NUTRITION WEEK

SUMMARY REPORT

INTRODUCTION

The weeks of meetings of Groups of Experts are organized with the object of facilitating the attendance of members by holding meetings of interest in the same locality on consecutive days. The Nutrition Week in Kiel was the second of its kind, bringing together 44 specialists from 22 countries.

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The International Dairy Federation (IDF) is a non-profit, non-governmental organization created in 1963 in order to promote, through international cooperation, the solution of scientific, technical and economic problems in the international dairy field. 32 member countries, in all parts of the world, are members.

This summary report is issued to all interested parties, including all participants.

PROTOCOL AND SOCIAL PROGRAMME

The Nutrition week was opened by Prof. Dr. C.A. Barth, Director of the Institute for Nutrition Physiology and Biochemistry, who explained the role of the Federal Dairy Research Institute of Kiel. Prof. M. Teuber, President of Commission F 'Science and Education' of the IDF, briefly reviewed the state of nutrition research within IDF, whereas Dr E.J. Mann, President of the Commission of Studies of the IDF, explained the structure and working of the IDF, not all participants being familiar with this.

On the first evening, a welcome reception sponsored by the IDF was held in the foyer of the Kiel Institute, a variety of German beers, wines and snacks were offered to the participants.

In the evening of the second day, a dinner sponsored by the Kiel Institute and in which participants shared a small amount in the expense, was organized in the beautiful setting of the Kiel harbour at the Kiel Yacht Club. This event, including a brisk but none-the-less scenic dock-side walk to the restaurant, was greatly appreciated by the attendees.

SUMMARY OF PROGRAMME

Tuesday, 15 May

Opening speeches

Research on Human Nutrition: how will it affect the dairy industry?

Pan European Nutrition Information Dissemination Project: what conclusions can be drawn by human nutritionists?

F20: Scientific session on the Role of Cultured and Culture-containing Milks in Human Nutrition:
- Ecology of bifidobacteria in the human intestinal tract
- Translocation of bacteria and its possible effects
- Impact of fermented dairy products on the immune system
- Recent findings on the effect of lactic acid bacteria on the immune system
- Possible antitumor properties of fermented dairy products
- Microbial b-galactosidase supports lactose digestion: proof from postprandial plasma galactose

F24: Nutritional properties of milk proteins and non-milk proteins (business meeting)

F22: Significance of milk in the diet from the angle of calcium metabolism (business meeting)
SUMMARY OF PROGRAMME

Wednesday, 16 May
F22 : Role of Milk in Human Nutrition from the Angle of Calcium Metabolism:
- Dietary calcium as a possible antipro-motor of colon carcinogenesis
- Dietary calcium, peak bone density and post-menopausal osteoporosis
- Calcium absorption and retention from dairy products
F24 : Milk and Non-milk Proteins in Human Nutrition:
- Report on the Group
- New insights into metabolic effects of animal vs. vegetable protein
F37 : Milk Lipids in the Diet and Health:
- Report on the subject
- Potential for modulation of milk fat composition by feeding

Thursday, 17 May
F38 : Education in Nutrition - National Reports on efforts and means to influence opinion leaders and the general public towards nutrition and health
- The place of dairy products:
  - England and Wales
  - Ireland
  - France
  - Netherlands
  - Australia
  - Canada
General Discussion and closing speech

SUMMARIES OF PRESENTATIONS AND DISCUSSIONS

RESEARCH ON HUMAN NUTRITION : HOW WILL IT AFFECT DAIRY INDUSTRY?
Leif Hambraeus,
M.D. Dr Med. Sci, Professor of Nutrition,
University of Uppsala, Uppsala Sweden

Many of the nutritional problems most discussed today in the industrialized world have had some negative effect on the consumption of milk and dairy products. Essentially the quantitative and qualitative aspects on the dietary fat intake have had an impact on the consumption of dairy products and will probably do so for many years to come. The low iron and fibre contents of milk and dairy products are other examples of nutritional characteristics which will hamper the marketing of dairy products in diet and health promotion activities. The essential questions are not only to identify the alternatives to dairy products in the diet or to question their superiority to the dairy products from the nutritional point of view, but also to analyze whether the dairy products can be modified to better meet the nutritional requests. This is a challenge for the dairy industry. After all milk does not only contain protein, fat and lactose but also a number of nutrients, some of which extremely interesting biologically active compounds. It is time to devote more time to develop new products which live in the borderline between food and pharmaceutical industry. Further studies on the potential physiological role of fermented dairy products, specific short fatty acids as well as of biologically active peptides are such examples. Studies on the bioavailability of not only calcium and iron but of other trace elements are well. The development of new dairy products that fit in the new lifestyle in order to attract the new generation, the teenagers, which need the calcium to optimize peak bone growth, and to develop convenient food for in-between meals, and for special groups, i.e. athletics and elderly, seems most accurate.

