

General Advice on Seed Germination

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Seeds are living things. Given the correct conditions, they will generally germinate quickly and give satisfaction. The correct conditions vary for each species.

The general guidelines given for greenhouse-sown plants should be of help. With field sown plants we are all at the mercy of the weather.

Sowing

A soil-less seed compost is best. Soil based composts generally give less good results. Maintaining the compost moist enough for the seeds and in the correct temperature range for the variety is critical.

Emerging seedlings are **vulnerable to disease**, particularly damping off which is an invasive fungus (*Pythium* spp.). A precautionary drench of the compost prior to sowing with a fungicide is helpful.

Sow seed at the **recommended time**. Bear in mind that southern Europe and northern Europe sowing periods will need adjusting to local conditions. As a general guide, these are the usual sowing times:

HA (hardy annuals): February - May. If sown direct outside, sowing should not be made until the soil has started to warm up after winter. (Some hardy annuals can be sown outdoors in late August/early September for flowering early summer the following year.)

HHA (half hardy annuals): January - April.

HP, HB (hardy perennials, hardy biennials): April - July

TA (tender plants, including most bedding plants): December - March.

Sow in plastic plant-pots or seed trays, preferably new and hence **sterile**. Fill the container with compost to within about 3cm from the top and lightly firm down. Once seed is sown, add a thin covering of fine compost or vermiculite.

Soak the compost by immersing the container in water, or by a gentle overhead drench and spray the surface with the fungicide.

Sow the seed thinly and evenly. Firm the seed down and then cover as appropriate, preferably with vermiculite. Generally, leave fine seed uncovered, otherwise thinly cover. Some species require light to germinate, some dark, so please check for any specific recommendations.

Wrap the sowing container with clear plastic. There should be no need to water the seeds again until after they germinate. The compost will stay moist; drying out is a common cause of germination failure. **DO NOT** leave exposed to full sun.

Germinate the seeds at their appropriate temperature. Most species, with some exceptions, are happy to germinate in the range 18° – 22°C. A common cause of poor germination is temperatures that are too high, too low, or too variable. A certain way to overheat seeds is to leave them in direct sunshine! Maintaining the seeds at the correct moisture levels and temperature is critical to success in germination.

Some species, particularly ornamentals, have a **dormancy mechanism** that delays germination sometimes by months. There are methods to overcome this.

Hard-coated seeds should be soaked in water before sowing for 24 hours or the seed surface can be etched (scarified) with a sharp knife, to allow water to penetrate.

Vernalisation and stratification: some seeds require exposure to moisture and low temperature for an extended period. This can be achieved by sowing the seed and leaving the container outside in January or February for some weeks and then bringing inside (to about 15°C). Alternatively, put the seed in a refrigerator at a temperature of 4°C for a similar period.

Pricking out

When large enough to handle, the young plants will need pricking out and potting on. It is a good idea to select individuals with an assortment of sizes. It is often less vigorous seedlings that produce flowers with the most interesting colours.

Storage

If you wish to keep seed, it should be kept cool and dry, ideally in a domestic fridge.