

Sowing and stratification

Most seeds will need to be washed and surface dried (on paper towels) before sowing / stratification.

Direct sowing, e.g. beech nuts

Some seeds can germinate as soon as they mature – they do not enter a state of dormancy – so they can be directly sown straight away.

1. Fill 1lt pot with seed compost
2. Use a presser board to firm the soil to simulate firm ground
3. Sow 9 – 16 seeds to a pot
4. Cover with grit for darkness, drainage and to protect against pests



Stratification, for seeds with embryo dormancy or double dormancy

Some seeds enter a state of dormancy during which they will not germinate or grow. They require a period of chilling / cold to stimulate germination. (See seed dormancy pdf)

Whilst seeds can be sown directly into the ground, winter conditions may be too mild to break seed embryo dormancy and germination can be delayed for 12 months.

Stratification simulates winter conditions by holding seeds in moist cool conditions for a number of months (dependent of species).

Method

1. Sieve the seed compost (sieved mixed peat and washed limed-free silver sand) and place in a stratification pot (margarine tub is ideal).
2. Add the dried seed and mix with a spoon.
3. Give 2 squirts of water from water spray bottle and mix again.
4. Firm the compost ensuring all seeds are covered.
5. Include a label with accession number, plant name and removal date inside the pot.
 - Most will need to go into the fridge for cold stratification (1-5°C), such as spindle, hornbeam, sapphire berry.
 - Seeds that require further ripening will require warm stratification, leaving in a heated room, e.g. sapphire berry.

The length of time for cold and warm stratification will vary from seed to seed but 2-3 months is usual, with conifers needing only 4 weeks.



Hand collected spindleberry seeds



Seed extraction from fleshy fruit using wire mesh



Sieving seed compost



Adding dried seed



Label with removal date

6. Label the pot lid with the accession seed batch number, plant name and date for removal.

7. Place in a fridge.

7. Check each week – stir, remove condensation from lid, check compost moisture levels, add a squirt of water if necessary, remove any mouldy seeds.

After stratification – 2-3 months later



1. Prepare a seed tray – overfill with compost
2. Use a stake to press firmly in the corners
3. Use a 'straight edge' to flatten the compost



4. Use a presser board to firm the compost
5. Leave to soak in water until compost is uniformly damp but not wet.
Leave to drain for up to 2 hours
6. Take the stratified seeds and sieve the compost until the seed remain.
For particularly damp compost tip out onto the surface and remove seeds
by hand.



7. Count the seed – check against the number stratified / accession book
entry when stratified – and record the number of seeds that have
survived stratification in the accession book / database. A few seeds for
some species may have rotted.
8. Sow by placing the seeds on top of the compost. Use a presser board to
gently press the seeds down.
9. Cover with horticultural grit, add the label from the stratification pot. At
Westonbirt, the seed tray is then placed in P1, the cold greenhouse.

These seed trays will be monitored for the next few months – they are likely to germinate around April / May.