REPORT ON PAN-EUROPEAN NUTRITION PROJECT

This project, funded by the EC from co-responsibility funds began in 1989. It is a 2-phase project, phase 1 being the collection and critical assessment of scientific publications relating milk and milk products to health and phase 2 being the communication of the results of that assessment to selected target groups in the EC. Prof. Gurr’s Nutrition Department at the MMB of England & Wales was awarded the contract for phase 1 which was completed on 1 May 1990. Because of time constraints, a limited number of topics, judged to be those of most concern to the Dairy Industry in most EC countries was reviewed. They were chosen (a) as being the basis for positive messages for the dairy industry to use (calcium and bone health; milk and milk products as a source of nutrients in EC countries) and (b) as being topics on which the industry faces a challenge (dietary fat and CHD; cancer). On each topic a series of detailed critical reports has been prepared and submitted to the Commission. The report on nutrient intakes from dairy products is a unique collection of data from most EC countries that demonstrate the importance of milk and milk products in nutrition, even countries that have the lowest consumption of dairy products. The data also illustrate the point that a high consumption of dairy products is not inconsistent with diets that meet most dietary guidelines.

Phase 2, the communication process, has already begun. It has been contracted to COPA, a European farmers organization, which has subcontracted with an international agency in close collaboration with National Dairy Councils (or their equivalents) in all member states.

The chosen target groups are not consumers at this stage but opinion formers and leaders: health professionals, scientists, teachers and scientific and medical journalists. A reference manual based on these reports has been prepared as a basis for disseminating information and a series of meetings with selected representatives of the chosen target groups is being organized in all EC states. The large differences between health patterns and perceptions of dairy products in each country dictate that the dissemination strategies should be different in each country.

Further funds are being sought for continuation of the programme into 1990/91 and beyond.

ACKNOWLEDGEMENTS
IDF wishes to thank the Federal Dairy Research Institute of Kiel for its hospitality and organization of the event in particular through Prof. G. Barth, Head of the Institute, Dr G. Rathjen and his team as well as all the other staff of the Institute who contributed to the flawless organization of this Nutrition Week 1990.
SCIENTIFIC SESSION OF GROUP F20:
ROLE OF CULTURED AND CULTURE-CONTAINING MILKS IN HUMAN NUTRITION

Report by Dr E. Renner, Chairman

A scientific session was arranged by Group F20 “Role of cultured and culture-containing milks in human nutrition” where new scientific findings were presented after the Group had submitted a new document to the Annual Sessions 1989 in Copenhagen (chairman: E. Renner, Germany).

R. Tanaka (Japan) presented a paper on the “Ecology of bifidobacteria in the human intestinal tract”. It is now considered that bifidobacteria play an important role in the maintenance of the normal intestinal flora in the human intestine. Scientific findings suggest that the number of bifidobacteria is a potential marker of the stability of the human intestinal flora. However, further studies are necessary in order to determine the precise role of the intestinal bifidobacteria in the colonization resistance, which can serve to develop feasible and practical measures to enhance the host’s defense.

B. Bianchi-Salvadori (Italy) gave a presentation on “Translocation of bacteria and its possible effects: the role of yogurt bacteria and bifidobacterium bifidum”. The “translocation” phenomenon consists in the fact that some indigenous bacteria of the gastro-intestinal tract (GI) as well as allochthonous ones are able to translocate to the mesenteric lymph nodes (MLN) and other organs, which represents the first step in the development of many diseases. For example, Escherichia coli, Proteus mirabilis, Staphylococcus and Clostridium spp. are able to translocate to the MLN.

Protection against translocation can be obtained by:
- the immune system (in particular T cells) and
- bacterial antagonism.

