Unlike hardy plants, half hardy plants will not tolerant frost and need to be given protection. These include half hardy annuals and half-hardy perennials.

Half Hardy Annuals

Like hardy annuals, these will complete their life cycle within a year. They tend to need a longer growing period than hardy annuals. Many popular summer bedding plants fall into this category, being grown under protection and gradually hardened off for use outdoors when the risk of frost has passed.

Examples of half hardy annuals include: Ageratum, Impatiens, Laurentia, Lobelia, Marigold, Nemesia, Nicotiana [some are beautifully **scented** – eg Nicotiana x s. 'Perfume Deep Purple' (T & M) and Nicotiana F1 perfume Mixed (Suttons)], Petunia, Thunbergia, Verbena, Zinnia. Morning Glory 'Candy Pink' is a new introduction from T & M, which is worth growing for its useful climbing habit, and unusual coloured flowers.

Half Hardy Perennials

The literal meaning of half-hardy perennial is a plant that will last year after year provided that it is given winter protection, as they will not tolerate winter conditions outdoors. This is certainly true of some of the plants in this group - Geraniums, Canna and Dahlias, for example, which many gardeners will lift and give frost protection to over winter. However others such as Gerbera and Mimulus are regarded as temporary pot plants and normally discarded after flowering.



Sowing

Seeds of plants such as half-hardy annuals, half-hardy perennials and some hardy perennials need a higher temperature in order to germinate properly. They may be raised in either a heated greenhouse, in a propagator or even on a sunny windowsill.

Make sure all equipment is scrupulously clean, be it pot, propagator or the glass on the inside of the frame or greenhouse. Seeds should be sown into proper seed compost, ideally. Multi-purpose may be used but, especially if the seeds are fine or expensive, it is far better to use seed compost - germination rate is likely to be better. The compost should be just moist. If it is too wet, spread it out over newspaper to dry it off a bit and if it is on the dry side, gradually add some water until it is slightly moist. Use either a seed tray or 3" pots and fill to ½ - 1" from the top with compost (for very fine seeds fill to the top). Tap the pot or seed tray down on a hard surface to settle the compost and then firm it down gently, using a wooden presser if you have one. Sow larger seeds individually and mix fine seeds with silver sand prior to sowing, taking care to sow thinly enough. Cover with compost to the required depth. Unless the compost is moist all the way through, place the pots or tray(s) into a shallow depth of water, removing when the surface of the compost is moist, and allow to drain. Either place in a propagator or cover trays with a sheet of glass or plastic. Pots should be sealed in a polythene bag, with the bag sealed at the top. Where a propagator is used, put the lid on and close the vents. If the propagator is heated, switch it on, adjusting the temperature on automatic temperature control models.

Aftercare

If a build up of moisture occurs on the inside of propagators open the vents until it clears. Where glass/plastic is used, this should be turned daily. Polythene bags may be turned inside out if moisture builds up. If the compost surface dries up, water using a small watering can fitted with a fine rose, but take care not to over-water. Cheshunt Compound may be mixed with the water, which will help prevent any problems with damping off. Once the seedlings emerge, remove the cover and ensure they get sufficient light. When the seedlings are large enough to handle, thin them out carefully, holding them by a leaf, rather than the stem, and ease them out with a dibber or kitchen fork. Smaller seedlings may be spaced out in rows in seed trays, larger ones transferred to 3" pots. Use either a seed and potting compost or multi-purpose compost at this stage - as the seedlings start into active growth they will need a higher level of nutrients. To transfer seedlings to their new home, make a hole in the compost with a dibber or pencil, put the seedling into the hole and firm lightly round the root ball. Water and place in a warm, bright position to grow on.

Hardening off

This is the gradual acclimatisation of the young plants to outdoor conditions. Begin by putting the plants outdoors for two hours in the daytime, either in a sheltered position or a cold frame. (Lower the temperature of heated propagators/greenhouse, where applicable, when the plants are brought back in.). Gradually increase the length of time that the plants are outside, so that when the danger of frost has passed they are fully adjusted to outdoor temperatures. Whilst the plants are outdoors they should be protected from heavy rain.