

For the Love of Peat

By Cindy Murray



Peat moss is a prime ingredient of many soil-free composts, above-ground soils, and mulch.

Before peat moss, often called Sphagnum moss, entered the horticultural scene in the 1960s, commercial growers and homeowners would, by trial and error, formulate their own media for plant propagation. This was because many native soils, or combinations of soil and sand, were heavy and had little capacity to retain air, oxygen, and nutrients. Furthermore, they were habitually ridden with weeds or pathogens and didn't drain well.

The advent of soil-free media has greatly reduced these obstacles and is why it has virtually become standard for container plants and many soil amendments. Peat moss is a prime ingredient of many soil-free composts, above-ground soils, and mulch.

Is there a difference between peat moss and Sphagnum moss? Both are of the genus Sphagnum, and the difference between the two are the stage of life cycle they are in at the time of harvest. Living Sphagnum moss grows on top of cool, waterlogged, decaying beds of plant matter called peat bogs, while peat moss is the older, dead material underneath. (There may also be various plants, shrubs and trees thriving on the surface.) A bog may go as deep as fifteen meters, and the process may take millennia. For this column, I will call both products "peat".

Even though peat is a natural product, many horticulturalists maintain it's unsustainable, claiming that more of it is being extracted than is being replaced. Furthermore, they assert that removing peat from bogs contributes to climate change.

Here's the deal: Sphagnum moss and plants living on top of peat bogs capture carbon dioxide during photosynthesis. After death they sink, but only partially decompose in their soggy environment. This results in carbon remaining intact within their tissues, and within the bog. When carbon is cloistered away like this for millennia, it is called a carbon sink. But when a bog is disturbed during the harvest of peat, masses of carbon dioxide gases are released into the atmosphere, possibly contributing to climate change

Should gardeners give up using peat? Of course, that's up to individual gardeners and their circumstances. Some bagged peat-free products may be available at local nurseries or hardware stores. (Be sure to call ahead.) Here are other products that can take the place of peat; however, some may not be suitable for everyone:

Coconut coir (pronounced coy-er), made of coconut husks, can absorb up to ten times its weight in water. Already a hot-market item, you may find it compressed as blocks and discs, both of which need to be properly hydrated before use. When used as a medium, you'll likely need to supplement it with fertilizer. Coir makes a great mulch.

Wood fiber or shredded wood chips may be less expensive than other peat alternatives, especially if it is locally fabricated. In addition to improving a medium's drainage, it promotes good soil structure.

The Landscape Connection Inc. here in Flagstaff fabricates a topsoil containing mineral-based soil combined with composted mule manure. The product contains 15%-20% organic matter.

Also in Flagstaff, Restoration Soils carries several peat-free products. Last month my husband and I picked up a load of their compost. It looks like most other composts and has an agreeable odor. Restoration Soils makes its own compost, using locally sourced organic waste such as food and forest restoration waste products. They employ an eight- to ten-month-long thermophilic composting method where the pile reaches 140°F.

I use straw as a mulch to reduce moisture loss, deter weeds, and regulate temperatures for my container plants. Other cost-effective and efficient mulches are lawn cuttings, shredded newspapers, pine needles, pine bark, shredded leaves, and more.

Eventually, horticulturalists and gardeners may be compelled to find ways to replace peat. But if we all use our noggins, along with a few trials and errors, we can take the initiative and start now. So, for peat's sake, our own, and our descendants, let's get to it!