Lactobacillus bulgaricus does not translocate to the MLN, but exerts a barrier effect (72%) versus E. coli. Also Streptococcus thermophilus does not translocate and exerts such a barrier effect (57%) against E. coli translocation. Bifidobacterium bifidum translocates to the MLN, it also exerts a barrier effect (63%) and it multiplies in the MLN of E. coli gnotobiotic mice. Bb. bifidum reduces translocation of pathogenic bacteria, but may become a source of infection, facilitating system diseases.

J. Goulet (Canada) reported on the “Impact of fermented dairy products on the immune system”. The immunomodulating properties of short peptides derived from human and bovine \( \beta \) casein lead the way to novel hypotheses to explain the probiotic effects of fermented dairy products. Milk proteins can be visualized as complex messenger molecules whose attack by several specific proteolytic enzymes, under special environmental conditions, in an orderly sequence, will release bioactive peptides, a part of which should be immunomodulating. The role of lactic acid bacteria and bifidobacteria in this process would be related to their proteolytic and acid production activities prior to and during the gastrointestinal digestion process. This action would affect the confirmation of the milk proteins and the sequence of their cleavage into peptides. This hypothesis is presently under study.

The presentation given by G. Schaafsma (Netherlands) dealt with “Possible antitumor properties of fermented dairy products”. The postulated antitumor properties of fermented dairy products may be related to an influence on the gut or the immune system. As regards the gut one could think about inactivation or inhibition of the formation of carcinogenic compounds, reduction of faecal pH, binding of bile acids and fatty acids to calcium phosphate or about a decreased formation of cytotoxic secondary bile acids. As regards the immune system an attractive possibility is the stimulation of the non-specific immune system (macrophages and NK cells) as a consequence of specific effects of lactobacilli or their antigens. There is sufficient evidence, mainly from animal experiments, to allow the conclusion that certain strains of lactobacilli are able to influence the metabolic activity of the gut flora as well as certain parameters of the immune system.

Two studies conducted in the Netherlands add some evidence to a possible antitumor effect of fermented dairy products. In a study with rats treated with a chemical carcinogen, feeding of yogurt, Lactobacillus acidophilus or milk fermented with Lactobacillus casei reduced the incidence and number of tumors. In a case-control study, a reduced relative risk of breast cancer was associated with the increased consumption of fermented dairy products. These results are in accordance with those of a case-control study which was conducted a few years ago in France.

An additional paper was presented by M. de Vrese (Germany) on “Microbial \( \beta \)-galactosidase activity on intestinal lactose digestion: proof from postprandial plasma galactose”.

The effect of microbial \( \beta \)-galactosidase activity on intestinal lactose digestion was evidenced directly by following postprandial vancous plasma galactose concentrations. To avoid superimposing effects of free galactose - as with yogurt - fresh or heat-treated suspensions of mechanically disintegrated kefir grains in kefir, containing lactose but no free galactose, were fed to 10 minipigs. Each meal contained 101.1 ± 0.1 mmol lactose in kefir supplemented by either native or heat-treated kefir grains corresponding to either 72 ± 8 or no \( \beta \)-galactosidase activity. Feeding kefir with \( \beta \)-galactosidase activity resulted in a 30% enhancement of the postprandial plasma galactose peak concentration (43 ± 12 versus 33 ± 7 µmol/L) as well as in 23% greater areas under the galactose-response curves (8.1 ± 1.5 versus 6.6 ± 1.2 mmol/L.min) if compared to kefir with heat-treated grains. Both differences were significant. There was no induction of intestinal \( \beta \)-galactosidase activity or intestinal lactose-hydrolyzing bacteria by lactose feeding. These results give direct evidence of an enhanced lactose digestion and absorption in native fermented milk products due to the microbial \( \beta \)-galactosidase activity.
DIETARY CALCIUM, PEAK BONE DENSITY AND POSTMENOPAUSAL OSTEOPOROSIS

E.C.H. van Berensteyn, NIZO, Ede, The Netherlands

The skeleton of an adult individual contains approximately 1000-1200 gram calcium and it is clear that calcium is necessary for development and maintenance of the skeleton. However, the question that has to be answered is whether extra calcium during life time may help to prevent osteoporosis by increasing peak bone mass or by decreasing postmenopausal bone loss.

