

From fighting wars to fighting fires

A vintage *Canso* aircraft that sunk two enemy submarines off the coast of Iceland during the Second World War, is currently being used as a water-bomber to help fight forest fires both in Canada and abroad.

A Canadian firm, Avalon Aviation of Parry Sound, Ontario, operates a fleet of eight modified *Canso* aircraft in their fire-fighting operations. Although the planes were last produced in 1945, the firm's managing director, Bruce Powell, says the planes are "good for another 30 years of water bombing".

Altered duties

The *Canso* originally specialized in search and rescue and anti-submarine patrol, tasks for which it was uniquely suited, as it can fly for up to 24 hours non-stop, carry a big load and land on water. The Canadian government named the plane *Canso* after Cape Canso in northeastern Nova Scotia, since the aircraft was used frequently in eastern Canada and on Atlantic submarine patrol.

The water-bomber modification was developed in 1961 by Field Aviation Ltd. of Toronto, Ontario. Two 1 800-litre tanks which were built into the hull, are filled at flying speed in 15 seconds by a retractable probe which "skims" the surface of a lake.

More than 12 two-tank loads of water per hour can be dropped on a fire when it is close to a lake.

"Speed is vital," explains Mr. Powell, "because forest fires move at up to 48-64 kilometres per hour, with flames as high as 30.5 metres and extreme turbulence."

In addition to water-bombing, Avalon Aviation can supply aerial fire detection services and bird-dogging (guiding water bombers to targets selected by the fire boss). For these services Avalon uses its other small aircraft such as *Piper Aztecs*. Avalon can also convert all aircraft similar to the *Canso* to water bombers, complete with the upgrading of all equipment to today's standards.

Recently the firm retrofitted all its *Cansos* with Rolls Royce turbo-props. The conversion is expected to increase the plane's water-carrying capability to 5 400 litres by using two probes instead of one and will allow more water drops per hour. Also, Rolls Royce engines can use a greater variety of fuels, including superior grade diesel or home heating fuel in remote locations.

Expanding markets

Mr. Powell's firm, Powell Corporation, acquired Avalon Aviation, which was originally based in Alberta, in 1980. Currently the water bombers work primarily for the Ontario Ministry of Natural Resources and for the Alberta government, on service contracts from May to September. Avalon Aviation also maintains a water bomber in Norway during the summer months, for fighting forest fires there. In recent years it has exported its services to Chile as well.

Mr. Powell is now also actively pursuing markets for Avalon's services in such countries as the United States, Australia, Portugal, Finland and Sweden.

(Condensed from Ontario Business News.)



Bruce Powell, managing director of Avalon Aviation, beside a *Canso* water-bomber.

Agriculture projects in Egypt

Minister for External Relations Monique Vézina has announced that Canada will contribute more than \$10 million for three projects that will assist agricultural development and food production in Egypt, as well as improve its water supply and sanitary drainage. The projects will be carried out through the Canadian International Development Agency (CIDA).

In the Agricultural Response Program, \$5 million will be provided for equipment and services for small- and medium-sized agricultural projects over the next three years. This program will place Canadian resources and technology including spare parts, tools and implements, teaching aids, laboratory equipment, technical literature and breeding stock, at the immediate disposal of those in need. The funds may also be used to recruit specialists on short-term assignments and to provide training outside of Egypt. A Canadian firm, which will act as executing agency for the Agricultural Response Program will place a Canadian coordinator in Egypt to work closely with counterparts in the Egyptian Ministry of Agriculture and Food Security.

Announcing the program Mrs. Vézina said that "not only does it place Canadian resources and technology at the immediate disposal of small producers, it is geared towards the poorest of the poor".

In another project, Canada will contribute \$1.84 million over two years for aerial photography, soil surveys, groundwater studies, test plots and other data collection required for the proposed Integrated Soil and Water Improvement Program (ISAWIP) in the Nile Delta. ISAWIP will rehabilitate some 20 000 hectares of farmland, at a total cost of \$70 million.

Also, technical assistance costing \$1.5 million will be provided to the National Organization for Potable Water and Sanitary Drainage to prepare an integrated master plan for water supply and sanitary drainage for the Giza Governorate (excluding Giza City), an area of 1 077 square kilometres on the west and east banks of the Nile. The master plan will recommend projects designed to better the health and sanitation of 2.5 million Egyptians. A feasibility study for one of the priority projects recommended in the master plan, will also be carried out.

Since 1976 the Egypt program has been CIDA's fastest growing, with disbursements averaging \$25 million a year. Canada's assistance has evolved from the occasional gifts of food aid to a much broader co-operation in development.