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# NUTRITION LABELING AND INFORMATION

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## DOCUMENTS

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BEFORE THE  
SUBCOMMITTEE ON NUTRITION  
OF THE  
COMMITTEE ON AGRICULTURE,  
NUTRITION, AND FORESTRY  
UNITED STATES SENATE  
NINETY-FIFTH CONGRESS

SECOND SESSION  
ON

FOOD INDUSTRY REPRESENTATIVES (GERBER, PILLSBURY,  
PROCTER & GAMBLE, OCEAN SPRAY); GIANT FOOD/NATIONAL  
HEART, LUNG, AND BLOOD INSTITUTE NUTRITION  
INFORMATION PILOT PROJECT

NOVEMBER 15, 1978

### PART II

Printed for the use of the Committee on Agriculture, Nutrition,  
and Forestry



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NUTRITION LABELING AND INFORMATION :

Aug. 9 and 10, 1978—Part I.  
Nov. 15, 1978—Part II.  
Feb. 9, 20, and 23, 1979—Part III.

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# NUTRITION LABELING AND INFORMATION

WEDNESDAY, NOVEMBER 15, 1978

U.S. SENATE,  
SUBCOMMITTEE ON NUTRITION OF THE  
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,  
*Washington, D.C.*

The subcommittee met, pursuant to notice, at 9:15 a.m., in room 324, Russell Senate Office Building, Hon. George McGovern (chairman of the subcommittee) presiding.

Present: Senator McGovern.

## STATEMENT OF HON. GEORGE MCGOVERN, A U.S. SENATOR FROM SOUTH DAKOTA

Senator McGovern. This morning we are continuing our investigation of nutrition labeling and information. With approximately 18,000 food items offered on today's supermarket shelves, a majority of which are processed food products, the buyer is in need of sound, useful nutrition information in order to make an informed choice.

I perceive a desire for better communication of nutrition information. However, I do not think we currently know how best to convey nutrition information, either on labels or through other media. Thus, while it would appear that it is time to act, we must proceed in a systematic fashion that considers the needs of all parties concerned.

We must be cognizant of and insure the consumers' right to know what is in the foods they select as well as their right to choose what they desire to eat. In order to achieve these dual objectives, we should approach nutrition labeling as an information function necessitating flexibility, and not as a regulatory action directed at protecting the public from toxic substances that require stringent guidelines. In short, we must differentiate the regulatory function from the information function.

If we proceed in this fashion I am confident that we can arrive at a solution that will serve well both the food industry and the American public.

For this reason I am pleased to welcome today representatives from Pillsbury, Procter & Gamble, Ocean Spray, and Gerber—four food companies that have contributed over the years to the nutrition labeling and information discussions. I am equally happy to have representatives from Giant Food, another pioneering food company, and the National Heart, Lung, and Blood Institute to discuss their pilot nutrition education program, "Foods for Health."

With no specific legislation before the Nutrition Subcommittee, I anticipate this oversight hearing will allow us to be creative in analyzing how we might develop a truly useful, realistic and comprehensive nutrition information system.

On our first panel today, we have four witnesses: Dr. Howard Bauman, vice president of science and technology of the Pillsbury Co.; Mr. Ray Frodey, vice president, research and quality control, Gerber Products Co.; Dr. James Tillotson, vice president, technical research and development, Ocean Spray Cranberries, Inc.

We will be joined a little later by Walter Meyer, associate director of food product development, Procter & Gamble.

Gentlemen, because of the constraints of time, if you can highlight your opening statements in about 10 minutes apiece, so we can save some time for questions, we would appreciate that.

But feel free to proceed in any way you see fit.

We will start with Dr. Bauman.\*

**STATEMENT OF DR. HOWARD E. BAUMAN, VICE PRESIDENT OF SCIENCE AND TECHNOLOGY, PILLSBURY CO., MINNEAPOLIS, MINN.**

Dr. BAUMAN. It is a delight to be here. I think it is appropriate for this issue to be discussed at this time. In the statement I will make I hope I will be able to rationalize why we should reevaluate some of the things we have done over the past decade.

Although I know this hearing is most specifically about nutritional labeling, there are other aspects of the food package label that I think warrant mentioning since, in many cases, they relate directly to nutritional information about the product.

I would like to state our opinions at the outset so that you understand the Pillsbury Co.'s position on labeling, and specifically, nutritional labeling. I've also attached a copy of our corporate policy on nutrition which has been widely disseminated over the years.

First of all, we are committed to full, meaningful, informative labeling on our products including the listing of all ingredients. We firmly believe that diet and nutrition go hand in hand; that there is no such thing as a single good or bad food—like many things in life, there are good and bad ways of using items, including food.

We feel that there should be a concerted effort on the part of industry, the academic community, and the Government to develop a Nation of smart eaters rather than having our choice of foods limited by Government action.

We believe that this can be accomplished by providing a wide variety of foods with informative labeling. We should take into account the educational programs that are necessary, because we do have a Nation that varies tremendously in individual lifestyles, their health status and ethnic backgrounds.

Whatever we do should be compatible with a cross section of the Nation.

I have some testimony in the statement of how we got to where we are, and I will paraphrase and say, the food processing industry got a start during and after World War II, and primarily because of the shipping of food products long distances into tropical areas.

\*See p. 69 for the prepared statement of Dr. Bauman.

We learned about how to preserve foods and handle foods. This over time has been accelerated because more and more of the homemakers have been entering the employment market and time for preparation of foods has become quite valuable to them.

They are shifting somewhat towards the convenience foods.

It also has had an effect on commodities. Prior to World War II, 70 percent of our sugar was brought into the home in bags. But today 70 percent of the sugar now goes into the home in the form of processed and convenience foods.

The renewed reemphasis on nutrition began in 1969 at the White House Conference on Nutrition. This Conference raised concerns about the types of food products that were being eaten and the nutritional well-being of the population, who, for at least a generation, had not been exposed to adequate nutrition education.

Because of this effort as well as a great deal of effort on the part of the Select Senate Committee on Nutrition and Human Needs, we have for the past 9 years, gone through a period of accelerated change.

Because of the rapidity of these changes, other problems have been created. We believe that we have arrived at a point in time where we must look at where we were, what we've been doing over the past decade and what we ought to do from this point on to improve the nutrition awareness and understanding of the consumer.

After the White House Conference, the Food and Drug Administration, the USDA, industry, the academic community, the Senate and interested organizations embarked on a semicrash program in an attempt to deal with some of the desires and expressed needs shown at the nutrition conference of 1962.

I have included in my testimony a list of all the labeling changes that have occurred since 1973 and they are quite massive.

As a general rule that is used in industry, the first 80 percent of a project can be accomplished with about 20 percent of the money. However, the last 20 percent of the project takes the remaining 80 percent of the funds.

It is the attainment of the final 20 percent or fractions thereof that we must view with caution and concern since it's in this area that the greatest effect on price, productivity, and cost to the consumer will be felt.

Therefore, we think this is a good point in time for all of us to reflect upon what has been accomplished so far.

We feel that before any additional changes are recommended in our labeling systems that we very seriously look at three major factors, in a matrix.

First, the feasibility implementing the proposal; that is, primarily the feasibility of industry's ability to accomplish this change.

Second, the magnitude of the cost of the change so that we have some idea of the cost benefit.

Third, the utility of the change to the consumer. For example, a change that is felt to be desirable by a few people, may be very expensive and have little or no utility to the vast majority of the people and should not be made.

Does it really do the consumer any good, or does it satisfy a very few people, but places the cost burden on a very large segment of the population.

I would hope that the Food and Drug Administration, who have carried out with the USDA and the Federal Trade Commission a series of field hearings, that they will carry the idea of feasibility, cost, and utility, when they come up with a list of changes they think may be necessary.

I hope this change would be presented as one document listing all of the changes, so the consumers, the Government people, anyone else, can find out what the magnitude of each change is.

One little change may not cost much, but if we have 15 changes, it could be very dramatic.

I would like to point out also, on label changes there appears to be an impression it does not cost much. It costs between \$500 and \$15,000 to change one label. Our company currently has 1,300 labels. If we had to change all those, our direct, out-of-pocket expenses would be about \$1 million, and the indirect expense of personnel time would amount to another \$1 million.

It is not just personnel time that is important, but the fact that we are diverting personnel from areas of productivity to areas of nonproductivity.

We should also consider whether or not some issues should be dealt with on the basis that they are informational rather than primarily of a regulatory nature. It's an inherent fact of life within a regulatory agency that any regulations must be written with penalties and constraints. There is no question, in our experience, that some regulations tend to inhibit innovation.

Experience has shown that new ideas and new approaches are difficult to incorporate into a regulation and generally take a long period of time. For instance, the regulation on nutritional labeling is voluntary, however, once a nutritional claim is made, then it becomes mandatory.

Those organizations that do nutritional labeling do so with a certain amount of trepidation since as soon as they voluntarily enter, they assume a regulatory liability, and at the same time, assume a substantial cost for the analysis necessary to insure compliance with the regulation. This, undoubtedly, deters many companies from putting nutritional information on their products.

Senator McGOVERN. What is the explanation for the wide range in costs that you estimate from \$500 up to as high as \$15,000 for changing one label? What goes into that cost?

One of the things we have been concerned about is not to encourage the development of a label system that will be very expensive in terms of adding to the cost of food.

Can you tell us what these cost factors are when you bring about a change in labeling?

Dr. BAUMAN. The label change that I have mentioned, the \$500 and the \$15,000, is just changing the label. We consider a label that requires additional analytical study and then the cost skyrockets. It is very expensive.

For instance, we just did an analysis on our pizza products. We did an analysis of what it will cost us to do the basic nutritional analytical work.

It will cost us \$600,000.

Senator McGOVERN. On that one product?

Dr. BAUMAN. Just one product line. It will cost us \$300,000 a year to maintain that, to do the analytical work to insure that, yes, we are in compliance as we go along.

In nutritional labeling, beside the possible penalties that may be laid on a company because of mistakes in labeling, the great deterrent is the cost.

First of all, nutritionists are very scarce. Analytical laboratories are very scarce. The more we overload them trying to do analytical work for labeling, the less we can do in new product development.

I suggest in my testimony very strongly that we consider the use of handbook No. 8 as the data base for all nutritional labeling and nutritional information in the United States.

First of all—

Senator MCGOVERN. Just for the record, can you explain what handbook No. 8 is, so we can get that into the record?

Dr. BAUMAN. Handbook No. 8 is a publication by the Department of Agriculture, and it is an analysis of various foods and ingredients for foods in a listing that covers most of the important nutrients that we need.

Our experience has shown, and I have talked to other companies that have used this in their own computer data base, is that handbook No. 8 is very accurate. When we compare it to all of the results coming out of the laboratories. Its important to remember that raw materials vary considerably.

If the only constraints that we should have are that a manufacturer uses handbook No. 8 to derive nutritional labeling, he must do some minimum analytical work to assure that the process he uses ends up with a product that meets the information in handbook No. 8.

Another part of this would be to make sure that the USDA continues to update and refine handbook No. 8.

Senator MCGOVERN. Are there other companies like Pillsbury that plan to or have already developed computer nutrition programs?

Dr. BAUMAN. There are a number of companies, I am sure, that have the programs in their computers. We have gone one step further. Miss Peggy Katalinich of the Minneapolis Star, who is a reporter, during an interview mentioned that she had been looking for a computer base source that she could use for new recipes she was publishing in the paper.

Our system has been refined so she could use that. They did publish that information in the paper.

I have attached some information that appeared in the newspaper. The response from the readers was tremendous. This has also been done by the Los Angeles Times, and we have put the data base and the software into the Honeywell data network, so anyone who wants to use it can.

And I think for a 6- or 8-month period they are charging \$3.50 a recipe. All of the response we have been receiving so far has been tremendous.

I think this could turn out to be educational mechanism to get consumers to understand nutritional labeling and how to use it, plus the fact that they can compare home recipes with processed foods.

They will have a basis for comparison that they did not have before.

Senator McGOVERN. Dr. Bauman, I assume that at times labels are changed on a voluntary basis by the companies under the advice of your marketing people for marketing reasons.

Do you have any rough breakdown on how much of the voluntary changes in nutrition labeling is done primarily for marketing purposes, to make the product more appealing?

Dr. BAUMAN. It will vary somewhat, but an average label change will be once every 18 months. If there was a way of tying that into additional changes in a voluntary period, it could be a cost savings. Plus, if we had all changes going on at the same time instead of one this month, one the next, and so forth, it would be much cheaper.

It is just as cheap to make six changes as it is to make one change.

I think I have covered essentially everything in my statement.

Senator McGOVERN. In your prepared testimony I gathered that you don't support percentage ingredient labeling. We have had it come to our attention that a number of the consumer groups that have been testifying at the FDA, USDA, and FTC hearings have requested that there be a percentage breakdown of ingredients.

Do you think any breakdown such as characterizing ingredients has any utility?

Dr. BAUMAN. I can see a possibility, one example I know of is the percentage of ingredients in seafood cocktail where you have a very valuable ingredient and you want some basis for comparison.

But in most cases, percentages would be a mistake because our ingredients vary so much. They continually change our mixes.

Our percentages have to vary over the year. One way to explain this is, I am sure an awful lot of people have made lemon pie and used cornstarch, and they found out it either ran or it was so stiff it was hard to eat.

This is a kind of situation we face, where a carload of starch is brought in, and it does not necessarily carry the same thickening power as a previous carload. So we have to increase the amount or decrease the amount in some instances.

It seems to me a percentage labeling would be such that the industry would almost always be in a technical violation of the law. I don't think we should have a law where everyone is in violation of it.

Senator McGOVERN. We will now hear from Mr. Frodey, vice president of reserch and quality control of Gerber Products.\*

#### STATEMENT OF RAY C. FRODEY, VICE PRESIDENT, RESEARCH AND QUALITY CONTROL, GERBER PRODUCTS CO.

Mr. FRODEY. Thank you.

I was very pleased to hear your opening statement, because it is very refreshing to find that we are in agreement on many points.

I will try to summarize this and not go into detail. I will start out this morning with the point that we were one of the earlier companies in the food industry to use nutritional education as a part of our advertising.

This program was initiated about 30 years ago in the "Mrs. Dan Gerber" advertising columns that we regularly inserted in many national publications and still do.

\*See p. 85 for the prepared statement of Mr. Frodey.

This nutrition education involves descriptions of the functions of the major nutrients and discussion of the group of foods that contain these nutrients. We also provide nutrition information in the form of films, seminars, and education aids for both professionals and consumers.

We have maintained charts of average nutrient composition for all of our products and have supplied these on request to consumers as well as to professionals. We have been doing this for more than 20 years.

We have for many years supplied two booklets on nutrition. One of these is designed for the professional person concerned with infant feeding and the other one is designed for use by the consumer. These publications have been very popular and we feel have done a good job of nutrition education. While both of these booklets are aimed primarily at infant nutrition, the consumer book also supplies general nutrition information that can be used for children and adults as well.

Our nutritionists have concluded, after many years of experience in dealing with many consumers, that the most effective approach to teaching basic nutrition to the general public is by means of the "basic four" or "basic seven" food groups.

While there is little question that the "basic seven" is better if this approach can be properly assimilated by the consumer, we have felt that a modified "basic four" approach can be better understood and remembered by most consumers.

Using this approach, we do specify that within each group of the "basic four," a variety should be fed and we specify examples of approaches to get proper variety within each of the four groups. This consumer booklet has been very well accepted and we feel that it has made a significant contribution to nutrition education.

Our products which fall under FDA jurisdiction are voluntarily nutritionally labeled in accordance with the regulation. We have not nutritionally labeled our products which come under USDA jurisdiction because of the fact that the regulations have not been clarified by USDA as yet.

We are currently using nutritional labeling in accordance with the voluntary program. We have not—

Senator MCGOVERN. In that connection, Mr. Frodey, would you recommend that USDA improve its regulations? My understanding is that you don't have much difficulty following the Food and Drug Administration, but it is the USDA regulations that are not clear.

Mr. FRODEY. We have talked to USDA about it. Their labeling group, will approve a label that is set up in accordance with the FDA regulations. But then you have to have it approved by another USDA group, which is a quality control group, and they set up the number of analyses that you have to run on each product, on each production run, in order to verify your analysis.

The discussions we have had have been indefinite, and what information they have given us on what they are going to require indicates that the analytical work will be extensive.

Senator MCGOVERN. Don't you think that FDA and USDA might get together on a consistent format, so they would be following the same guidelines?

Mr. FRODEY. I think they should.

We have seen little indication from our consumer correspondence that nutrition labeling has contributed anything meaningful to consumer education at the present time, and question whether the expense is justified. We have received consumer comments in regard to nutrition labeling, including questions as to why the meat and poultry products are not nutrition labeled.

However, the few specific questions that we have received in regard to nutrition labeling just as often indicate confusion and misunderstanding as they do understanding and benefit.

Those few consumers who have the knowledge to understand and benefit from the current nutrition labeling and the professional people who have training in this area will be better served by our nutrition information in consolidated chart form, using composite average data, since menu planning is better done before shopping, rather than in the store.

Senator McGOVERN. Mr. Frodey, if it is true that you get very little feedback, does that indicate that the consumers are being educated by nutrition labeling, or does that mean nutrition labeling is not worthwhile, or it is not being done well?

Mr. FRODEY. It is my feeling that it is not being done properly.

I think we have to understand that, talking about the average consumer, probably regardless of what we do, other than teach the basic four, it will not be understood by all of them.

However, we can do a better job of nutritional labeling for those consumers that have an interest and the ability to understand it.

But I am not prepared to say this is the best format, because I don't think we know. I think I have covered that in my next section, so I will just skip that.

Some benefit can probably be derived by permitting the labeling of calories, and the macronutrients, fat, protein, and carbohydrate, without triggering the labeling of the vitamins and minerals. The consumer understanding of calories and the macronutrients is better than of the vitamin and mineral micronutrients.

Senator McGOVERN. Is that the trend we are moving in now, Mr. Frodey, less concern about deficiencies of minerals and vitamins and more concern about the overall nutritional component?

Mr. FRODEY. I believe there is a tendency that way. It is not to say that minerals and vitamins are not important. If you take care of the other components, however, they will take care of themselves.

Senator McGOVERN. Will you again, just for the record, we use these technical terms and sometimes they are difficult when you get back to it, tell us when you use the term, "macronutrient and micronutrient," what you mean?

Mr. FRODEY. Macronutrients are the basic nutrients that you consume, the proteins, carbohydrates, and fat, primarily.

The other nutrients, the micronutrients, are vitamins and minerals which are present in very minute quantities.

One of the points I want to cover here, even though Howard Bauman covered them, is that we feel the use of data bank or published information, such as USDA handbook No. 8, would result in just as good overall dietary control and would eliminate a numbers "race" on labels by the food companies.

We also have our nutrition information on computers, and we share that with the USDA, for their data bank and update of the USDA handbook No. 8.

A question has been brought up about sodium and potassium labeling. We currently are labeling many of our products for sodium content in accordance with the existing regulations, insofar as we are making the label declaration that they have no salt added, and both FDA and USDA require sodium labeling when a "no salt" claim is made.

Senator MCGOVERN. Dr. Bauman mentioned the cost factor involved in analyzing the nutritional component in food. Is it less expensive in your opinion just to analyze the macronutrients?

Mr. FRODEY. It definitely is, because there are fewer of them basically.

I would summarize the situation, saying the following points should be considered in any new nutritional labeling program.

A. Usefulness to the general public: It must be simple and yet convey meaningful information.

B. Cost effectiveness: The substantial continuing analytical costs should be minimized.

C. Flexible: It should be flexible so as to permit the use of limited information on products where complete nutrition information is not needed, which will not be useful to the consumer, or is not practicable to determine.

D. Label space: It must be adaptable to small labels, such as some baby food labels, because most of our labels are quite small.

E. Compliance: It should be considered primarily as an educational tool rather than as a regulatory compliance problem for the agencies. Keep the regulatory lawyers out of it as much as possible and let the scientists draw up the regulations.

Allowance must be made for natural variations in nutritional components. The 80-percent requirement in the current regulation is inadequate in some instances.

F. Comparison of similar products: It should be recognized that nutritional labeling is not suitable for utilization as a means of comparing similar competitive products. Under the current system differences in declarations of competitive products are not normally significant because of the range of natural variation in raw materials and because many of these differences are the result of different interpretations of the current accuracy regulations or because one company may be more conservative in setting up their declarations, even with similar data.

Most of these points can best be resolved by permitting the use of nutritional data bank type information for the natural nutritional components. I do acknowledge here that there should be some exceptions, where people make exceptional claims, and where they have a fortification program beyond the standard enrichment program, other than the standardized enriched grain and dairy products.

It has also been suggested that percent ingredient labeling could be a substitute for nutrition labeling. While it may be more understandable to most consumers than present nutrition labeling, it can also be misleading and can cause an incorrect nutritional choice. We are not opposed to percent labeling in some types of products. We

have voluntarily percent-ingredient labeled some ingredients in some products where it was feasible to do so, did not involve substantial additional testing, and where there was consumer interest in our doing so.

However, in many instances there are severe problems with feasibility and costs, which we have outlined in detail in our comments on the FDA baby food ingredient labeling proposal. Further, with most baby food products, and many adult products, produced directly from fresh fruits, vegetables, and meats, percent ingredient labeling of characterizing ingredients can not only be of no value to the consumer, but it can mislead the consumer into making an improper choice.

Because of unavoidable natural variability in the composition of the fresh fruits and vegetables, a product labeled as containing a lower percent of the characterizing ingredient may actually have an equal amount of, or more, fruit or vegetable solids and nutritional value than another product containing a higher percent of characterizing ingredient.

Meats vary in fat and protein content and a company that selects very low fat meats will be at a disadvantage as compared to another company that uses a larger amount of less expensive, higher fat meat—even though their product may be superior nutritionally.

Even though the products might also be nutritionally labeled, which would demonstrate this fact, the overwhelming majority of consumers would ignore the nutrition labeling and select the product with the higher listed percent of the characterizing ingredient. This has been demonstrated in tests by an independent consumer research organization and the data has been submitted to FDA.

As indicated previously, this does not mean that we are opposed to percent ingredient labeling in all products, but each product and each ingredient must be considered on its own merits in regard to feasibility, cost and value to the consumer. In no case, however, will it function as a substitute for nutrition labeling.

We are also greatly concerned about other labeling proposals being considered by USDA, particularly the possibility of their promulgating a machine deboned poultry regulation similar to their machine deboned meat regulation. The statement required as part of the name in this regulation would mislead the consumers into believing that they were consuming an inferior product and cause most of them to reject the product.

It will be a tremendous economic factor in the industry, and it will cost the consumer accordingly. But it will not be of any nutritional benefit to them.

We acknowledge that there may be some problems with some types of deboned poultry. Both industry and USDA are getting data.

However, these problems can be taken care of without these labels and the consumer will not understand what this label will mean, and will generally reject the product.

In summary I will give our recommendations for optimizing nutrition information for the general public.

No. 1, initiate nutrition education in the schools at an early level, using properly trained instructors and using a system that is understandable and will be retained by the general public.

We believe that the best way to do this is to set up a program based on a modification of the "basic four," whereby variety within the four groups is emphasized and discussed, and the basic nutrient functions are explained in simple terms.

Follow this at the high school level, for those students with capability and interest, with more specific nutrition instruction, including simplified biochemistry of nutrition.

No. 2, initiate a continuing education program for the current post-school generations, by using the "basic four" as the base, and encouraging interested adults to take the high school level course in nutrition on a continuing education program.

No. 3, continue with the present voluntary nutrition labeling program, but permit limited nutrition labeling without the necessity for full disclosure of micronutrients, until such time as a consumer research and marketing test program involving the universities, the Government agencies, consumer groups, and industry can define whether or not it is possible to develop a nutrition labeling system that can be more meaningful, and which will encourage industry to participate in the program on a cost-effective basis.

I'm sorry that I have not been able to suggest an ultimate, simple solution to the problems of nutrition labeling and nutrition education, but I don't believe anyone yet has enough information to give reliable answers to many of the questions.

However, we can get started on the general education program, and also proceed to get more information by implementing carefully designed consumer research and market test programs. I'm sure industry will cooperate in these programs.

I appreciate having had the opportunity to present my views to this committee.

Senator McGOVERN. Thank you, Mr. Frodey.

I was impressed by the fact that you make the point that there is a growing interest in the major nutritional components of food, that the consumer is more interested in that than they are in the minor nutritional ingredients, vitamins and minerals.

You also say it is considerably less costly to give the information that the public wants in terms of the total nutritional value of the product. To me that is an encouraging sign.

If you can respond to the consumers' need and the consumers' request for basic nutrition information and do it at a less cost than concentrating on some of the minor nutrients, I think that is an encouraging situation.

I noticed in your prepared statement you showed considerably dissatisfaction with the just-completed hearings by the USDA, FDA, and FTC on the whole question of labeling. You say considerable more consumer research is needed before even tentative conclusions are going to hold up.

Are your own recommendations on concentrating on the basic four, the basic seven food groups, are those supported by careful consumer research on the part of you and your associates?

Mr. FRODEY. We have not done research on the basic four. We do have a consumer correspondence group which is composed of three nutritionists. They answer letters. We receive millions of them, on

the order of 100 to 200 a day, and this is the basis they have come to the conclusions we mentioned.