The results of a longitudinal study of 10-year duration have shown that there is no relation between habitual dietary calcium intake (range 560-2500 mg/day) and postmenopausal bone loss but body mass index appeared to be inversely related to postmenopausal bone loss.

These results are in agreement with other epidemiological and short-term intervention studies. The results of cross-sectional studies on the relation between dietary calcium intake and peak bone mass are not very conclusive. As long as long-term prospective studies are lacking the role of dietary calcium in increasing peak bone mass remains speculative.

It can be concluded that at this moment there is for women up to the age of 65 years, no reason to increase the RDA for calcium (800-1000 mg/day) with the intent to decrease postmenopausal bone loss or to increase peak bone mass.

In the elderly calcium absorption is decreased as a result of loss of kidney function. For this reason it is hypothesized that in elderly people decreasing urinary losses is more efficient than increasing dietary calcium intake. Development of products with a higher Ca/protein ratio could be considered to reach this goal. Future research will learn whether this way benefits bone health.

DIETARY CALCIUM AS A POSSIBLE ANTI-PROMOTOR OF COLON CARCINOGENESIS

J.A. Lapré & R. van der Meer

We hypothesized that dietary calcium may give rise to the formation of insoluble CaPi in the intestine. Free cytotoxic bile acids and fatty acids in the colon may then bind to CaPi. As a consequence intestinal cytotoxicity is decreased. Ultimately, this may decrease the risk for colon cancer. Using pure bile acids and fatty acids we showed that these compounds can bind to insoluble CaPi. This binding decreases their cytotoxicity.

Dietary CAHPO₄ supplementation in rats resulted in a decrease in soluble bile acid concentration as measured in fecal water. Cytotoxicity measured as lysis of erythrocytes was decreased in the same manner. This fecal water cytotoxicity was highly correlated with colonic proliferation as measured by 3H thymidine incorporation into DNA (M = 0.85 P < 0.001). In a human intervention trial with twelve healthy volunteers who received a CaCO₃ supplement (35.5 Ca mmol/day) we found that this supplement increased the formation of a bile-acid-CaPi complex in the feces. In duodenal bile the ratio of DIOH/TRIOH bile acids was almost halved, indicating that the cytotoxic DIOH bile acids were selectively bound. However, no differences in bile acid concentration in fecal water was found. An asterified fraction of bile acids and the fatty acid concentration was decreased by CaCO₃ supplementation. Using our in vitro experiments we found that the combination of fatty acids and colonic bile acids was highly cytotoxic.

Fecal water cytotoxicity of our human volunteers was significantly decreased by Ca supplementation.
IDF GROUP F24 - MILK & NON-MILK PROTEINS IN HUMAN NUTRITION & GROUP F37 - MILK LIPIDS IN THE DIET & HEALTH

Report on the Discussion
by Leif Hambraeus,
the Session Chairman

In the discussion the participants essentially questioned the relevance to give dietary advice on the basis of what we know today about the role of milk lipids for future health. Dr. Gurr in his presentation argued that a committee dealing with public policy matters on nutrition advice should handle over the available scientific data to another committee comprising scientists to analyze their significance. This led to a discussion regarding the evidence that there was a clear relation between the atherosclerotic lesions and the intake of saturated fatty acids from dairy products, which Dr. Gurr questioned. In addition to the scientific evidence based on animal and epidemiological studies as well as human intervention studies more emphasis should be given to the genetic aspects. What could be learnt from the dose-related effect with respect to cardiovascular disease in heterozygotes and homozygotes with disturbances in cholesterol and lipid metabolism in relation to the general population?

The question was brought up whether we all had the right to jeopardize the dairy industry as well as the milk-producing farmers economically by accepting the present "fashion opinion" that dairy fat is potentially harmful to the health in case it will later be shown that the saturated fatty acids are not dangerous. This led to a philosophical debate whether it was best to concentrate the efforts to debate whether or not the criticism of saturated fatty acids were harmful, or to accept this as a potential risk and use the limited resources to develop new products which could take over on the market. This would be a more positive approach and decrease the risk of dairy products loosing their role in the food system.

