

## Buying peat-free compost

Get your plants off to a good start with the right seed sowing compost.

Traditionally, peat has been widely used in commercial composts even though it's long been recognised that peat extraction damages the environment. Our peatlands are disappearing rapidly. The English Department for the Environment and Rural Affairs calculates that a 10m deep peat reserve which took 10,000 years to form could be exhausted in 50 years. This extraction not only destroys invaluable biodiversity but releases huge quantities of carbon, and therefore CO<sub>2</sub> into the atmosphere. So, using peat in composts is destructive and inexcusable.

Despite this, 2.69m<sup>3</sup> tons of peat are extracted annually for use in the UK and 2/3 of this is used by gardeners. Peat has a fine texture and retains moisture beautifully, so is an ideal bulking agent in composts. Not only that, but recent trials by Which? Gardening showed that peat-based compost was a much more effective growing medium than peat-free alternatives.

Which? Gardening assessed how well 27 different composts worked with seedlings and young plug plants and found that J. Arthur Bowers Seed & Cutting compost scored 91%, but was 95% peat. Verve Grow Your Own Growing Bag, also scored 91%, with 55% peat content. By contrast, the highest scoring peat-free medium was Miracle Grow Expand N.Grow with 73%, and the best organic mix was New Horizons at 60%.

The organisers conceded that composts vary from year to year and that results from different bags of the same product could score differently. Thankfully peat will be banned from garden composts in 2020. In the meantime, though, gardeners should ask if they're prepared to contribute to this environmental damage for the sake of a few seedlings.

As plants grow, they require different amounts of nutrient and manufacturers can add that, but the structure of the compost is almost as important. Tiny seeds need a fine texture and peat-based media easily provide that. At the pricking out stage, they require more open material, and this is even more important in containers. Again, peat provides the answer for all of this.

It's much harder for peat-free composts to meet these requirements. This explains why the growing media are nearly always sold as 'multi-purpose', even though they're not as 'multi' as we'd like. When preparing this compost, manufacturers use green waste, forest bark, wood waste or coir in different proportions.

Green waste, municipal compost, is often very dense. Woody waste is too open and has lots of wee bits of bark mixed in. And coir, a by-product of the coconut industry, is fine and often dusty. Manufacturers have to find a good balance of these ingredients and it's not easy to come up with the right formulation.

In trials at their garden at Wisley, the Royal Horticulture Society experimented with different ingredients, removing woody material and adding vermiculite to improve drainage. They grew begonias and lettuce seedlings in different mixes. Because coir is fine, they simply added vermiculite in the ratio: 1 part vermiculite to 8 parts composted coir. Wood fibre had too many large particles, so they used a 6mm sieve to remove the larger particles and mixed 1 part vermiculite to 4 parts woody compost. They think they should have added liquid fertiliser to this after seeds germinated. Green waste is, by and large, finer than woody material but still retains some larger bits, so this too was sieved. They then used a mix of 1 part vermiculite to 4 parts green waste.

It would be impossible for gardeners to make their own compost mixes like this and achieve the right level of nutrients. The solution would be to modify compost like New Horizons for use at the seed sowing stage. Use a fine sieve to remove the larger woody particles and add vermiculite to provide drainage while also retaining nutrients. Multi-purpose peat-free media should work for larger seedlings and in containers.

This does involve some more work but it's much better than supporting environmentally-damaging peat extraction. Hopefully better peat-free products will soon become available.