I should point out that basic consumer research—FDA has the ability to do this and I assume the USDA does also—is a good preliminary, but it really needs followup market research, and that can be done relatively easily with the cooperation of industry.

Senator MCGOVERN. We will move on to Dr. James Tillotson, vice president of Ocean Spray Cranberries.\*

**STATEMENT OF DR. JAMES E. TILLOTSON, VICE PRESIDENT, TECHNICAL RESEARCH AND DEVELOPMENT, OCEAN SPRAY CRANBERRIES, INC., PLYMOUTH, MASS.**

Dr. TILLOTSON. Mr. Chairman, I am James E. Tillotson, vice president, technical research and development for Ocean Spray Cranberries, Inc. Ocean Spray is a farmers' cooperative representing cranberry growers in the States of Washington, Oregon, Wisconsin, New Jersey, and Massachusetts, and growers of grapefruit in Florida.

I am pleased as a representative of Ocean Spray to have this opportunity to present our views on food labeling to this committee. We believe food labeling is an important part of our business.

Our farmers' cooperative is engaged in the processing and marketing of food products produced from cranberries, grapefruit, and other fruits. The majority of these food products are sold at retail in grocery stores throughout the country. Our products must, therefore be labeled in compliance with the applicable Federal and State laws and regulations governing such products.

We, as a food company, are concerned over the current system of required food labeling, as well as the format that food labeling may take in the future. We seriously question how effective the current method of required food labeling is in satisfactorily communicating product information to the public.

Up until the present time, the regulatory approach to required food labeling has stressed compliance rather than consumer communications; traditional methods of labeling format rather than innovations in food labeling, and regulatory decisions based on subjective judgments rather than on research findings.

We as a food company recognize that our food labels are one of the important methods of communicating necessary information to our customers. We fully acknowledge that today's sophisticated consumer needs and demands to know far more about our food products than they did in the past. It is obvious to us that information on the product label should include the name of the product, its net contents and the manufacturer.

The label should also include understandable and balanced information concerning the composition of the product and its major nutritional values. What is not so obvious is the most useful manner to convey this information to the consumer.

The question is not whether or not to have this, but how to have it on the label.

\*See p. 112 for additional material supplied by Dr. Tillotson.

We believe in the future as more people recognize the important relationship between their health and their diet, the demands for new types of specific product information will increase. It is highly questionable whether the current format of food labels is adequate to meet these new demands for product information. It is, therefore, of vital importance that our food labels in the future be redesigned to meet these new requirements. Suitable development efforts on new labeling approaches should be undertaken now.

As a food company, we are in the business of attempting to meet our customers' needs and wants in order that we may sell our products. As a part of this marketing process, we feel it makes good business sense to supply information to our customers in an understandable form on our labels.

A significant number of people, we feel, do not understand or use information currently on food labels. There is a general dissatisfaction with the way that food products are labeled. The recently completed food labeling hearings conducted by FDA/USDA/FTC in various parts of the country have clearly demonstrated the degree of consumer dissatisfaction with current food labeling. Unfortunately while these hearings have articulated well the perceived problems with current methods of food labeling, these hearings have not generated any clear solutions to what food labeling should be.

Unfortunately, up into the present time, there has been a serious lack of innovation with respect to food labeling. The traditional regulatory answer to consumer dissatisfaction with food labels has been to require the crowding of more and more information on the product label rather than seeking new and better labeling approaches.

Today's mandatory label clutter has, in essence, returned us to an era of functionally unlabeled foods.

I would like to show a demonstration. This is a product I would like to use as an example of what is going on. This has a trademark Cranorange. It is generically a frozen concentrate for cranberry-orange juice drink.

This is made up of four ingredients: just 150 cranberries or 6 ounces of juice; the juice from 3 oranges, 6 ounces of the juice; 67 grams of sugar; and 270 milligrams of vitamin C, four basic ingredients.

What does the ingredient label say in 17 words? Ingredients: cranberry juice, sugar, orange juice concentrate, cranberry juice concentrate, orange pulp, vitamin C, natural orange flavor.

Those four ingredients suddenly become 17 words. How is that possible?

Let me just demonstrate with the oranges. In order to put it in a small can, I have to concentrate it. In the process I take out the pulp, also the flavor, the natural flavor comes off in the concentration process. So when I refabricate this product, the rules require each ingredient to be listed in the so-called information panel.

One more point on this label. If you count the words on this can, this 6-ounce can, there are 123 words and symbols required by appropriate regulations. Let's put that in perspective. My prepared remarks today are only 1,600 words. This can is in the frozen chest. It is frosted. I wonder how much communication is going on?

We question if it is necessary to crowd such information directly on the label. What is the purpose?

One of the basic problems in dealing with innovation in food labels may rest in the legal authority to regulate food labeling.

For example, the Federal Food, Drug, and Cosmetic Act deals with food labels and labeling in terms only of prohibiting the misbranding of foods. This act does not deal with the issue of communicating product information in a positive manner and is currently being used, or rather misused, to generate a stream of unrelated, unfamiliar, and unwanted statements in labels that dissuade consumers from reading food labels. Cranorange is an example.

Further compounding the problem of designing food labels to adequately communicate product information has been the similar approach to label regulations for all regulated products whether they be drugs, pesticides, or foods. Historically, the same group has been given the task of developing label regulations; they chose the same approach to labeling, regardless of the type of product involved.

This decision predestined the failure of food labeling. This approach to the label regulations appears to have neglected the differences in the users of regulated products, the differences in requirements for information, and the relative sophistication of the users with respect to the labeled product.

Senator McGOVERN. Dr. Tillotson, just for the purposes of contrast. I notice you make the point that the present act, the Food and Drug Act, does not deal with the issue of communicating information in a positive manner.

I understand that you are making the point that what people are urged to do under the terms of the present law is simply not to be misleading.

Whether you report anything of value is of secondary importance as long as there is nothing untruthful about it.

What would you do if you were labeling this can? If you started with a blank sheet—

Dr. TILLOTSON. May I go on?

Senator McGOVERN. Sure.

Dr. TILLOTSON. Requiring the same label format on all types of regulated products may lead to efficiencies in the regulatory process; however, it creates difficulties in adequately communicating about different types of products to different audiences with different needs for information.

We are held responsible for the labels, not the consumers. We are the ones that have to come up with solutions for the information.

Rather than further critique the deficiencies we perceive with the current system of required food labeling, let me briefly outline the types of action we believe should be taken to improve our food labels in the future.

Basic to the current dilemma of designing a more satisfactory labeling system for food products, is the absence of suitable research findings to guide Government policies on food labeling.

There are currently many proposals for the types of information that should appear on a food label. In addition, there are many proposals as to how and where this information should appear on the

label. Many of these proposals have merit; however, unfortunately the space on food labels is limited as well as the ability of consumers to comprehend and use this information on the product label.

Therefore, there is a great need to determine by suitable consumer research conducted by knowledgeable professionals in the field of communications—I stress, in the field of communications—what information is truly needed on the food label and what information is most appropriate to actually appear on the label.

This selection process to determine the information that should appear on the label should not be based on a subjective basis, but should rest on the results of adequate and appropriate consumer research. This research, conducted under actual market conditions, should determine not only the information most needed and most wanted by consumers, but should also deal with the format in which this information should appear on the label, and get away from labelese.

This is not an easy or quick research undertaking; however, the results of this proposed research are important if we are to have adequate and acceptable food labeling systems in the future and not repeat the mistakes of the past with regard to food labels.

I believe it is obvious that no food label format will please everyone, there will be a great deal of consumer desire and need for information that cannot appear on food labels because of space limitation. This potential problem should also be addressed in an organized manner. Alternate means should be available to interested consumers to easily obtain additional specific product information.

One method of supplying this additional information is by the use of off-label information sources, such as product information sheets. Food manufacturers could prepare a comprehensive information sheet on each of their products. These product information sheets could be either supplied directly to interested consumers by the manufacturer, and/or could be organized into manuals which would be available in such places as grocery stores, libraries, and schools.

Such product information sheets or manuals could go into far more complete detail than is possible directly on food labels.

The special and important information needs of small segments of the population; that is, allergy prone or those on restricted diets, could be accommodated in such a system.

In addition food manufacturers could more easily and economically update such product information sheets when changes were necessary. In order to assure the validity of the information in these product information sheets, these sheets could be considered product labeling and could be regulated in compliance with suitable regulations.

In conclusion, we would encourage that such off-labeling approaches receive the most thorough consideration by this committee in solving the dilemma created by the present food labeling situation which seems to pit the consumers' desire for information against the current regulatory approach.

Senator McGOVERN. Thank you.

Is your proposal for placing product information sheets in a manual and making it available to stores, is that similar, as far as you understand, to what FDA is proposing about a Federal food formulary?

Dr. TILLOTSON. I have heard some remarks to that effect. I don't know the exact details.

It is obvious, that it can, I don't think there is anyway that I can put the information that people want in the form that they want it. Until we solve this—since 1970 we have been through one complete re-labeling change. How many are we going to go through?

We have to learn from past mistakes.

Senator McGOVERN. Based on your experience and desire to see a more innovative labeling system—you stress the need for professional communications. What agency in the Government do you think could carry out this?

You have to deal with FDA, USDA, and FTC.

Dr. TILLOTSON. These are very fine people that are lawyers, scientists, and economists. I see very little talent in the area of psychology or communications.

That may be a basic problem, because these are different disciplines altogether.

Senator McGOVERN. Years ago we used to have a Senator on the Agriculture Committee, a ranking Republican by the name of John Aiken from Vermont.

One of the services he tried to perform around here from time to time was to take a Federal regulation and translate it into English. I remember one day he took the Senate floor and was reading regulations from the USDA on dairy barns. One sentence was that dairy barn operators, that they should take all due precautions for rodents.

What this means, he said, was watch out for the rat holes, boy.

I think this may be what you are getting at, the language has to be simpler, that it has to go to the things that people are interested in in terms of calories and food content, protein, sugar, and it has to do it in a readable and plain English form.

Dr. TILLOTSON. I think that is the core question.

Senator McGOVERN. But if a lot of this is done on a voluntary basis, by industry, I am just wondering why with all of the experts you have at your hands in the field of communications and PR, why industry has not moved in that direction more than they have.

Dr. TILLOTSON. Look around this table and you see companies with some excellent mailouts. You see some of this material. It is excellent. It is in a form that people can read. It is in English.

Senator McGOVERN. Do you think the industry itself is moving in this direction?

Dr. TILLOTSON. I think some of the companies are. We are just as interested in solving this labeling problem as anybody else.

You can't sell products to people that are unhappy with your products.

Senator McGOVERN. I agree with that. I was glad to see you make that point.

Let's move on to Walter Meyer.

**STATEMENT OF WALTER MEYER, ASSOCIATE DIRECTOR, FOOD  
PRODUCT DEVELOPMENT, PROCTER & GAMBLE CO.**

Mr. MEYER. I want to begin by thanking you for this opportunity to express my views on certain food and nutrition labeling considerations that are presently being discussed in legislative and regulatory hearings.

I am Walter H. Meyer, associate director, food product development, of the Procter & Gamble Co. In this capacity I have the direct responsibility for the safety, nutrition, and regulatory considerations related to our food products. I have been with the Procter & Gamble Co. for 31 years and for the past 20 years have had the responsibility that I just described to you.

Our food products include edible oils, prepared baking mixes, peanut butter, and potato chips. We are presently nutrition labeling most of our food products and in all cases are in conformance with the regulations prescribed by the Federal Food and Drug Administration.

There has been much discussion in the past year about the labeling changes that should be made in food products in an effort to help consumers in their understanding of the nutritional and other qualities of the food they purchase.

The Food and Drug Administration and the Department of Agriculture have recently held extensive hearings in a number of cities throughout the United States in an effort to obtain a better understanding of what might be helpful. We commend this effort on the part of the agencies and we are patiently waiting for their evaluation of the information presented. We also commend this committee in its attempt to learn further what might be helpful in food and nutrition labeling.

My comments about food labeling are based on some simple principles that guide our thinking at Procter & Gamble. Specifically, we believe any consideration of this subject should reflect an interest in: (1) Helping consumers, (2) holding down costs, and (3) not discouraging fair competition.

I will first direct my comments to some observations we have made regarding the existing nutrition labeling regulation and then discuss several other considerations that bear upon food labeling.

First, our observations tend to support the growing opinion that the listing of most micronutrients—vitamins and minerals—in nutrition labeling is probably less useful than the listing of the macronutrients—protein, carbohydrate, and fat. The reason for this is not fully understood at this time, but we suspect that the nutritional considerations bearing on micronutrients are so complex that the information simply is not usable by the average person.

The present regulations require that micronutrients be listed if the food is to be nutrition labeled. For many foods that are not recognized sources of the various vitamins and minerals, this often necessitates a listing of many zeros or very low percentages of the recommended daily allowances of these nutrients.

In light of these findings, it should be determined whether the listing of all the micronutrients that is now required for nutrition labeling is useful. If some of this information is found to be not useful, it should be deleted.

It has always been our philosophy that the information we print on our labels must be useful and understandable to consumers. It should assist them in making an intelligent choice in the marketplace and facilitate the proper use of the product in the home. When information is not needed, used, or understood, it should be deleted and this seems to fit the situation for many of the micronutrients now required for nutrition labeling.

The present nutrition labeling regulations are also proving to be very costly as a result of the compliance requirements that are part of these regulations. Analyses of macronutrients and micronutrients, in particular, are very costly and involve extensive sampling in order to assure compliance with the requirements set forth in the regulation.

We believe that meaningful nutrition information can be developed from data banks such as the one now being assembled by the Department of Agriculture. The use of average values obtained from data bank information could simplify compliance requirements, reduce costs, yet provide accurate information to the consumer.

The present compliance requirements associated with the nutrition labeling regulations have also contributed to some inaccuracies in nutrition labeling. Many raw agricultural commodities have inherent variations in both macro and micronutrient content and the compliance requirements dictate that the labeling must reflect the content of the extreme variations anticipated.

Thus, manufacturers must frequently list a very low level of nutrient resulting from seasonal or climatic variations, simply to comply with the regulatory requirements.

Here, again, the use of the data bank comprised of average values for various commodities would overcome this problem.

We recognize that the regulatory agencies in dealing with the nutrition labeling considerations were concerned that inaccuracies might mislead or deceive the public. But in their attempt to protect against this concern, they have created some problems that are perhaps even greater than would have occurred had they not composed such stringent compliance requirements.

The FDA has ample authority to take action against misleading labeling in any form, and we see little need for the very explicit compliance requirements that have been promulgated for nutrition labeling.

We continue to learn about studies of the consumer's understanding of nutritional consideration which indicate that the science of nutrition simply is not understood by the average person. There is also some feeling that the present formal education system does not equip the average person to understand and use the nutrition information now provided in labeling and from other sources.

Some have suggested that the consumer's understanding of nutrition might be enhanced if food processors devoted a part of their labeling and advertising messages to a concerted nutrition education program.

The industry, however, has stated repeatedly that this would be ineffective because it has learned through experience how little consumer understanding can be achieved through such exposures. We have to find a better way to teach nutrition in the schools.

To this end we have been very interested in a proposal that is being developed by the Consumer Affairs Institute. This is an organization affiliated with the University of Miami and Florida International University. This organization, which is headed by Dr. Milton Blum, has brought together consumer representatives and members of the food industry to discuss current concerns related to food labeling and nutrition education.

A proposal that has grown out of this effort, which I understand will be discussed with this committee at a later date, relates to nutrition ed-

ucation. Briefly, the organization concluded that nutrition education programs have not been effective in the past because the students have been given little understanding of the functions of the human body in relation to the foods they consume. It was their opinion that some understanding of the biochemical and physiological functioning of the body is fundamental in understanding nutrition and its relationship to health.

In the past the approach has been to teach students how to select nutritious diets on the basis of the composition of the various individual foods with the expectation that they will remember the contribution of each food to the diet based upon its nutrient content. Students have been taught the need for the function of the various classes of nutrients, but the technique has generally relied upon memory rather than upon understanding.

It is analogous to teaching a student about the care and maintenance of an automobile by naming all of the parts and giving classical definitions of the purpose of each without first providing a basic understanding of how the total automobile functions.

The Consumer Affairs Institute organization proposes that the formal school curriculum teach basic physiology to the child beginning in kindergarten and continuing through grade 12. It would teach the functions of the human body including an understanding of how food is absorbed, transported, and utilized by the body.

In the more advanced years, subjects such as the function of enzymes, the synthesis of protein, cell metabolism, blood chemistry, the Krebs cycle and other more advanced elements of the science would be included.

In the opinion of the Consumer Affairs Institute, there would also be a number of tangential advantages to come from this approach in addition to teaching nutrition to the children. For example, it would give the students a better understanding of effects of drugs or smoking abuses and thus serve to discourage such behavior.

It would give them a better understanding of the ecological considerations that will face them throughout their lives. In fact, it is the opinion of this organization that the inclusion of life science in general education curricula would serve to stimulate interest in education because everyone, children and adults alike, is concerned about his own well being.

This is a very interesting proposal which we hope will be forthcoming soon, and we have worked closely with Dr. Blum in its development.

Before leaving the subject of nutrition education and nutrition labeling specifically, it is our view that the regulatory agencies should be encouraged to permit understandable references to nutrients in food labeling. Consumers can understand what is meant by a "good" source or an "excellent" source of a nutrient but they are hard pressed to obtain any real understanding from only the listing of so many grams of a nutrient per serving.

The agency could define the criteria that must be met to qualify as "good" or "excellent" sources of a nutrient and this would supplement or replace the present numerical listings. The industry proposed that this approach be taken when nutrition labeling was first considered, but the proposal was not adopted because it was considered imprecise.

I would now like to turn briefly to several additional labeling considerations that are very important to us. You have undoubtedly heard some discussion recently from members of the regulatory agencies that they intend to reconsider the "total food label." To the best of my knowledge, none of the regulators has defined what is meant by this term, but I believe the implication is such that the subject deserves discussion at this time.

We presently have a regulatory definition for both the principal display panel and the information panel for food labels. These are defined in considerable detail in the regulations promulgated under the Fair Packaging and Labeling Act and the Food, Drug, and Cosmetic Act.

The industry is able to produce reasonably effective labels under these provisions but at times it is difficult to do so and still comply with all of the regulatory provisions. If we should go beyond where we are today in further limiting the development of effective labels, I am sure that the consumer understanding and industry's effectiveness would suffer. Because foods and other consumer products are now marketed in self-serve stores, the package must serve as the on-the-spot sales person for the product. We go to great lengths to illustrate what food is contained in the package or what food may be prepared from it.

Vignettes and other illustrative information is an excellent way to communicate this information. Recipe information informing the consumer of the variations that may be prepared from the basic food are also an important element of labeling that is extremely useful to the purchaser.

We simply must not lose sight of the fact that the label serves these very fundamental purposes in our economy and not become so deeply engrossed in regulatory considerations that the total label is viewed only as a nutritional information vehicle.

Our company is meticulous in the attention that it pays to label design, selection of recipes, and other information that assists the consumer in the selection of the food and in its ultimate use. We cannot overemphasize the importance of this consideration to this committee, particularly as we are exposed to any new concepts of what might constitute a "total food label."

I would now like to discuss briefly the subject of percentage ingredient labeling which has been the topic of considerable discussion in the hearings held by the FDA. There seems to be a growing feeling among some that food labels should bear the percentage of certain or all major ingredients contained in the foods. It is argued that this information is desirable in order to assist potential customers in their understanding of the nutritional value and/or the economic value of the food.

At this point in time we cannot predict the exact form of percentage ingredient labeling that might be proposed. No matter what form might be proposed, however, there are several points that should be kept in mind as we consider such a proposal.

First, it should be recognized that a listing of the percentage of each ingredient used in a food would, for all practical purposes, divulge the basic recipe of the food to competitors without really helping the con-

sumer. In most cases it is the physical protection from disclosure that is given the information by the manufacturer that is the only protection the manufacturer has for this valuable investment.

Senator McGOVERN. On that point, don't the companies generally know what the ingredients are in the competitors' food? Hasn't the industry become competitive enough so that one company knows another's ingredients.

Mr. MEYER. Senator, we certainly know the ingredients as the label tells us. The exact percentages, or the amount of a particular flour that he used, for example, or the amount of a particular sugar that is used; those things are not known.

Senator McGOVERN. Those are still trade secrets?

Mr. MEYER. Very definitely. I would have trouble determining the exact levels used by our competitors.

But to put the exact percentages on the labels would be in essence a complete disclosure of the levels we use.

Senator McGOVERN. I notice that you made the statement—your observation tends to support this, that the growing opinion is that listing of most micronutrients, vitamins, is probably less useful than a listing of macronutrients, protein content, and carbohydrates.

Do all four of you gentlemen agree with that observation?

Mr. MEYER. I think consumer communications supports this.

Senator McGOVERN. I am sure that there is a growing evidence that that is the consumer's desire. For years I wondered what riboflavin was, and wondered where it was. You read about riboflavin and its minute quantities. You figure what else do I have to eat today and where will I get it to make sure I get enough.

I think those things are meaningless.

Mr. MEYER. If a consumer's memory is good, she might remember what a particular vitamin did for her. But to utilize what 2 percent of the RDA does for her is a very difficult thing to do.

Senator McGOVERN. Thank you.

Mr. MEYER. A listing of percentages of ingredients would seriously jeopardize this investment. This, in turn, would also serve to discourage innovative product development activity because there would be no protection for the investment in such an effort. The net effect would be that all of the same type of products would ultimately gravitate to the same composition.

Second, the requirement to list exact percentages of ingredients used would virtually eliminate a manufacturer's ability to make formulation adjustments where required for consumer acceptance reasons. If a manufacturer were required to declare 30 percent flour in a food and the gluten or some other substance in the flour changed as a result of climatic or other variations and thereby necessitated an adjustment in the level of flour in the finished food, the manufacturer would be unable to make the adjustment until a new label was available listing the adjusted composition. Label changes often require up to 12 weeks to accomplish and a manufacturer's hands would be tied for this period before the necessary formulation changes could be made—changes which would clearly be in the best interest of the consumer.

Finally, we would like to urge that any label changes ultimately initiated on the basis of regulatory or nutrition considerations have

good documentation that the change is needed, that it will be understood, and that it will accomplish the intended objective.

We know that in the FDA hearings on food labeling and in a number of congressional hearings held in the past there have been many proposals made which would significantly change the present labeling practices and procedures of the industry.

These include the labeling of nutrition information the listing of ingredients, and the labeling of other required label information.

But, to the best of our knowledge, none of these proposals has been tested or proven. As a company we stand ready to do what is proper, when it is useful to and understood by the consumer, but we cannot lend our support to the making of changes that have not been proven to be understandable and useful. Labeling changes can be a disservice to the consumer in two ways, if we are not careful: they add to the cost and can be subject to misunderstanding.

We must recognize this potential problem particularly as we consider labeling proposals based on increasingly precise but complex scientific information.

I have appreciated this opportunity to discuss these labeling considerations with you and I stand ready to answer any questions that you might have pursuant to these comments.

Senator McGOVERN. Thank you very much for your statement.

I noticed midway through your statement that you make the point that the food industry has found that diverting advertising to nutrition information, nutrition messages, has not been very effective.

Why do you think that is? Have you made any studies or any efforts to find out whether it is the quality of advertising? Is it possible that consumers are getting conflicting signals through advertisers?

Mr. MEYER. No; I think it is a matter of exposure. You have a very limited exposure time, and to try to get a complex scientific message across in 30 seconds or 15 seconds is just physically impossible.

We have a hard enough time getting across the name of the product and having them retain this without trying to teach nutrition.

Senator McGOVERN. I don't think this relates to any of these companies, but one of the things parents are concerned about are early morning advertising that concentrates on children and which promotes the use of foods high in sugar.

I don't think that involved any of the companies here. I wonder if that isn't part of the problem. You get a lot of advertising that is not nutrition oriented.

It may even be moving people away from sound nutritional practices.

Mr. MEYER. How would you correct it? To try to do it, to get a new message across—

Senator McGOVERN. I don't know any way it can be done by Government regulation.

I think given the freedom of information we have in this country, in the last analysis it goes back to the sense of responsibility of the industry itself. I cannot think of any product where that kind of abuse has taken place represented by the industries here today.

I have seen advertising during the time that children are watching television that has convinced me that that advertising is not aimed with good nutrition involved. I don't blame people for trying to sell their products, but it must be confusing for children or parents to see ads

for products high in sugars, fats, and salt, and yet all of the evidence is we are getting too much of those things in the diet.

Maybe some of you want to comment. I don't know how you reach that by Government regulation.

Dr. BAUMAN. I think it points out the absolute necessity for better nutrition programs so even a child can sort out the differences in the types of advertising—obviously advertising is based on selling the product. But there should be a counter method of getting information on products, ingredients, and other things to the public, coupled with an educational program.

We have talked for 10 years about having an educational program, and there is nothing as yet, absolutely nothing. Until we take that step we are going to have these hearings over and over again.

Senator McGOVERN. There is the beginning of an educational program as of this year. We finally have gotten a small component into the child nutrition law that provides modest allocation to the States for the purpose of setting up nutrition education programs.