Subject F37
MILK LIPIDS IN THE DIET AND HEALTH

Report by M.I. Gurr (GB)

Prof. Gurr gave a review of his interpretation of the current knowledge of relationships between dietary fats and coronary heart disease (CHD) and made special reference to the role played by milk lipids. Much of the criticism of the nutritional role of milk products derives from their content of saturated fatty acids, believed by many in the health professions to be a major contributor to CHD. Scientific evidence for this (the "lipid hypotheses") is based on (a) animal experiments, (b) epidemiology, (c) studies of people with familial hypercholesterolaemia (FH) and (d) human intervention studies. Whereas those who recommend substantial changes in dietary fat intakes, argue that there is strong evidence from these sources, Prof. Gurr presented arguments that in each case the evidence was less than convincing, either because the scientific work was flawed to some degree or because of incorrect interpretation. Animal experiments demonstrate links between dietary fat and atherosclerosis but the main cause of death, myocardial infarction (MI) is rarely seen.

Epidemiological studies provide statistical relationships but do not provide evidence of causal links. Epidemiology is useful in forming the basis for testable hypotheses. Properly used, it is invaluable but its power has been abused. The arterial lesions in FH patients are said by some pathologists to be quite distinct from atherosclerosis and that evidence from this group of people has been overinterpreted.

Other pathologists disagree and this point needs clarification. Human intervention studies should provide the best test of the lipid hypothesis. However, they have been uniformly disappointing, the best giving indication of a trend only, not definitive proof. Positive results have often been claimed when differences were not statistically significant. Although blood cholesterol is established as a risk factor for CHD, it is one of many and there is evidence that attention to other risk factors (blood pressure, smoking, etc.) results in more positive improvements than dietary change. Recent studies have started to give more attention to thrombosis. There may be a link between dietary fat composition and tendency of some individuals to develop thrombosis (blood clots). This deserves more reserve attention. We cannot say that dietary fats, including milk fats, do not play a role in CHD but their role may be smaller than has been claimed and fat should be seen in perspective. There is no scientific justification for removal of milk fat from diets but some individuals need to modify their diet and lifestyle. The dairy industry can play a positive role in providing a variety of products based on the results of research.

IDF GROUP F38 - EDUCATION IN NUTRITION NATURAL REPORTS

- England & Wales
Dr Judy Buttriss,
National Dairy Council, UK

Following publication of the Government's COMA Committee report 'Diet and Cardiovascular Disease' in 1984, the UK dairy industry adopted its Fresh Approach campaign in 1985. In summary, the strategy of the campaign was to work within the report's recommendations for the general public (35% of energy from fat; 15% from saturates; increased consumption of starchy carbohydrate foods rich in fibre) but to stress the positive attributes of milk and to put the fat and coronary heart disease debate into perspective, stressing the multifactorial nature of the disease.

Under the umbrella of the Fresh Approach, activities are targeted at health professionals, particularly general practitioners and their practice teams, consumers and the media. Some projects are general, such as the Quarterly Review, read by a wide spectrum of health professionals. Others are more specific and are often joint projects with professional bodies. Examples include the newly launched Nutrifax, a handbook on nutrition produced with the Health Visitors Association and funded by the National Dairy Council and Milk Marketing Board; Sound Nutrition, an audio-cassette produced jointly with the Royal College of Nursing; a nutrition award for GPs and their team, offered jointly with the Royal College of General Practitioners (RCGP). Projects underway include a manual on nutrition for GPs produced with the RCGP and the British Dietetic Association.

- Ireland
Albert Flynn & Nuala Stanley,
Dept of Nutrition, University College, Cork & National Dairy Council, Dublin, Ireland

In the Republic of Ireland the National Dairy Council (NDC), through its Information Centre on Nutrition and Health, is the body which is primarily responsible for promoting the nutritional attributes of dairy products. The following initiatives have been adopted to influence health professionals and teachers
in tertiary education in their attitudes towards the Nutritional role of dairy products.

1. Annual Medical/Nutrition Meeting
   - to provide a forum for direct contact between the NDC, cardiology and dieticians with a view to providing them with objective nutrition information, which they in turn can convey to the general public.

2. Nutrition and Health Newsletter
   - to communicate to health professionals nutritional subjects which are scientific and objective, and which position dairy products in a healthy and balanced diet. Six newsletters are produced annually and the target audience includes general practitioners, dieticians, public health nurses, science teachers, home economics teachers and libraries.

