

Peat

Stephen M. Jasinski, mineral commodity specialist for the U.S. Geological Survey, has prepared the following information on peat, which is used primarily for horticulture in the United States.

Peat is a natural organic material of botanical origin, harvested from deposits in bogs and fens. Commercial deposits form from the incomplete decomposition of plant matter under anaerobic conditions and gradually accumulate to form peat over about a 5,000-year period.

Water source and chemistry influence the vegetation and its decomposition in the peat ecosystems, such as bogs and fens. The peat in fens, which are alkaline water-filled depressions fed primarily by groundwater, is shallower than in bogs. Bogs, on the other hand, are acidic, fed by precipitation only, raised above the surrounding landscape and less decomposed than fens. Peatlands are predominantly located in shallow wetlands of the Northern Hemisphere.

In 2006, peat was harvested in 15 states, with Florida, Michigan and Minnesota accounting for more than 80 percent of total U.S. production. Reed-sedge was the dominant variety of peat harvested in the United States, comprising almost 80 percent of the output, followed by humus, hypnum moss and sphagnum moss. Domestic peat production, excluding Alaska, was 551,000 metric tons, compared with 685,000 metric tons in 2005. Imports increased to 924,000 metric tons compared with 891,000 metric tons in 2005. U.S. apparent consumption was 1.5 million metric tons in 2006, down slightly from 2005. World production was 25.8 million metric tons in 2006, which was about the same as in 2005. U.S. reserves of peat are estimated at 150 million metric tons compared with 10 billion metric tons worldwide.

More than 60 percent of all peat used in the United States in 2006 was imported from Canada, which has extensive deposits of high-quality sphagnum peat. Because of its more fibrous composition, sphagnum peat is preferred for custom soil mixes and for sale to retail consumers. Sphagnum peat is also used as a filtration medium and as an absorbent. More decomposed types of peat, such as reed-sedge or humus, are used primarily in bulk by commercial landscapers and on golf courses. General soil improvement and potting soil mixes were the largest domestic end-use category, accounting for more than 85 percent of domestic peat sales, according to the annual U.S. Geological Survey canvass of producers. Data on the use and distribution of peat imported from Canada were unavailable, but imported peat was sold both in bulk for soil blending and packaged for direct horticultural use.

The number of peat producers in the United States has stabilized after falling gradually in the 1990s, when more stringent federal, state and local wetland protection regulations were enacted. The permitting procedures for new peat operations have become increasingly time-consuming, causing some companies to abandon harvesting and reducing the number of new fens and bogs brought into production. In addition, extensive areas of peatlands are located in protected wetlands, parks and other natural areas that

restrict commercial development. Other uses of peatlands include agriculture, forestry, recreation and wildlife management.

Factors such as the growing interest in gardening, landscaping related to home construction and golf course development indicate that peat usage will remain near current levels over the next several years. However, domestic producers face increasing competition from imports of peat from Canada and alternative soil additives, such as composted organic waste, coconut fiber and wood byproducts.

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Peat operation in northern Minnesota. Image from University of Minnesota Duluth, Natural Resources Research Institute.