But I quite agree with you, it is rather late in the day, and it is starting on a small scale.

It occurred to me while I was listening to you gentlemen that we need more emphasis on the major nutritional components, carbohydrates, fats, proteins, and so on, and less emphasis on these minor ingredients, the minerals and vitamins.

Does that reflect a change in our health status in this country and our economy? In other words, a hundred years ago we had to worry about things like ricketts, we had to worry about scurvy. Today we have a high degree of affluence. We eat too much. We consume too much fat and too much sugar.

I suppose that is reflected in the interest of what people want on the nutrition label; is it not?

Dr. BAUMAN. I think it does. We have to remember, you mentioned 18,000 food products. That is quite a large variety. If you coupled that with the fortification of flour and properly increased fortification to take care of certain marginal problems that exist, I think we should go along with the basic four or the basic seven, and impress on people that they must eat a variety of foods, because if they eat the basic components, then they eat a variety of foods, and the odds are they will get sufficient micronutrients.

Senator McGOVERN. There is reference here, Dr. Bauman, by you and Mr. Frodey, to handbook No. 8. Would using that kind of approach solve the problem to meet industry's general rule of thumb of 80-20 percent?

Dr. BAUMAN. Yes, it certainly would. As we point out, the analysis we do now are only precise at a point in time, and it does not take into account time of storage or other uncontrollable changes such as raw material variations.

Handbook No. 8 is an average. It says if you eat this particular food product over a year, this would be the average you would get of certain nutrients.

Senator McGOVERN. Would that approach save the industry money?

Dr. BAUMAN. It would save the industry a lot of money, which in turn would save the consumers a lot of money. For instance, our cost

to do the pizza products, I mentioned before, would change from \$600,000 to \$185.

Senator McGOVERN. You referred to the need for feasibility, cost, and utility analysis. What should be the responsibility for doing that kind of analysis, and in turn, arriving at some decisions? In other words, what is the best means of getting that kind of analysis in motion?

Dr. BAUMAN. I think an analysis has to be done jointly with industries and the consumers. What we are basically saying is, is this change feasible? The industry has to answer that. Can we do it?

When we get to the cost side, industry has to answer that, too. The consumer has to become part of this, because we want to find out what is the utility of this change? Is the consumer going to use it? If they are not, why make it? Why go to the expense and the cost?

If it is useful and they really want it then it should be made.

Senator McGOVERN. Let me direct the attention of the whole panel, and let's see if we can put down a proposed label format, and then after we can get these items on the board, I would like to ask you whether this kind of nutrient information could reasonably be placed on a label by a food manufacturer at less cost than the current system?

In other words, is this the kind of information we ought to be after, and is it within reasonable cost estimates? Would it be even cheaper?

Dr. BAUMAN. Total ingredient listing, our company is committed to that. It is feasible. It is low in cost and it is useful.

Mr. MEYER. Could we define what we mean by "total." Are we talking about ingredients of standardized foods? This is really complicating labeling, where we are required to list all of the ingredients used in standardized foods.

Take a peanut butter cookie. We must now list all of the ingredients of the peanut butter used, which adds up to a very complex label whereas in the past we did not have to do so—before the Food and Drug Administration required the listing of all of the individual ingredients. Before, we were permitted to say "peanut butter." Now we have to list all of the ingredients of the peanut butter.

That kind of thing increases the complexity of the label.

Dr. BAUMAN. It adds not only to the complexity, but to the cost.

Dr. TILLOTSON. But it is the utility I question.

Dr. BAUMAN. On that issue, you are probably right.

Senator McGOVERN. On the second factor, percentage of characterizing ingredients.

Mr. FRODEY. I would like to comment on that one. As I indicate in my presentation, I think there you have to put a question mark, because in some instances it may be feasible and in some instances it may not be feasible.

In some situations, it might be useful and in other situations, it might not be useful.

Dr. TILLOTSON. Grapefruit juice is 89 percent water. Would that do any good to put that on the front of the label—Grapefruit 89 percent water? Does that really tell them anything?

Mr. HITT. Is there a problem with this word?

Senator McGOVERN. Does the panel agree that there is high utility in using total ingredient listing?

Mr. FRODEY. I think that should be a question mark too. In some instances it may be. Howard mentioned crab cocktail before. Crab I think is a relatively uniform in composition as compared to something like beef. Beef has a lot of variation in fat content, and it may be low or high and it could be misleading to the consumer.

We had a test done by an independent consumer group that demonstrated that.

Senator MCGOVERN. On total ingredient listing, the utility is questionable?

Dr. BAUMAN. There may be some situations where you combine one or more ingredients.

Mr. HITT. But generally we are saying it is high?

Dr. BAUMAN. Generally it is high, and then a question mark for a specific product.

Mr. FRODEY. Can I comment on the cost? You put a question mark there, but in some situations the cost is nothing except for the label change. In some cases you have to change the production line in order to get an accurate percentage.

Senator MCGOVERN. The listing of total calories?

Dr. BAUMAN. Feasibility, high; cost is low; utility is high.

It is probably the one thing consumers want to know.

Mr. FRODEY. We get more comments on calories than anything else.

Senator MCGOVERN. The source of the calories, protein, carbohydrates, and fat?

Dr. BAUMAN. It depends on each of them, if you segregate them out. Feasibility is high. Cost is low and utility is high. Where the costs would start to increase is separating out which part of the carbohydrates is coming from complex starch and sugar, and with fats, whether it is saturated and unsaturated.

By going to handbook No. 8, it would be helpful, because they are including saturated and nonsaturated as a part of the data base.

If we have to do it by actual analytic studies—

Mr. HITT. Let's assume it is broken out.

Senator MCGOVERN. Assume it is broken out, as it is on the board; carbohydrates into starches and sugars, and the fats into saturated and unsaturated.

Dr. BAUMAN. Protein is feasible, cost low, utility high. Starch, it is feasible, the cost is medium, and the utility is questionable. Sugar is the same thing.

Do you guys agree?

Mr. FRODEY. As far as starch is concerned, starch is feasible in some cases, although there are certain products where you have starch that has been broken down enzymatically. Sugars are formed basically from starches, but you have intermediate compounds which you cannot classify as a starch or a sugar. In most cases it may be feasible, but some clarification of these intermediates may be necessary.

In certain other cases, it may not be. If it was based on an average, based on handbook No. 8, those problems were recognized and I think it would be feasible.

Senator MCGOVERN. Fat, saturated, and unsaturated.

Dr. BAUMAN. It is feasible. The cost would be high, the utility, can you comment on that, Walter?

Mr. MEYER. Are we talking about all foods?

Dr. BAUMAN. All foods above a certain percentage of fats that is considered important, as contributing a significant part of the fat diet.

Mr. MEYER. You can get that data from handbook No. 8. But the chances are, you are probably going to have to run your own fatty acid composition of the particular fat you are buying, because it will have been processed, and not readily available.

So there would be a cost to that. I really question if we are talking about a very low level of fat in a food. It is questionable whether this would be helpful, and particularly, with the added cost of the fatty acid composition analyses.

Dr. BAUMAN. Over time, if it was accepted in handbook No. 8 as a prime data base, this information could be fed into the data base.

Mr. MEYER. A lot of the time we tailor foods for individual needs.

Dr. BAUMAN. We would know what that is. The utility, I think it is of primary importance for those people who are under a physician's care, controlling whether or not the fat is saturated.

Mr. FRODEY. As far as utility goes, my feeling would be total fat has utility. There is still disagreement within the nutrition profession as to the effect of saturated and unsaturated fats, although some are saying total fat is more important. Total fat has some utility. For the saturated and unsaturated, I would put a question mark.

Senator MCGOVERN. Do you want to leave a question mark as to the utility of sugar in a product?

Mr. MEYER. The problem is differentiating the added sugar from the natural sugar.

Dr. BAUMAN. It should be total sugar.

Mr. MEYER. This would be subject to misunderstanding.

Dr. TILLOTSON. There is your basic problem. Just putting it on a label, that is why no matter how clever you devise it, there has to be misinformation. I have to think a lot of people are interested in sugar in their diets.

Mr. FRODEY. We have a number of products that are high in natural sugar and have no added sugar. Again, it is the variability question that comes into play. For us it would be an extreme problem if we had to use that value.

However, if we could get handbook No. 8's value, which is an average, it would be of great help.

Senator MCGOVERN. It occurred to me that maybe one practical way of getting around minor traces of fat would be to say you list it only when it is beyond a certain point. In other words, just a trace element of fat, comparatively small elements, and you would be exempted.

But what you are trying to identify is significant elements of these various ingredients.

Dr. TILLOTSON. The question is more than that. You are looking at each product as if it were a whole product. Somethings we have are very high in fat. We don't eat that much of it. Some are high in sugar. This tends to make each product look like it is a whole diet. It does not tell you how much to consume in a week, and we are really concerned about the whole diet.

This relates it too much to one product.

Dr. BAUMAN. If you relate these three items back to the very high interest of the consumer in caloric consumption, proteins, carbohydrates, and the total fats, it is extremely important to them, because if they are trying to control their calories, they can look at a product and say, no, I don't want that because of the calories.

It gives them an opportunity in controlling their diets as to what they would like to do. The total is high utility and relatively low cost.

Senator MCGOVERN. What about the other three?

Dr. BAUMAN. Sodium, that is high feasibility, the cost is low, the utility is high. It would be best if we could go to handbook No. 8 on something like that as well as potassium. We are committed to that. That is feasible. The cost is low and the utility is high.

Mr. FRODEY. In my written remarks I did mention the variability of sodium. In some products we are doing sodium. We found a greater variability than expected.

If you used handbook No. 8 or a data bank information, it would be feasible, low cost and high utility. Otherwise, it could be a problem and it could be costly.

Dr. BAUMAN. And the utility would be no different.

Mr. MEYER. You are talking total sodium?

Senator MCGOVERN. And then cholesterol.

Mr. FRODEY. Under the present situation in cholesterol—it is so wide open, with the question of high density lipoids and low density lipid proteins, I am not sure it would have high utility.

If you had to determine it analytically, it would be a problem. I question the utility because I don't think the state of the art is there, at that point.

Mr. MEYER. Don't you think that it is not too dissimilar from the status of sodium? After the symposium we had last week; yes, for certain people sodium may be a problem. But for the general public doctors feel a sodium restriction is debatable, and the same situation is probably true for cholesterol.

Dr. BAUMAN. That raises a question that ought to be addressed. Do you make major changes that will aid and assist 10 percent of the population? I feel in sodium rather than trying to dictate what the sodium content of a product ought to be, list the sodium and potassium and allow the person to control it, to manage their diet, according to what the food product is.

They can have a control.

Senator MCGOVERN. That is all you are trying to do. You are not begging the question as to whether these are harmful or helpful. You are giving the consumer a chance to see what he or she is buying, and then make a judgment. Even if it is only 5 percent or 10 percent, of the population, such as those people whose doctors tell them to go easy on salt for reasons of hypertension or whatever, it is probably a good reason to put it on there so they can make the judgment?

Dr. BAUMAN. I think so. Cholesterol may be another issue in that the cost would be quite high. The analytical determinations of cholesterol are hard.

Mr. MEYER. Again, the data bank would have it.

Dr. BAUMAN. If we could use the data bank, it would be helpful.

[The following table was displayed on the blackboard at the hearing:]

NUTRITION LABELING NOT USING HANDBOOK NO. 8 OR DATA BANK

	Feasible	Cost	Utility
Total ingredient listing .....	Yes	Low	High.
Percent of characterizing ingredient .....	(?)	(?)	(?).
Calories .....	Yes	Low	High.
Protein .....	Yes	Low	High.
Carbohydrate (total) .....	Yes	Low	High.
Starch .....	Yes	Low	High.
Sugar .....	Yes	Medium	(?).
Fat (total) .....	Yes	Medium	(?).
Saturated .....	Yes	Low	High.
Unsaturated .....	Yes	High	(?).
Milligrams sodium .....	Yes	High	(?).
Milligrams potassium .....	Yes	Low	High.
Milligrams cholesterol .....	Yes	High	(?).

Senator McGOVERN. Let's assume you are going to use a data bank as a guide, and let's further assume a reasonable degree of flexibility so that you were not required to identify every trace element of fat and cholesterol, where it is a very minor part of the component. You don't bother to list it. Only where it becomes—I don't know how you work out what is reasonable, but surely there is a way to do it, to work out certain minimum levels that would be accepted.

Do you think this general breakdown makes sense over the system we are using now?

Dr. BAUMAN. I do.

Mr. FRODEY. I think the breakdown is good. I question the utility of cholesterol, but it certainly is feasible if data bank information can be used.

Mr. MEYER. Do you think cholesterol is any different from fatty composition?

Senator McGOVERN. On cholesterol you have a lot of doctors wanting patients to cut down on cholesterol. Whether they are right may not be as certain as the law of gravity, but there are large numbers of doctors advising patients to cut down on their cholesterol.

That being the case, one useful thing the food industry could do would be to at least identify the cholesterol where it is present in a food to a considerable degree. I cannot think what you would lose by it.

Maybe you say the cost might be higher, but this total system would probably be somewhat cheaper than the one you are using now.

Dr. BAUMAN. Yes, no doubt about it.

Mr. MEYER. Are you thinking about characterizing ingredients for every product?

Senator McGOVERN. No, just a tentative list.

Mr. MEYER. Is it not a format for all products? If it is I think that would be a mistake, because I think a lot of products do not have a characterizing ingredient. For example, a baking mix, what is the characterizing ingredient in that?

Dr. BAUMAN. In most cases we would be talking about a very valuable ingredient.

Mr. MEYER. That would be a substance we add in certain instances. I was interpreting the Senator to say this would appear on all labels.

Senator McGOVERN. I don't think we necessarily conclude that at this stage. The one thing I am quite sure on is whatever system is devised it will have to have some flexibility. There is no way you can devise an absolute rigid system of labels without either getting into a pro-

hibitive cost, or making it so cumbersome that it would be unusable. But these are just some tentative conclusions that the staff and members of the committee have looked at as a possibility.

It certainly is not in the way of a final recommendation or anywhere near that. But they have grown out of the testimony and the investigations we have already conducted.

Mr. FRODEY. In regard to that area, if there is any interest, we would provide the committee with our comments on that subject.

Senator MCGOVERN. I think that would be very useful, and any further reactions you may have to this breakdown, suggestions for improving it or general identification of areas of difficulty would be helpful.

There is one other thing that has bothered members of the committee and a good many members of the general public, and that is whether the preservative content or additives in food ought to be listed. Is this a service?

Mr. FRODEY. It is hard to say that you should not declare them even though we think in most cases the consumer does not understand them, particularly if chemical names are used. So it puts you in a position where yes, you probably should declare them, even though in some cases the consumer cannot understand them.

Dr. BAUMAN. There is another way to approach this and that is if there are items that would be considered in the gray area, they ought to be listed so people can make their own decisions.

Saccharin, of course, would be a prime candidate for that. There are other additives that are natural components of many foods that probably could be just listed as emulsifiers. That ought to suffice.

There are a lot of ways to approach this, but again, we get back to the flexibility of how this should be handled. I think the consumer is very much confused about many of the chemical terms used, and if there is some way we can give them information interpreted without scaring them to death at the same time, or creating total confusion, I think it is worthwhile trying.

Senator MCGOVERN. I have been struck the last few years around the country at the number of questions I get about food additives and chemicals.

You must know there is a lot of anxiety about that. Our subcommittee, in conjunction with another subcommittee here on the Agriculture Committee, will be opening up some inquiry on that question.

I frankly don't know whether it is an exaggerated fear or not. I don't think we have a hard body of evidence yet as to what the health implications are of food additives because that goes beyond simply food additives, pesticides, and other things.

But we are going to be looking into that more. We may have some followup questions.

Dr. TILLOTSON. If the people want to know this information, why shouldn't it be on the label. We have flagged "no preservatives, no artificial color or flavors," which is against a standardized IFT. We found people wanted to know this. We have to deal with this.

Are we trying to satisfy scientists with our labels or regulators, or are we trying to satisfy what people want? I would like to put this label problem to bed for awhile. Until we satisfy what they want, some of it may be irrational, but if they wanted to know this information, it appears like good business to tell them.

Mr. FRODEY. We have had exactly the same experience. We did put "no preservatives" on our labels because consumers thought our products had preservatives. That was the single biggest concern of our consumers.

Senator MCGOVERN. I think we will be in a better position to know the substance of these anxieties after we complete the hearings on that aspect of the problem.

I am glad we are going forward on that simultaneously with the hearings on labeling and information. I know for a fact, just based on my own travels, that there is a sizable percentage of the American public that is very much worried about food preservatives and chemicals and what they are going to do to their health.

It is my own tentative conclusion that more people hurt themselves from too much fat and sugar than from the chemicals they are eating. But in any event, we ought to at least explore that with the best scientific resources we can bring to bear.

Just a question for the whole panel. Has the National Academy of Sciences' Food and Nutrition Board, with their emphasis on micronutrients, minerals and vitamins, has that contributed to delaying the food industry's moving toward more informative and less costly labels, the protein and the carbohydrates and the fats and so on?

Mr. FRODEY. I am the current chairman of the industry liaison panel to the Food and Nutrition Board. My feeling is that the Food and Nutrition Board feels that their information is primarily for professionals. They are professionals and they feel this information is needed by dietitians and other professionals.

In our case it has not had any influence on us. I don't think it has with others, either.

Mr. MEYER. I would agree with that also.

Senator MCGOVERN. Do you think it is important that we examine the total nutrition information system, not just nutrition labeling, in order to reduce the possibility of false starts because of inconsistencies in various parts of the nutrition information system?

Dr. BAUMAN. I think it is very important. That has been our problem up to now. Certain areas have been the prime focus, and the rest has just slid away.

Mr. MEYER. I would hope that someone would look into the ability of the consumer to use the information, because we suspect that is one of the biggest problems.

Senator MCGOVERN. One final question: as leaders of the food industry, can you give us any summary conclusions that we can draw from this morning's hearings? Are there any particularly pertinent points that you feel you need to underscore?

Dr. BAUMAN. I think it is extremely important in proceeding with any labeling changes that we really look at the cost, utility and feasibility, specifically in light of the fact that I pointed out before that you can do 80 percent with 20 percent of the cost. I think that last 20 percent really effects it. We should decide who needs that last 20 percent.

The decision of micronutrients and the analysis we have put against it is an example. But there is information that would cost less than 20 percent of what we are spending now.

Mr. FRODEY. I agree with Howard.

I also would want to emphasize the utility of using data bank or

handbook No. 8 information. I think that is one of the most important points.

I would also like to point out, as has already been pointed out, that every type of product has to be looked at individually, particularly in regard to percent in ingredient labeling.

Dr. TILLOTSON. I would like you to look very carefully at the limitations of labeling in communicating information. It is only one part, that has to be looked at very carefully. It is one part, but it is not everything.

Senator MCGOVERN. That is a good point.

Mr. MEYER. Whatever we do, it should be well tested if we are to do something that is to be truly useful. We would hope we could simplify the existing requirements use of data from a data bank, and simplifying micronutrient ingredient listing. I guess the point I feel most strongly about is that we must remember that a label is the "on-the-spot" sales person. A lot of people think of the label merely from an ingredient standpoint. This is very important, but it is also a salesperson that represents the manufacturer at the point of purchase.

Senator MCGOVERN. Before you arrived, Mr. Meyer, I stressed a similar point, that we have to divide out the information function, which is what we are talking about here, from the regulatory function, which deals with toxic substances. We are dealing with an informational problem.

Mr. MEYER. So many times, they overlap.

Senator MCGOVERN. Gentlemen, we will take a 5-minute break before we proceed to the next panel.

[A brief recess was taken.]

Senator MCGOVERN. If the committee will come to order, please.

Senator Dole directed a letter to me under this date which I would like to read into the record. He said:

I regret that my schedule does not permit my being at this second very important and significant session on Nutrition Labeling and Information. Please express my regrets to today's expert witnesses, representing some of our major food manufacturers, a retail grocery chain, and the National Institute of Health. I would appreciate your inserting the attached opening statement into the record.

I will submit that statement for inclusion in the record.\*

Senator MCGOVERN. Now, appearing on the second panel today is Mr. Gerson Barnett, senior vice president of Giant Food, Miss Odonna Mathews, consumer adviser to Giant Food, and Dr. Steve Zifferblatt, special assistant to the Director, National Heart, Lung, and Blood Institute.

So if the panel is ready, we'll begin with Mr. Barnett.

**STATEMENT OF GERSON BARNETT, SENIOR VICE PRESIDENT,  
GROCERY OPERATIONS, GIANT FOOD, INC.**

Mr. BARNETT. Mr. Chairman, good morning. I am Gerson Barnett, senior vice president, grocery operations, at Giant Food, Inc. Giant Food is a regional supermarket chain with 117 stores operating in Washington, D.C., Maryland, and Virginia.

It is my pleasure to be here today to discuss the pilot nutrition education program that we are running in cooperation with the National

\*See p. 113 for the submitted statement of Senator Dole.

Heart, Lung, and Blood Institute. But first, let me give you a little background on Giant's previous involvement in nutrition programs.

In 1971 Giant participated in the original tests of nutrition labeling with the Food and Drug Administration. With the help of our advisory committee, composed of consumer, government, academic, and industry representatives, we developed a simple label based on units of 1 to 10 rather than the percentages required now. The results of our tests indicated a high degree of consumer interest. From the reports on the recent labeling hearings, the percentage identification of vitamins and minerals may hold the least interest for consumers of any part of the label. We hope that the consumers' pleas for simplicity will now be heard.

In recognition of changing consumer needs in labeling, we reactivated and expanded our original labeling committee in early 1976. We are looking at the current questions in open dating, special diet information, percentage of ingredient labeling and nutrition labeling of produce.

Currently we are working closely with the United Fresh Fruit & Vegetable Association, the Food and Drug Administration, the Department of Agriculture, academic and consumer representatives, to develop plans for intelligent sampling of fresh produce for the purpose of assaying nutrient content for fresh produce. We hope this will provide a way to get the necessary data to begin identifying nutrients in many fresh fruits and vegetables for the consuming public.

In the fall of 1977 we ran a small nutrition awareness program, aimed at parents and children, called—"Eating Right Is Out O' Sight." From in-store surveys, we discovered consumers wanted more detailed information.

During the winter we began discussing the concept of the foods for health program with the National Heart, Lung, and Blood Institute. What evolved from long hours of work by our consumer affairs staff and others and the NHLBI staff is what we will show you today.

Foods for health is an unusual undertaking in its scope, its duration, and its cooperative nature. Giant Food could not have done a program requiring this level of scientific background without the help of NHLBI. While we have experts in retailing, consumer affairs, nutrition, quality assurance and graphics, we are not research scientists. To provide consumers with such an information program, we must work cooperatively with scientists in the public sector.

The systems of our society work best when they work together. When we serve the needs of our society, we serve its future. At Giant we are dedicated to such a philosophy. Therefore, our commitment to the foods for health program is consistent with our beliefs and our previous actions.

We believe the cooperation of Giant Food and the National Heart, Lung, and Blood Institute in bringing important information to the public should stand as a model of responsible action by industry in cooperation with Government.

Thank you for the opportunity to be with you today. I would be happy to answer any questions you have now, or after you have heard more about the program in greater detail from Ms. Odonna Mathews and Dr. Steven Zifferblatt.

Senator McGOVERN. Thank you very much, Mr. Barnett.

I think what we will do is give Ms. Mathews a chance to testify, and also Dr. Zifferblatt, since we're really talking about a cooperative effort here, and then I will hold the questions until everybody has had a chance to give an opening statement.

Ms. MATHEWS. If it's all right, Steve Zifferblatt would like to go first.

Senator McGOVERN. Fine.

**STATEMENT OF STEVEN M. ZIFFERBLATT, PH. D., SPECIAL ASSISTANT TO THE DIRECTOR, NATIONAL HEART, LUNG, AND BLOOD INSTITUTE**

Dr. ZIFFERBLATT. Senator, you have a practical problem in front of you, an important one. It is my belief that part of the solution to those problems exist right now and that we do not have to do a great deal of complex, esoteric research to get it done. It could be done right now, and rather simply.

We have developed and implemented three pilot nutrition education programs at the Institute, the largest and most significant of which is this one with Giant. They have taught us a great deal about the realities of trying to deliver nutrition education.

I am a psychologist, and several of the people who work with me are psychologists. We worked at Stanford University in the heart disease prevention program, and are used to doing research. When we came here, we were given a charge to deliver something practical as opposed to looking at research questions. You have a Ph. D. and I think you know the type of training that characterizes the Ph. D.'s. Depending on the application of these skills, solutions to practical problems can sometimes be obscured rather than illuminating.

I feel a lot of the theories and techniques that we dealt with in an academic setting would not be relevant or practical in terms of trying to help people with the immediate concerns in the area of nutrition information. We have been given a charge to deliver, and we have dropped a lot of theorizing and jargon and have used something all of us have. We use our eyes, our ears. We think in practical terms and are led around by the nose in a practical sense, and we use our common-sense.

I believe that with the basic kind of equipment everyone in this room has, anyone who is really planning a nutrition information program can come to the same conclusions we have.

In working with Giant Foods we are learning a lot about how to disseminate nutrition information and how to help the people help themselves. It is a very, very difficult task, but we have a firm conviction that the expertise to do this exists now. It exists in society, and it exists mainly in the private sector of our economy.

