



## Transcription of the Opening Plenary Session of the World Conference on Vegetable Food Proteins

*A.R. Baldwin, chairman of the Conference:*

Good morning, Your Royal Highness, and good morning, delegates to this important congress! We are very pleased to have His Royal Highness Prince Claus of The Netherlands open this congress this morning. Your Royal Highness . . .

*H.R.H. Prince Claus of The Netherlands:*

Mr. Chairman, ladies and gentlemen. It is a great pleasure and honor for me to welcome you all here today in The Netherlands, in the capital of the Netherlands as a matter of fact, in Amsterdam. As you may know, The Netherlands is an oil and fat country, as we have few in the world. I think this is true not only in the field of the vegetable oils but also mineral oils and last but not least, and for some people it's really synonymous with The Netherlands, with Holland, the dairy-derived fats and oils. It's a very happy occasion for me to welcome you here today. You will treat a lot of problems and you will try to define aims and goals for the solution of one of the major problems the world community is facing today -- the *deficiency* in vegetable proteins derived from vegetable oilseeds, and so forth. In this connection I was reminded this morning of a conversation I had some years ago with a representative from your field of the oil and fat world. He was, as a matter of fact, a representative of a Dutch company, and we were talking about a problem that was facing and may be still facing the European economic community. It was the problem of what we call the "butter mountain." He said, "Well, you know it really isn't a problem when we look at it from our point of view, from the vegetable people, and as a matter of fact we have approached the European community, the commission in Brussels, and have a plan to solve the problem. It's rather easy -- they should sell the whole mountain to us and we'll convert it into margarine." "Of course," I told the man, "it will not be a margarine of first quality." I hope that you are aware that you are in a dairy country (as a matter of fact, we started as a dairy country), and that maybe you should refrain from proposing this sort of solution while you are here and enjoying the hospitality of our country. But, there are certainly larger problems on your agenda, and I wish you a very fruitful and very successful congress. By expressing this wish, I have the honor and the pleasure to declare the World Conference on Vegetable Food Proteins open. Mr. Chairman, ladies and gentlemen, thank you very much!

*A.R. Baldwin:*

Thank you, Your Royal Highness Prince Claus. We are deeply grateful to you for your patronage of this World Conference on Vegetable Food Proteins here in Amsterdam. And we are especially honored that you would take the time this morning to come and be with us. We know you have a busy schedule and we appreciate you officially opening this congress.

We are also pleased that other honored guests are with us this morning. Several of the Honorary Committee were not

able to be with us this morning, but we have fourteen important and well known people on the Advisory Committee who were very helpful to us, and you can see their pictures and names in the program. Dr. Meershoek and his local committee here in Amsterdam have done great things to put this program together, and we appreciate their help as well as that of Jim Lyon and his group in Champaign, Illinois, who put the program together from the American side.

Over 97 people were on the Steering and Program Committee and many of them worked long and hard to assemble the program. We have 55 speakers lined up for the plenary sessions and about 60 speakers as well as the plenary speakers, scheduled to speak at the roundtable sessions. So, we have a lot of people involved. There will be more than 900 of you here before this meeting is over, representing 42 or 43 different countries. We have 32 exhibitors who have participated in the exhibition and the explanation of the products which are going to be used in this connection and 51 participating organizations have cosponsored the program along with the American Oil Chemists' Society and CEPF.

This conference is taking place at a time when many nations represented here are making regulatory, nutritional, and economic decisions that will impact on the use of vegetable proteins in their many forms to prepare better foods and to alleviate hunger and malnutrition in many parts of the world. The subjects discussed here will make clear that the means do exist for peoples around the world to benefit from inclusion of more proteins in the very kind of foods that they prefer most of all. This can be accomplished at a minimum of expense and with significant increases in the quality of foods as well as the nutritional value of foods. Let me illustrate with a very simple example. You will hear many other examples before this conference is over. But this is a simple one which we will all understand.

An extensive study sponsored by the Agency for International Development in the United States showed that 36% of the world's population consumed more than one half of its calories in the form of bread. And many of these people are really protein deficient -- they're the people that need protein most of all. Fortification of bread with only 5% of vegetable protein flour would increase the protein content of that bread by 12 to 15% and increase the daily intake of the average person by somewhere between 10 and 12%. This would increase the cost of bread by only 4/10 of a U.S. cent per kilogram of bread. And the way the dollar is going down it's getting cheaper every day!

There are some problems which are hindering the optimal use of proteins for functional purposes and for nutritional improvements in our foods. Throughout the week we will be discussing regulatory, economic, and consumer preference obstacles that need to be addressed and overcome. By sharing the extensive knowledge and experience available among these 55 plenary speakers and more than 60 roundtable speakers as well as the exhibitors and the special lunches planned for each day except for

Friday, we can help people understand how the world can meet its continually increasing need for more and better foods. Each of us here should be able to take from this conference valuable information in a much larger measure than we bring to the conference. I believe that it will be a very rewarding experience for each day and every one of us.

