

## Saskatchewan to build fibre optics communications network

Saskatchewan will begin construction this autumn on a fibre optic network that will extend cable television — and eventually other communications services — to more than 50 centres in the province.

Donald Cody, minister responsible for Saskatchewan Telecommunications, announced the \$56-million, four-year project to install the hair-thin fibres along 3,200 kilometres across the province connecting communities of 500 or more households.

Mr. Cody said a 200-kilometre link between Regina and Yorkton is expected to be completed late next year with the final links ready for service by 1984.

Northern Telecom Canada Ltd. of Montreal has been awarded a \$22-million contract to supply fibre optic cable and equipment.

The fibre optics system involves laser light travelling along tiny strands of glass.

The Sask Tel system, composed of 12 fibre strands, will initially be able to carry 4,032 simultaneous phone conversations with each strand able to handle 45 million bits of information a second. A pair of conventional copper wires usually carries two conversations.

The system, Sask Tel said, can carry signals up to ten kilometres without being boosted and can carry voice, television and data signals at once.

The entire network is expected to be in place by the year 2000.

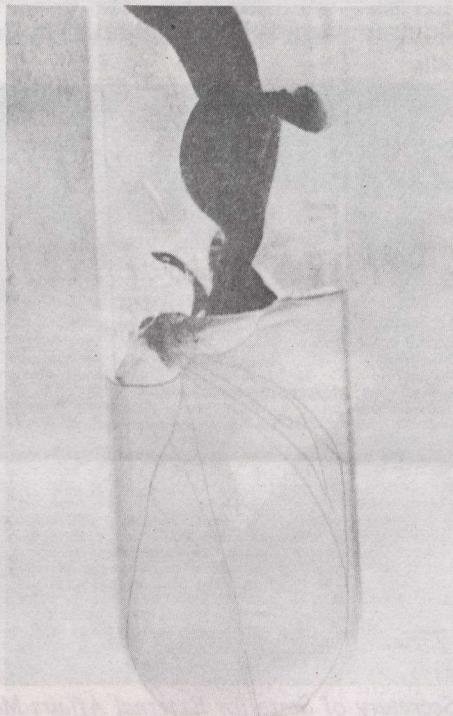
## Test-tube tobacco

A group of Ottawa genetic engineers may have also concocted the first genetically-engineered cash crop in the world — low-tar, high-nicotine tobacco needed for today's "light" cigarettes, reports Margaret Munro in *The Citizen*, February 20.

Dr. Wilf Keller of Agriculture Canada, Dr. George Setterfield of Carleton University and his graduate student Gerry Douglas have mated two sexually incompatible tobacco plants in the test tube.

Their revolutionary technique may also be able to cure tobacco of the blue mold that destroyed more than 30 per cent of Ontario's crop in 1979.

Such possibilities will be explored once the test-tube creations are transferred in March to the federal tobacco re-



*Test-tube plant creations will be planted this spring.*

search centre near London, Ontario.

Stressing that they have borrowed ideas from genetic engineers in labs around the world, Dr. Setterfield admitted the success with tobacco is rather novel.

"In the whole world there have been about half-a-dozen wide crosses of this sort, but to my knowledge none of them have ever made it out of the greenhouse," said the cell biologist, pointing to the 23 tiny plants sprouting from test tubes at the Central Experimental Farm.

Such "wide crosses" are analogous to the mating of a field mouse and a house mouse.

The main aim behind test-tube plant breeding is to break the laws of nature that forbid most plants from interbreeding.

"You simply can't cross most plant species," said Dr. Setterfield. "If you can the offspring are usually sterile. What we are onto here is a method of bypassing sterility blocks."

It took almost two years of cell manipulation to create the unique tobacco plants.

The new hybrids must now undergo extensive testing to find out which characteristics they inherited from their parents, Dr. Setterfield said.

It is hoped that it will take only 18 months to develop a new tobacco breed containing the high nicotine and low tar of the wild variety's genes. Nicotine is

responsible for the flavour smokers crave in tobacco.

Tobacco cells have a reputation for fusing more readily than those from other crops, but the principle behind the test-tube technique applies to all types of plants. In future experiments, the Ottawa team plans to cross potatoes, tomatoes and egg plants in the test tube.

## Prince Sihanouk in Canada

Cambodia's former head of state, Prince Norodom Sihanouk made a private visit to Canada, March 8-12, to meet with Cambodians living in Canada, in particular with refugees who have arrived in Canada since the Vietnamese invasion in December 1978.

Prince Sihanouk visited Quebec City where he gave a press conference and met with government officials and Premier René Lévesque. He later travelled to Ottawa for talks and a private lunch with Secretary of State for External Affairs Mark MacGuigan.

The Canadian International Development Agency has announced a grant of \$715,000 to three organizations aiding Kampuchea: World Vision of Canada, the Central Mennonite Committee and the Canadian Catholic Organization for Development and Peace.

## Canada-U.S. marine research accord

The Canadian and American governments recently signed an agreement to co-operate in the field of marine transportation systems and technology research.

The agreement is an addendum to a memorandum of understanding signed originally by the Minister of Transport and the U.S. Secretary of Transportation June 18, 1970, dealing with research and development co-operation in transportation.

Under the agreement, there will be information and personnel exchanges, project work sharing and joint assessments of marine transportation systems and technology. Initial areas of interest are propeller protection techniques for ships navigating in ice and marine fire hazard research.

Canadian participation in the activities will be directed by the Transport Canada Research and Development Centre and the Canadian Coast Guard.

Linda Marchand, Citizen