Our thinking at the Institute in terms of these pilot programs has been very practical and I think germane to the committee's concerns. I think the best way to show it to you is for Odonna and I to take the committee through a presentation of the programs. We will do that in a way that's commensurate with delivering good information, through an audiovisual experience as opposed to just a verbal experience. So if you will bear with us a few minutes, we will start.

**Public Health Service Act  
Public Law 95-83 Section 413 (d)**

**. . . . shall conduct a program to provide the public and health professionals with health information with regard to cardiovascular . . .**

**. . . . in the conduct of such programs special emphasis shall be placed upon dissemination of information regarding diet . . .**

Why are we in the business of disseminating health information? We have a mandate and it is very clear, that Congress has charged us to disseminate nutrition and diet information and education, and I think there is nothing ambiguous about that particular mandate.

We intend to deliver on this mandate, and we think we can do it now. As I mentioned, we believe the expertise exists, and we'll show you why in a few minutes.



That guy in the picture is every one of us. He knows a lot about nutrition. He has a lot of information about nutrition. It may not be all the information we would like him to have, but he is exposed each day to a variety of different messages about what to eat and sometimes what not to eat.

Contrary to public opinion, we have been challenged to develop more research in the area of nutrition education, but I don't really feel we need more basic research in this area. There are, in fact, a lot of existing effective techniques, that attest to the fact that nutrition education is alive and well in our society.

# 11 ways to liven up a July 4<sup>th</sup> tradition!

- 1. Pepper Pot Franks**  
(Heap on sautéed hot red peppers and onions.)
- 2. Chili Franks**  
(Spoon on hot prepared chili.)
- 3. Franks Parmigiano**  
(Add tomato sauce, Parmesan cheese, olive slices.)
- 4. Pig-in-a-Blanket**  
(Wrap in prepared biscuit dough, then liver foil. Grill.)
- 5. Pizza Franks**  
(Stuff with mozzarella cheese and pizza sauce.)
- 6. Cheese Grilled Franks**  
(Add mustard and soy sauce. Top with bean sprouts.)
- 7. Hot Biggie Franks**  
(Spoon on sautéed onion rings and sautéed tomato sauce.)
- 8. Dog On A Stick**  
(Put 1/2 beaten egg, fresh mixture of bread crumbs and ground chicken cheese. Grill.)
- 9. Sun-O-Penny Franks**  
(Heap with hot potato salad.)
- 10. Pops (with mustard)**  
(This is the one that started it all.)
- 11. Coca-Cola**  
*Coke adds life...*

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I don't think we need large research programs to develop these techniques. We just have to look around. Any place you look—stores, where you eat, TV, billboards, radio, et cetera—there is information about nutrition. The skills exist, and we have to learn from these particular people. They have practical techniques that are tried and true. A good practical suggestion is to encourage our health education community to consider some of the ideas that have been worked out in the private sector of our economy. We want to use the skills that exist and encourage health education professionals also to use them.

There is one problem, especially in the area of heart disease which is germane. We don't know, what we can say with a great deal of

certainty. There is a lot of disagreement among heart scientists. Some tell you "eat eggs"; some people tell you to throw the yolk away; and some people tell you to use the yolk on your dog's coat.

We have been silent for a long time. The reasons are supposedly that there is nothing definitive to say. But NHLBI's congressional mandate does not charge us to wait for definitive evidence before we act; we are charged by Congress to make our citizens aware today of what is known and what is not known about cardiovascular diseases and nutrition. Scientists do have a role to play in trying to help people with nutrition information, even if all the evidence isn't in. That role, as you will see in all these pilot programs, is to try to convey what we know and what we don't know.

The personal choices are, as always, individual. People are rational and will make very logical choices—their own choices—if all the information is available. Our role is to give people the opportunity—to decide for themselves and make informed decisions.

Now, where are we going to disseminate nutrition information? The strategy we're using is—and again, you don't need a college education to figure it out—to pilot programs in places where people make food decisions every day of their lives.

How can this be done? There are several different places. We talked about the home, cafeterias, restaurants, supermarkets, vending machines, travel and leisure settings. These are places where people come in contact daily with food, with nutrition information.

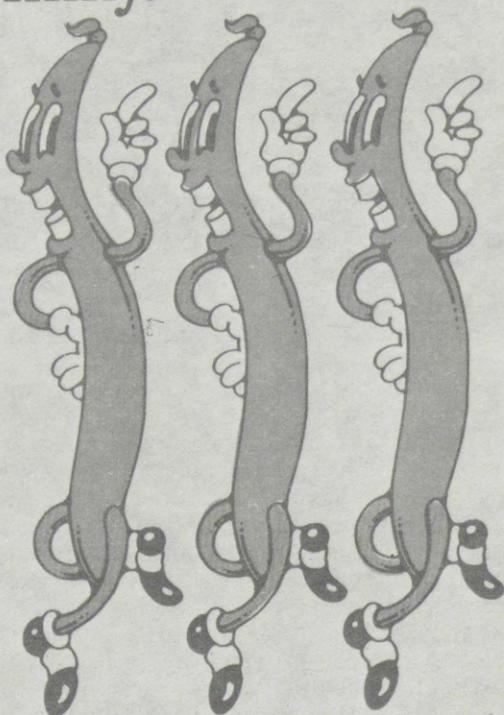
The challenge is for us at this particular point to try to develop effective ways to deliver nutrition information. One way to do it is to profit by what has been successful, and what has been successful has been going on in the private sector as done by industry.



The first program we'll discuss is one completed in a cafeteria setting. We developed a pilot program with GSI, which is a large cafeteria-based industry. The program is developed on a point-of-purchase idea. People pick up information-playing cards right where they make decisions about food. The cards contain upbeat information which gives them a little idea on calorie substitutions.

# Identify with string beans—they're skinny.

2  
♦

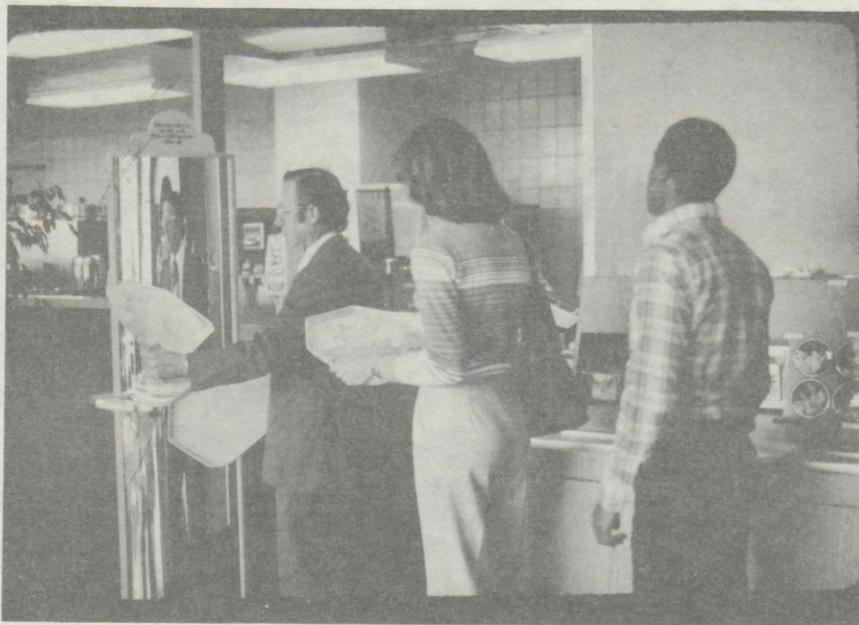


Green Beans, $\frac{1}{2}$ cup	30 calories
Pan rolls and butter	155 calories
Regular soft drinks, 12 oz.	145 calories

It's a playing-card format and prizes are awarded for various combinations, such as a full house, three of a kind or four of a kind. Senator, you have a kit there with some of these materials in it.

The idea is that the information is upbeat, fun, and not oversized.

Another approach we have used, other than nutrition information and education, in this cafeteria is to try to deliver what we call six practical steps for behavior change delivered to people right at the moment they make food decisions.



These are practical, personal actions you can take, and they deliver information in the form of tray liners. These tray liners are picked up at the beginning of the line, and there's a "skinny" mirror there that challenges you to pick up a tray liner. One tray liner a week is offered in the cafeteria. You have tray liners in the information packet so you can see these first hand. Again, it's upbeat and it delivers some practical advice to people in a fun way, translated into "English," as you pointed out before. It is directed right at the moment when people make decisions.

The next pilot, another logical place to look, is the vending machine. People make a lot of choices on what they select from vending machines in terms of food every day. We have worked with Macke Vending Machine Corp. and the National Automated Merchandizing Association and they challenged us to ascertain whether it was feasible to market lower calorie snacks. We took it upon ourselves to do a study at the Institute and attempted to market lower calorie snacks.



This slide shows a fully dressed machine which has point-of-purchase information indicating calorie content and a number of different alternatives in terms of food selections.



This slide is a close up of what the candy selections look like. Again, our theory is to work with the industries that can do the job, to provide some leadership and stimulate them to use their resources. This particular program has now enlarged into a plan for a national program where 12 to 15 major vending machine corporations are going to again test the feasibility of marketing lower calorie snacks in vending machines. This time they're going to use something other than the candy bar vending machine. It will be the one with the glass front containing potato chips and such.

Now let's move on to the supermarket. This is the largest and, I think, the most significant pilot program that we have launched, and is the subject of this particular discussion. Thirty-three million people a day shop in the supermarkets. But again, if you look around, you will notice the competition; look at all the information; look at all the labels. So the job is not very easy.

Supermarkets are not dull, grey drab types of places. A great deal of information is available in the supermarket and we go into a "den" of competition any time we want to try to deliver nutrition information in an objective manner, right in the supermarket itself.

Giant Food is sharing the major brunt of this task, and we, are working with the Food Marketing Institute for the dissemination of the program—if it merits dissemination.

The goals of the program are, again, quite simple: To inform people about nutrition as it relates to heart disease, to evaluate the impact and see whether it's worthwhile doing in other particular settings, and if it's worthwhile doing it, to develop some of the dissemination types of technique that would be useful in encouraging other supermarkets or retailers to engage in a similar endeavor.

## **GIANT'S ROLE**

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- 1. Design, printing and distribution of all materials**
- 2. Management of program in the supermarkets**
- 3. Development and dissemination of consumer radio spots and newspaper copy.**
- 4. Permitting use of all materials to any other retail supermarket chain.**
- 5. Providing overall sales data and price changes on specific products identified for evaluation in the program.**

Giant's role—there are five steps there, but I think Giant's role could be characterized as probably 55 steps. They have done an awful lot.

Aside from the design and management of the program, and certainly assuming all the costs of developing the copy, graphics, et cetera, they have provided inestimable support and objective advice about the best way to develop a high-quality program. This particular endeavor is cooperative, but the major management and marketing expertise certainly resides within the Giant Food Corp.

## NHLBI's Role

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1. Review and editing of all materials for scientific accuracy, style and mode of presentation
2. Evaluation of the program
3. Dissemination of the program

The Institute's role is one of reviewing and editing of materials for evaluating the program and disseminating the program.

At this particular point let me turn it over to Odonna Mathews, consumer affairs adviser. She will take you through the actual program itself.

### STATEMENT OF ODONNA MATHEWS, CONSUMER ADVISER, GIANT FOOD, INC.

Ms. MATHEWS. Mr. Chairman, I am Odonna Mathews, consumer adviser for Giant Foods. I am delighted to be here today to discuss the foods for health pilot nutrition education program which Giant recently initiated in cooperation with the National Heart, Lung, and Blood Institute.

I also want to share with you some of the consumer concerns about nutrition education and food labeling that we feel need to be a part of any comprehensive nutrition information and labeling system.

However, before we look at our nutrition program, I would like to review the types of consumer inquiries we receive at Giant. As consumer adviser, I hear every day from consumers. My office receives between 300 and 350 letters and comment cards each month from consumers. Increasingly, there are requests for information on nutrition and food composition.

What do consumers ask about food and nutrition? They ask for simple, basic nutrition information. Additives top the list, but a close second is information on special diets, such as sodium, fats, cholesterol, potassium, carbohydrates—and within that, of course, is sugar—colors, flavorings, preservatives, calories, food selection, and preparation.

Many questions we receive concern the food label, for that's often the only nutrition information available in most food stores. But

some consumers want to know why more information isn't provided, and others want to know what the nutrition information means.

It is clear to me that nutrition labeling is not adequate as it presently exists. Consumers want and need concise, practical nutrition messages. Industries, consumers, and Government need to work toward a comprehensive nutrition information system that helps consumers distinguish the half truths from the truths.

Over the past 7 years our experience has shown us that there is no one best way to communicate information to consumers in the supermarket. Most consumers, particularly working women, want to get in and out of the store as quickly as possible.

Even though the typical consumer goes to the supermarket on the average of twice a week, the supermarket is not a very conducive atmosphere for education. That is why at Giant we have increasingly emphasized the graphics and visual appeal of consumer information distributed in all Giant Food stores.

Our consumer information materials are designed to encourage people to pick them up, and we hope they read the messages once they have them home. The bite taken out of Bag It, our guide to packing nutritious lunches is probably our best example of graphic illustration and it seems to have worked judging by the number of guides that go each week. The graphic emphasis is also an important part of the foods for health program.

The foods for health pilot nutrition education program is one example of the type of program that needs to be tested in the marketplace. A specific nutrition information system should not be legislated. A great deal of experimentation is necessary and any system must be evaluated based on consumer response. We expect the evaluation of our pilot program will help to determine which of the various methods of communicating nutrition messages to consumers in the supermarket are successful.

Our year-long program began October 18, 1978, in 90 Giant supermarkets in the Washington, D.C., Virginia, and Maryland areas. It will give consumers information on what scientists and experts see as growing evidence on the relationship between diet and coronary heart disease, the Nation's No. 1 killer.

Through this program we should know whether providing nutrition information at the point of purchase can make a difference in consumers' knowledge and food selection choices. To help consumers make food selections based on complete information, the facts and controversies are discussed throughout the program. If consumers decide to change their habits, the program provides practical suggestions for changing food choices, preparation, and eating habits. To do this, we are using several communication devices to convey the nutrition information to consumers.

I should add here that our program has been based on our experience with consumer information and education materials in a variety of circumstances. We have tried consumers' guides, and we have often found consumers prefer shorter formats, either in the form of a flier or pamphlet which just covers a few pages.

Our 60-second consumer radio spots that are aired on major Washington radio stations convey nutrition and buying information to consumers. This is probably our most frequently used communication

device. Institutional advertising in our newspaper ads is certainly another way, as well as postage-paid comment cards that are self-addressed to consumer affairs.

We have also tried cartridge films in our stores, giving information on specific products. However, we found that is not too successful. We found that often the consumer does not wait to watch the complete show, which may only be 3 or 4 minutes, and it also irritates our employees.

Now, back to the foods-for-health program. As consumers shop, they will see a display holding a booklet entitled "Eaters' Almanac." Every other week a new almanac will discuss different heart and health nutrition issues. A total of 26 topics will be covered in all. Instore posters and shelf signs will contain nutrition information on heart health, such as fat content and calories per serving.

We have made a special effort at Giant to include a cross section of issues based on consumer questions. Topics include such nutrition and heart health issues as coronary heart disease and cholesterol; types of foods such as fats and oils, dairy items, breads, grains and cereals, fruits and vegetables, lean meats, fish and poultry; specific nutrients such as sodium and sugar; and seasonal topics such as Thanksgiving and back to school. One almanac is devoted solely to the reading of food labels.

Before we see the slides of the materials I would like to mention that the program has been developed with the advice and input from several outside groups.

First, we have developed a foods-for-health advisory committee composed of a cross section of industry, Government, consumer, and nutrition experts. The committee continues to provide us with professional expertise on the program's purpose, content, and method of evaluation. The members have emphasized the need to test a program of this nature.

Second, all the materials have been reviewed by several NHLBI advisory committees, and we have reviewed the initial layout for signs as well as a draft copy of the "Eaters' Almanac" with two consumer focus groups. These focus groups told us whether we were communicating a clear message to consumers, and they will continue to help us to gear the program to consumer concerns.

Repeatedly, the consumer focus groups emphasized the importance of giving practical suggestions such as recipes for implementing heart health ideas, as well as factual material. Consumers also stressed the need to incorporate the family, and particularly children, in nutrition messages. Consumers told us they wanted a simple message, not just an attractive sign.

Now let's walk through a typical Giant store just to see the program as a consumer would view it over the coming months.



A PILOT NUTRITION EDUCATION PROGRAM BY GIANT FOOD INC. IN COOPERATION WITH THE NATIONAL HEART, LUNG, AND BLOOD INSTITUTE. A PART OF THE NATIONAL INSTITUTES OF HEALTH

Look for the **HEYERS' ALMANAC** in this store

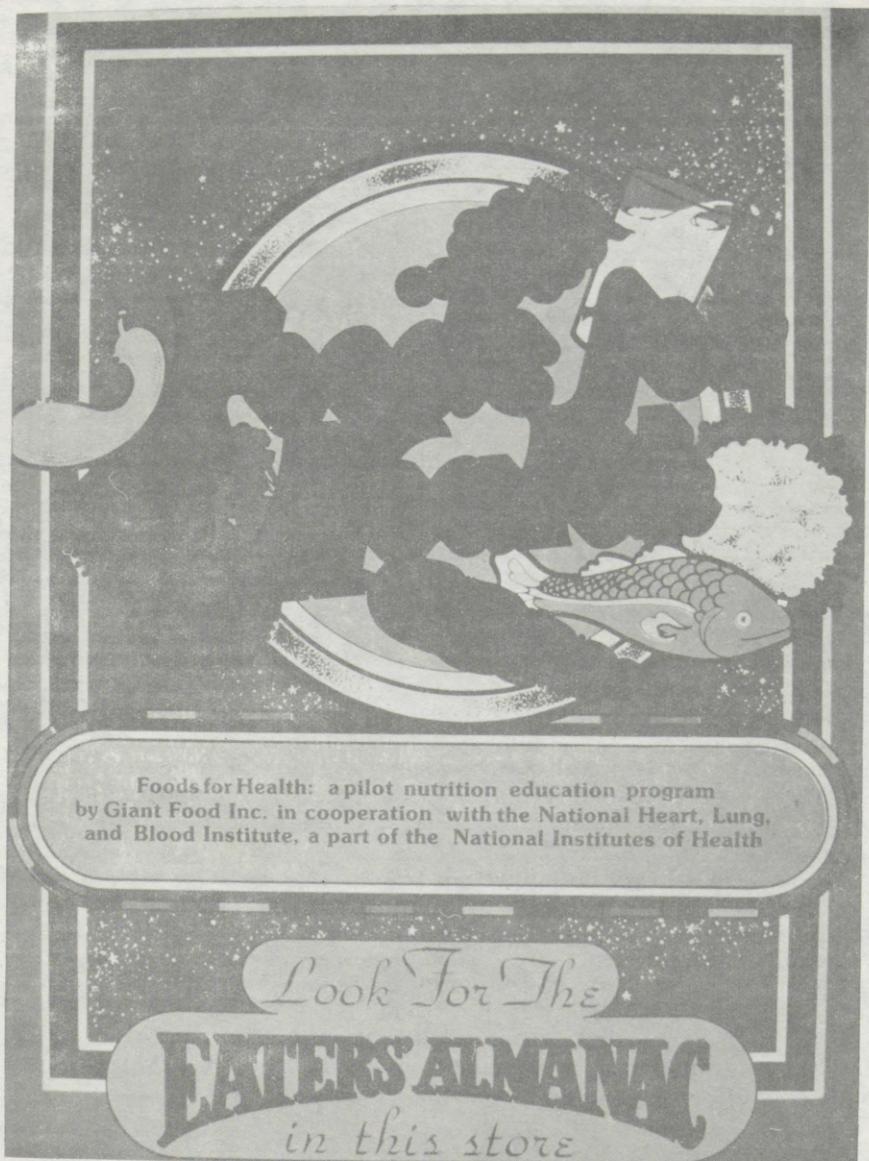
Before we do that, this gives you an outline of the types of topics that we are covering. The almanac you will find in the stores this week covers Thanksgiving, one of the seasonal topics. The first issue was a food fact or fiction quiz. We also encouraged consumers to go to the store to pick up the material and to let us know what they think about the program.

The variety of topics includes, of course, fats and oils, New Year's resolutions discussing risk factors related to heart disease.

Of course, low-fat dairy products, fruits, and vegetables, lean meats, vegetable protein, sodium—read the label—

Fish and poultry, sugar, ethnic foods, summer focus. Here again we try to take consumer lifestyles into account.

There is focus on dairy products, fruits again, summer snacks. We end the program by asking the consumer, "What did you decide?" This will be a full year after the program's implementation.



The window signs are large 40 by 50 window signs which announce the program and give an identity to the "Foods for Health" logo. This slide is the sign that went into our stores a week before the program began on October 18: It says "Coming soon. Foods for Health."



The sign is located at the checkout stand, where consumers may be signing their checks or getting their groceries. It gives an identity to the program, and the message encourages them to look for an Eaters' Almanac in the store.

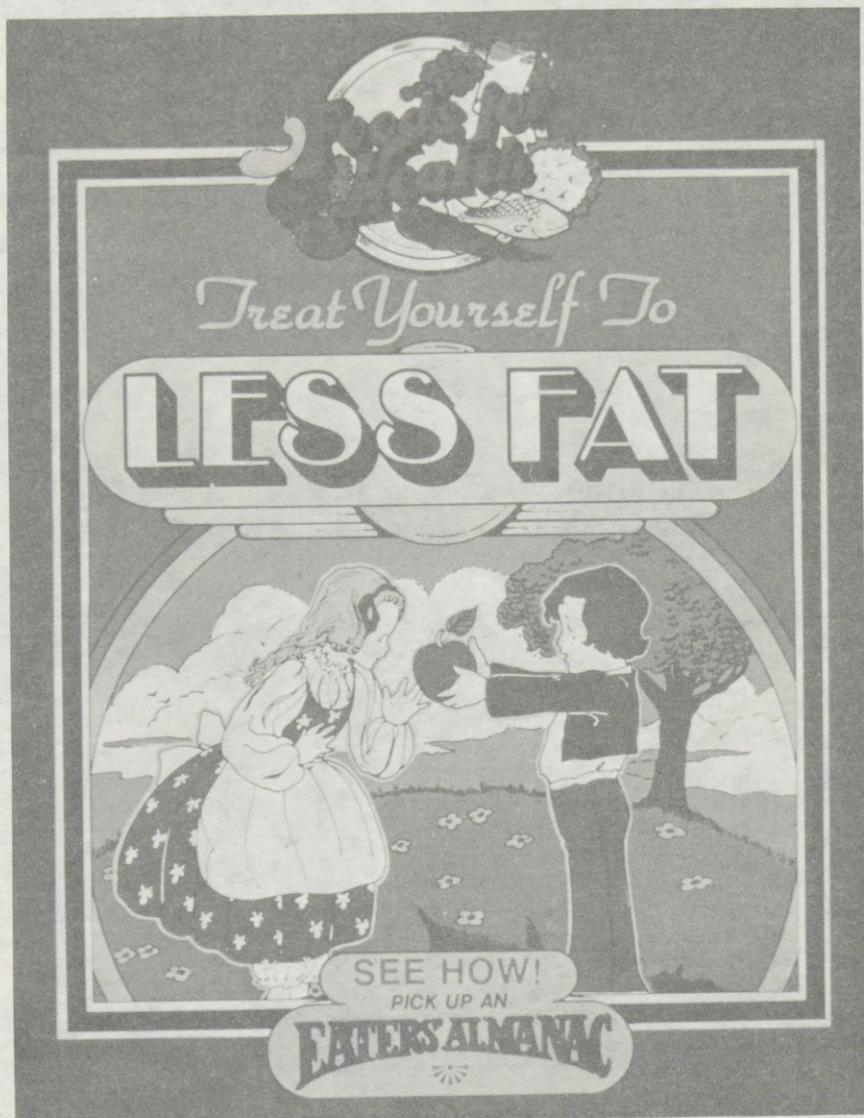
There is a large overhead banner located near the front checkout aisle. The words indicate "Choose Food for Health." It's a double-sided banner and very colorful. We're getting some feedback now as to how much people notice signs and banners in the stores.

I mentioned before that people do want to get in and out of the supermarket quickly, and that the style of the sign and the graphics must be designed to catch the consumer's attention.

Here's a sign in the produce department which is the first department that you enter in every Giant store.



The sign encourages consumers to "Treat yourself to less fat."



Here is the specific display in which the Eaters' Almanacs are distributed. It is usually located in the dairy-deli aisle. You may wonder why we choose that aisle. Basically, it is one of the highest traffic areas in the store. We want people to see the materials and pick up the programs, so that we can know the effect of this type of program on consumers.

The display holder for almanacs features a 22- by 28-inch sign, and more or less a magazine rack holder, for the different Eaters' Almanacs. On the side of the rack, there is a comment card in which we ask consumers to let us know what they think about the program.



Here again is a closeup of the sign that was in the store the first week when the almanac covered, "What do you know and what don't you know about food and nutrition issues."

