

Mistletoe Information Sheet Nº5: Growing Mistletoe

Information about *Viscum album*, the native mistletoe of Britain & Northern Europe



Mistletoe Matters

www.mistletoe.org.uk

Growing mistletoe - dos and don'ts

Many people want to grow their own mistletoe – but most get confused and misled by traditional, but inaccurate, gardening lore on how to proceed.

Common myths include;

“seeds have to pass through a bird to germinate”

“seeds need the fertilisation from bird droppings to germinate”

“seeds should be placed under a flap in the host bark”

“seeds should be covered in muslin/raffia/etc to hold them in place”

“seeds must be planted on the same host as their parent plant”

“the best location is in old fissured bark”

All of those statements are false.

This information sheet describes how mistletoe germinates and gives stage by stage instructions on how to grow your own. The instructions are tailored to European Mistletoe *Viscum album*.

Germination process

Viscum album berries contain one seed, enclosed in sticky mucilage. Natural dispersion of the seeds is via birds which either swallow the berries whole or separate the seeds to swallow just the berry pulp. If swallowed the seeds are excreted, still sticky, and will glue onto a tree branch. If separated beforehand, the sticky seeds are wiped from the bird's beak, onto a tree branch.



The sticky glue soon dries, fixing the seed in place. Germination (which needs light) follows, with each seed producing one or more (seeds can contain several embryos) green hypocotyls. These bend to touch the branch surface and flatten into a holdfast on the bark. Shallow penetration of the bark (only as far as the cambial cells) follows. This process can take some months.

Until the cambial cell connection is made the seedling is independent, only becoming parasitic after connection is made. Mistletoes do not actually grow *into* the host wood – they simply trick host cambial cells to develop host wood around them. The resulting fused host/parasite woody structure (the haustorium) grows larger each year, eventually dominating the supporting branch.

How, when, and the need for patience

The best way to grow your own mistletoe is to emulate the natural process described above – separate the seed from the berry, glue it with its own glue to the outside of an undamaged branch, and just leave it to grow.

Remember that the seeds, and seedlings, need light to develop (so don't cover them) and that penetration is only to the cambial cells, best achieved where there is young thin bark. Do not be tempted to cut into the bark as that will damage the cambial layer – let the mistletoe seedling penetrate intact healthy bark by itself.

You need to time it right – germination success is highest in February, March and early April. Plant lots of berries to be sure of success (many germinating seeds are eaten after planting). And remember mistletoe is dioecious – each plant will be either male or female so you'll need at least two plants to get berries.

Lastly, be patient! Mistletoe seedlings grow very slowly in the first 4 years – so it'll be some time before you get a significant plant. It grows quite fast once it is well-established.

Squeeze out the seeds

Freshly harvested berries are best, though Christmas-cut berries can be kept if left in a cool but well-lit place until February. Start by squeezing the seed from each berry – you'll



find they come out enclosed in a ball of sticky jelly-like viscin. Try to remove as much of this jelly as possible, as the seeds seem to germinate better when fairly 'clean'. You can stick several seeds on your hand whilst you squeeze out more.

Choose a suitable host

Then choose your host. *Viscum album* will grow on a very wide range of host trees but to maximise chances of success it's best to choose one of the most susceptible ones. These include Cultivated Apple, Hybrid Poplar, Hybrid Lime, plus Hawthorn and indeed most shrubs and trees of the Rosaceae family (though not *Pyrus* or *Prunus*). Exotics such as False Acacia are also particularly susceptible

Do remember that mistletoe is parasitic, so it will adversely affect the growth of the branch it is on.

Plant your seeds

Avoid older branches and the trunk, they are less suitable for the mistletoe and, if it takes, will mean it has too much influence on the tree. Choose young branches with smooth bark. 3 to 5 cm diameter is a good guide. Horizontal branches are easiest.



Stick those seeds you kept on your hand onto the branch by wiping them on one by one. The side or underside of the branch is best – as this gives them enough light to germinate but reduces the risk of desiccation (until the seedling connects with the host cells it has no water supply).

Label the branch by tying on a plant label. It is very easy to forget which branch you planted, and the seedlings are tiny. If you have enough berries repeat the exercise on about 4 more branches. Germination is easy but many seedlings will die later, or be eaten by birds and invertebrates.

Germination stages

By March/April your seeds should have begun germinating and look like those pictured on page 1. This is as big as they get in Year One – so be sure your label is tied securely to the branch.

In Year Two, your surviving seedlings may become more erect, though with little growth. But if they are still green all is well. In Year Three you might get some proper leaves – though these may be tiny at first.

After the third year the mistletoe plant will start to grow much more rapidly. Each branch will divide once a year – doubling branch numbers annually. This picture shows twin Year 4 seedlings, both from one seed, just about to start doubling.



Further information and help:

For more information on mistletoe, including guidance on longer-term management of mistletoe, visit the Mistletoe Pages website, accessible via www.mistletoe.org.uk.

For a Grow-Your-Own Mistletoe Kit visit the English Mistletoe Shop at www.englishmistletoeshop.co.uk.