



by Martin Kral

OH, FOR PEAT'S SAKE!

Black peat harvest in earlier times

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The sale of peat products is being banned in Great Britain within the year to “protect England’s precious peatlands”. This ban aligns the country with the 2023 decision by the European Union to enforce restoration efforts of its natural environment through this EUDR legislation. In particular, it obligates the member states to discourage (and then ban) harvesting of peatlands. Horticultural use of peat is to be phased out by 2026; such products no longer will then be offered in the consumer gardener marketplace.

What does that have to do with me, you ask? It certainly is a timely response to environmental and climate-related developments brought about by human activity and experienced globally. Moreover, almost all of the peat moss we can purchase in America comes from Canada. True

enough - peatlands around Hudson Bay provide ample sources for peat harvest. Other large peatlands are located in Russia, Scandinavia, and the Baltic, but are also found in Indonesia and New Zealand. Even the USA processes peat in Minnesota and Alaska. So why the alarm?



Without getting (ahem!) bogged down in this intense debate, let's examine how such peat deposits develop and persist. As vegetation dies, it either decays or (if kept underwater) goes into an anaerobic state that very slowly causes cellular breakdown. In a bog many layers of seasonal growth of grasses and mosses (bryophytes) pile on top of one another. A peat deposit literally is a diamond in the rough: on top is the barely decayed matter that eventually forms what's called white peat. This is fibrous sphagnum moss offered by nurseries for lining baskets and beloved by seedling growers because of its neutral pH and aeration properties. Below that is a much deeper layer of the brown peat moss you may use in soil amendments and for storing dahlia tubers. Some plant structures may still appear, but for most the decomposition of these slowly breaks down deposits into a substance with great water-retention capabilities.

The lowest layer is composed of densely compacted organic matter. This is black peat - the kind you can see in the photo above. Historically such sterile peat deposits had been harvested for fuel. They still have their fans in some areas: reportedly 14% of Irish still use peat in wood stoves. Harvesting black peat is thought to be most damaging to the environment, since this also releases trapped CO₂ that had been kept captive below ground. Extreme compression of peat results in lignite coal, then anthracite, and (much farther along in the timeline) to diamonds.

This peat deposit grows imperceptibly. It is estimated that one meter of the stuff requires 1,000 years, so exploitation of peatlands is a hot topic among environmentalists and the agricultural industries. The critical role of peatlands as vast carbon sinks is being recognized at government levels that at last accept climate change as an inevitable effect of population growth and industrial development. Destruction of their critical habitat also endangers the flora and fauna

that depends on these damp regions. For such prominent factors government action has become necessary in what used to be lightly regulated exploitation of a waste reservoir.



Vacuum harvesting in Canada
Credit: Lambert Peat Moss

The Canadian nursery industry challenges these contentions by pointing to the improved harvesting practices that contradict such assertions. Some of this country's large peatlands regularly are tended by machinery that scrapes off the top 3 inches, allows the screened peat moss to dry, and then vacuum-harvests it. Such fields are then replanted with mosses, sedges, and other bog vegetation that is allowed to regrow. Adequate rehydration of this layer is essential for good plant development. This [video](#) illustrates such commercial harvest.



For dahlia growers, the need for peat depends on a short list of cultivation and storage practices. Although widespread use of peat moss in amending raised bed soil for purposes of better friability and moisture retention is discouraged, in smaller quantities (such as in container culture) up to 1/3 of the potting soil may be peat. Some add perlite to the mix in order to aerate the growing medium. Sphagnum peat also is in the popular Jiffy pots and pellets used for raising plants from seed or cuttings. Other growers, such as Swan Island, store their tubers successfully in dry peat moss. In Heather Gitts-Schloe's [video](#), she explains the prep and final storage of the firm's huge collection. Having a former potato bunker is a bonus, since the semi-basement bottom holds humidity and temperature at consistent readings. For certain, reusing such peat moss over many seasons is an economical and wise use of storage medium.

There are alternatives to using sphagnum peat moss in horticulture. One recommended supplement is coir, the shredded husks of coconuts. Once judged a waste product, it now is found in a large number of potting mixes, coir pots for starting plants, and is suggested for general use as a soil amendment. Its compressed bricks, mats, and disks expand rapidly as moisture is introduced. Coir is praised for its ability to hold its shape and promoted for its Earthwise sustainability. At the same time, it must be noted that transporting coir fiber from tropical zones to the end user also has its drawbacks: the CO2 imbalance hardly is improved by the shipping methods, salt residues may remain, and there is a potential of exotic microbes surviving the ride. These environmental consequences need to be addressed as products such as Coco Coir and fiber trays flood the nursery markets.



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