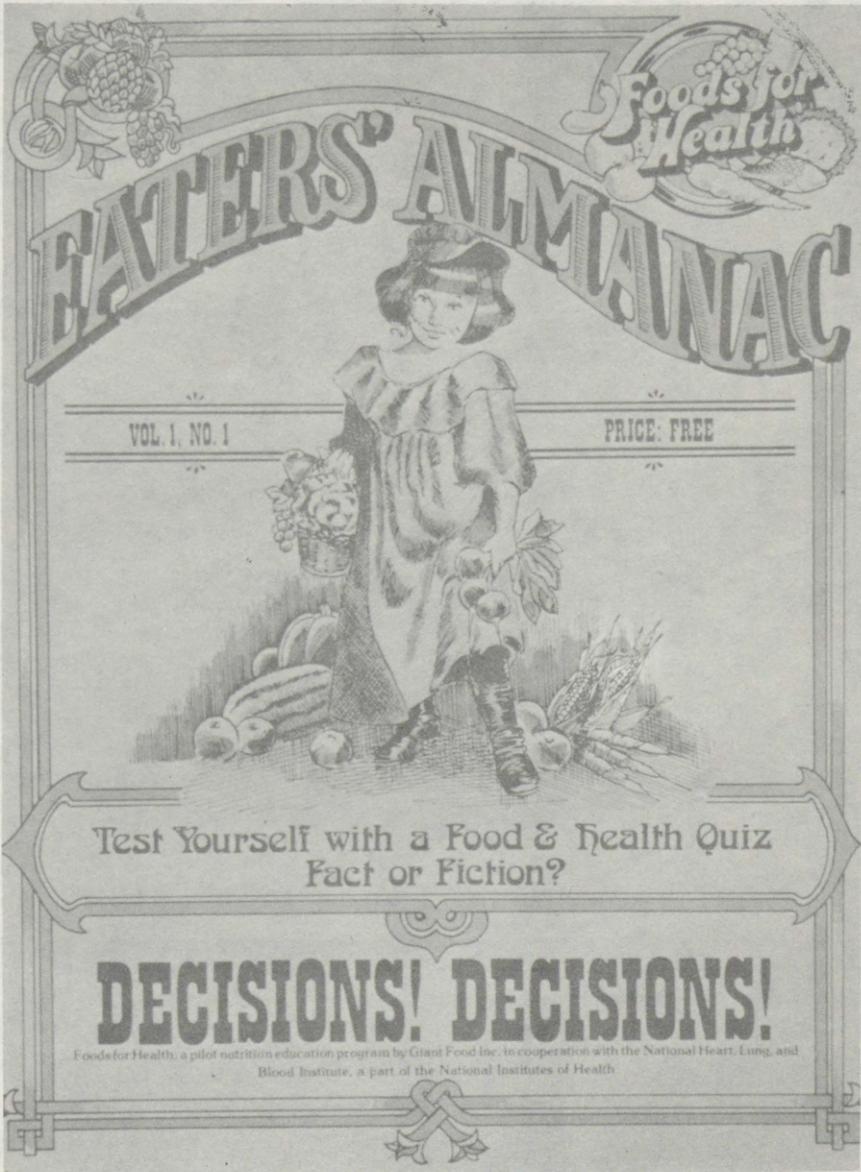


Here is an example of a consumer picking up the almanac as they walk down the first aisle in the store.



Here is an example of one of the theme sign messages—featuring a particular message on which the almanac gives more specific information.

Here is an example of the sign we will see when we talk about low-fat dairy products. The actual sign will say, “Everything your family needs from milk without extra fat and calories.”



This is the cover of the Eaters' Almanac. All the almanacs have three holes punched in them so that the consumer can keep them as a handy reference at home. This doesn't show on the slide here, but the cover is basically the same for each different issue. However, every 2 weeks a different color is used and, of course, the remaining inside portions vary with the particular topic that is covered.

We do have copies. Senator, for you and other members of the subcommittee, so you can look at them in detail if you like.



Here is a closeup of the sign in the seafood department. This sign encourages consumers to "Love their hearts at mealtime," featuring a family scene, to "See how! Pick up an Eaters' Almanac."

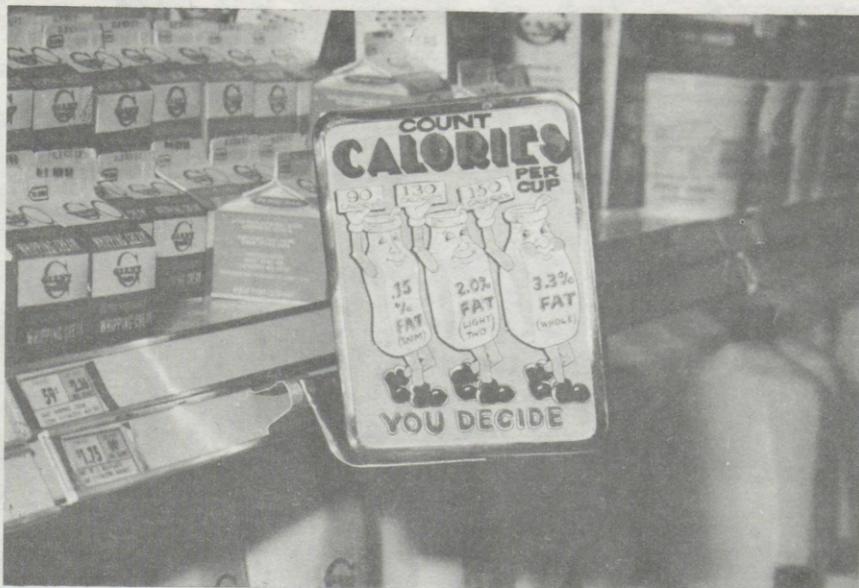
In the bakery department, we also have a sign which encourages the consumer to "Start your child on a healthy heart track."

You may ask why this sign is in the bakery department. Well, our experience has shown that people don't read posters unless they are waiting for service or have some need to stop and take a little bit longer in particular areas. So the four locations we have chosen are areas where people wait, or walk through high-traffic areas.



Here we give a specific cue-to-action, so to speak, to the consumer. There are specific shelf signs that will be a part of the program, and here is an example of the sign that we're talking about, low-fat milk products, giving a difference—a comparison, in fact, in fat content and calorie content. There are three different types of milk that you commonly find in any supermarket. Other specific shelf signs cover fats and oils, margarine, turkeys, and lean meats. Some of the sample shelf signs that have been printed are on the board here for you to look at.

The different shelf signs will appear throughout the year, at the same time the particular almanac discusses a particular topic.



We have been encouraged by the initial consumer response to the "Foods for Health" program. During the first 2 weeks of the program, we received over 780 comment cards from consumers. These are the comment cards that are displayed next to the almanac holders. This is a lot of mail for us on any one particular topic. We were often surprised to receive 100 letters coming in 1 day. After a total of 4 weeks into the program, we have received over 1,040 responses. About 90 percent of these said they find the material useful and interesting.

On the comment card, we also ask consumers to tell us what areas they would like more information about. It was basically a "check-list" in which we asked them to indicate the areas that are of greatest interest to them. At the top of their list is additives, followed by sodium, fats and cholesterol, labeling, recipes, fiber, weight reduction, and vegetarianism.

There seems to be a trend over the first 4 weeks, at least, in terms of heightened consumer interest in these areas. The comments we have received here have been so very favorable from consumers as well as our store managers that we feel we're on the right track.

We are encouraged that so many consumers are letting us know their reaction to the program and commenting on the important role of the supermarket in developing a program of this nature.

We have also received some reaction on the program from other food retailers. Both Giant and NHLBI are receiving requests for more information about the program.

Since this pilot program can be used by other supermarkets after the initial test period, we feel it is important to share the program's objectives and method of evaluation at this early stage.

Last week, I gave a presentation on "Foods for Health" before the Consumer Affairs Council of the Food Marketing Institute, the trade association for supermarkets, independents, and wholesalers. At that meeting, there was a strong interest expressed in nutrition information by other supermarket consumer advisers. But whether a

program with the scope of "Foods for Health" is possible for retailers in general is not yet clear. We are still learning.

"Foods for Health" is only possible for Giant because of the combined expertise of industry and Government. Without the scientific input and evaluation of the experts at the National Heart, Lung, and Blood Institute, we believe that a nutrition education program of this type would have little credibility with consumers.

Retailers are not nutrition experts and, therefore, cannot make definitive statements about nutrition and health without the support of reputable scientists. Government must support the research necessary to set the standards for nutritional quality and health. We believe, too, that the Government must see that the information derived from that research is widely disseminated.

Now, Steve Zifferblatt of the Institute will explain how the program will be evaluated and their plans for dissemination to other retailers.

Dr. ZIFFERBLATT. May we have the lights, please?

The evaluation is very simple. The first phase relates to knowledge and the second relates to actual measured changes in food selection. We want to see whether people learn more from this program, and we also want to see whether, in fact, it changes any of their food consumption or food purchasing selection behaviors.

The knowledge aspect is a very important dimension. People usually call the bottom line the "bread and butter" line—if you'll excuse the cliché—behavior. Everybody points to the fact, "Well, if people know something, that's fine. But it has to change their behavior in some way."

In fact, we really don't know what the relationship is between these particular two areas, knowledge and behavior, at this point except that all logic dictates that it exists.

A consumer who goes through this pilot program for an entire year (1) should acquire a lot of nutrition information on what is known and what is not known, and (2) should be able to weigh the consequences or the alternatives in terms of implementing these changes in his or her life. They then might look at all this information and say, "Thanks." I know it all, Giant and NHLBI, but I don't wish to make those changes right now. I'm going to wait." We still think that's a legitimate goal in the program.

So it is not only changes in actual food selection that are really important, but it's whether those persons who go through a program like this are, in fact, learning something and becoming fully informed.

The program is being instituted in the Washington, D.C., Richmond, and Salisbury, Md., area only. This program has a comparison group in the Baltimore area. The knowledge phase of the evaluation is accomplished by a pre-, during-, and post-survey. The surveys are done in both groups and we will be able to compare differences in levels of knowledge between and within groups in terms of food selection.

Giant has given us access to actual food purchasing or food selection data 20 weeks or more prior to the start of the program, and for the entire duration of the program—1 year. So we have an opportunity to evaluate food selection as well.



A unique aspect of the food selection dimension of the evaluation is that we have hard data; we don't have to rely upon man-based inventories. Giant has instituted in many of its stores a computer-based inventory. Those are the ones with the "hash marks" on it. This is an excellent use of that particular system, in order to ascertain if there are any changes in food purchasing behavior.



In this last slide, we take a look at this guy again in terms of the reality of changes. Change is very, very difficult in our society. Many of us in this room have tried to make a lot of personal changes in our lives, vis-a-vis eating, and we have a lot of difficulties. We have wrestled with it and will for the rest of our lives, as it turns out. We will have to look at that particular reality.

Quite often the baby is thrown out with the bath. You have a program, you put it in, you run it for a year, you evaluate it, and bingo, it doesn't make any changes in food selection. When you look at the reality of change, why levy expectations on changes in food selection behavior in terms of 1 year or  $x$  amount of years. These expectations are raised and have never before, vis-a-vis intervention program, been verified or replicated.

If you look at learning in the classroom and mental health, parent, child rearing, toilet training, changes occur but these changes take time. This particular program, the way we see it, is one program among many others that have to occur. You have to keep on stimulating action around the subject, keeping the awareness up, keeping the information flowing, and gradually  $x$  amount of years down the line, there will be changes.

But to throw the baby out of the bath and evaluate it after 1 year and say, "It's no good; let's try something else," flies in the face of everything we know.

The basic principle that I carry with me at this time is: No. 1, the skills are here to do it and we don't have to go out and do additional basic research to find those skills. No. 2, we have to do it in a cooperative way with industry. We can lend credibility perspectives, scientific expertise, evaluation expertise, et cetera. But it has to be a cooperative effort. There are problems with that, and we might touch on those.

It is difficult to develop education programs in a large system such as the Government. There is a need for patience and perspective on the realities of change for both nutrition behavior and the behavior of governmental personnel involved in the programs. These must be looked at very closely. We are optimistic that something could be done in our society by the Government about developing effective ways of delivering nutrition information.

Senator McGOVERN. Thank you very much, members of the panel. Maybe we can turn the lights back on now.

Mr. Barnett, I want to first of all commend you and Ms. Mathews, and also especially Mr. Danzansky at Giant Food, for the work you have done in this field. I think it's a splendid example of the way food industry companies can undertake initiatives that are most worthwhile in the nutrition field. I am very much impressed with what you're trying to do.

We have had Esther Peterson before this committee on several occasions. I know about her association with Giant Food in the past.

As a representative of senior management at Giant, what lessons has the company learned about nutrition labeling since you have been in this area? As I understand it, you began in 1971. What about the feasibility and practicality of it; the cost factors, the utility for consumers?

Can you tell us, just in a general way, about your impressions of the value of what you have been doing?

Mr. BARNETT. The present guidelines for nutritional labeling are difficult for industry to comply with. They're expensive and they are not under the best formats. The use of representative values, which has been mentioned before today, is a more practical way to approach universal nutrition identification.

We think the consumer should be served with this type of information, but only if it's in a reasonable form to give to the consumer.

Senator McGOVERN. I was wondering, in listening to you, why more food chains haven't emulated your example. Maybe they have and we're just not aware of it.

Are you almost alone in carrying the effort as far as you have?

Mr. BARNETT. I don't think so. Maybe we're highly visible and have a commitment as a company, but I have a great deal of respect for a significant number of food chains.

The Food Marketing Institute is extremely sensitive to the issues and wants to work for even more progress in developing innovative consumer programs.

Senator McGOVERN. Do you think the fact that you're located in the Washington, D.C., area and you have good proximity to the appropri-

ate Federal agencies is a necessary component of doing what you're doing in the nutrition field?

Mr. BARNETT. I think it helps, but I don't think it's a necessary component.

Senator MCGOVERN. Have you had any reaction from your grocery suppliers, both positive and negative? I'm wondering if there has been any feedback there that would be significant.

Mr. BARNETT. Before the processors start working with the consumer representatives and with the Government agencies, they have a great reluctance to do that. After they have the experience and find out we're all human beings, then they shed that reluctance and they are better for the experience.

We have had some of the largest food processors working on our committees, and they have learned a lot and have changed their attitudes.

Senator MCGOVERN. The reason I asked that—it seems to me you see more and more evidence, in the groceries that are going onto the shelves, of an awareness of consumer interest in low-fat dairy products, lean meats, things of that kind.

I wonder to what extent the efforts your company and others have made have prompted this kind of response in the food suppliers or food manufacturers.

Mr. BARNETT. Certainly the entire question of nutrition and health has brought more emphasis, but remember, we're dealing in almost a sea of ignorance, with a substantial amount of misinformation as it applies to foods.

There is a desire on the part of human beings to provide the best for their families and for themselves. I believe that is inherent in our society.

Senator MCGOVERN. Is it fair to say much of what you're doing, Mr. Barnett, is an outgrowth of expressed consumer interest in knowing more about the content of food and its nutritional value?

Mr. BARNETT. If the consumer wasn't interested in this, we would have ceased long ago. We're very sensitive, and we're right on the firing line with the consumer. We see "Mrs. Murphy" every day. Yes, it's our awareness that she has that interest that causes us to continue with these efforts on her behalf.

Senator MCGOVERN. To turn to you for a few minutes, Ms. Mathews, in general, what is the target audience that you're after in this program? Are you aiming at consumers as a whole, or at certain special concerns among consumers that you're targeting on?

Can you tell us a little bit about that?

Ms. MATHEWS. We spent a lot of time talking about that. In any consumer information program that you develop, particularly when you have stores in all types of areas and a cross section of customers—it's very difficult to approach.

We have felt, in conjunction with the Institute, that to develop a program like this that, hopefully, will be appropriate for dissemination elsewhere, that we did have to make it simple and did have to repeat the message. But we were aiming at the consumer-at-large.

We have paid particular attention to make sure the almanacs are between a 10th- and 11th-grade reading level. Words like "cholesterol"

automatically make it the 11th grade level. But we have tried to make the definitions and the materials as simple as possible.

To answer your questions specifically, it's the adult population rather than children.

Senator MCGOVERN. As you know, we have 16 to 17 million Americans now on food stamps and it is generally believed that many of those people have rather low reading skills. They are classified as "hard to reach" with informational programs.

Have you done anything particularly to make the program meaningful to that group?

Ms. MATHEWS. One of the two consumer focus groups we met with was a group of Head Start mothers that worked with the Community Nutrition Institute—CNI. CNI has developed a nutrition education program for a number of consumers in this particular area who are low-income consumers. They helped us most specifically with the visual aspects of the program. They said they liked the colors; they said, keep the message simple and we really took that to heart in developing the materials that we have here today and the other ones that will be coming out in the future.

Yes, we have made an effort, I believe, to address that area. But I think it's really going to come out in the evaluation of the program, specifically who finds this program the most useful. Surely, some parts are more useful to certain consumers than others; and that's one of the reasons why we have included a cross section of topics, anything from how to read food labels to specific topics like fats, oils, cholesterol, and sodium.

Senator MCGOVERN. I was struck by one observation you made in your prepared statement. You say, "There have been times that Giant has found the Government has prevented us from voluntarily providing nutrition information to consumers on various food products."

What do you mean by that? What do you specifically have in mind?

Ms. MATHEWS. I did want to mention that I have a couple of further pages attached to my testimony which address some food labeling questions.

That experience we have testified on before. The nutrition labeling regulations do not allow us to disseminate information based on the best information that we have, USDA handbook No. 8, which has already been mentioned this morning. We were told that USDA handbook No. 8 was not good enough. So, the nutrition labeling posters, that we first instituted in 1971 as part of a general information program, had to be removed. But the posters were attempting to inform the consumer.

We feel we could probably still make similar posters, but we would have to take each of the posters to FDA for a step-by-step approval, and that's a very time-consuming endeavor.

We would like to have more voluntary information available for consumers, but we found in this case that voluntary information isn't feasible.

Senator MCGOVERN. Based on what you have said and what we heard from these food industry leaders earlier today, I gather the industry as a whole has a high regard for the quality of USDA handbook No. 8.

Ms. MATHEWS. We're hearing that more and more from the people doing this revision. I personally don't feel I am qualified to say as an individual, but this comes up again and again, and I think with more of the data that is being developed that we will have a better idea.

Senator MCGOVERN. Do you think this kind of informational program that you have developed, and all these colorful aids and so on, would be useful in the classroom?

Ms. MATHEWS. That's a good possibility, I think. We have received some requests from teachers and we often find they want someone to come out and explain nutrition to them. I wish we had more people in our department to do that very thing.

Senator MCGOVERN. Is it a costly program? And if so, who is paying that cost? Do you have to pass that on to the consumer?

Ms. MATHEWS. We have a consumer affairs budget within Giant and the great majority of this program is included within that amount. Radio spots are not an additional cost for the program, since we air a different spot twice a month. Newspaper advertising and store signing are part of the program and also are not additional costs.

The additional cost for this program beyond which we would spend for a consumer affairs corporate program is around \$40,000. The total cost of the program is around \$150,000 for the printing of the materials.

Senator MCGOVERN. That's scattered around some 90 stores?

Ms. MATHEWS. Yes, over a full 52 weeks.

We are printing 150,000 copies of the first three almanacs, with the idea we will evaluate what is used in the stores. We want to keep as close a handle on the cost as possible. We do have our own printshop, and that enables us to save significantly on these costs.

Senator MCGOVERN. Thank you very much, Miss Mathews.

Dr. Zifferblatt, let me just commend you and the National, Lung, and Blood Institute for instigating this program.

I think it is clearly within the congressional intent to disseminate scientific research findings; and as you say, perhaps they're not as certain as the law of gravity and some of these other areas in the physical science field. But certainly there is a growing body of evidence to support the kind of nutritional concerns that you have expressed here.

As one Senator, I just want to commend you for what you have done.

I wonder if you could give us more details about the cafeteria and vending machine studies at NIH which helped lead to the "Foods for Health" project?

Dr. ZIFFERBLATT. All of these things were thought out very systematically at a particular moment in time. I think a lot of scientific creative work sort of happens at a moment when you see something and you want to try it.

There was a cafeteria there, and we thought our strategy would be to try to deliver information right when people are making decisions. The cafeteria had a computer system set up somewhat similar to Giant's. We worked with GSI and we discussed for a long time the access to their data. We took data for an entire year on everything that was eaten in the cafeteria and analyzed it by season, day of the week, holidays, pre- and post, et cetera.

Then we instituted two programs, one being a straight nutrition education program, which is sort of a play on the gasoline station games—you know, you get a little prize—and “digestible” pieces of “upbeat” nutrition information are disseminated.

Then we instituted a program on behavior change as well. We are still evaluating the behavior change project—the one with the tray liners—you have copies of that. But certainly the nutritional education program was a useful one.

We have very hard evidence that changes were made. We reduced overall calorie consumption in cafeterias; we increased the consumption of skimmed milk; we increased the consumption of yogurt, and, I believe, salads, and decreased desserts.

Senator MCGOVERN. How long did it take you to develop and implement the “Food for Health” program?

Dr. ZIFFERBLATT. Well, the program from start to finish took about 7 months, I believe, from the time we thought of the program and got all the materials prepared and printed and got it out.

Senator MCGOVERN. I was struck rather favorably with the report we had here awhile ago, at the National Heart, Lung, and Blood Institute Conference, which reviewed the factors which may be contributing to some drop in heart disease since 1968.

How much was credited to possible alterations in the American diet in explaining this apparent drop in heart disease rates?

Dr. ZIFFERBLATT. The conference was held several weeks ago and there aren’t any clear data on that. My recollection of that data is somewhere between 10 and 40 percent, though the methodologies and how the data are collected and the lack of data on incidence of coronary disease make any type of interpretation very, very difficult.

It is indicated clearly that this is a major risk factor, and certainly any input or any concentrated effort to do something in the area of nutrition and calorie reduction, saturated fat, cholesterol, as it relates to risk factors alone, would make—

Senator MCGOVERN. Did that report deal with all ages or did it concentrate on middle-aged people?

Dr. ZIFFERBLATT. It dealt with all ages, and attempted to identify the culprits controlling for age.

Senator MCGOVERN. As I remember the news report, there was one indication that among middle-aged males particularly, and especially among those in the higher income, higher educational levels, you have a noticeable drop in the incidence of heart disease.

Dr. ZIFFERBLATT. Yes.

Senator MCGOVERN. And at least the person writing the news story was attributing that to various factors, one as dietary changes, and one, a decrease in tobacco intake, and another was more exercise.

Were those all significant factors that were identified?

Dr. ZIFFERBLATT. The socioeconomic variables were discussed; again, no final consensus was reached in this conference on this particular point. The writeup of the conference is still going on.

But you point to a very significant phenomenon, that changes first take place in the higher socioeconomic brackets of our society in all areas. Witness 2 years ago at the publication data on cholesterol levels

at a Lipid Research Center press conference. The drops in cholesterol were clearly related to socioeconomic status.

Senator MCGOVERN. Earlier today, our witnesses put considerable emphasis on the need for better communications in conveying nutrition information. I am wondering how you decided on the format of the "Food for Health" concept that you're using.

Did you call in communications experts or how did this program evolve?

Dr. ZIFFERBLATT. The terminology or actual program?

Senator MCGOVERN. The actual program.

Dr. ZIFFERBLATT. Again, it was a logical outgrowth of a point of concentration on point of purchase, or occasions where people make food decisions.

It's totally logical to go to a supermarket and try to do something under those circumstances. We did contact the major supermarket chains in our country to ascertain whether they were interested in working with us on a pilot program. While there was interest, we were interested in evaluating a program and doing a pilot as opposed to encouraging a consumers' service prematurely.

Senator MCGOVERN. What kind of nutritional expertise did you draw on in devising this program?

Dr. ZIFFERBLATT. We have a rather large staff of nutritionists at the Institute itself that are involved in clinical trials, who are very well trained in the area of epidemiology, as well as nutrition—lipid metabolism, et cetera.

We draw our main expertise in making decisions about—from the Institute's point of view—in terms of what's accurate or objective, as opposed to lacking consensus at this particular point of advocacy.

We have drawn upon those people, and also the people that Odonna mentioned. There are several well-known nutritionists in the Giant advisory group that provide input as well.

Senator MCGOVERN. In the expert testimony we have had before this committee in the last couple of years, Dr. Zifferblatt, we have identified the risk factors—that is, the dietary risk factors—in terms of not only heart disease but also cancer and three or four other major killing diseases.

Do you know whether other parts of the National Institutes of Health that go beyond your particular Institute for example, the Cancer Institute, are beginning to disseminate information of this kind, the relationship of diet, for example, to cancer?

Dr. ZIFFERBLATT. Senator, I have no idea about that. However, the Dental Institute is developing a program on sugar, and they are working on one of the Eaters' Almanacs in the sugar area as well.

Senator MCGOVERN. One of the frustrations of this committee is that we get testimony from the cancer people that perhaps as much as 50 percent of the cancer in this country is related in some way to diet; yet they don't seem to be motivated the way you are in making that information available to the American people. I am really somewhat baffled at the lack of enthusiasm in the Cancer Institute, both on the research side, in identifying the dietary factors in cancer, and also disseminating what evidence they do have. I don't know if they're waiting for absolute, 110-percent proof or what, but they don't seem to act on the basis of the evidence that is available.