Your Royal Highness Prince Claus, we are indeed indebted to you for your considerable support of this work, and we feel that that is an important contribution. Competition in the world we know is good. It sharpens our economics, improves our products, and the ultimate consumer gains considerable from it all. The United States and Europe are good competitors in the agricultural field in particular. Oh yes, we've had our tariff problems, and mountains of butter, and quotas, and chickens, wars, and noncompetitive subsidies, and embargos, and all that sort of thing, but today let us have peace in the agricultural field. Prince Claus, the Indians in our country solemnized their pow-wows and their conferences by smoking the peacepipe. It was a tradition practiced many years ago by your ancestors and mine who settled in America that they should smoke that peacepipe. Today I would like to present to you this peacepipe which my family and I have personally made. This is a small momento of the conference. If at any time you feel that things are getting rough around the house, we beg of you to have a pow-wow and share the peacepipe.

We also are very pleased to have with us this morning Madame Ambassador from the United States of America. We would be pleased to have you greet us this morning if you would be so kind.

*Madame Ambassador Joseph of  
the United States of America:*

Prince Claus, Dr. Baldwin, distinguished guests, ladies and gentlemen. Good morning and, if I may, I'd like to say a very special good morning to all of you who are here from the United States. Would you raise your hands so I could know how many of you there are? Wonderful. Glad to see so many of you here. I, too, want to welcome you to The Netherlands and to wish you success in your World Conference on Vegetable Food Proteins. This opportunity is a particular pleasure for me for several reasons. First, I am a representative of a country which as much or more than any other in the world is deeply involved in the production of food and food proteins. Secondly, because I know, I certainly know, the importance this country plays in the production, processing and distribution of food. And finally, to make a long list perhaps too short, because the work that you do in this field is vital for an ever growing world population that desperately needs better nutrition. I'm proud to say it is fundamental United States policy to do all that it can to assure an adequate food supply and in particular, adequate protein, for all the world's people — adults and children alike. Your presence at this conference is very clear evidence that you share this worthwhile goal. May your deliberations here add to the progress that we already have made in providing a more stable, adequate diet for people in both developed and the less developed countries. Thank you very much.

*A.R. Baldwin:*

We are also very pleased to have with us this morning Dr. Engineer M.P.M. Voss, Deputy Director General of The Netherlands Ministry of Agriculture, and Food Supply, who will greet us on behalf of the Minister of Agriculture, Mr. van der Stee, who was not able to be with us. Mr. Voss —

*Dr. Engineer M.P.M. Voss:*

Your Royal Highness, Mr. Chairman, ladies and gentlemen, as deputy director-general of the Dutch Ministry of

Agriculture and Fisheries I feel honored to be invited to give a short welcoming address to this conference. In my view this important world conference on vegetable food proteins offers an outstanding opportunity as a meeting place for many scientists and others involved with all the different aspects of these proteins, which will be dealt with in the impressive range of your sessions.

You will pardon me if I can not cover all eleven sessions in about ten minutes. I should, however, like to touch a few points that, in my view, stress the importance of your discussions.

As we all know, plant proteins are very valuable, both from a nutritional standpoint and in food technology. First of all I should like to consider some nutritional aspects of vegetable proteins. One has to keep in mind that we are dealing here with a variety of products derived from different sources. Important is soybean, but we should not forget possible sources like rapeseed, sunflowerseed, peas or other beans, lucerne and so on. In evaluating the products the most outstanding aspect is their high protein content. This can be important, although in Europe and North America the nutritional implications are less significant since virtually all diets contain sufficient protein to supply more than the physiological nutritional need. In these areas vegetable proteins mainly will replace other protein-rich foods in the diet. I need to mention here also the low fat content of these products, especially in view of the pervasive concern with high and often excessive fat consumption. In developing new products, one should keep this in mind and prevent this aspect from being lost in the application of the products, e.g., in the food preparation.

The way we feed ourselves is not rational at all, but developed in traditions formed over many hundreds of years. In East Asia the soybean has been recognized for ages as a source of nutritious food. People there also were aware that the bean itself is not very suitable for consumption as such and developed different methods to overcome this. This tradition, however, does not apply to other parts of the world — the Western world included.

So here we have a problem: in principle a good and nutritious product that people do not want to eat. Costly experiments with T.V.P. (Textured Vegetable Proteins) during the first years of the 1970s underlined this dilemma. The next line of approach offered itself readily: if possible and appropriate, adding vegetable proteins to the traditional well known foods. Your program lists a wide range of such products as baked foods, snacks, meat and fish products, sugar confectionery, fermented products, cheese and other dairy products.

