

International award for new way to freeze eggs

The Department of Agriculture has received a major international prize for Cryogran eggs, a new form of frozen egg, which could prove to be a major ingredient for industrial food products from mayonnaise to a wide range of baked goods.

Dr. Paul Sims, director of the Agriculture Canada Food Research Institute in Ottawa, accepted the award on behalf of the Agriculture Department at the recent Fifth International Food Products Exhibition in Paris, where some 30 countries displayed hundreds of new food products.

Simple, effective process

"The prize was awarded because of the ease and simplicity of our Cryogran process," said Dr. Sims. Frozen-egg mixture is used on a large scale by the food industry, and until the Cryogran process was developed, it was available only in bulk packages of about 40-pound lots. Besides the required periods of about a day and a half each for freezing and thawing, conventional frozen-egg bulk mixture has the disadvantage of restricting food formulators to using recipes that can take multiples of the 40-pound lots. It is not possible to thaw only part of a lot to obtain lesser weights.

"We've overcome these problems by freezing droplets of pasteurized egg *mélange* in liquid nitrogen," said Dr. Gordon Timbers of the Agriculture Canada Engineering Research Services, who developed the equipment and refined the process.

The product is free-flowing pale yellow granules or spheres about the size of peas.

Freezing droplets in a cryogenic (very cold) liquid such as liquid nitrogen takes less than one minute. The frozen granules can be easily poured, packaged and measured in the volumes required by the user.

Built-in safety

Rapid freezing prevents the growth of microbes, while rapid thawing — about 15 minutes while being mixed in with other ingredients — also guards against bacterial contamina-

tion and avoids separation problems in the egg mixture, which often requires further processing before use.

"Cryogran eggs perform as well as fresh eggs in all products tested, including omelets, mayonnaise and a wide range of baked goods," said Dr. Timbers.

The granular form is a quality-control feature, since if any thawing and refreezing occurs during storage, the *mélange* becomes a solid mass. One glance at the product can reveal if there has been a thaw that might have given microbes a chance to invade.

Canada Council seeks jobs for Ph.Ds

A publication designed to help find jobs for students nearing completion of their Ph.D. studies was recently sent by the Canada Council to potential employers across Canada.

According to the Council, the 1972 edition of its *Annual Directory of Doctoral Fellowship-holders* lists 1,045 students in the third or fourth

year of their doctoral studies in the humanities and social sciences. The list, which was drawn up from responses to a questionnaire mailed late last May to 1,365 holders of Canada Council fellowships, includes only those who indicated they would be available for employment.

This is the first time the Council has sought the collaboration of the students in compiling the directory. The first two editions, compiled from Council records, contained less information about each award-holder.

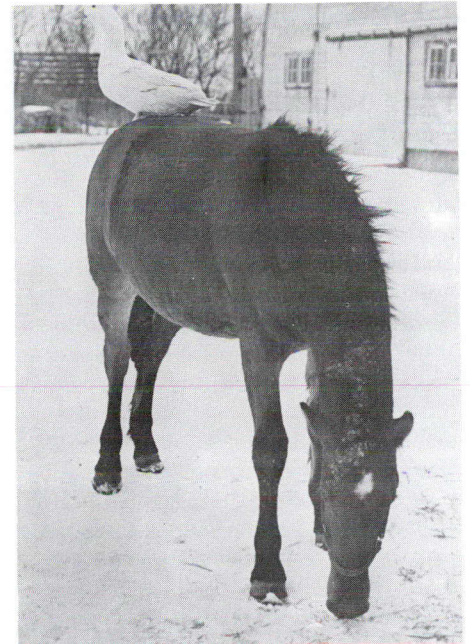
The directory has been mailed to more than 1,000 potential employers of Ph.Ds, including deans and department heads at Canadian universities, private firms, and personnel officers in the Public Service. Copies are also sent to all Canada Manpower Centres and to the Association of Universities and Colleges of Canada.

The list of students, broken down by academic discipline, includes the age and areas of specialization of each award-holder, the date he or she expects to complete doctoral work, the degrees already obtained and the date of availability for employment.



Lame duck not so lame any more

Elmer, a duck owned by Mr. and Mrs. Allan Maly of Macdonald, Manitoba, recently suffered injuries at the hands (oops! hooves) of his pal Cupid the horse. Rubber boots prevented Elmer from further damaging his broken leg



Winnipeg Tribune photos

and an old stovepipe elbow restricted any movement of his crushed wing. Fully recovered and back on his feet (with his feet on his back) Elmer finds the perfect spot to avoid further injury from Cupid's flying hooves.