coco-de-mer** or double coconut. It can be half a metre long and weigh up to 25kg. Despite this it floats in the sea to be dispersed elsewhere...

Plants have evolved many ways to disperse their seeds to new areas, using wind, water and animals.

Seeds are often inside fruits, tempting animals, including humans, to eat them and they then spread the seeds through faeces, but only if you have a compost toilet!

Many kinds of seeds are good nutritious food for animals and people. The varieties of grain that people grow, such as rice, wheat, and maize, are all seeds, as are nuts.

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Why organic?

An organic gardener works **in co-operation with nature**. Growing produce without chemicals, from organic seed, and saving the seed each year brings us back **in alignment with nature's systems and cycles**.

If all 15 million UK gardens were cared for organically, it would create **a more healthy, sustainable environment** for our families, plants and wildlife.

Better for the planet

Saying no to chemical fertilisers and pesticides, (which come from burning fossil fuels) **reduces environmental pollution** and greenhouse gas emissions.

Instead we **build fertile soils naturally**, using nitrogen-restoring plants and compost made from kitchen waste and garden cuttings. In no-dig gardening this is laid as mulch on the soil.

These methods ensure that the **carbon** which plants return to the soil, **stays in the soil**, vital in the fight against **climate change**.

Better for nature and wildlife

Organic gardens provide homes for bees, birds and butterflies, instead of killing them and the plants they depend on by using pesticides and weedkillers.

Pesticides have found their way into our food, our soils, our rivers and our wildlife.

Around half of pesticides used in the UK are fungicides, which used repeatedly kill the microbial life essential to the soil ecosystem and affects all that depend on it.

Better for People

Healthy plants come from healthy soils, damaged soils cannot supply the nutrients plants need, meaning less nutrients in our foods.

Recent studies found organically produced crops (cereals, fruit and vegetables) were **more nutrient dense** and had up to 68% more antioxidants than non-organic.

Organic foods have lower concentrations of pesticides and the toxic heavy metal cadmium.

Organic farmers are allowed to use 'natural' pesticides (made from plants) but home growers can be **completely pesticide free**.

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Cycle of abundance

Seeds obtained from an organic supplier

Increasing abundance

sow

grow

prepare the ground

feed the soil

weeds

Diverse stock of resilient seed adapted to local conditions

compost

harvest

seed husks

plant residue

kitchen scraps

seed from community

store seed in cool dry conditions

selected plants allowed to set seed

food

surplus seed

save seed

Community

home

surplus food

share the abundance

Community events such as seed circles and seed exchanges

Nutritious fruit and vegetables as part of a healthy diet

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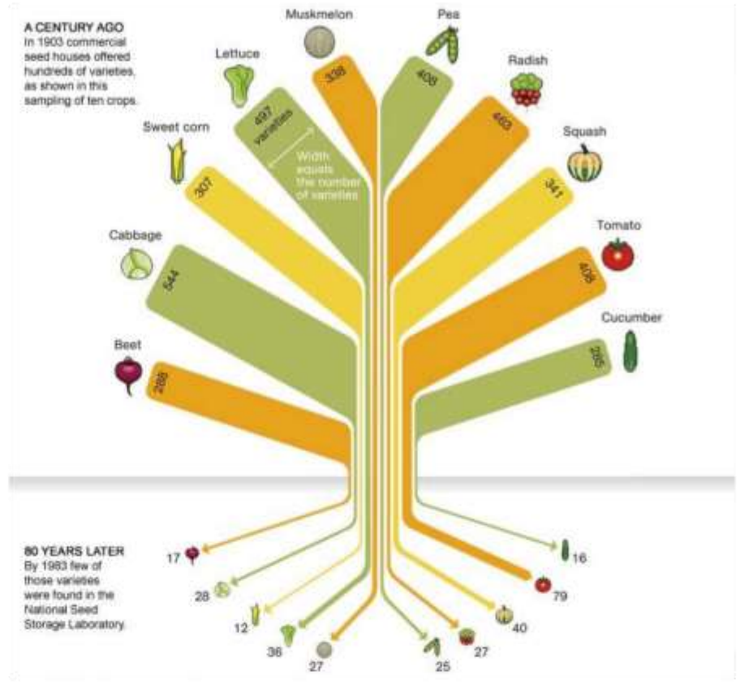
Seed saving

The number of vegetable seed varieties has reduced massively in the last 100 years.
This means there is **less diversity** for future breeding, and **less resilience** to disease and climate change.

Saving seed is important because:

- We preserve varieties which are disappearing.
- Much of the seed we buy is bred for supermarkets, which means it tends to produce vegetables that have uniform shape, bland taste, crop all at once and have tougher skin in order to survive transportation.
- Home saved varieties adapt to specific local conditions and so grow better.
- Modern varieties are often bred to require chemical fertilisers and pesticides.
- Seeds are now difficult to obtain due to a surge in veg growing.
- Observing plants as they mature, flower and seed creates an intimate relationship with the natural world.
- It ensures seed is retained as a freely available natural resource, not owned or controlled by corporations for profit.
- It's fun to swap and share in the community!



