Field peas — Protein by the package

Pea milling — a world first — has resulted directly from research carried out at the National Research Council's Prairie Regional Laboratory in Saskatoon, Saskatchewan.

Once there was a little field pea that lived in the middle of the Prairies. The pea was proud of its 5,000-year heritage, dating back to the Bronze Age. Aryans had brought its ancestors to Greece and Italy, and the ancient Greeks and Romans had carried others of its kind to the lands under their domains; some were found in excavations on the site of ancient Troy. But even with such an illustrious past, the pea was not happy, mostly because no one paid any attention to it. Then one day, about 10 years ago, a scientist came along — examined it, picked it up, and took it to a large room full of benches, beakers, boxes, tubes and wires. The room was called a laboratory. The scientist and his colleagues found that the pea possessed a number of advantages which could make it important as a supplementary protein crop. This meant that the little pea could help to bring an end to the "protein gap" existing in developing countries and assist the industrialized nations as well. And that is how the lowly field pea became the "Cinderella" crop of the 1970's. The research that started it all was initiated in 1968 at the National Research Council's Prairie Regional Laboratory in Saskatoon, Saskatchewan.

Bruce Kane, PIB/DIP

The common field pea has always been considered an inexpensive food item with only a modest market value for the farmer. PRL has changed all that with the development of techniques for isolating and utilizing the pea's protein content.

Le pois des champs ordinaire était jusqu'alors considéré comme la nourriture du pauvre et sa valeur sur le marché assurait un maigre profit pour le fermier. Grâce aux nouvelles techniques d'extraction et d'utilisation des protéines du pois, mises au point au LRP, ce n'est plus le cas.

Human foods are made up mainly of three basic ingredients — carbohydrates, fats or oils, and proteins. Although the western Canadian agricultural industry is able to supply ample carbohydrates in the form of wheat and coarse grains, and oils from rapeseed and sunflowers, it is unable to keep pace with the need for protein — the human body's chief building element. Searching for a crop to remedy this situation, PRL scientists turned to grain legumes, a plant family almost completely neglected as a potential source of protein in Canada — finally settling on the common field pea: it was already adapted to Prairie climatic conditions (Manitoba has been the field pea growing area of Canada, with some 50,000 to 70,000 acres of production annually going almost entirely to the soup trade); it could be handled by existing farm machinery and stored and shipped like other grains; and it contained no known toxic or otherwise undesirable materials. Economic analysis showed that there was a market for peas in animal feed rations and that, as a traditional human food, there would be no buyer resistance to its use as a food ingredient.

Since the inception of the program, analytical studies of pea varieties have been carried out; processing techniques for utilizing pea flour have been developed; potential markets have been defined and partially exploited; and