

Sphagnum Peat Moss

by Betty Ferguson



Peat moss is the primary ingredient of almost all of our soilless potting mixes, yet it's a topic of heated controversy and debate. So, what gives?

According to Wikipedia, "Sphagnum is a genus of approximately 380 accepted [species](#) of [mosses](#), commonly known as 'peat moss.'" These moss plants consist of a main stem with several short, tuft-like branches crowded closely together. Sphagnum is a non-vascular plant (no roots) and grows in acidic environments. Colors of the moss range from green to yellow to pink, red, or brown. Sphagnum species can be distinctly male plants or female plants, or a single plant may be bisexual--bearing both male and female reproductive parts. Eighty percent of North American Sphagnum species are unisexual requiring plants bearing the opposite sex organs nearby for reproduction. Both living and dead cells of the plant are able to hold great quantities of water, up to 20 times the weight of the plant. Under good conditions, the moss grows at a rate 1.5 inch a year.

Sphagnum prefers an acidic environment. It grows best in wet, bog-like conditions, in conifer forests, and moist tundra areas mainly in the Northern Hemisphere. Peat mosses cover about one billion acres of the land on earth. That is about two to three percent of all the land on earth. According to the University of Vermont Extension Department of Plant and Soil Science, two-thirds of the world's peat bogs are in Russia and one-quarter is in Canada, who supplies 80% or more of the United States' peat moss.



In the United States there are 51 million acres of peat, distributed across 42 states. U.S. peat is commercially harvested in 14 states, with Florida, Minnesota and Alaska being top producers. Around 82% of the U.S. produced peat is sedge peat, however.

Only about .02% of Canada's 270 million acres of peat bog are mined, and Sphagnum mosses are reported to replenish what is removed 60 times as fast as it is mined.

In the Southern Hemisphere, New Zealand, Australia and Chili are the main producers.

Some of the peatlands are thousands of years old. As the Sphagnum plants die, the dead and decaying material forms a mat, called peat, beneath the living plants. Older peats are darker in color and possess shorter fiber. New moss plants continue to grow on top of the peat, continuing the cycle. These peat accumulations provide a habitat for various animals and other acid loving plants including orchids, carnivorous plants, reindeer lichen, rhododendron, and cranberries.



Arkansas Sedge Bog

Centuries ago, glaciers moved across the northern lands, leaving behind shallow, poor draining land depressions fed only by rain and snow. Over the years Sphagnum and other vegetable matter slowly filled the depressions from the edges until the watery bogs became covered. Peat forms at only .04 inch or less a year, but over the years the dead organic matter grew into mounds over the bog covered by a thin layer of living sphagnum moss and companion plants. The water holding capacity of Sphagnum moss enables it to spread into drier areas, increasing the bog size.



Sphagnum Peat Bog

Due to poor drainage, the bog is anaerobic and has limited microbial populations that would normally decompose plant material. The acid, cool, poorly oxygenated dead peat and almost anything in it has been preserved, much like pickles, protecting the peat through the centuries. Millennia old human bodies have been found preserved in the bogs. The bones, of course, were dissolved by the acid. People living in the area took advantage of the preservation factor of peat and stored foods in the bogs. Containers of butter or lard have been found, preserved for several thousand years.

Peat has been used for centuries, including during WWI as dressing for wounds due to its absorbent and astringent qualities. It has traditionally been used as a source of

fuel for heat, in septic systems, as insulation for houses, and as animal bedding because it neutralizes the ammonia in animal urine. Peat is currently used in swimming pool, drinking water and waste purification as well as whiskey making and in cosmetics.

Long-fiber Sphagnum moss gathered from the top of the bog provides a neutral pH, good water retention, and is a spongy, pliable growing material with antiseptic qualities which benefit seedlings, cuttings, and young plants. Except for the lower quality brands, long-fiber Sphagnum is pure moss containing no other plant material, whereas peat may contain decaying matter from other plants, dead insects, and heaven forbid—human bodies or prehistoric butter or lard!

Sedge peat, also known as Michigan-type peat, in contrast to Sphagnum peat, includes the remains of a variety of swamp plants such as sedge grasses and reeds. It is less acidic because the water feeding the sedge bog is free flowing. Sphagnum does not thrive in that more alkaline environment. Whereas Sphagnum peat is golden to brown in color, sedge peat is dark brown to black and is finer, more earth-like in texture.

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