Open pollinated or self-pollinated plants are best for seed saving.

Open pollination occurs naturally by wind, insects, birds or animals (including humans) carrying pollen between plants and mixing genes.

Self-pollination occurs in flowers with male and female organs in the same flower, such as peas and tomatoes - so these are nice and easy for seed saving beginners.

To avoid **cross pollination** don't grow varieties from the same family nearby.

F1 hybrids are inbred for consistency, and usually don't produce viable seed.

You can find techniques for seed saving in books and online. In short:

- **Selected healthy plants are allowed to flower and produce either a seed head, pod or fruit. Fruit should be fully ripe before harvesting.**
- **Seed is harvested, cleaned and in some instances washed, then dried, labelled and stored in cool, dry conditions.**

Some vegetables such as carrot and parsnip only produce a root in the first year and a very pretty flower in the second, they are called **biennals.**

Norfolk Organic Group offers a seed swap among members as well as a knowledge bank of people who are also happy to share their experience growing and saving seed.

We need to dispel the myth that somehow shop bought seeds are better. Let's preserve seeds by using them, saving them, and passing some on.

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Where to start

1. Join a local group like **Norfolk Organic Group (NOG)** and get inspired.
2. Read books, watch videos, talk to others and get even more inspired!
3. Prepare your garden vegetable beds or investigate getting an allotment.
4. Buy organic seed, register for some heritage seed with **NOG** or visit the **Garden Organic** website and join the **Heritage Seed Library**.
5. Sow your seed, watch your plants grow, enjoy your harvest and save your seed.
6. Form a seed circle with friends and neighbours. Exchange seed in your circle or visit seed swap events such as those run by **NOG**. Swap stories of successes and challenges.
7. Have **fun**, reconnect with the **nature** and take satisfaction from knowing that the food you produce is **healthy** and full of **vitality.**

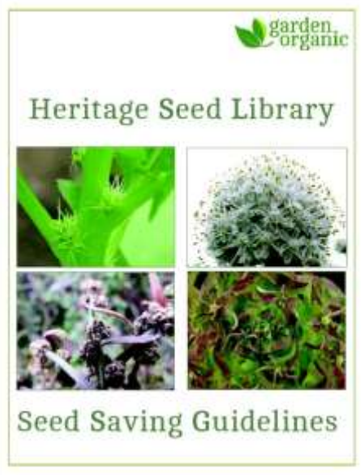
A Selection of Organic Seed Suppliers:

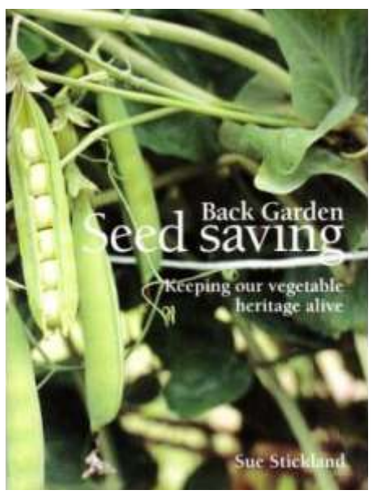
- Tamar
- Real Seed*
- Seed Co-operative
- Vital Seeds
- Seeds of Change

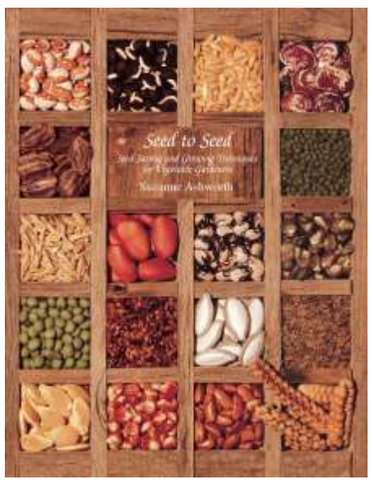
* lots of useful seed saving info on their website

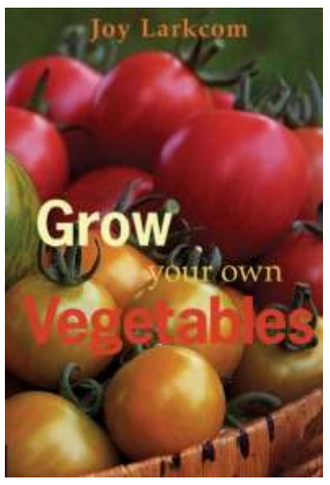
Useful reading material:

- Garden Organic - Seed Saving Guidelines. Available on their website
- Back Garden Seed Saving by Sue Stickland
- A Guide to Seed Saving, Seed Stewardship & Seed Sovereignty by The Seed Ambassadors Project. Free download available on **Permaculture Market** website
- Seed to Seed by Suzanne Ashworth
- Grow Your Own Vegetables by Joy Larkcom









Numerous videos are available online including a number by **Charles Dowding** on **No Dig Gardening**. These cover a range of topics including sowing seeds, raising plants and seed saving.