This is a logical approach, which certainly should be tried experimentally. In all these cases, however, it will have to be worked out, not only from the viewpoint of production, but also in the general interest; what are the advantages and disadvantages of the use of plant protein in such products?

This brings us to legislation. Legislation dealing with vegetable proteins should concentrate on two points: health and product quality. Above all it should guarantee the consumer that he is provided with a safe product. In many countries legislation in this area is already well advanced. Regulating the qualitative aspects of vegetable protein products is a more complicated matter.

Let us try to face this issue from the consumer's viewpoint. Many products have a name that connect it with its origin. For instance, the word "cheese" is unconditionally related to milk and to the cow. This denomination should in my view retain this exclusivity, to avoid the danger of misleading the consumer.

This leads us to three questions:

— Should industry be allowed to produce a cheese-like product on a plant protein basis?

- Should it be allowed to produce a cheese partially on milk basis and partially on a plant protein basis (a "mixed" product)?
- Which labeling and compositional requirements have to be formulated for such products?

Of course such questions also apply to other products such as meat.

It is not for me to give specific answers, here and now, on such questions. There might also be different answers to it in different parts of the world. I should like, however, to present a few general thoughts on these basic questions. In the first place on the name. This should not be confusing: a new product needs a new name. So a cheese-like product based on plant protein should have a name that in no way reminds one of the product "cheese." It is a new product with its own merits; it should not, and will not, have to surf-ride on the name of a well known traditional product. In this way the consumer is offered a new product and by the new name is spared any possible confusion with existing products. So, generally speaking, new products based on plant proteins can be accepted, provided they are labeled distinctly.

Should mixed products – in the case of cheese, partially on a milk basis and partially on a plant protein basis – also be allowed? I must admit that, generally speaking, I am rather adverse toward such developments which confused the consumer. There will have to be a decision on a product-by-product basis whether such a development seems desirable.

Undoubtedly, plant protein products do have great potential as food for human consumption. A good nutritional value is combined with functional properties such as water- and fat-binding capacities, and gelling and emulsifying properties. These possibilities are, and will be in the future, of importance in many new and existing products. Without excluding other applications, my thoughts here primarily go to many engineered foods with a convenience aspect.

I should like to stress the fact that developments in food science during the past two decades have made it possible for plant protein products to reach a broad potential for human consumption; and that use of plant protein is not restricted any more to animal feed. New products will be made available, enlarging the assortment of foods so the consumer can choose between a variety of clearly labeled and defined products, different in quality and price, but all with a good nutritional value. The consumer will have the last word! It is in this spirit that I wish you good and fruitful discussions, which will serve the interest of the consumer as well as of the producer.

*Dr. Karl Gander, cochairman of the World Conference on Vegetable Food Protein:*

Your Royal Highness, Deputy Director General, ladies

and gentlemen. Thank you very much, Dr. Voss, for your clear comments and clear advice and for the best wishes you presented to use from your government. We are happy to be able to enjoy the hospitality of this beautiful country. The Netherlands have already performed many times the function of a link in Europe and over the oceans. Her position in the heart of Europe and the "savior vivre" of her population are the best frame we could wish for this conference. For the second time, we shall discuss here in Europe the chances for supplying people with new food products, since it is possible to make vegetable protein directly accessible to human nutrition. This protein will certainly mean a new source of food of great value for the poor countries, but for the industrialized countries there are also very interesting applications. This does not mean putting substitutional products on the market. It means not only a better utilization of other raw materials, but taking full advantage of the special functional and physiological properties of vegetable proteins offering an excellent combination with other components of our nutrition. This will also be a new challenge for agriculture and technology here in Europe after the Americans led the way.

Let me now read some telegrams we just received. One is from the Director General of FAO. It reads: "We are indeed grateful to the organizers of this World Conference on Vegetable Food Protein to be given the opportunity to express on behalf of the Food and Agriculture Organization of the United Nations my best wishes. The subject of your deliberations focuses on issues of great importance to the food supply and food intake for the people of the world over. My organization faces a tremendous task in resolving the problems of food supply and malnutrition by which still hundreds of millions of people are affected. May I express the best wish that your conference will not only focus on improving the variety of foods to be consumed by the affluent but rather put primary attention to improving the food supply of those who need it most. *E. Saouma.*"

And another telegram from the EC Commissioner for Agriculture, Mr. Gundelach: "Much as I would like to be with you at the World Conference on Vegetable Food Proteins, regretfully I am engaged for the whole of this week. I wish you all success with the conference." And finally I just would convey to you the greetings of IUPAC.

So, let me add, I wish you all that the conference meets your expectations, and I should now like to introduce to you the chairmen of the first session, Session A, Protein Nutrition. At the very end of the table, Professor Debry, Department de Nutrition et des Maladies Metaboliques de Universite de Nancy and Dr. Max Milner from MIT, International Nutritional Planning Program. Dr. Milner, may I ask you now to take over.