

REPORTS FROM WORKSHOPS ON -

GRAIN LEGUMES FOR FOOD AND TRADE

1. ADDED VALUE TO LEGUME PRODUCTS

Convener - G.D. Hill

Our group began by considering the question of processed soya bean imports. A processor suggested he would be happy to buy 50,000 t of whole soya beans, let alone any soya bean meal. We decided, after discussion, that it would be best to have a solvent extraction plant, which is unfortunately the most expensive sort of soya bean processing plant.

There was someone in our group from Mexico who has had experience growing the crop, who indicated that by crushing alone you produce a high oil content meal which unfortunately has a short shelf life.

Another area of discussion was the substantial increase in the consumption of vegetable oils in New Zealand in recent times. These vegetable oils, besides being used for such things as cooking and baking, are also used in other products like margarine, salad dressings and mayonnaise. Workshop members from industry seemed to think that there would be no real problem with the disposal of the meal created from crushing, to the pig and poultry industry.

One suggestion made was the production of a fresh green product and this ties in with the suggestion for green chick peas and green soya beans.

We discussed in detail the most suitable area for soya bean growing. We concluded that the North Island was probably going to be the most suitable because of the high shipping costs in the South Island and also because that would be where the main market would be for oil and for the pigs and poultry which could be produced from the meal. It would increase the cost of the product to grow it in one part of New Zealand and process it in another part.

The alternative scenario if competing land use options were to preclude this, would be for crop production and animal production to take place in the one area.

We then considered ways of increasing the value of other products and we decided the one thing we needed to exploit in more depth was the snack food market.

A few years ago the value of consumption of potato crisps in the United Kingdom was on an exponential growth phase. (Dietitians are probably horrified at the thought that we increase snack food products!) However, there are a variety of ways in which legumes can be prepared which don't necessarily have to be bad for you. Particularly legumes like chick peas - they can be soaked in water and then roasted. In Mexico they also soak and roast faba beans. They are eaten with or without chilli, depending on your taste.

There was also a suggestion that we ought to improve the convenience of legumes with the production of canned or dehydrated refried beans which are also available in Mexico.

The other thing discussed was the possible use of extrusion processes for snack foods, and also popping. I had seen some work done on the extrusion of beans in Nante in France and in the United States. People are also looking at popping various types of beans.

We returned to the discussion of the possibilities of prepackaging legume foods to make them more convenient. We decided the place to do research on this would be the Food Science School of the University of Otago. Firstly, to see how legumes reconstitute after they are frozen because some things don't reconstitute very well. Secondly, the possibility of freeze dried products to which water is added to make them suitable for use.

There was brief discussion on the production of specialised foods from legume products specifically for diabetics, as they comprise 5 % of the population. It was stressed that if such foods were prepared, no sugar and very little salt should be added.

Finally, the group discussed, very briefly, the textured vegetable protein market, and we decided that it was an idea that has had its day.

There were no questions, but Mr. Rees commented that another idea was the use of cooked chick peas in salads. They are considered to be very tasty.