

prolonged storage takes place, and certain spore-forming organisms, which are inactive during sterilization, may become activated during long periods at room temperature.

Nelson's has put together a highly qualified research team which is working to find answers to basic problems of microbial and physical-chemical stability of dairy and non-dairy foods. In addition, considerable effort is directed towards the sterility of conventional packaging material.

Parameters and techniques such as ultra-high temperatures, homogenization pressures, storage temperatures, organoleptic and nutritional properties, body and texture, appearance, colour, etc., are currently being evaluated in research studies and data is carefully analyzed and related to each specific product during its entire shelf-life.

Products such as coffee whitener, chocolate-flavoured drinks and ice cream mixes are just a few of the many under study. Available sources of all ingredients are currently being investigated and these will be analyzed for microbiological, chemical and taste qualities. Vegetable proteins, corn syrup solids, vegetable fats, emulsifiers and stabilizers are now being introduced and tested and particular attention is being given to whether or not spore-forming bacteria will reactivate during the course of long shelf storage.

#### Potential international markets

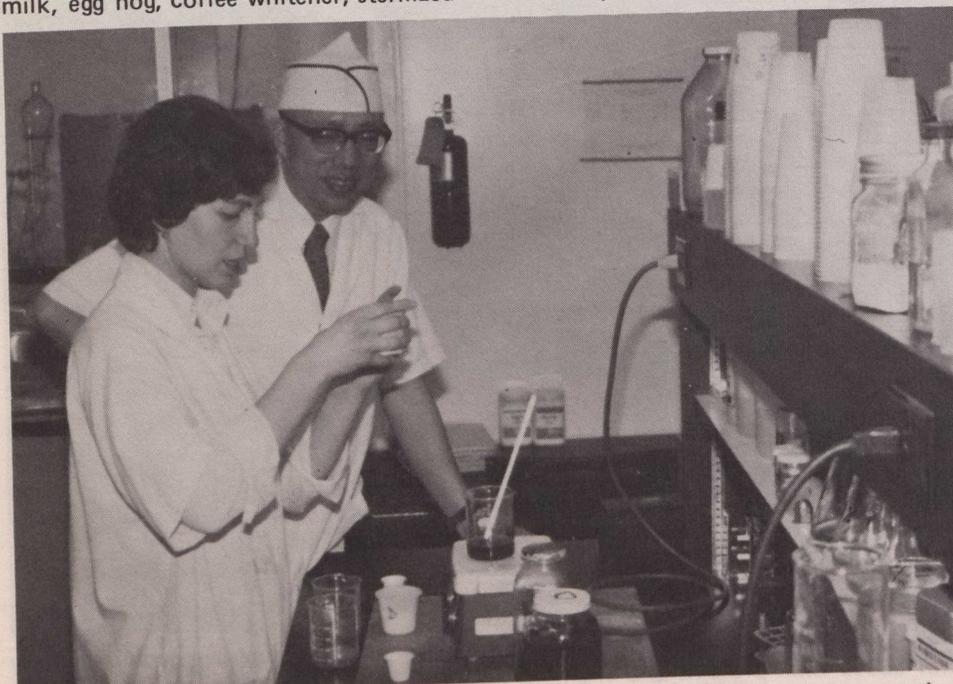
The end products — sterilized chocolate milk, egg nog, coffee whitener, sterilized



*Chin Ting, operating the pilot plant in Weston, Ontario, where studies are carried out on homogenization pressures, storage temperatures, nutritional properties, body and texture, appearance, colour, etc. of each product.*

milk and partially skim milk, butter milk, fruit flavoured milk and low calorie sterilized diet products — will have a potential market both in Canada and abroad. Some are expected to replace existing pasteurized products at refrigeration temperature. And due to lack of refrigeration costs, the consumer may enjoy price benefits.

Last year, the company marketed its



*Nelson's Peter Cheng and Diana Neizvestny discuss the quality of cream being tested.*

newly formulated liquid coffee whitener in packages capable of holding the product stable and in a durable form for 90 days (the usual length of time is only 15 days) on a regular refrigerated shelf. The company expects this item alone will generate up to \$1 million in additional sales this year and \$5 million in three year's time.

Development of a fortified skim milk sterilized by the ultra-high temperature system has now been completed. The new product, which contains added milk proteins, is fortified with vitamins and has a taste more closely associated with 2 per cent milk. The company hopes to obtain a significant percentage of the Ontario market with this and its sterile chocolate milk (now being developed).

Ice cream mix, ice milk and sherbet are also under investigation and have been taste tested against major leading domestic and imported brands and were found to be highly acceptable.

*(Excerpts from an article by Joan Powers Rickerd in Science Dimension 1981/6.)*

#### Work sharing funds increased

Employment and Immigration Minister Lloyd Axworthy announced that an additional \$20 million has been allocated to the federal government's work sharing program.

The program, aimed at preventing temporary layoffs, was introduced in early January with a budget of \$10 million. By March 2, the program had prevented 4 271 layoffs, and more than \$11 million had been committed.

Under work sharing, all employees in a work sharing unit agree to work one to three days less a week to prevent layoffs. Unemployment insurance benefits are added to the salary so that most workers receive about 90 per cent of their normal weekly pay.

There are 9 671 workers involved in the work sharing projects, 56 in Ontario, 47 in British Columbia, 17 in Manitoba, 11 in Quebec, nine in Nova Scotia, eight in Alberta, five in Saskatchewan, one in New Brunswick and one in Newfoundland.

"The response to the program clearly shows that workers and employers will accept imaginative measures if they are convinced that jobs can be protected," said Mr. Axworthy.

Nelson's Dairy photos