

## Canadian apparatus turns manure into fuel

A fuel, costing about 28 cents a gallon, is being produced from a boiler-like unit in a converted garage near Calgary.

The product is methyl fuel, a substitute for heating oil, diesel fuel and, with further refinements, perhaps fuel for automobiles. It is being made from animal and human manure and barley straw.

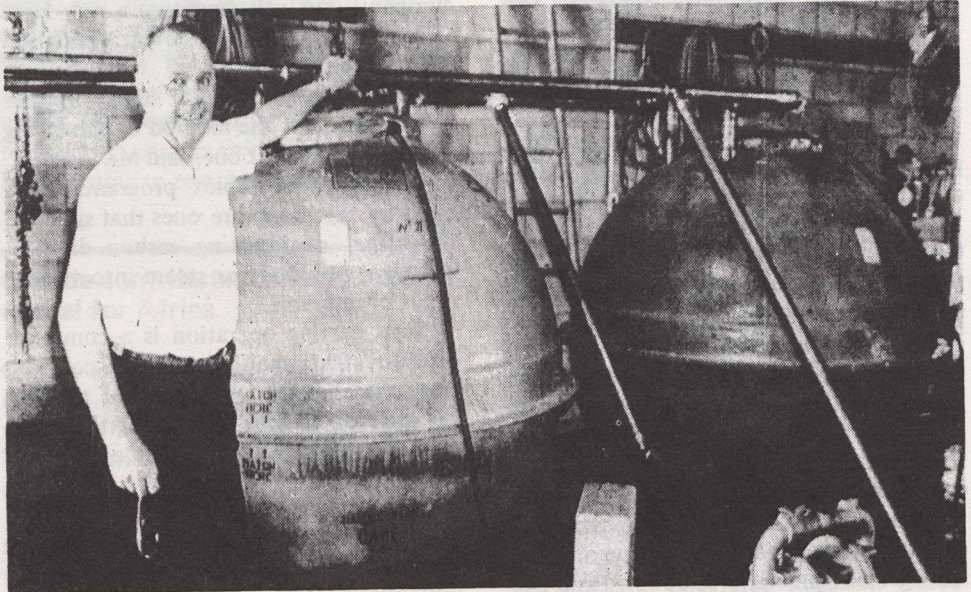
The fuel has been produced by many others before, but no one has done it as quickly or cheaply as the process now controlled by Wilbur Griffith and partner D.M. Grant.

The key to the process is an enzyme or catalyst which launches a cooking action that transforms a solution of manure and waste into a clear, combustible liquid.

The catalyst was developed by two California scientists who have agreed to provide the enzyme to Mr. Griffith and Mr. Grant on a world-wide exclusive basis. The two Canadians have constructed a pilot plant to test the process.

"It's everything we hoped for," said Mr. Grant. "We are still awaiting further laboratory results, but it now appears we also have some other chemicals being produced from the process."

"To date we have been approached by people from all ten Canadian provinces, 14 U.S. states, Italy, Austria, New Zealand, Israel, Tasmania, Switzerland, France, Britain, Japan, China, Indonesia,



Mac Grant stands beside his methyl fuel pilot plant.

Hong Kong and Taiwan.... They want the plants as soon as possible," said Mr. Griffith.

"The first commercial unit will probably be sold in the interior of British Columbia where interest has been intense since the start," he said.

A two-ton plant is expected to sell for about \$30,000 and will turn out about 120 gallons of fuel and 1,800 pounds of organizer fertilizers daily from two tons of solid waste.

"It will tell them the qualifications needed, type of personality, salary, promotion prospects and a variety of other information," Mr. Ferguson said.

A sophisticated device known as CAL (Career Awareness Lab) allows students to play a series of electronic games that help them learn their own temperament, needs, skills and preferred lifestyles.

The centre has 30 salaried staff working on four main projects, one of which involves compilation of a job bank for Fort Garry and metropolitan Winnipeg.

The bank provides a detailed listing of all area companies, the type of workers they hire and the qualifications needed.

Another aim of the centre is to provide a skills assessment program for physically, academically or socially handicapped students. Counsellors test their skills and give training in resume-writing and job interviews.

Assuming a value of only 50 cents a gallon of fuel to the owner and five cents a pound for the fertilizers, it has been suggested that the plant could pay for itself in eight months.

The 28-cent-a-gallon production cost is based on the assumption that plant owners have free access to the feedstock, namely manure and assorted garbage. A rancher could keep a two-ton plant operating daily on manure from 150 head of cattle.

## Careers computer-style

A Winnipeg counselling and assessment centre, with a difference, may assist indecisive young people to choose which career they wish to follow.

The \$171,000-centre uses sophisticated electronic equipment to help students from Grades 9 through 12 assess their talents and personalities and find their most suitable choice of job.

"Today's student often has a job concept based on fantasies he may have picked up on television," said Art Ferguson, the school division's work experience counsellor and founder of the centre.

The centre, financed in part with a \$128,000 federal grant, has computers that give students in-depth aptitude tests and access to an Ottawa computer that can provide answers to any queries about any job.

## Cure for hives

Typhoid vaccine can cure itchy, unsightly hives, says a Canadian skin specialist. Although he cannot explain his success, Dr. William Pace of London, Ontario, said 16 out of 23 patients aged 21 to 61 were apparently cured of chronic hive conditions by injections of the vaccine, six of the patients suffered fewer attacks and one had no reaction to the shots.

Dr. Pace told a meeting of the Canadian Dermatological Association that the cure does not make sense but works. The injections given to hive patients are about one-hundredth of a dose given to a person for typhoid fever immunization, he said.

Dr. Pace is a professor of medicine at the University of Western Ontario and dermatologist at Victoria Hospital, in London.