3. Nutrition and Heart Disease Booklet
   - this booklet was prepared jointly by the Kilkenny Health Project and the NDC on measures (including diet) for preventing heart disease. Targeted at general practitioners, the aim of the booklet is to position dairy products in therapeutic diets, observing nutritional guidelines, and to offer an alternative to "cutting out dairy products" to general practitioners when they advise on therapeutic diets.

4. Osteoporosis and Health for University Students
   - to provide all University and Third Level students, in student handbooks, objective and scientific information on nutrition and health and to raise the level of awareness of osteoporosis and dietary measures to help prevent the disease, i.e. adequate calcium intake.

5. Calcium Awareness Campaign
   - to raise the level of awareness of osteoporosis and the role of dairy products in the provision of calcium. In this promotional campaign targeted at health professionals, such as public health nurses, general practitioners and dieticians (as well as the general public), calcium is put into its correct context alongside other factors such as exercise and hormone replacement therapy. All sources of dietary calcium are highlighted with emphasis on dairy sources.

6. Primary School Teachers' Nutrition Education Programme
   - this educational tool has been prepared jointly by the Kilkenny Health Project and the NDC. It is directed at primary school teachers and children on the subject of general health, and the aim is to highlight the changes in diet necessary to conform with healthy eating guidelines and maintain an objective and positive view of dairy products.

- France
  * Paul Sachet, CIDIL, Paris, France

During the last 5 years, the French dairy industry has been making a special effort to participate in the fat debate and more generally to increase dairy products consumption through promoting well balanced diets. So far, the French national Dairy Council (CIDIL) has organized 4 international meetings on nutrition for the elderly, for pregnant women, for adolescents and on prevention and coronary heart diseases.

The information collected from these meetings are the basis of the information delivered to the various target groups, e.g. scientific community, health professionals: general practitioners (GP's), specialists, dieticians-home economists, teachers.

Specific materials are specially devised for each target group (proceedings, booklets, brochures) and are used as complementary tools to education programs (specifically for the post-graduate training of physicians).

To reach a greater number of health professionals, the Health Department of CIDIL has recently developed 3 new approaches which could improve the quantitative impact of the health strategy.

1. An advertisement campaign on cholesterol in largely-circulated daily and weekly medical journals.

2. The use of the channel of drug-representatives to communicate with French cardiologists on the fat debate.

3. A database on lipids which GP's, scientists and other health professionals can have free access to through the telephone network (Videotext system) or IBM PC.

- The Netherlands
  * Gerrit J Hiddink, Dairy Foundation on Nutrition & Health, The Netherlands

Since September 1989, the responsibilities on nutrition education in the Netherlands are as follows:

The Dairy Foundation on Health and Nutrition is responsible for nutrition education to health professionals, The Dutch Dairy Bureau is responsible for nutrition education to consumers. The coordination of the two is also the responsibility of our Foundation. The Dutch Dairy Bureau informs us of their plans on education to consumers, so we can coordinate. Until September 1989, I was head of the Nutrition Education Department of the Dutch Dairy Bureau (education to health professionals), now I am with the Dairy Foundation on Nutrition and Health.

What do we do on nutrition education to health professionals? We organise a continuous flow of information to health professionals on the basis of international literature and national and international contacts. We have available a videofilm "Calcium and osteoporosis," as part of a multimedia project; we have other multimedia projects Milk as a basic food, and Protein, western world and third world. We send the health professionals six times a year our Voedings Magazine, we do market-research on opinions among key-groups, also on their ideas on the content and lay-out of Voedings Magazine. This research we do on a regular basis, so monitoring.

We organise presentations, give help in organising symposia, workshops and congresses of other scientific organizations (content of the symposia and possibly financial help). We have a Nutrition Research Program, the result of which we can use in our nutrition education work. On February 7, 1991, we will organise a symposium for the health professionals with Prof. Dr J. Hautvast as chairman. The title will be: "Diet: tasty and wholesome."