If there is anything like 50 percent of the cancer in this country that is related to what we eat, one would think a public agency that has the chief obligation in that area would be making that information available to the American people.

On the other hand, if they have doubts about it, it's peculiar they are not doing more research to resolve those doubts. The last information we had is that the Cancer Institute people are allocating about 1 percent of their research budget in an attempt to identify dietary factors as a possible cause of cancer.

I realize that's not your field, but it just underscores to me the commonsense that the Institute you're associated with, and Dr. Levy is associated with, is demonstrating in contrast to some of the other people over there at NIH.

Dr. ZIFFERBLATT. You know, you could sit and wait and wait and wait and hope all the information rolls in some day. But at the same time, when you look around, people are really interested right now. You have a responsibility to communicate to them.

Again, it's logical. You don't have to have it all in before you talk to people about what you know and what you don't know. They can decide for themselves. They're intelligent and rational. You can at least convey the information objectively to them so they can make these particular decisions.

Senator MCGOVERN. Well, thank you very much. We appreciate your testimony here. I think this has been very helpful. If we have followup questions, we may submit them to you later on.

We appreciate your response this morning.

Mr. BARNETT. Thank you, Senator, and thank you for your kind remarks.

[Whereupon, at 12:20 p.m., the subcommittee adjourned, subject to call of the Chair.]

## A P P E N D I X

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STATEMENT OF HOWARD E. BAUMAN, PH. D., VICE PRESIDENT OF SCIENCE AND TECHNOLOGY, THE PILLSBURY CO., MINNEAPOLIS, MINN.

Mr. Chairman, members of the Subcommittee on Nutrition, I am Dr. Howard Bauman, Vice President for Science and Technology, The Pillsbury Company, Minneapolis, Minnesota. I appreciate very much having the opportunity to address this Subcommittee on behalf of The Pillsbury Company concerning the labeling of food products, particularly in the nutritional area. Although I know this hearing is most specifically about nutritional labeling, there are other aspects of the food package label that I think warrant mentioning since, in many cases, they relate directly to nutritional information about the product. I would like to state our opinions at the outset so that you understand The Pillsbury Company's position on labeling, and specifically, nutritional labeling. I've also attached a copy of our Corporate Policy on Nutrition which has been widely disseminated over the years.

First of all, we are committed to full, meaningful, informative labeling on our products including the listing of all ingredients. We firmly believe that diet and nutrition go hand-in-hand; that there is no such thing as a single good or bad food . . . like many things in life, there are good and bad ways of using items, including food. We feel that there should be a concerted effort on the part of industry, the academic community and government to develop a nation of smart eaters rather than having our choice of foods limited by government action. We believe that this can be accomplished by providing a wide variety of foods with informative labeling. This must be accompanied by massive educational programs that will enable the consumer to utilize the information so that they can select diets wisely that are best for their individual life styles, health status and ethnic background. We don't feel that labeling by itself can substitute for education.

It was just prior to and during World War II that food processing on a large scale became more prevalent and somewhat more sophisticated. The requirements during the war time period for shipping products long distances and having them arrive in good shape, with acceptable quality and nutrition, were such that it was necessary to do a tremendous amount of research on developing suitable additives that would aid and assist in this process. Many of the current food additives were developed during this period. This shift in preparation of foods from the home into food processing plants was concurrent with the recognition of the Food and Nutrition Board that pellagra and beri-beri could be eliminated from the U.S. population through the addition of appropriate vitamins to a carrier such as flour. Nutrition research during and after the war emphasized the role of adequate nutrients in the diet, and because of this recognition, the Department of Agriculture, for years, carried out extensive educational campaigns encouraging the consumer to eat a wide variety of foods to insure the consumption of sufficient vitamins, minerals and other essential nutrients necessary for good health. However, over time, the educational programs dropped off. It was also during this time that the preparation of food outside the home became much more sophisticated with many more products being produced in restaurants and manufacturing plants rather than the home. This had quite an effect on the food system, particularly in causing a number of commodity shifts; for instance, prior to World War II, approximately 70 percent of the sugar consumed on a per capita basis was brought into the home in bags. Today, approximately 70 percent of the sugar is brought into the home in the form of prepared mixes and other types of manufactured foods. This shift towards prepared foods that has been so prevalent in the past two decades has been increased dramatically by the number of former homemakers that have now entered the mainstream of the employment market. This, in turn, has caused a

shift in lifestyles so that many more meals are eaten outside of the home. This has also caused a greater demand for meals that can be prepared quickly, since the time available for long preparation of foods, which was common many years ago, has disappeared.

The renewed re-emphasis on nutrition began in 1969 at the White House Conference on Nutrition. This conference raised concerns about the types of food products that were being eaten and the nutritional well being of the population who, for at least a generation, had not been exposed to adequate nutrition education. Because of this effort as well as a great deal of effort on the part of the Select Senate Committee on Nutrition and Human Needs, we have for the past nine years, gone through a period of accelerated change. Because of the rapidity of these changes, other problems have been created. We believe that we have arrived at a point in time where we must look at where we were, what we've been doing over the past decade and what we ought to do from this point on to improve the nutrition awareness and understanding of the consumer.

After the White House Conference, the Food and Drug Administration, the USDA, Industry, the academic community, the Senate and interested organizations embarked on a semi-crash program in an attempt to deal with some of the desires and expressed needs shown at the nutrition conference of 1969. During this period, a succession of regulations were promulgated and finalized. A listing of many of these has been attached to my testimony.

As a general rule that is used in industry, the first 80 percent of a project can be accomplished with about 20 percent of the money. However, the last 20 percent of the project takes the remaining 80 percent of the funds. It is the attainment of that final 20 percent or fractions thereof that we must view with caution and concern since it's in this area that the greatest effect on price, productivity and cost to the consumer will be felt. Therefore, we think this is a good point in time for all of us to reflect upon what has been accomplished so far. We must re-evaluate what has been done and determine which of the changes we have wrought are important, cost effective and ought to be kept, and which of the changes are ineffective and perhaps should be dropped. It's also a time for a great deal of reflection and study to determine what, if any of the additional costly 20 percent of the effort, is absolutely necessary. We urge a great deal of caution in this area because, as we all know, these costs are passed on to the consumer. We feel that before any additional changes are recommended in our labeling systems that we very seriously look at three major factors.

First, the feasibility of implementing the proposal (this would primarily be the feasibility of industries' ability to accomplish this change with current knowledge). Second, the magnitude of the *cost* of the change so that we have some idea of the cost/benefit. Third, the *utility* of the change to the consumer. For example, a change that is felt to be desirable by a few people, may be very expensive and have little or no utility to the vast majority of the people should not be made. We think it's important to delineate all changes that are requested and obtain a statistically valid survey as to whether these changes are really wanted and the costs accepted by the consumers. We emphasize *all* changes since, many times, a single change with a cost presented might well be accepted by the consumer, but the cost/benefit of the total may not be accepted or only partially accepted since there is an additive effect of change. We would hope that the Food and Drug Administration will follow this proposed system with the list of changes that have resulted from the hearings they've held before their acceptance and implementation of the changes. This would necessitate developing a feasibility, cost and utility document which would allow the consumer to react to the total package, rather than each as an individual item. We are confident that the effect of a total package will instill a great deal of caution in the selection of those items that are truly of high utility to the consumer in relation to cost.

There appears to be an impression among government personnel that label changes are relatively inexpensive as long as companies are given time enough to run out their current labels. I would like to point out that it can cost somewhere between \$500 and \$15,000 for each label change that is proposed. These costs will vary, of course, depending on the magnitude of the change. The Pillsbury Company has currently approximately 1,300 different labels. If we had to change all of these labels once, our direct out of pocket expense would be approximately \$1,000,000. The indirect costs of personnel time would amount to another \$1,000,000. Further, it's not just the personnel time that is important, but the fact that personnel are diverted from productive to non-productive effort.

A label change affects Research, Law, Marketing, Graphics Department, Procurement, Quality Assurance and other personnel at a minimum, and unless done in an efficient and well planned manner, tends to disrupt whole departments. If we assume a label change about every year by regulation (which seems to be a pattern that has developed), we can see that, for Pillsbury alone, the cost is enormous, in the neighborhood of two million dollars per year.

We should also consider whether or not some issues should be dealt with on the basis that they are informational rather than primarily of a regulatory nature. It's an inherent fact of life within a regulatory agency that any regulations must be written with penalties and constraints. There is no question, in our experience, that some regulations tend to inhibit innovation. Experience has shown that new ideas and new approaches are difficult to incorporate into a regulation and generally take a long period of time. For instance, the regulation on nutritional labeling is voluntary, however, once a nutritional claim is made, then it becomes mandatory. Those organizations that do nutritional labeling do so with a certain amount of trepidation since as soon as they voluntarily enter, they assume a regulatory liability, and at the same time, assume a substantial cost for the analysis necessary to ensure compliance with the regulation. This, undoubtedly, deters many companies from putting nutritional information on their products. It seems to us in light of these deterrents that what we must be looking at is whether or not we want nutritional information so inflexibly regulated. We have also found that costs can be increased dramatically by requirements that are imposed under the guise of nutrition information. For example, a few years ago shortening in products were labeled as vegetable or animal shortening. This enabled the manufacturer to utilize those vegetable oil sources and animal fat sources on a price basis as long as the shortening was functional in the product. FDA proposed that this be changed so that the consumer would know the precise vegetable shortening or the precise animal fats that were used. The manufacturers quickly recognize that they would lose their ability to produce foods using the price differentials of ingredients in the market in order to maintain the cost of food on a more even basis. It was pointed out that if the manufacturer is locked into precise shortenings on his label, he has only two choices.

One, he could continue to buy the labeled shortening in spite of increased price rises. Two, he would have to print a number of labels, each of which would name specific shortenings. Either one is costly, affects productivity and the cost effectiveness of the food system. A compromise was reached in this instance where an "and/or" statement could be used. However, in the labeling hearings, this issue was again brought up and there is a possibility that itemization of the precise fat source will be required. This is a typical example of why we should look at the feasibility, cost and utility before any action is taken. Precise labeling can also affect other materials, such as different forms of sugar and starches.

Percentage labeling of ingredients is another issue that has been raised in the guise of nutrition information. It's well known by scientists that this is impractical and could be very expensive to the consumer since agricultural raw materials are highly variable. For example, wheat from one area of the country is not the same as wheat from another area of the country. Milling characteristics of wheats are different; many times during the year, different blends of wheat are necessary to get the functional characteristics that are necessary. During the course of a year, between harvests, percentages of a given ingredient are often varied in a formula depending on what its functional characteristics are at any point in time which can be influenced by age, storage, conditions, etc. The food industry would be caught in a trap of being in technical violation of the percentages on a frequent basis. Why have a regulation with which no one could consistently comply unless adding significantly to the manufacturing costs. Our primary concern with ingredients outside of the obvious, such as public health considerations, is the functionality of the ingredient; and if it varies, then the formula must vary; and if the formula varies, then the percentages must vary. As already mentioned, frequent label changes are very expensive. The removal of this flexibility could be devastating to the food industry.

An area that I know this Subcommittee is deeply interested in is that of current nutritional labeling and regulations. We pointed out previously that the analytical costs of meeting the current regulatory requirements are high, not only in the sense of dollars, but also in the diversion of scarce resources such as nutri-

tionists into time consuming clerical effort. We can no longer afford, in this nation, to use our scarce scientific people for non-creative tasks just to be in compliance with regulations. We believe there are solutions to this problem. For example, over the years that we've used nutritional labeling, we have utilized, in our computer, the data from Handbook #8 from the Department of Agriculture. We use this data base primarily to give us our initial readings on certain nutrients in a mixture of ingredients in order to determine what our analytical parameters should be for the analytical tests necessary to comply with the regulations. We have found that Handbook #8 is remarkably accurate when compared to our final analytical results. Other companies that have engaged in nutritional labeling have found the same to be true. This is not really surprising since Handbook #8 data is comprised, in most instances, of averages of many analyses of each ingredient and food listed. Thus, the variations are more or less washed out and we could say that these averages represent, say over a year's time, the average intake that a consumer would get from any particular food. We have felt for a long time that the utilization of Handbook #8 data as the data base for all nutritional information on food products in the United States is a practical and sound possibility. Especially when we recognize that ingredients do vary in nutrient value over time and under various situations so that even the precise analytical work we are now doing is only precise at the point in time that the samples are taken. If we can accept the premise that nutritional information is for information purposes and if we can accept that Handbook #8 is a relatively good source of data, then I believe we could move to the next step which would be the acceptance of Handbook #8 with provisions for updating and addition of more nutrients to it as *the data base* to be used by all in the United States. This would accomplish a number of desirable events.

It would free up many of the scarce resources that are currently being used (i.e. people and laboratories for instance). It would enable all of the small processors and all restaurants to publish and make available nutritional information about their products. It would eliminate any possibility of horsepower races between industries trying to squeeze out the last analytical decimal point for their nutritional labeling in order to round off to a higher level rather than a lower level. It would eventually enable published recipes to show the nutrient value. The most a manufacturer would have to do would be to verify that the product he produces with his process is within reasonable limits of Handbook #8 data.

The utilization of Handbook #8 has been already started through a chain of events. Recently, during an interview at Pillsbury, Ms. Peggy Katalinich of the Minneapolis Star mentioned that she thought including nutritional information with recipes that are published in the food section of the newspaper would be highly desirable. She described her frustrations at trying to find a computerized source of this information that could be used for this purpose. We told her that we have utilized Handbook #8 in this fashion for years. We have included, for instance, a monetary prize in our Bake-Off® contest for the most nutritious recipe and analyzed all of the Bake-Off® recipes on our system. We also used this data base and program to develop the mini-computer meal analysis system that has been in use at the Minneapolis Public Library for about a year. We offered the system to her to try. The upshot of this was that she did try it; the consumer response was very favorable. We've included with this testimony an attachment of her critique of the utilization of this data based to the Food Editors Conference that was held recently in Los Angeles. Ms. Eleanor Ostman of the St. Paul Pioneer Press and Ms. Betsy Balsley of the Los Angeles Times also utilized the system and have received favorable comments from their readers. On the basis of this, we decided that an experiment ought to be tried in making this system available to food editors in general.

We made arrangements with the Honeywell Corporation to install our data base and computer program in their data network system, which is international in scope. This would allow it to be used by food editors in any part of the United States for a small fee. We have agreed we would do this on an experimental basis for six to eight months to find out the extent of interest by the consumer, and whether or not it could offer sufficient information to the consumer. This system was presented at the Food Editors Conference in Los Angeles. So far, the response has been very good. We've attached an article from the Editor and Publisher Journal and also an article from the food pages from the Los Angeles Times as written by Ms. Metsy Balsley which demonstrates that there is a hunger

for information on the part of the readers, particularly relating to foods that are fabricated in the home. I won't attempt to describe the comments that were received other than they all are favorable.

We believe a recognized data base such as Handbook #8 could, over time, have an extraordinary effect on nutritional information in the United States at a relatively nominal cost, particularly to the consumers. We feel that nutrition education is a great need in this country; and we also believe that consumers are anxiously awaiting useful nutritional information. We therefore hope that the Subcommittee would seriously consider recommending the utilization of Handbook #8. Of course, this would also require sufficient funds to the Department of Agriculture for continual updating so that, over time, the United States would have the finest, most accurate nutrition data base that would exist anywhere in the world. Importantly, the use of Handbook #8 as the nutritional data base for the United States would tie together nutritional information for both processed foods and home prepared foods. Thus, a major cause of consumer confusion about nutritional values would be eliminated.

We sincerely appreciate, again, the opportunity to present information to this Subcommittee and look forward to another decade of progress in the nutritional and information area. We only ask that a high level of intelligence and selectivity be used in the process. Thank you.

## ATTACHMENT I

### PILLSBURY NUTRITION POLICY

The Pillsbury Company continues to recognize its role in assuring its consumers that the nutritional quality of its food products will not be compromised. In addition to adhering to both the letter and spirit of regulations on nutrition, the Company is committed to a continuing program of research and development to enhance the nutritional quality of its products, and to full disclosure of nutritional information about all of its products.

In Pillsbury's products nutritional equivalence must be achieved where one food is intended to replace another, except in cases of special dietary needs or where the food replaced is not a significant part of the daily diet. Processes must be designed to retain nutrients, insofar as possible. Where nutritionally appropriate, nutrients may be added for restoration or for fortification to meet special dietary needs. Nutrient addition must be based on nutritionally sound principles and must recognize bioavailability and shelf life requirements.

Where labeling, advertising, brochures and other communications state nutrition and/or health information, it must be factually in accordance with generally accepted scientific and/or medical data. Where appropriate, consumer product labels shall contain nutrition information. Such data must be in accordance with federal (state) regulations. Nutrient claims must be relevant to the needs of the target populations for the particular product. Health related claims or recommendations must be supported by appropriate substantive medical/nutritional evidence. Nutrient claim "horsepower" races must be avoided and nutritional advertising should not reflect adversely or unfairly on other wholesome food products or services. Consumer inquiries on nutrition and health matters must receive prompt, complete and factual responses, which should be stated so as not to be construed to be medical advice.

To assure proper implementation, a Corporate Health and Nutrition Committee shall have the responsibility of coordinating this policy within the Company. Each Free Standing Business involved in nutrition/health related areas shall have written procedures assuring adherence to this policy.

## ATTACHMENT 2

### REGULATIONS AND PROPOSED REGULATIONS AFFECTING FOOD LABELS

October 15, 1973, FDA revised enrichment levels for enriched flour and enriched bread.

January 1, 1973, FDA published nutrition labeling regulations.

January 19, 1973, FDA established food label information panel.

January 19, 1973, FDA published fat and cholesterol labeling regulations.

May 4, 1973, USDA proposed definitions and labeling for textured vegetable products in meat products.

- November 14, 1973, FDA proposed standards for fruit jelly and preserves.
- November 28, 1973, FDA required modified label statements for optional ingredients in flour and farina.
- December 3, 1973, FDA modified labeling of spices, flavoring, coloring and preservatives.
- January 11, 1974, USDA proposed information panel and nutrition labeling.
- May 7, 1974, FDA established standards and labeling for sour cream and related products.
- May 8, 1974, FDA modified standards and labeling for cold-pack cheese and related products.
- June 3, 1974, FDA modified labeling requirements for cheese and cheese foods.
- June 14, 1974, FDA modified nutrition labeling requirements for infant foods.
- June 14, 1974, FDA established standards and labeling for various syrups.
- June 14, 1974, FDA modified standards and labeling for tomato juice.
- November 11, 1974, FTC proposed food advertising regulations.
- December 5, 1974, USDA restricted use of the label terms "all", "pure" and "100%".
- December 5, 1974, FDA established nutrition labeling regulations for food sold in fast food restaurants.
- May 28, 1975, FDA proposed standards and labeling requirements for dietary supplements.
- November 7, 1975, FDA proposed standards and label requirements for drained weights for fruits and vegetables.
- November 11, 1975, FDA proposed name and label requirements for fruit flavored sweetened spreads.
- November 24, 1975, FDA established label requirements for restructured onion rings and potato chips.
- November 24, 1975, FDA gave notice of intent to require label changes for alcoholic beverages.
- January 6, 1976, FDA established source oil labeling.
- February 12, 1976, FDA modified standards and labeling for bread and bakery products.
- March 10, 1976, FTC proposed regulation on advertising and labeling of protein supplements.
- May 26, 1976, FDA modified standards and labeling for salad dressings.
- May 28, 1976, USDA issued interim regulations dealing with labeling of meat and nonmeat protein products.
- August 30, 1976, FDA proposed name and label requirements for margarine substitutes.
- September 7, 1976, FDA proposed name and label requirements for infant foods.
- October 15, 1976, FDA modified standards and labeling for lemonade.
- October 19, 1976, FDA issued standards and labeling regulations for dietary supplements.
- October 26, 1976, FDA established standards and labeling for enriched raisin bread.
- November 5, 1976, USDA established standards and labeling for liver sausage and braunschweiger.
- January 4, 1977, FDA reissued name and labeling regulations for seafood cocktails and frozen heat-and-serve dinners.
- January 18, 1977, USDA issued standards and labeling regulations for various styles of ham.
- February 4, 1977, FDA proposed listing FD&C Yellow No. 5 on labels when used in the food.
- April 12, 1977, FDA modified standards and labeling requirements for various frozen desserts.
- May 25, 1977, DOC issued regulations for a voluntary consumer product information labeling program.
- May 27, 1977, FDA modified nutrition labeling regulations.
- July 15, 1977, FDA established name and labeling requirements for peanut spreads.
- July 15, 1977, FDA proposed revising standards for enriched rice.
- July 19, 1977, FDA issued tentative regulations for labeling certain special dietary foods.
- August 2, 1977, FDA modified standards and labeling requirements for Italian cheeses.

November 11, 1977, FDA reset the effective date for source oil labeling and several other labeling regulations.

November 15, 1977, FDA issued tentative guidelines for labeling saccharin products.

December 2, 1977, USDA proposed net weight labeling requirements.

December 9, 1977, FDA proposed drained weight label regulations for various canned fruits and vegetables.

December 9, 1977, FDA issued final guidelines for labeling saccharin products.

February 3, 1978, FDA issued final modifications for standards and labeling of certain frozen desserts.

March 21, 1978, FDA stayed standard and labeling requirements for fortified protein macaroni products.

March 28, 1978, FDA finalized source oil labeling regulations.

April 7, 1978, FDA proposed ingredient labeling variations for enrichments added to food.

May 9, 1978, FDA modified standards and labeling requirements for dry milk products.

May 9, 1978, FDA proposed modifying standards and labeling for various tomato products.

May 19, 1978, FDA issued standards and labeling requirements for certain condensed milk products.

June 2, 1978, USDA proposed standards and labeling for turkey ham.

June 6, 1978, FDA established ingredient labeling requirements for leavening, yeast nutrients and dough conditioners.

June 20, 1978, USDA issued name and labeling requirements for mechanically processed meat products.

July 14, 1978, FDA proposed name and labeling requirements for vegetable protein products.

September 19, 1978, FDA proposed modifying standards and labeling for various cheese products.

September 19, 1978, FDA proposed standards and labeling for cheese substitutes.

September 22, 1978, FDA issued labeling regulations for foods useful in calorie controlled diets.

September 22, 1978, FDA proposed labeling regulations for reduced calorie bread.

#### HOW THE PILLSBURY NUTRITIONAL DATA BANK WORKED FOR THE STAR

(By Peggy Katalinich, Editor, Taste, the Minneapolis Star, at National Food Editors Conference, Oct. 11, 1978)

Under normal circumstances, I would be here in person, picking everyone's brain right along with you—comparing the number of staff members and the number of columns as well as complaining about the lack of understanding we experience from our management.

However, previous plans for a working vacation in Europe that were made months ago could not be canceled, even for a trip to sunny Los Angeles. Even as you hear me now, I'm forced to spend my time sipping cafe au lait in some sidewalk cafe in Paris, eating my way through Europe for the good of my job.

I hope that explains why you're hearing me on tape. I really do want to tell you all about this nutritional labeling program we have started at The Star because it is so exciting. And I think it's a major breakthrough for food editors in the area of nutrition education.

By now you should have copies of the recipes we have analyzed. But before I explain how we decided on a format and the nuts and bolts of the program, I would like to give you a little history.

I came across an item—I can't even remember where—that some food editor on some paper in some city in this country was printing a nutritional rundown on recipes. Great, I says to myself, the Taste section wants to get in on the action.

I approached the University of Minnesota's food and nutrition department where I was greeted enthusiastically. Yes, they said they had a computer program that could analyze recipes—it would be ready in a couple of weeks. Those

weeks turned into months, but finally we ran some test recipes to try to establish some price for the service. They came back with a cost of \$50 per recipe.

And they managed to say it with a straight face. Needless to say, even a newspaper with the great profit picture like The Star and Tribune Company was not about to pay \$50 per recipe. And I couldn't ask them to.

Months passed. Then after an interview with some Pillsbury executives, Howard Bauman, Lou Gelfand and I sat around chatting. I brought up the idea of running nutritional analyses on recipes and the proverbial light bulb went off. Lou said it could be done. Not only could but if he had anything to say would be done. There was a program in the Pillsbury computer, one of the only such programs in the country, he said, and he was confident that the Star could plug into it for the purpose of analyzing recipes.

There were a few minor details to be ironed out—computer experts had to ensure the safety of confidential Pillsbury data banks, the Star had to come up with money for the trial program, but they were indeed minor details. After a few months, we launched what we called nutritional labeling for recipes in the August 2 issue called the great zucchini, featuring recipes for the summer squash.

We asked for reaction from readers, and we got very positive feedback. About 35 readers wrote and only one was critical although not entirely negative. Let me share some of their comments:

One reader said—Yes yes yes, please keep up the nutritional labeling and include it in as many recipes as you can. My husband is on a 2000 to 3000 milligram per day sodium diet and I need all the help I can get. Also, keep in mind that for every one person who writes, there must be 15 who just don't take the time to do so.

Another reader said—I just wanted to thank you for including the nutritional information on the recipes . . . it really is information such as I have been hoping to find. The information you include has been helpful for many of the persons I have had contact with.

