

# **Peat Production in Saskatchewan**

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Canadian sphagnum peat is rated among the best in the world. The provinces of Quebec and New Brunswick account for around 70% of the total peat production in Canada. The rest of the provinces, excluding Ontario and British Columbia which have no peat production, account for the remaining 30%. Most of Saskatchewan's peat is harvested in the Carrot River district.

### *What is Peat?*

Peat is a plant product derived from sphagnum moss, reed and sedge deposits. It varies in quality from light, loose fresh moss to peat which has been broken down into a dense, caked humus material. At present there are thought to be three trillion cubic metres of peat deposits in Canada, and that approximately 70 million tonnes of peat accumulate through natural growth every year.<sup>1</sup>

### *Where is Peat Found in Saskatchewan?*

Saskatchewan's peatlands account for about seven and one half per cent of the province, consisting of a 200 km wide band ranging across the southern edge of the Precambrian Shield, from Alberta to Manitoba, in the boreal zone. Most of our peat is found in boggy lowlands, while smaller amounts are located in upland areas. Dense sedge peats are sometimes overlain by sphagnum moss.

### *Peat Harvesting and Processing in Saskatchewan*

Commercial production of peat was begun by the Carrot River Peat Moss Co. Ltd. in the Carrot River area in the late 1950s.<sup>2</sup> Today Premier Sask. Inc. is harvesting 40 km northeast of Carrot River. The Tobin Lake area is also producing peat. Harvesting begins after the bog area is cleared of trees and shrubs and is drained. Blocks of peat are cut out and set out on the surface to dry. The dried peat is then vacuumed up and trucked to the processing plant where it is pulverized by hammer mill, compressed and bagged or baled. At present, only sphagnum peat is being produced.<sup>3</sup>

Saskatchewan is one of four provinces which have put in place wetland conservation and management policies to address concerns about the destruction of plant and animal habitats. Peatland bog ecosystems are home to unique biological communities which must be protected. Another potential problem, related to the "greenhouse effect", is the release of carbon gases into the atmosphere from their anaerobic environment when peatlands are drained and disturbed.<sup>4</sup> The draining of wetlands can result in water and air quality problems related to run-off and wind erosion. In 2001, a national Industry Code of Practice was adopted by the peat industry.<sup>5</sup> The desirability and difficulty of reclamation and restoration of harvested areas is being increasingly

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<sup>1</sup> Stewardship Canada, "Canadian Peat Industry," [http://www.stewardshipcanada.ca/sc\\_national/events/nc\\_cws/papers/Issues\\_paper\\_Peat\\_CSPMA.pdf](http://www.stewardshipcanada.ca/sc_national/events/nc_cws/papers/Issues_paper_Peat_CSPMA.pdf)

<sup>2</sup> Saskatchewan Industry and Resources, "Mineral Resources of Saskatchewan," Peat, <http://www.ir.gov.sk.ca/default.aspx?DN=3557,3541,3538,3385,2936,Documents>

<sup>3</sup> Government of Saskatchewan, "Saskatchewan Energy and Mines," Peat, <http://www.gov.sk.ca/enermine/facts/sempeat.htm>

<sup>4</sup> Stewardship Canada.

<sup>5</sup> Ibid.

discussed. An Industrial Chair of Canada for peatland management was established in 2002 in support of continuing research on peatland restoration and reclamation.

### *How is Peat Used?*

At present, most of Saskatchewan's peat is used as an additive in the horticultural industry to break up and aerate compacted soils. The product is commonly sold in compressed bales or bags, and as an ingredient in green house and gardening soil mixtures. Peat is also used to make plant pots, compressed peat pellets (Jiffy 7®) for seed starting and for bedding in mushroom growing operations.

Research into further uses for peat is ongoing. Saskatchewan has large reserves of dense well-humified peat suitable for fuel in the territory west of La Ronge and Montreal Lakes and in the La Ronge area itself. Also, experiments have shown that peat is effective in removing oil from oil and water emulsions.<sup>6</sup> In the future young sphagnum peat may be harvested to produce specialty long fibres.<sup>7</sup>

### *Where Does Saskatchewan's Peat Go?*

Saskatchewan ships around two million bales annually to markets across Canada and in the United States, mostly for horticultural uses. In British Columbia, Saskatchewan peat is used for bedding in the mushroom and forestry industries. Saskatchewan peat is beginning to be sold in Europe and Asia as well.

### *What is the Value of Peat to Saskatchewan?*

According to Premier Sask. Inc., the worldwide demand for their high quality Carrot River horticultural peat moss is growing. With increasing production, employment has nearly doubled to about seventy,<sup>8</sup> providing direct and indirect benefits to Saskatchewan's economy.

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<sup>6</sup> Studies using Saskatchewan product show that peat's ability to remove oil makes it potentially valuable as a filter medium for the improvement of oily waters and other industrial uses. The material removed between 34 and 99 percent of the oil depending upon the oil concentration, the type of emulsion, and the rate of flow. G.N. Mathavan, "Treatment of Oily Waters Using Peat (Adsorption, Water Treatment). (PhD Thesis, University of Regina, 1990.)

<sup>7</sup> Saskatchewan Industry and Resources.

<sup>8</sup> Town of Carrot River, <http://www.town.carrotriver.sk.ca/industrial.htm>