



THE LANDSCAPE CONSULTANTS

Your design and installation team



Seed Starting

The love of gardening is a seed once sown never dies.
Gertrude Jekyll

Annual – a plant that germinates, flowers, produces seeds and dies within one year.

Biennial – a plant that produces vegetative growth in its first year, flowers in its second season, and then dies.

Perennial – any plant that normally lives for more than two years.

Damping off – a lethal disease of seedlings caused by soil-borne fungi.

Dormancy – a general term denoting a lack of growth of seeds.

Seed – the mature ovule of a flowering plant containing a mature embryo.

Undercover Sowing

Cleanliness is one of the most important and necessary things that you have to worry about when you are going to start to germinate seeds.

- Trays and pots should be sterilized before use.
- Fresh compost should be used each season.
- Treat emerging seedlings with Damp-Off.

Most seeds germinate best, if the seed trays are covered by clear plastic domes. These domes are available in 3 and 6" height. They are used to retain the moisture in the compost. Some seeds may need to germinate in the dark; you can simply cover the dome with a sheet of newspaper and leave it in a light, warm place.

A daytime temperature of 65-75F, with a drop at night to about 55F is good. When the seedlings have emerged, the daytime temperature should be a little lower to about 65F.

Sowing Biennials and Perennials

Biennials can be sown in seed trays where they can grow undisturbed until ready for transplanting. Seeds that are sown in the spring will result in plants that are sturdy enough to be moved out into the garden in the fall, normally when the summer bedding plants are finishing off.

Some perennials can be sown indoors early in the spring and then transplanted out in late spring to flower during that summer. However the majority of perennials can be grown in the nursery bed during the spring and summer, and then planted out to their permanent positions in the fall, to flower the following season.

Unlike annuals, which only last the one-year, perennials will occupy the same garden for years. Thorough preparation of the soil is important to ensure the plants enjoy a long life.

Sowing Trees and Shrub Seeds

These seeds can usually be sown at any time of the year. It is helpful to pre-chill the seeds and most large seeds benefit from a soaking in luke warm water for 1-2 hours before sowing. Free draining seed compost is preferred. Sow seeds into individual pots which should be labeled and then enclosed in a clear plastic bag to prevent moisture loss. Place the pots on a well lit but not sunny windowsill. Once the seedlings start to emerge, remove the bag and lower the temperature to around 60F. Give the seedlings plenty of light but shade from the strongest rays of sun. An alternative method, which is pretty foolproof but slower is to plunge the pots, after sowing, up to the rims in a shady part of the garden or in the cold frame. It helps to cover the pots with a large upturned jam jar or piece of glass. The compost must always be moist but never soggy. Germination can take over 12 months in some cases.

When the seedlings are large enough to handle, carefully transplant into pots of similar potting compost and grow in a cool and well lit site. Once the seedlings show signs of becoming established, plunge the pots out into the shady sheltered part of the garden and bury them up to the top rim of the pot. Keep the pots well watered during the spring and summer. Plant out into a reserve garden in the fall and hold for 2-3 years until they have reached a size that they can then be transplanted to their final position.

Coping with Tiny Seeds

Tiny seeds that are as fine as dust can be difficult to handle. Here's how to successfully deal with this task.

- Use small pots for sowing, 4-5 inch is adequate
- Fill the pots to overflow with seed starting compost, then firm down into the pot.
- Pour a heaping teaspoon of silver sand into the seed packet and shake to mix the sand and seeds.
- Sow the seed direct from the package, tapping it slowly to release the sand-seed mixture evenly over the compost.
- Do not cover the seed with compost, simply press them into the surface with a spoon.
- Water the compost from underneath by standing the pots in tepid water.
- Cover with a piece of glass, cling wrap or seal in a clear plastic bag to keep the moisture in the compost and the air humid.
- Fine seeds have a lower rate of germination than the normal-sized seeds. So the correct temperature for germination is very important.

Pricking Out

When the seeds germinate the first set of leaves that appear are the cotyledons or seed leaves. These are usually oval, fleshy leaves that bear no resemblance to the mature leaves of the plant.

It is said the seedlings should not be pricked out or transplanted until the first true leaves appear, but you must use common sense and move them only when they are large enough to handle. However in the case of large seedlings this may be before the true leaves have developed.

The golden rule is to never handle the seedlings by their stems, which bruise very easily, but always by their seed leaves. Some people use a sharpened piece of wood or a metal device called a widger to separate and ease out the seedlings, taking care not to damage the delicate roots.

It is good planning to prepare your planting holes in the well-moistened compost before you actually lift out the seedlings from the sowing container. Place the seedling into position with the roots falling neatly into the hole, and then gently firm the compost into contact with the seedling, while still holding it by the seed leaves.

Hardening Off

The final operation before planting out your seedlings is to harden them off. The idea is to slowly acclimatize the seedlings to the harsher conditions of the outdoors. Allow a minimum of ten days or more to do this. Start by putting the trays of seedlings out in a sheltered place outdoors for two hours during the day and lower the temperature of the greenhouse or place that you have the seedlings stored, for the rest of the day. Increase the length of period that the plants stay outdoors each day, so that by the time the frosts have ended, the plants are fully conditioned to being outside. Don't forget to water the trays, but protect from rainfall.

Damping-off

This term is used to describe underground, soil line, or crown rots of seedlings due to unknown causes is damping-off.

The seedlings will discolour or wilt suddenly or simply collapse and die. Above ground symptoms of root rot will include stunting, low vigor or wilting on a warm day. The seedlings may have yellow leaves that will fall prematurely starting with the oldest leaves first.

Ways to prevent damping-off

- use sterile well drained soils
- seeds must not be covered more than 4 times their thickness
- plants must not have their crowns below the soil line
- use pots with drainage holes and do not allow pots to stand in excess water
- avoid overcrowding and overfeeding of plants
- avoid spreading infected soil from one place to another, disinfect tools with one part bleach to four parts water
- sow all your seeds on top of the growing media, then cover the seeds to the right depth with a material less likely to harbor fungi; milled sphagnum moss, chick grit, coarse sand
- mist seedlings once or twice a day with water containing a anti-fungal agent such as; Captan, chamomile tea, clove tea, a one time dusting of powdered cinnamon on the soil surface
- provide constant air movement (very important)

Fungicides can be applied as a soil drench after planting or they can be incorporated into the soil before planting as a dust. Or they can be sprayed in mist form on the seedlings. Once transplanted, only those seedlings that are sensitive to damping-off need to be misted daily until the first or second seed leaves have been produced. Good Luck!

Easy Cold Frame

A few sheets of ½ inch plywood will make a quick and easy cold frame.