Still another reader—I find the nutrition labeling very helpful. My husband and I try to watch our diets and nutritional content of all that we eat. I even hesitate to buy food that does not have it. I find it especially useful to have this information on recipes.

One reader wrote—In regards to your test program on nutritional labeling of recipes. Yes. Please keep it up . . . in fact I was disappointed that it wasn't included after every recipe.

Finally, a reader said—I am delighted to see the nutritional labels for recipes. I only wish the multitudes of cookbooks and recipes I already own had them also. I do hope you will continue the practice and perhaps in time others will follow your excellent example.

The negative comments came from a reader who said she thinks there is a better way to reach nutritional needs. Whatever happened to the basic four. That was such a neat and concise formula and one the mathematical deficient could at least remember.

There have been some setbacks. If you change a recipe at the last moment another analysis must be run and one week it seemed as if we changed every recipe. We do not have the time or the money to analyze every recipe so there is some disagreement on which ones to analyze—should we select the ones that make us look the best, for instance.

There are problems that anyone considering signing up for the program should be aware of:

1. It does cost. And somewhere you have to persuade stingy editors to come up with some bucks for something that you cannot demonstrate will raise circulation. While Pillsbury can give you more background on the cost factor, we have been estimating about \$3.50 per recipe. The charge represents the cost of actual computing time when the computer is spitting out the facts and figures. We have budgeted \$2,500 for the program, which works out to 10 recipes per week with some flexibility for special projects.

2. It does take time. We were fortunate to have a new assistant assigned to Taste and she has been trained in on how to run the computer whatchamacallit, the telephone hookup that talks to Pillsbury's computer. But you have to come up with somebody who can devote about five hours per week—the amount of time we estimate it takes to analyze 10 recipes and put the results into our typesetting computer. This person also needs to have extreme patience—it is a time consuming tedious project fraught with the need to make difficult decisions like how many grams in a medium size onion, chopped.

3. It takes space. In the already tight newshole that I'm sure most of us have, you will have to come up with about  $\frac{3}{4}$  of an inch of space per analysis. Doesn't sound like much, but 10 analyses can take almost a half column of space which for us is a lot.

There is no question in my mind, however, that these drawbacks are outweighed by the benefits.

The most basic benefit is the plain simple fact that you are providing a tremendous service. Instead of just talking about the need to educate you are doing something about it. Taking a leadership role. Obviously, the nutritional breakdown we provide doesn't tell everything, but it does give important information about protein, fat, calories and sodium content. It also gives you the chance to make sure your recipes are providing a good range of nutrients.

We are finding some surprising things—sodium levels in our recipes, for instance, are often dreadfully high and that's scary since we thought we were pretty careful about that. Calorie counts are also up there. This program gives you the chance to discover these facts, though, and do something about them. We haven't begun to tap the potential of the program—we can do comparisons of recipes high in fat then show how to change them to cut it down. The same with sodium.

Do you get the idea that I'm high on this project?

I would like to take this opportunity to publically thank a number of people without whom this would not have been possible. Sounds like an Oscar speech.

First of all, thanks to David Nimmer, the managing editor of *The Star*, for being persuaded by his zealous food editor that he should pop with the money.

Thanks to Debbie Botko, the news assistant for the Taste section who runs the actual program and copes with the many problems that arise with each new recipe.

And special thanks to Lou Gelfand whose tenacious efforts to make this a reality were essential. I have a tendency to get caught up in new things and Lou kept hounding me until it worked.

Well, enough for Peggy and her soapbox. I tend to get a bit evangelistic. But the nutritional labeling for recipes is really something my staff and I believe in. And we hope food sections and magazines around the country can jump on the bandwagon.

Well, since Pillsbury did not want to arrange for a phone hookup to Paris so I could answer any questions, I'm going to turn the program over to Debbie Botko who has the real answers anyhow. She is waiting back in the Minneapolis office to answer any questions you may have on the specifics of running this program.

#### ATTACHMENT 4

[Reprint from Editor & Publisher]

#### PILLSBURY DEVELOPS NUTRITION DATA BANK

(By Carla Marie Rupp)

This week on the cover of its Thursday (October 26) food section, the *Los Angeles Times* introduces the newest concept and talk of the newspaper food pages—nutritional labeling of recipes.

Betsy Balsley, food editor of the *Times*, is taking the lead from Peggy Katalinich, editor of Taste in the *Minneapolis Star*, who asked Pillsbury to develop its computerized Nutritional Data Bank, now refined through Honeywell and available to newspapers.

"I think it's a major breakthrough for food editors in the area of nutrition education," says Katalinich, who requested the service from Pillsbury and whose newspaper, the *Star*, used the system first in its August 2 section on zucchini recipes.

The only other newspaper to use the computerized nutritional information from Pillsbury so far has been the *St. Paul (Minn.) Dispatch*. Food writer Eleanor Ostman had use of the Pillsbury terminal and service for her feature. "Computer adds nutrition to recipes," in the October 4 *Dispatch* food section. Pillsbury took that terminal to Los Angeles for display in the press room and use by those attending the Newspaper Food Editors Conference. Ostman plans to "make selective use of the Pillsbury data bank when nutritional information is pertinent, not for every cake or cookie recipe."

But the *Los Angeles Times* plans to follow recipes with nutritional information on a regular basis as the *Star* has done. "We are trying to nutritionally label

recipes—entrees, desserts, salads, and vegetable dishes—and do it in a single feature each week,” said Balsey. She said her editors Jean Sharley Taylor, associate editor, and Bill Thomas, editor, see the value in such a program. “They are very pleased that we will be able to offer it,” Balsey said.

“We will see what our reader reaction is to it and supply this information in the way most of our readers want,” she said. Balsey wrote the cover story explaining the system followed by a collection of general recipes with nutritional data.

The biggest news to come out of the Newspaper Food Editors Conference in Los Angeles was this practice of adding nutritional data to recipes—something so new it was practically unheard of by most of the 116 food editors attending. But they had a chance to try out the Pillsbury-Honeywell Nutritional Analysis System themselves and find out details in a session from Pillsbury executives and in a taped speech from Katalinich, in Europe at the time.

Back from her food-tasting trip, Katalinich said this week: “There is a great need for nutrition information to the readers and consumers. The response has been very positive for us. We’re kind of proud that we were the first paper to do this, and we’re very happy the other newspapers will be able to use it. There is a tremendous potential for using this kind of a program, and we’ve only started.” At least 4-5 recipes have been analyzed nutritionally in each Star food section since August.

A major effort using the nutritional labeling system was in the October 18 (Wed.) Star “Taste” section, a feature called, “Living on Less,” with analyses of recipes using less salt, less sugar, fat and meat, said Katalinich.

Louis I. Gelfand, director of public relations, the Pillsbury Company, says, “We’re hopeful we will be able to get a number of newspapers to use the nutritional-computer service.” He said he is now able to announce to the food editors, introduced to the system at the conference, that a lot of clerical time can be saved: the computer can now translate all ingredients into grams.”

Also, as a result of the food editors conference and suggestions Pillsbury received, the Pillsbury Company will now use nutritional analysis on all of its recipes. “We will be the first food company sending recipes to newspapers that will use the nutritional data analysis. The program was so new we hadn’t yet applied it to ourselves,” Gelfand said.

Dorothy Chapman, Orlando Sentinel food editor, sent Gelfand a postcard and said she was interested. “You’ll be hearing from me.”

Marge Rice, Sun Diego Tribune wanted to know specific costs. Gelfand said the cost is approximately \$3.50 per recipe, if a terminal is available to the newspaper. (The Minneapolis Star uses a terminal in the accounting department for the Pillsbury nutritional data).

Nancy Weir, Jacksonville (Fla.) Times-Union, said: “Excellent idea. We will be interested after you are able to convert to grams (which Pillsbury says the system now can do).”

Dorothee Polson, Arizona Republic, said, “I would like to use it. Pillsbury and other companies which send us recipes should use the nutritional data analysis.”

Other food editors said responsibility of analysis should rest more with food companies rather than food writers.

Howard Bauman, vice president, science and technology, Pillsbury, said, “We believe this system will have utility not only for newspapers but also by hospitals, supermarkets, universities and county extension agents, among others.” And some day to owners of home computers to analyze their meals.

Edgar Mertz, group vice president, Pillsbury, said that six years ago Pillsbury was the first major food processor to introduce nutrition data on the labels of its consumer products, prior to the publication of the regulations by the Food and Drug Administration.

Gelfand said Pillsbury has received inquiries from a California supermarket chain which may want to label the nutritional contents of recipes it advertises in newspaper food pages and on the counters of products it sells.

Peggy Katalinich gives credit to Debbie Botko, the Minneapolis Star news assistant, who puts the information from recipes into the computer and gets back the data. “I think it’s a good service,” says Botko.

All that is needed is the terminal, a telephone receiver that goes into a cradle. The phone number of the Pillsbury-Honeywell National Computer is dialed, the recipe is typed, and the computer sends back nutritional data, such as a recipe of “Crunchy Zucchini Casserole”:

“Per serving: 264 calories; 14 gms. protein; 640 mgs. potassium; 23 gms. carbohydrate; 15 gms. fat; 495 gms. sodium.

USRDA: Vit. A . . . 16.7%; Vit. C . . . 62.3%; Thiamin . . . 15.6%; Niacin . . . 28.3%", etc.

"We're finding that recipes are higher in sodium than we thought," said Botko. The readers most interested in the service are those on special diets—low on sodium, restricted on fats, low-calories and for those watching their potassium intake, she said.

Running nutritional scores on recipes is "tedious and time-consuming," she said. For about 6-8 recipes a week, Botko says it takes her about 4-5 hours a week.

Food editor at the Star 4½ years after two years as a Star copy editor, Katalinich came across an item last year—she can't remember where—that some food editor printed a nutritional rundown on recipes. She wanted to "get in on the action."

She approached the University of Minnesota's food and nutrition department, and was told they had a computer program that could analyze recipes. The weeks turned into months, but finally the department ran some test recipes to try to establish some price for this service. The university came back with a cost of \$50 per recipe.

"And they managed to say it with a straight face. Needless to say, even a newspaper with the great profit picture like the Star and Tribune Company was not able to pay \$50 per recipe," Katalinich said.

Months passed. Then after an interview with some Pillsbury executives, Bauman, Gelfand and Katalinich discussed the idea in April 1978. Gelfand said it could be done. Details had to be worked out. The Star budgeted \$2,500 for the program, which works out to 10 recipes per week if needed.

Katalinich says, "Nutritional labeling for recipes is really something my staff and I believe in. And we hope food sections and magazines around the country can jump on the bandwagon."

She says she hopes other food editors can have the encouragement she has had from her managing editor, David Nimmer, for being "persuaded by his zealous food editor that he should pop with the money (and space)."

The most basic benefit, she said, is the plain simple fact that you are providing a tremendous service. "Instead of just talking about the need to educate you are doing something about it. Taking a leadership role. Obviously, the nutritional breakdown we provide doesn't tell everything, but it does give important information about protein, fat, calories and sodium content. It also gives you the chance to make sure your recipes are providing a good range of nutrients.

"We are finding some surprising things—*sodium levels in our* recipes, for instance, are often dreadfully high and *that's scary* since we thought we were pretty careful about that. Calorie counts are also up there. This program gives you the chance to discover these facts, though, and do something about them. We haven't begun to tap the potential of the program—we can do comparisons of recipes high in fat then show how to change them to cut it down. The same with sodium.

"Do you get the idea that I'm high on this project?"

Bauman of Pillsbury says the goal is to get the nutrition story across to consumers via newspapers. "If people had the nutrition data to prove it, they could lower meat costs. Or at least they'd see they were getting more protein than they needed." An adult needs about 65 grams of protein per day.

Eleanor Ostman said the St. Paul paper was getting ready to buy a \$900 terminal that could be used to key into the Pillsbury-Honeywell system. She thinks that as more newspapers use nutritional labeling, it will become more acceptable. "It was all so new at the L.A. meeting; none of the other papers had heard of it, but the food writers were excited about it."

#### ATTACHMENT 5

[Reprint from the Los Angeles Times, Oct. 26, 1978]

#### NUTRITION LABELING: NEW INGREDIENT IN TIMES RECIPES

#### DATA FACILITATES MENU PLANNING

(By Betsy Balsley, Times Food Editor)

Although far more at home with typewriters and pots and pans, for the past couple of weeks several members of The Times food staff have been playing around with computers. Happily, the experimentation is paying off with a new service that should be of benefit to readers.

Beginning today, The Times food section will carry at least one special feature each week that will provide not only good recipes but, as a bonus, pertinent nutritional information on each one. This nutritional breakdown will show the number of calories in each serving, plus the amounts of protein, carbohydrates, fat, sodium and potassium. In addition, the percentage of the necessary nutrients one should eat every day according to the U.S. Recommended Dietary Allowances (USRDA) will be listed for each serving. Thus we are capable, in effect, of providing nutritionally labeled recipes, and those who use the data will find it easier to provide a properly balanced diet for their families.

Why hasn't this type of information been available before? It has, but the research time and cost required to provide it to the public has made it unfeasible. Now, however, the Pillsbury Co. of Minneapolis has come to the rescue.

The U.S. Department of Agriculture's Handbook No. 8 is the generally recognized basic authority for nutrient information about fresh, cooked and some processed foods. Eight or nine years ago Pillsbury's vice president for science and technology, Dr. Howard Bauman, had Handbook 8's nutritional information fed into Pillsbury's computer. Pillsbury wanted the information handy as it developed new products and moved toward the nutritional labeling of existing products.

Only recently did Bauman and his associates realize the possibilities inherent in making this data easily accessible to the public. But there was a catch. While Pillsbury had the information in its computer, "Our computer just couldn't handle all the calls it would have if this information were made available to anyone who wanted it," Bauman said.

So they looked elsewhere for a solution. And that turned out to be the Minneapolis branch of the Honeywell Data Network, which specializes in providing computer services to companies and organizations that need them. Pillsbury supplied the nutritional information to Honeywell, which now can provide it on a nationwide basis to anyone who wants it. At the moment Honeywell believes it can offer nutritional information at a cost of about \$3.50 per recipe. Pillsbury's role hereafter will be simply to keep the nutrient information up to date.

Pillsbury is not the only company to have this type of information in its computer. A number of other food companies and even some universities have put the information into computers for their own purposes. UC Davis, UC Berkeley and UCLA all have it computerized in one form or another.

But, putting the information into a computer is one thing; getting it out is another. At present there is no practical public access to the information.

Who can use the information provided through the Honeywell Data Network? According to Bauman, hospitals, institutions, supermarkets that manufacture private-label products and small food companies that can't afford computers of their own are among those who might find the information valuable. Some dietitians and clinical researchers are also investigating the possibility of adopting it to their own use.

"I can see that the military could use it for recipe development," said Bauman. "and some years down the road, even the homemaker, by simply picking up the telephone, could check his or her own recipes for nutrient value." The major problem at the moment, however, is that a special type of computer terminal is required to tap into the Honeywell system.

When The Times decided that providing nutritional information on recipes was a worthwhile service, several questions arose. Should the recipes analyzed be for low-calorie foods only? Should recipes of dietetic value, such as those slanted at low-sodium, low-cholesterol and low-sugar dieters, be the ones used? Or would it be better to show the nutrient content of ordinary recipes of the type the average person might prepare for a family meal?

The latter idea won out. There's no quicker way to learn where you need to cut back or build up nutritionally than by finding out exactly how much or how little good nutrition there is in a recipe your family likes and eats often.

For this reason we selected a collection of recipes for salads, main dishes, desserts and vegetables that might appear on any table. In addition, we also have included variations for three of the recipes. These will demonstrate clearly how substituting one ingredient for another can reduce or increase the amount of a specific nutrient. The nutritional information provided will also enable the homemaker to serve a well-balanced meal by supplying missing nutrients through other foods served with the ones featured.

## CHICKEN RATATOUILLE

- 4 chicken breast halves (2 pounds)
- 1 teaspoon salt
- ¼ teaspoon pepper
- 1 (1-pound) can tomatoes, broken up
- 1 pound eggplant, cut in 3×1-inch fingers.
- ½ pound zucchini, cut in 3×1-inch fingers
- ½ pound mushrooms, halved
- 1 bay leaf
- 2 teaspoons onion powder
- 1 teaspoon garlic powder
- 1 teaspoon oregano crumbled

Sprinkle both sides of chicken breasts with salt and pepper. Place chicken, skin side up, in shallow roasting pan or large ovenproof skillet. Bake at 450 degrees 20 minutes, or until lightly browned. Remove chicken and pour off drippings. Reduce oven temperature to 350 degrees. In roasting pan combine undrained tomatoes, eggplant, zucchini, mushrooms, bay leaf, onion and garlic powders and oregano. Place chicken breasts on top of vegetable mixture, spooning some of the sauce over breasts. Cover and bake 30 minutes. Uncover and bake until chicken is fork-tender, about 15 minutes. Makes 4 servings.

Per serving: 259.35 calories; 40.35 gms protein; 14.07 gms carbohydrate; 4.54 gms fat; 763.34 mgs sodium; 1232.68 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein -----	62.08	Niacin -----	87.40
Vitamin A -----	25.65	Calcium -----	5.46
Vitamin C -----	58.64	Iron -----	18.92
Thiamin -----	16.27	Phosphorus -----	42.85
Riboflavin -----	29.71		

## VARIATION

Substitute ½ pound of sliced, sauteed italian sausage for the chicken breasts. Place cooked sausage pieces over vegetable mixture and bake at 350 degrees 30 to 40 minutes, or until vegetables test done.

Per serving: 243.46 calories; 13.39 gms protein; 14.76 gms carbohydrates; 15.32 gms fat; 690.70 mgs sodium; 766.19 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein -----	20.60	Niacin -----	30.36
Vitamin A -----	24.29	Calcium -----	4.72
Vitamin C -----	58.64	Iron -----	18.92
Thiamin -----	26.11	Phosphorus -----	22.76
Riboflavin -----	29.38		

## MEAT AND POTATO CASSEROLE

- ½ cup butter
- 4 cups thinly sliced potatoes
- 1 pound lean ground beef
- 1 cup chopped onion
- 1 (6-ounce) can tomato paste
- 1 cup water
- 3 teaspoons salt
- ½ teaspoon cinnamon
- ¼ teaspoon pepper
- 3 tablespoons flour
- ¼ teaspoon nutmeg
- 2 cups milk
- 2 eggs, lightly beaten.
- ½ cup grated Parmesan cheese

Melt ¼ cup butter in large skillet. Add potatoes and fry until lightly browned, turning as needed. Remove potatoes from pan and set aside. Add 2 tablespoons butter to skillet. Add beef and onion and cook, stirring, until meat is crumbly and loses its red color. Stir in tomato paste, water, 2 teaspoons salt, cinnamon and pepper. Cook, stirring frequently, until thickened.

Melt remaining butter in saucepan, blend in flour, remaining 1 teaspoon salt and nutmeg. Add milk and cook, stirring constantly, until thickened. Add a small amount of hot mixture to eggs, stirring constantly. Return to saucepan and cook 1 minute longer. Spread half the potatoes over bottom of a shallow 2-quart casserole and cover with meat mixture. Sprinkle with half of the cheese, then top with remaining potatoes. Pour on sauce and sprinkle with remaining cheese. Bake at 350 degrees 30 to 35 minutes. Let stand 10 minutes before serving. Makes 8 servings.

Per serving : 426.50 calories ; 18.71 gms protein ; 24.16 gms carbohydrate ; 28.61 gms fat ; 1034.39 mgs sodium ; 778.80 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein	28.79	Niacin	22.53
Vitamin A	29.73	Calcium	16.67
Vitamin C	46.91	Iron	17.93
Thiamin	14.74	Phosphorus	27.70
Riboflavin	20.25		

#### VARIATION

Substitute margarine for the butter called for and substitute 1 pound of ground turkey for the ground beef.

Per serving : 282.80 calories ; 26.43 gms protein ; 24.16 gms carbohydrate ; 20.04 gms fat ; 1108.17 mgs sodium ; 853.14 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein	40.67	Niacin	32.17
Vitamin A	29.38	Calcium	16.55
Vitamin C	46.91	Iron	15.09
Thiamin	13.60	Phosphorus	33.09
Riboflavin	20.92		

#### TARTE AU RIZ

- 1 cup rice
- 3 cups milk
- Grated peel of  $\frac{1}{2}$  lemon
- $\frac{1}{4}$  cup raisins
- 2 tablespoons almond liqueur
- 1 (9-inch) unbaked pie shell
- 1 tablespoon butter
- $\frac{1}{3}$  cup sugar
- $\frac{1}{4}$  cup chopped dried apricots
- 2 eggs, separated

Combine rice, milk and lemon peel in top of double boiler. Cook over hot water until rice has absorbed all the milk, stirring frequently until rice is done. Meanwhile, soak raisins in liqueur and prepare the pie shell. When rice is soft, remove from heat and stir in butter, sugar, dried apricots, raisins and liqueur. Add egg yolks and blend in thoroughly. Beat egg whites until stiff and fold into mixture. Pour into unbaked pie shell and bake at 325 degrees 45 to 50 minutes, or until a knife inserted 1 inch from the edge of the pie comes out clean. Makes 8 servings.

Per serving : 360.62 calories ; 8.52 gms protein ; 48.72 gms carbohydrate ; 13.90 gms fat ; 222.98 mgs sodium ; 284.85 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein	13.11	Niacin	7.61
Vitamin A	18.92	Calcium	13.98
Vitamin C	3.22	Iron	10.27
Thiamin	13.04	Phosphorus	18.26
Riboflavin	14.25		

## RICE FRUIT TREAT

- 1 cup brown rice
- 1 tablespoon butter
- 2½ cups water
- ¼ cup honey
- 2 tablespoons lemon juice
- 1 cup diced pears
- 2 bananas, peeled and sliced
- 1 cup peeled cantaloupe balls
- ½ cup chopped pecans
- 1 large red apple, diced
- ½ cup yogurt

Combine rice, butter and water in saucepan. Cover and cook over low heat 45 minutes, or until rice is tender and water absorbed. Chill thoroughly. Combine brown rice with honey and lemon juice. Mix well. Add pears, bananas, cantaloupe, pecans, apple and yogurt. Blend thoroughly. Cover and chill. Makes 10 servings.

Per serving: 210.59 calories; 3.02 gms protein; 38.05 gms carbohydrate; 6.45 gms fat; 24.87 mgs sodium; 318.52 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein	4.65	Niacin	6.76
Vitamin A	14.22	Calcium	3.29
Vitamin C	20.26	Iron	5.10
Thiamin	10.21	Phosphorus	8.59
Riboflavin	4.57		

## SUMMER SQUASH AU GRATIN

- 2 pounds summer squash, halved
- 1½ teaspoons salt
- ½ cup water
- ¼ teaspoon pepper
- 3 tablespoons butter
- 2 tablespoons flour
- 1 teaspoon dry mustard
- 2 cups half and half
- 2 cups shredded Cheddar cheese
- ½ cup dry bread crumbs

Place squash in large saucepan and add 1 teaspoon salt and water. Cover and boil 20 to 25 minutes, or until crisp tender. Drain well and sprinkle with ¼ teaspoon pepper. Melt 2 tablespoons butter in saucepan over low heat. Blend in flour, remaining ½ teaspoon salt, ⅛ teaspoon pepper and mustard. Cook over low heat, stirring until mixture is smooth and bubbly. Remove from heat. Stir in half and half and heat to boiling, stirring constantly. Boil and stir 1 minute. Add cheese and cook, stirring, just until melted. Stir in cooked summer squash. Pour mixture into ungreased 1½-quart casserole. Melt remaining butter and mix with bread crumbs, then sprinkle over vegetable. Bake uncovered 20 to 30 minutes, or until bubbly. Makes 6 servings.

Per serving: 379.73 calories; 15.03 gms protein; 18.96 gms carbohydrate; 27.88 gms fat; 966.69 mgs sodium; 457.47 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein	23.12	Niacin	10.31
Vitamin A	34.71	Calcium	42.75
Vitamin C	56.83	Iron	7.55
Thiamin	9.74	Phosphorus	30.77
Riboflavin	27.88		

## VARIATION

Two cups half and half may be replaced with 2 cups liquid nonfat milk.

Per serving : 298.86 calories ; 15.16 gms protein ; 19.18 gms carbohydrate ; 18.49 gms fat ; 969.45 mgs sodium ; 484.21 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein -----	23. 33	Niacin -----	10. 24
Vitamin A -----	27. 01	Calcium -----	43. 84
Vitamin C -----	56. 37	Iron -----	7. 80
Thiamin -----	9. 90	Phosphorus -----	31. 53
Riboflavin -----	28. 23		

## CHINESE CHICKEN SALAD

- ¼ cup oil
- 3 tablespoons vinegar
- 2 tablespoons sugar
- ½ teaspoon pepper
- ½ pound chicken breast, cooked, boned, shredded and chilled
- 1 small head lettuce, shredded
- 2 tablespoons toasted almonds
- 2 tablespoons chopped cilantro
- ½ cup chopped green onions
- 2 tablespoons sesame seeds, toasted
- 1 (5-ounce) can chow mein noodles
- 1 teaspoon sesame oil
- ½ teaspoon salt

Combine oil, vinegar, sugar and pepper. Shake well to mix, then set aside. In large bowl combine chicken, lettuce, almonds, cilantro, green onions, sesame seeds, sesame oil and noodles. Toss with dressing and add salt to taste. Serve immediately. Makes 6 servings.

