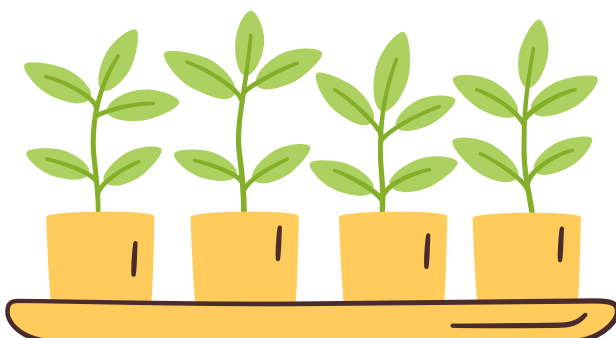
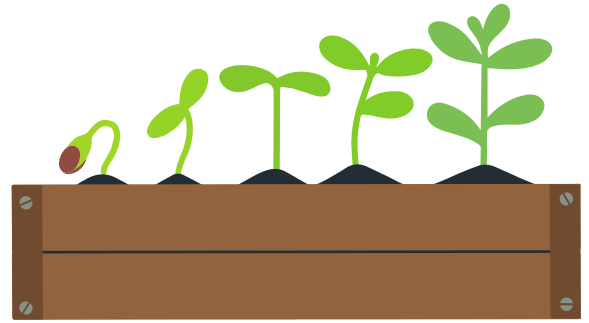


# Germinating Seeds and Propagating

Plants can propagate in many different ways, giving them a head start when having to outgrow animals that eat them, when we grow, or when we try to rid our patch of weeds, understanding how plants propagate can help us decide what to do best.



## 1. Key Ideas

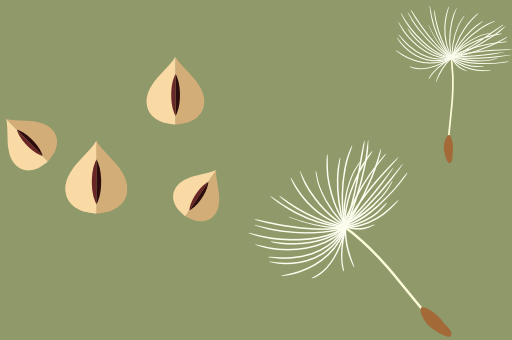
Plants can grow from seed which is a genetic mix, or from parts of the plant, meaning it is genetically the same as the parent plant. While we are familiar with seeds, there are common plants we often grow as tubers, bulbs, rhizomes, and corms.

In the garden, you can also see plants popping up from roots, called suckers. A lot of weeds love spreading that way. Potatoes are another piece of a plant - the tuber - when planted they can grow again into an entire plant and even create more potatoes.

Germination is the process of a plant developing leaves and roots from a seed. It is a process of slow change and transformation which we can observe as a series of stages.

## 2. Seed Dispersal

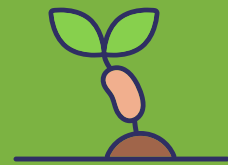
Depending on shape, weight and size, a seed can travel far away or go deep into the soil. Some seeds are carried and eaten by animals, others float on water or fly away in the wind. This is why certain plants are successful in colonising large areas, seemingly out of nowhere.



## 3. Germination

What does a seed need to grow? A seed can travel a long way before it settles. To start growing, the temperature and moisture content must be right. Often this means it has to be springtime. Plants which originate from warmer climates may need to be started indoors.

As the seed starts growing, water and sugars are gradually used up - this is why we need to make sure seeds are watered and put into a good soil to grow.



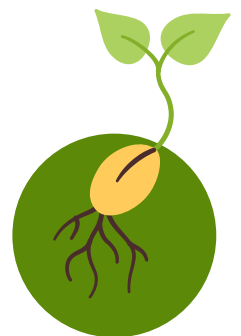
## 4. Sowing

Seeds can start germination in a small pot, with a well-draining seed compost or other medium to protect the seeds and seedling from animals and the environment. This also means that we use only a little compost, and then select a few strong plants for planting in bigger pots and then into our garden.

Some seeds are better sown directly into their growing position in the garden, as they don't like to be transplanted.

Seeds have to be moist, but not wet, all the time. This means that after sowing it's time to water daily. Once they have germinated, seeds are susceptible to fungi, when their stems become brown or mouldy and they slump (known as 'damping off').

Using a sterile compost rather than a homemade one at the sowing stage can help prevent this. Often though, shop bought compost includes peat which is not good news for our planet. Some people use coir, from coconut shells, or fresh sub-soil dug up by moles. Damping off can also be reduced by letting air circulate.



## 5. Record Keeping

It's easy to forget what you have sown, and where.

When planting in the garden it's helpful to use labels, and to keep records of where and when you have sown things.



## 6. Seedlings

Once your seeds have germinated and have at least 2 true leaves (the first 2 leaves often do not look like the adult plant) it's a good idea to 'pot your plants on' into compost full of nutrients.

Use a pencil to loosen the soil around the seedling, while holding the seedling at the leaves. Holding the stem means you might snap it off and kill the plant. Ease out the seedling.

In a bigger pot filled with regular compost, make a wide hole with your pencil, drop in your seedling and hold it roughly at the same depth as it was when it was growing before. If you need to squeeze the roots in, your hole is not big enough.

Now place your pencil a bit away from the plant and push the soil in towards the roots, without touching the roots. Do this from a few directions, until the seedling is firmly planted. You can now go around the edges of the pot with your thumb. Pressing it all down a little bit more.

Your seedlings will need water directly after, and then keep watering daily.

