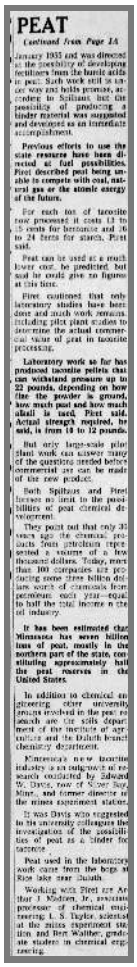

PEAT

Continued from Page 1A

January 1933 and was directed to the possibility of developing fertilizers from the humic acids in peat. Such work still is under way and holds promise, according to Spilhaus, but the possibility of producing a binder material was suggested and developed as an immediate accomplishment.

Previous efforts to use the state resource have been directed at fuel possibilities. Piret described peat being unable to compete with coal, natural gas or the atomic energy of the future.

For each ton of taconite now processed it costs 13 to 15 cents for bentonite and 16 to 24 cents for starch, Pirst said.

Peat can be used at a much lower cost, he predicted, but said he could give no figures at this time.

Pirst continued that only laboratory studies have been done and much work remains, including pilot plant studies to determine the actual commercial value of peat in taconite processing.

Laboratory work so far has produced taconite pellets that can withstand pressures up to 22 pounds, depending on how fine the powder is ground, how much peat and how much alkali is used, Pirst said. Actual strength required, he said, is from 18 to 12 pounds.

But only large-scale pilot plant work can answer many of the questions needed before commercial use can be made of the new product.

Both Spilhaus and Pirst foresee no limit to the possibilities of peat chemical development.

They point out that only 30 years ago the chemical products from petroleum represented a source of a few thousand dollars. Today, more than 100 companies are producing some three billion dollars worth of chemicals from petroleum each year—equal to half the total income in the oil industry.

It has been estimated that Minnesota has seven billion tons of peat, mostly in the northern part of the state, constituting approximately half the peat reserves in the United States.

In addition to chemical engineering, other university groups involved in the peat research are the soils department of the institute of agriculture and its Duluth branch chemistry department.

Minnesota's new taconite industry is an outgrowth of research conducted by Edward W. Davis, now of Silver Bay, Minn., and former director of the mines experiment station.

It was Davis who suggested to his university colleagues the investigation of the possibilities of peat as a binder for taconite.

Peat used in the laboratory work came from the bogs at Rice lake near Duluth.

Working with Pirst are Arthur J. Madsen, Jr., assistant professor of chemical engineering, L. S. Taylor, scientist at the mines experiment station, and Ben Walther, graduate student in chemical engineering.

Will Peat Take Over continued

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