



STEP 1 - Selection of trays for sowing ferns



STEP 2 Three examples of fern development. Prothalli just forming, prothalli well grown with true ferns just starting, and prothalli replaced by small fern plants



STEPS 3 & 4 - Spore pan ready for patching out, and a tray of patchings ready for potting

Spores are produced during the late summer on the underside of the frond in many fern species. Occasionally they are in separate, fertile fronds that look less leafy than the normal ones.

You can tell if a fern is producing spores as it often dusts its own leaves or any cobwebs etc., with a fine, brown powder. These are the spores which can be collected by laying a frond on white paper and leaving for a day or so to fully shed.



For many people the best way to obtain the widest range of spores is to join a specialist society, such as the BPS, which organises a spore distribution based on donations from fellow members.

BPS members may choose up to 20 free packets from an extensive list. Spores can also be obtained from BPS stands at many national gardening shows.

For further information please visit the BPS website

at www.ebps.org.uk

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Growing ferns from spores A basic practical guide



Produced by
The British Pteridological Society -
for fern enthusiasts

STEP 1 – Prepare the sowing pots

Clean a suitable sowing container
Fill with compost to 1-3 cm below rim
Water and sterilise
Allow to cool

STEP 2 – Sow spores and monitor

Sprinkle spores over surface of compost
Place in clean, sealable plastic bag
Label and keep out of direct sunlight
Look for the formation of prothalli (see pictures)
Look for the formation of small fern plants
Little intervention should be needed at this stage

STEP 3 – Patch out small fern plants

Clean suitable small pots/modules
Fill with compost
Water and allow to drain
Prick out individual ferns, or clumps
Place in clean, sealable plastic bag
Label and keep out of direct sunlight

STEP 4 – Pot up fern plants

Wait until small plants are filling their pots
Pot up the small plugs into larger pots
Label and keep out of direct sunlight
Partially cover and mist if necessary to lessen shock of removal from plastic bag
Grow on and plant out once established

Suitable containers include small plastic pots, translucent plastic boxes or cut down milk bottles. Ensure they have drainage holes. Ferns are not generally fussy as to compost – however, peat based is ideal and coir is often not suitable. Do not add any fertiliser at this stage. Sterilise by placing kitchen towel over the tray and pouring boiling water over to thoroughly soak the compost. Allow to cool completely before sowing. Remove the kitchen towel immediately prior to sowing. This will remove any stray weed spores that may have landed while the tray was cooling.

Thin and even sowing is ideal. Spores are VERY small and dust-like – a small speck goes a long way. After sowing each pan, place in a sealable plastic bag and wash your hands to reduce cross-contamination. Spores do not grow directly into ferns. Initially prothalli are formed. They may form after a few weeks or a few months or even a year after sowing. Be patient! Eventually the prothalli will be replaced by small fern plants. This should happen naturally, but may take some time. Something that may speed this process up is spraying with sterilised water if the pots look dry. Something that slows it down is the prothalli being too crowded – try taking out some and hence making holes in the blanket of growth if the spores have been sown thickly.

Ideally, patch out when the fern plants have several leaves and are clearly growing. Patching out when very small is possible, but tiny fern plants will need delicate handling and aftercare. The same composts can be used as for sowing. Again, additional fertiliser is not normally required. Choose pots or modules suitable to the size of the plants and of the bags you intend to use. Once potted and sealed, the little fern plants are again fairly trouble free and should be left to grow. They can be slow and it may be up to a year before you will want to pot them on again

This is one of the trickiest stages of fern spore growing. This is because the fern plants have been in their own microclimate in the plastic bag since sowing and it's a shock to be introduced to the outside world. Two methods are possible. Either open the bags gradually, allowing more and more air flow, eventually cutting off the top of the bag. After a week or two of acclimatisation, pot them up, water and place in a shady frame. Alternatively, you may pot up the plants and acclimatise them after potting by giving them some temporary cover and misting if they show signs of wilting, again over a week or two. Whatever method you chose, some losses are likely, but many will survive.