Fast growing poplars could be worthwhile new ag crop.

February 1995 Article, Country Life in B.C.

Wendy R. Holm, P.Ag.

There's a new crop on the block. A crop that requires very little in the way of care compared to traditional crops and is only harvested every 5 years or so.

A crop that is already planted on some 25,000 acres of prime farmland in Washington and Oregon and has over 200 area farmers lined up for a look-see.

A crop the acreage of which, according to U.S. reports, will increase to 75,000 acres in Washington and Oregon over the next several years and has an economic potential measured in the billions of dollars.

A crop for which markets are already short and buyers clamoring for new supplies.

What is this wonder crop that's causing such excitement south of the border? Hybrid poplar. High-density (6 by 10 foot spacings), mechanically-harvestable, drip-irrigated hybrid poplar, to be precise. Pacific Northwest grown hybrid poplar, which with a growth rate of 50 m^3 per hectare per year over a 4 to 5 year rotation, quickly out-distances the best-sited Douglas Fir stands (8 m^3/hectare/year over a 40 to 50 year rotation).

Spurred by the growing international shortage of wood fibre, plantation poplars are being grown primarily as a source of raw material for the pulp and paper industry. Hybrid poplar can also be used in the production of plywood, laminated veneer lumber, oriented strandboard and other solid wood products as well as in the manufacture of ethanol or methanol and as hogfuel for electrical power generation.

Kenneth Wearstler Jr., forestry consultant to Boise Cascade in the development of its hybrid poplar plantations in eastern Washington and Oregon, believes that hybrid poplar could "maintain and enhance agricultural communities by providing a more profitable alternative crop." As he sees it, "There is a wood products industry in the Pacific Northwest that has been shrinking and needs to shrink even further to come into balance with available public timber supply. There is an agricultural community struggling to find profitable alternative crops. And there is an electrical power generating industry struggling with reduced capacity resulting from the termination of nuclear facilities and continuing stricter regulations of fossil fuel use."

What does this all mean for British Columbia? B.C. pulp and newsprint mills are also looking at extraordinary means to assure chip supplies as pulp prices skyrocket. Chip prices have doubled in the past year while the price of pulp logs — which are chipped by the buyers — have risen even faster in the face of unexpectedly strong chip demand, a decline in B.C.'s permitted timber harvest and consumption of marginal logs that might otherwise have gone to chip production by a robust lumber market. In 1994, six of B.C.'s pulp mills (about a third of the producers) have filed "notices of need" with the B.C. Ministry of Forests in order to stop the export to Japan of chips required in B.C.

(Obtaining a more secure supply of chips is what was reportedly behind Canfor Corp's recent $700 million bid for Slocan Forest Products Ltd. Because Slocan is a major marketer of chips and pulp logs in the B.C. interior, its acquisition would solve the growing chip shortage which caused the three week shut down of Canfor's two Prince George mills last summer. While the acquisition would put Canfor ahead of the pack in chip supply, it would spell major problems for Slocan's regular chip clients, including Castlegar's Celgar Pulp Co., which doubled the capacity of its pulp mill last year with a $700 million investment, is already extremely short of chips and is reportedly hauling chips and logs from sources beyond the normal economic distance for transport.)

Based on U.S. experience, hybrid poplars would seem to attain their best growth on deep, fertile, alluvial soils that have adequate moisture. Light textured soils, such as sandy loams and silt loams, are generally preferred. (This having been said, one of Boise Cascade's larger plantations is located on drip-irrigated sand dunes.) Clonal cuttings of 9 to 18 inches in length are planted vertically, leaving 1 inch exposed above the ground. Control of competing vegetation is a priority for the first two years, after which crown closure produces shade sufficient to deter undergrowth. Incidences of insect and disease damage are reported to be minimal.

As a diversification option for British Columbia farmers, the production of hybrid poplars may well be worthy of further consideration.

Contract growers in Washington state purportedly netting somewhere in the neighbourhood of $200 - $300 annually per acre (Wearstler).

While such returns aren't likely to produce a stampede given higher land costs facing B.C. farmers, poplar may offer growers the opportunity to turn a profit from cost-reducing initiatives. Examples might include poplars as a buffer crop separating farm and non-farm use, poplar stands to achieve specific pest management objectives — e.g. (re)introduction of raptors to control root damage in vineyards and orchards — or poplar as a strategy to satisfy ecological/environmental/integrated resource-use objectives in specific regions of the province.

(It would be interesting to explore multiple cropping opportunities to take advantage of the unique, fast-rotation, deciduous "forest floor" environment created by hybrid poplar plantations. For example, the natural environment for many high-valued essential oil and pharmaceutical crops — including North American ginseng — is forest floors. What if, by extending the poplar harvest cycle to seven years, you could put in a successful undercrop of ginseng in year two and pocket the $13,500 per acre in shadecloth costs?)

It may just be worthy of further investigation.