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Report on the discussion
by the Chairman Session M.I. Gurr

Presentations regarding the educational programmes of the National Dairy Councils (NDCs) or their equivalents in Ireland, UK, France, Australia, Netherlands and Canada revealed a similarly in the issues addressed by each country but differences in emphasis depending on the background and pressures upon the dairy industry in those countries. Prof. Hambraeus said that many of the issues discussed in the presentations would, in Sweden, be regarded as outdated. Sweden already had to cope with the problems of dietary fat in the late 1960s, early 1970s. The 1980s had been characterized by a productive dialogue between the dairy and other food industries and nutritionists, the medical profession and legislators.

Most NDCs considered that programs aimed at opinion formers and leaders (especially general practitioners) were very important and provided material for professionals as well as for schools in the form of leaflets, literature reviews, videos and slide packs.

Professor Gurr opened the discussion by referring to remarks made by Dr B. Mills, of the Canadian Dairy Bureau, during the discussion of his paper on fat
and CHD the previous day, Dr Mills had described recent initiatives by a panel of Canadian Nutritionists advising the government to adopt more stringent guidelines that would effectively be very damaging to the dairy industry. She argued that cooperative approaches had been tried and had not been effective. The time had come to go on the offensive and publicly counter the arguments of the lipid hypothesis. Prof. Gurr, asked representatives from other dairy councils to comment on this approach and to indicate their positions on this issue.

J. Buttriss (GB): We should emphasize the advantages of milk and milk products in providing a very broad spectrum of nutrients, rather than overemphasizing single nutrients, such as calcium, in isolation or spending time being defensive about fat. Moreover, we should consider milk and milk products in the context of the complete healthy diet, rather than concentrating only on the nutritional aspects of dairy products alone. Only by taking this general nutritional approach could we work in collaboration with respected bodies (She quoted examples in the UK such as the British Dietetic Association and the Royal College of General Practitioners). G. Hiddink (NL) supported this with an example in the field of food allergy. Now to start working with respected professional organizations in order to gain wide acceptance and credibility.

Dr Mills said that the situation in each country was different. They had been working on the cooperative approach for years and it had not worked. She did not rule out the total diet approach but her argument was that it was too long to start concentrating upon the positive benefits of milk products wherever they could be demonstrated. Thus, for example, they were going to concentrate on the positive benefits of cheese for dental health. Ulla Høelund (DK) remarked that the same imperious research background must be demanded if we promote cheese aggressively on this basis as we would demand when we question the evidence on fat and CHD. She was not convinced that the relationship between cheese and dental health was indeed soundly enough based.

A. Marriott (AU): In Australia, there are few nutritionists working in the whole of the food industry, still less in the dairy sector and they are regarded with suspicion by the health professionals. If we were to take the combative approach suggested by Canada, we would lose any little credibility we have. Already there are advertisements planned by the butter companies contrasting butter as “natural” against margarine as “unnatural”. Marriott thinks these will have a disastrous effect but has to accept the directive of her industry. Prof. Gurr remarked that in the UK, the Butter Council was taking this approach in the early 1980s but had since taken a more cooperative stance, working with health educators to get butter accepted as being able to contribute to diets within the framework of dietary guidelines and had thereby improved its credibility enormously.

Ulla-Marja Urho (FI) stressed the need for the widest possible variety of milk products so that consumers always had a choice of products to fit in with whatever type of dietary recommendation they wished to follow. In Finland the trend was toward high cost specialized products (low fat; lactose reduced) which people were willing to pay for if they were convinced about their quality and the need for them.

Dr P. Sachet (FR) said that the industry and the scientists advising it must have credibility and that the support of the medical establishment was vital. That was what they had tried to do with their Paris symposium and what they were attempting to do with their “Nutri-pid” database.

Dr Husek (CS) said that the scene in his country was changing rapidly. Traditionally they had relied on high fat products but now there were pressures to change to lower fat products. So far, however, these had been quite unsuccessful in the market place. He would like to receive any literature and information from the West that was available.

Elisa Albertsce (ZA) said that in South Africa there were two distinct populations: the small white population with all the same health problems described for other Western type countries and a large “third world” population with a completely different nutritional and health problems. In the latter case, there may well be arguments for higher fat products. In any case the educational programmes had to be quite different.

Israel had a high rate of CHD and a high average plasma cholesterol value and ways to reduce average fat content of the diet were being researched. They were also looking at the influence of milk and milk products on dental health.