Per serving : 314.54 calories ; 16.52 gms protein ; 22.45 gms carbohydrate ; 18.24 gms fat ; 211.00 mgs sodium ; 368.38 mgs potassium.

USRDA	Percent	USRDA	Percent
Protein -----	25. 41	Niacin -----	23. 99
Vitamin A -----	6. 69	Calcium -----	3. 42
Vitamin C -----	12. 92	Iron -----	6. 61
Thiamin -----	5. 49	Phosphorus -----	13. 84
Riboflavin -----	7. 20		

## CHICKEN SALAD IN TOMATO CUPS

- 3 cups diced cold cooked chicken
- 1 cup diced celery
- ¼ cup minced onion
- 2 hard-cooked eggs, diced
- ¼ cup chopped green onions
- ¾ cup mayonnaise
- ¼ teaspoon salt
- ⅛ teaspoon pepper
- 1 tablespoon capers
- 6 large tomatoes

In bowl combine chicken, celery, onion, eggs and green onions. Combine mayonnaise, salt, pepper and capers. Add to chicken mixture and blend well. Cover and chill 2 to 3 hours. Core tomatoes, scoop out seeds and pulp, leaving only firm outer walls. Drain upside down on paper towels and set aside in refrigerator. Fill with chilled chicken salad before serving. Makes 6 servings.

Per serving: 392.79 calories; 27.10 gms protein; 11.99 gms carbohydrate; 26.70 gms fat; 350.57 mgs sodium; 895.51 mgs potassium.

USRDA:	Percent	USRDA	Percent
Protein	41.70	Niacin	48.14
Vitamin A	43.33	Calcium	5.96
Vitamin C	82.58	Iron	14.18
Thiamin	12.14	Phosphorus	29.11
Riboflavin	13.03		

#### NUTRITION FOR THE LAYMAN

Most nutritional labeling is in basic metric units of grams (gm), milligrams (mg), micrograms (mcg), and IUs (International Units).

The Times will provide per-serving data in metric units for protein, carbohydrates, fats, sodium and potassium. It will also publish per-serving percentages of U.S. Recommended Dietary Allowances (USRDA) for protein, vitamins and minerals.

Please note that these amounts are those recommended to maintain good health. However, the Senate Select Committee on Dietary Goals has also recommended that consumers decrease their total daily fat intake to 30 percent and refined sugar intake to 10 percent, cut salt consumption from 6 grams to 5 grams, and eat more of the complex carbohydrates and natural sugars.

Whether one uses the USRDA guidelines or follows the Senate panel's recommendations is a personal choice. For those who go the USRDA route, here is a chart showing the amounts of nutrients needed daily by the average person.

#### U.S. recommended dietary allowances (USRDA)

Nutrient:	For adults, children over 4
Protein	65 gm
Vitamin A	5,000 IU
Vitamin C	60 mg
Thiamin	1.5 mg
Riboflavin	1.7 mg
Niacin	20 mg
Calcium	1.0 mg
Iron	18 mg
Vitamin D	400 IU
Vitamin E	30 IU
Vitamin B-6	2.0 mg
Folacin	0.4 mg
Vitamin B-12	6 mcg
Phosphorus	1.0 gm
Iodine	150 mcg
Magnesium	400 mg
Zinc	15 mg
Copper	2 mg
Biotin	0.3 mg
Pantothenic acid	10 mg

#### STATEMENT OF RAY C. FRODEY, VICE PRESIDENT, RESEARCH AND QUALITY CONTROL, GERBER PRODUCTS CO.

Gerber Products Co. was one of the first companies in the food industry to initiate nutrition education as part of its advertising. This program was initiated about 30 years ago in the "Mrs. Dan Gerber" advertising columns that we regularly inserted in many national publications and still do. This nutrition education involves descriptions of the functions of the major nutrients and discussion of the group of foods that contain these nutrients. We also provide nutrition information in the form of films, seminars and education aids for both professionals and consumers.

We have maintained charts of average nutrient composition for all of our products and have supplied these on request to consumers as well as to professionals.

We have for many years supplied two booklets on nutrition. One of these is designed for the professional person concerned with infant feeding and the other

one is designed for use by the consumer. These publications have been very popular and we feel have done a good job of nutrition education. While both of these booklets are aimed primarily at infant nutrition, the consumer book also supplies general nutrition information that can be used for children and adults as well.

Our nutritionists have concluded, after many years of experience in dealing with many consumers, that the most effective approach to teaching basic nutrition to the general public is by means of the "basic four" or "basic seven" food groups. While there is little question that the "basic seven" is better if this approach can be properly assimilated by the consumer, we have felt that a modified "basic four" approach can be better understood and remembered by most consumers. Using this approach, we do specify that within each group of the "basic four," a variety should be fed and we specify examples of approaches to get proper variety within each of the four groups. This consumer booklet has been very well accepted and we feel that it has made a significant contribution to nutrition education.

Our products which fall under FDA jurisdiction are voluntarily nutritionally labeled in accordance with the regulation. We have not nutritionally labeled our products which come under USDA jurisdiction because of the fact that the regulations have not been clarified by USDA as yet.

We have seen little indication from our consumer correspondence that nutrition labeling has contributed anything meaningful to consumer education at the present time, and question whether the expense is justified. We have received consumer comments in regard to nutrition labeling, including questions as to why the meat and poultry products are not nutrition labeled however, the few specific questions that we have received in regard to nutrition labeling just as often indicate confusion and misunderstanding as they do understanding and benefit. Those few consumers who have the knowledge to understand and benefit from the current nutrition labeling and the professional people who have training in this area will be better served by our nutrition information in consolidated chart form, using composite average data, since menu planning is better done before shopping rather than in the store.

It may be that a method of nutritional labeling can be developed that will be more effective than the current one. However, we would certainly suggest that before any changes are made, the subject be reviewed in depth with objective consumer research and marketing studies, not predictable "window dressing" such as the just completed FDA/USDA hearings. Consumer research should be used initially but actual marketing studies are needed for final evaluation. While FDA has scheduled some consumer research studies, they apparently have insufficient funds for the extensive "in depth" study needed and we would suggest that the Congress provide the needed financing. The marketing studies will require industry cooperation, but I'm certain that this would be forthcoming. We are not aware of USDA labeling action in the consumer or marketing research area.

Some benefit can probably be derived by permitting the labeling of calories, and the macronutrients, fat, protein, and carbohydrate, without triggering the labeling of the vitamins and minerals. The consumer understanding of calories and the macronutrients is better than of the vitamin and mineral micronutrients, and this might encourage some manufacturers, who otherwise would not participate, to use this limited nutrition labeling, which would be less expensive to maintain than the full nutrition labeling.

Use of "data bank" or published information, such as USDA Handbook 8, would result in just as good overall dietary control and would eliminate a "numbers rat race" on labels by the food companies.

A question has been brought up about sodium and potassium labeling. We currently are labeling many of our products for sodium content in accordance with the existing regulations, insofar as we are making the label declaration that they have no salt added, and both FDA and USDA require sodium labeling when a "no salt" claim is made.

In the course of getting the data necessary for this labeling, we have found a far greater variation in the natural sodium levels of vegetables and meat than we had anticipated. As a result, it is necessary to overdeclare sodium content to a very significant degree in order to meet the accuracy requirements, which in turn could result in consumers on low sodium diets rejecting some natural foods that are basically low in sodium. This is, of course, a severe problem with products which have no salt added, but it will also aggravate the sodium labeling problems of many products with added salt.

I believe that the consumer will be better served by permitting averages (or data bank info where no salt is added) to be used for sodium and potassium

labeling. In the overall diet the variability will be cancelled out, and the consumer will have a more accurate idea of his total sodium and potassium consumption. Total sugar labeling presents some of the same problems, and each type of food should be looked at individually before a sugar labeling format is adopted. What is suitable for cereals, for example, may not be suitable for fruits and vegetables.

The following points should be considered in any new nutrition labelling program:

A. Usefulness to the general public.—It must be simple and yet convey meaningful information.

B. Cost effectiveness.—The substantial continuing analytical costs should be minimized.

C. Flexible.—It should be flexible so as to permit the use of limited information on products where complete nutrition information is not needed, will not be useful to the consumer, or is not practicable to determine.

D. Label space.—It must be adaptable to small labels, such as some baby food labels.

E. Compliance.—It should be considered primarily as an educational tool rather than as a regulatory compliance problem for the agencies. Keep the regulatory lawyers out of it as much as possible and let the scientists draw up the regs.

Allowance must be made for natural variations in nutritional components. The 80 percent requirement in the current regulation is inadequate in some instances.

F. Comparison of similar products.—It should be recognized that nutritional labeling is not suitable for utilization as a means of comparing similar competitive products. Under the current system differences in declarations of competitive products are not normally significant because of the range of natural variation in raw materials and because many of these differences are the result of different interpretations of the current accuracy regulations or because one company may be more conservative in setting up their declarations, even with similar data.

Most of these points can best be resolved by permitting the use of nutritional data bank type information for the natural nutritional components. The primary objection to this has been that a manufacturer can cause the excessive loss of some sensitive nutrients by using poor manufacturing practices. This objection can be handled by specifying that mislabeling action may be taken against a manufacturer who does not use good manufacturing practices so as to cause such excessive nutrient losses.

Exceptions to the use of data bank information would be for products where specific nutritional claims are made, above or beyond the normal data bank declaration, and for nutrients involved in a fortification or enrichment program, other than the standardized enriched grain and dairy products.

It has also been suggested that percent ingredient labeling could be a substitute for nutrition labeling. While it may be more understandable to most consumers than present nutrition labeling, it can also be misleading and can cause an incorrect nutritional choice. We are not opposed to percent ingredient labeling in some types of products. We have voluntarily % ingredient labeled some ingredients in some products where it was feasible to do so, did not involve substantial additional costs, and where there was consumer interest in our doing so.

However, in many instances there are severe problems with feasibility and costs, which we have outlined in detail in our comments on the FDA baby food ingredient labeling proposal. Further, with most baby food products, and many adult products, produced directly from fresh fruits, vegetables, and meats, percent ingredient labeling of characterizing ingredients can not only be of no value to the consumer, but it can mislead the consumer into making an improper choice.

Because of unavoidable natural variability in the composition of the fresh fruits and vegetables, a product labeled as containing a lower percent of the characterizing ingredient may actually have an equal amount of, or more, fruit or vegetable solids and nutritional value than another product containing a higher percent of characterizing ingredient. Meats vary in fat and protein content and a company that selects very low fat meats will be at a disadvantage as compared to another company that uses a larger amount of less expensive, higher fat meat—even though their product may be superior nutritionally.

Even though the products might also be nutritionally labeled, which would demonstrate this fact, the overwhelming majority of consumers would ignore the nutrition labeling and select the product with the higher listed percent of

the characterizing ingredient. This has been demonstrated in tests by an independent consumer research organization and the data has been submitted to FDA.

As indicated previously, this does not mean that we are opposed to percent ingredient labeling in all products, but each product and each ingredient must be considered on its own merits in regard to feasibility, cost, and value to the consumer. In no case, however, will it function as a substitute for nutrition labeling.

We are also greatly concerned about other labeling proposals being considered by USDA, particularly the possibility of their promulgating a machine deboned poultry regulation similar to their machine deboned meat regulation. The statement required as part of the name in this regulation would mislead the consumers into believing that they were consuming an inferior product and cause most of them to reject the product. The result would be to set the industry back 20 years by forcing reversion to hand deboning all poultry, including whole carcass poultry, at a tremendous cost to industry and the consumer, and no nutritional benefit to the consumer.

Any problems with certain types of machine deboned poultry can be taken care of without this labeling requirement, which would apply to all machine deboned poultry.

Our recommendations for optimizing nutrition information for the general public would be:

1. Initiate nutrition education in the schools at any early level, using properly trained instructors and using a system that is understandable and will be retained by the general public.

We believe that the best way to do this is to set up a program based on a modification of the "basic four", whereby variety within the four groups is emphasized and discussed, and the basic nutrient functions are explained in simple terms. Follow this at the high school level, for those students with capability and interest, with more specific nutrition instruction, including simplified biochemistry of nutrition, on an elective basis.

2. Initiate a continuing education program for the current post-school generations, by using the "basic four" as the base, and encouraging interested adults to take the high school level course in nutrition on a continuing education program.

3. Continue with the present voluntary nutrition labeling program, but permit limited nutrition labeling without the necessity for full disclosure of micro-nutrients, until such time as a consumer research and marketing test program involving the universities, the government agencies, consumer groups, and industry can define whether or not it is possible to develop a nutritional labeling system that can be more meaningful, and which will encourage industry to participate in the program on a cost effective basis.

I'm sorry that I have not been able to suggest an ultimate, simple solution to the problems of nutrition labeling and nutrition education, but I don't believe anyone yet has enough information to give reliable answers to many of the questions. However, we can get started on the general education program, and also proceed to get more information by implementing carefully designed consumer research and market test programs. I'm sure industry will cooperate in these programs.

I appreciate having had the opportunity to present my views to this committee.

GERBER PRODUCTS Co.,  
Fremont, Mich., November 27, 1978.

Mr. CHRIS HITT,  
Subcommittee on Nutrition, Committee on Agriculture, Nutrition and Forestry,  
U.S. Senate, Washington, D.C.

DEAR CHRIS: Following up on the hearings on November 15, attached is the information which I indicated I'd send you.

Best regards.

Sincerely yours,

RAY C. FRODEX,  
Vice President, Research and Quality Control.

Attachments : 3.

GERBER PRODUCTS Co.,  
Fremont, Mich., January 4, 1977.

Re 21 CFR part 125, (Docket No. 76P-0329), infant foods, percentage declaration of ingredients.

OFFICE OF THE HEARING CLERK,  
Food and Drug Administration,  
Rockville, Md.

Gerber Products Company, Fremont, Michigan, engaged in the manufacture and distribution of infant strained and junior baby foods hereby offers comments on and voices opposition to the above proposal.

We are in full support of the filing on this issue by the National Canners Association.

We question the legal basis for this proposal.

The statement is made that proposed percentage ingredient labeling will enable the consumer to better evaluate the quality of the product and also will facilitate value comparisons with home-prepared baby food from the standpoint of ingredient content. This has not been demonstrated and, quite to the contrary, it is evident that the average consumer has no numerical concept of the percentage ingredient composition of home-prepared foods. Further, many processed foods other than baby food are fed to infants and the consumer has no accurate conception of the percentage of ingredients in these products. The conclusion made in the proposal cannot be justified without comprehensive consumer research. Unless it can be shown that the consumer has a reasonably accurate idea of the percentage of ingredients in home-made foods and in processed foods other than baby food, the listing of percentage ingredients on the labels of baby food products would be a confusing factor, would result in inaccurate value comparisons and, indeed, would be discriminatory.

There is no evidence that there are or have been nutritional problems which are related to consumer misunderstanding of the composition of baby foods. Quite to the contrary,<sup>1</sup> there is good evidence that the primary nutritional problem with U.S. infants is iron deficiency, and this deficiency is not related to any factor that would be improved by percentage ingredient declaration.

To the best of our knowledge, all of the commercial baby food that comes under this regulation is nutritionally labeled and this is the information that is of value to the consumer.

While the stated objective of this proposal is to inform, a high degree of confusion will be injected with percentage labeling since it is often incompatible with nutrient labeling.

Nutrient labeling by itself provides the most effective means for the consumer to judge the usefulness of a particular food in the overall dietary regimen.

We would propose a requirement that all infant and junior foods be nutritionally labeled as a more effective substitute for percentage ingredient labeling.

The validity of many of the statements made by the commissioner in the preamble to this proposal are questionable.

The commissioner uses the term "fillers" in discussion of other ingredients in baby food without attempting to define what this term means. In normal connotation of the term, none of the ingredients used in baby foods are "fillers." Each ingredient used has a specific function in regard to the quality of the products and the nutritional characteristics of the products.

Many of the baby foods that would come under this proposal are composed of raw agricultural commodities and are processed on a continuous line with the only weighing being that of the raw agricultural produce before washing, trimming, sorting, and peeling, as applicable. Depending on the amount of preparation needed, there are wide variations in the ratio of weight of prepared produce as compared to the raw agricultural produce weight. Examples of this variation will be attached as an appendix to these comments.

Strained and junior baby foods prepared wholly or predominantly from produce are formulated by adjustment to the standard feeding consistency. These raw agricultural commodities have a natural variation in their composition to such an extent that even if an accurate weight of prepared produce could be used, the usage in order to obtain the proper feeding consistency is variable.

There is no other ingredient in these products that can be used to adjust the consistency. This presents a variable that cannot be controlled, since it depends on

<sup>1</sup> Hearings before the Select Committee on Nutrition & Human Needs of the U.S. Senate. National Nutrition Policy Study, Part 6A. Series 74/NNP-6A, pp. 2697-2729.

the particular composition of the raw agricultural produce which, in turn, is variable depending on varietal, seasonal and geographic factors.

The variable in regard to the weight of the raw produce as compared to yield of the prepared produce can only be quantitated by breaking the line at the end of the produce preparation operation, inserting batching and weighing equipment at this point, and then reincorporating the product on to the line after weighing and recording the weights. Finisher wastes would later have to be measured and subtracted from this weight.

Similar additional difficulties are involved in regard to fruit products to which sugar is added. Sugar is added to a standard Brix (sugar measure as soluble solids) to many of the fruit products. Thus, the determination of the amount of sugar added is based on the natural initial Brix of the raw agricultural commodity. This natural sugar level is variable by reason of varietal, seasonal and geographic differences and thus there is a wide variation in the amount of sugar that might be added to these products to adjust to uniform Brix (or sweetness). An example is included in the appendix to these comments.

The problem of obtaining an accurate raw produce weight would result in additional equipment and labor and would result in increased holding time of prepared raw commodity, which in turn would have an adverse effect on the quality of the finished product from several standpoints—nutrition, flavor and color. The effect on nutrition of increased holding time under ambient conditions cannot be adequately evaluated without extensive studies, but the effect on color and flavor can be readily observed and many references in the literature have noted that nutritional deterioration accompanies these changes in color and flavor.

We would have to depart from our current efficiently engineered operations in whole or in part and return to a less efficient batch type operation. Because of the additional raw material and finished product handling required, there would be an increase in energy usage in the operation. There would also be a requirement for additional plant space. The necessary holding prior to labeling would require loading and unloading equipment, special storage bins, and additional warehouse space, which would not be presently available at most baby food plants. The holding of finished product between manufacturing and labeling would inevitably result in some container damage, which in turn would result in increased inspectional costs and product losses necessary as a result of removing damaged containers. This would also increase the likelihood of damaged containers reaching the consumer. The holding time of the finished product prior to shipment to distribution level would be increased significantly, which would raise inventory costs. Additional label inventory costs would be incurred because of the necessity of keeping in inventory several labels for these products subject to variability. Estimates of these costs will be included in attachments to these comments.

Without major changes a material balance could only be done by hand collecting and weighing all waste products of the preparation and finishing operations. This would have to be done periodically over at least a three year period to determine quantitatively the seasonal variations. The result would be an average and would not represent the percentage in any given lot of product. Since the amount of ingredients is essentially non-controllable with products manufactured directly from raw agricultural commodities, percent ingredient labeling would not serve as a meaningful basis for comparison.

Baby foods formulated from many ingredients, other than raw agricultural produce, also offer very significant problems. Alternate methods are available for controlling consistency in multiple ingredient baby foods, however evaluation of finisher waste data must still be correlated with batch weights. This type of problem would not exist with dry products such as dry infant cereals, but under some conditions formulation is varied, within the limits of the ingredient statement, depending on availability of certain ingredients. The problems with consumer understanding would exist with all products, of course.

The proposal offers a potential for manufacturers to use larger quantities of lower quality ingredients in order to reflect a higher percentage of characterizing ingredients in the product. In actuality, in many situations a lesser amount of a better quality ingredient may produce a better product from all standpoints, including nutritive value.

The consumer will be misled by the assumption that the ingredient with the largest percentage will be better, even though this will lead in many cases to higher caloric density.

The proposal specifies that dehydrated ingredients be declared on a hydrated basis, which is a logical position to take, since it would reduce confusion. We

assume that concentrated products are classed as "dehydrated" products, since they are produced by dehydration.

Incompatibility between percentage labeling and nutrient labeling (particularly calories) will occur in presenting ingredients on a "raw" or a "prepared" basis. Examples would be whether the percentage was based on the raw or cooked weight of products such as macaroni, carrots, and potatoes. Individual foods either gain or lose moisture during the cooking process, which changes the nutrient content. This change is not generally recognized by the consumer. The basis for labeling would have to be established in accord with general consumer usage and understanding.

If the standard selected is the "raw" basis, the consumer, in order to validate the nutritional data, must have a great deal of information available regarding the products being used. Such information would include variety, maturity, processing losses, etc., and if on a "prepared basis", it would be necessary that recognized standards for describing ingredients are applied throughout the industry and are well known to the consumer as well. Someone will have to assume this educational responsibility because a demonstrated conflict more than likely can be shown to exist between the presently established nutritional labeling and the proposed percentage labeling.

We contend that nutritional labeling is much more precise and meaningful to the consumer than the proposed percentage labeling. Compliance to nutritional labeling presents some variability problems but these are much less severe than with percent ingredient labeling. For example, the procedure of formulating to standard consistency tends to "even out" some of the natural nutritional variability, particularly the variability of natural moisture content. Three years experience with nutrient labeling of baby food demonstrates the compatibility of formulation control by adjustment to a standard consistency with nutrient labeling.

As the commissioner suggests, there is potential for both confusion and deception in the case of ingredients that might be added and ingredients that might be natural components of the agricultural product. The sucrose example is pertinent. Sucrose is present to some degree in nearly all fruits, vegetables and grains, and this amount is variable depending on the particular ingredients and also variable depending on other uncontrollable conditions. From the standpoint of nutritional control, the total sugars is a more important factor than percent added sucrose or added carbohydrate sweeteners of other types.

It should also be noted that with added sucrose in products of low pH, there is an inversion of a substantial percentage of this sucrose during storage. Further, some starch components may revert to sugars in the process. From the standpoint of direct nutritional control, the most useful information is total carbohydrate, which is already required by nutritional labeling.

The commissioner states that he agrees with the statement in the petition that the consumer may assume that baby food products have a larger amount of certain ingredients than they actually contain. We would like to note that this is also true of many of the large number of processed food products on the market today, many of which are fed to infants and children instead of baby food. If baby food were labeled with a percentage of ingredients and these other foods were not, it could deceive the consumer into believing that the baby foods contain more or less of a certain ingredient than these other foods, when actually this may not be the case. Further, the increased cost of baby food as a result of percentage ingredient labeling could cause the consumer to adapt less suitable adult foods to infant feeding.

Junior and Toddler foods should not be included in infant food regulations. While Junior foods are used to some degree by infants, so are many other foods that are not covered by this regulation. Further, toddler foods are specifically promoted for use by children 1-4 years of age and definitely are not designed or intended for infants.

The commissioner states that infant foods play a "unique role" in the development of the baby. We agree that foods play an important role but we fail to see that this is "unique". Foods play an important role in the development and health of all humans, but we don't consider this "unique" either.

Infant formulas are specifically excepted in the regulation. Formulas provide the sole source of food for some infants during a critical nutritional period, and nutrient labeling is considered adequate for these foods, yet it is not considered adequate for other infant foods. It would appear that the commissioner didn't use a consistent rationale in evaluating infant formulas and baby foods.

It is apparent that a considerable amount of very carefully controlled marketing and consumer research would have to be done in order to answer many of the questions the commissioner poses and to confirm or refute many of the statements he makes. We will attach preliminary information on consumer surveys that we have made.

We would like to note that it is not adequate to ask consumers to comment on how much more they will pay in order to get percentage ingredient labeling information. Experience with consumer research has demonstrated that what consumers may say when asked a question such as this may be in considerable variance with what the average consumer would actually do. Similarly, to ask consumers if they would like percentage labeling automatically invites an affirmative answer without any knowledge of the complexities involved. Consequently, actual market testing or at least mini-market testing will be necessary to make this determination. Arrangements might be made with the industry to work in cooperation with the Food & Drug Administration in getting more comprehensive marketing information on these questions.

The effective date of this proposal is established as January 1978. We feel that it is extremely unreasonable to attempt to establish a date before a proposal has been finalized or a publication date has been determined. If this proposal is carried through as written, it would require extensive remodeling of many baby food plants, including the addition of more space for processing and for warehousing. Much of the special equipment needed has not been tested in this application. Considerable research and engineering must be done. These changes would require five years or more. Even the time necessary to make the proper label changes, the cost of which will also be attached to these comments, will cover a period of at least 24 months from the date of any final proposal. This is required because many of the products are packed seasonally.

The commissioner has acknowledged that compliance and enforcement of the proposed regulations will be involved and difficult. Analytical evidence is not adequate to monitor compliance, since the variability of ingredients and multiplicity of food components defy analysis. Continual monitoring would be required to be indicative of compliance, and enforcement would require inspectional evidence for each lot of product. This represents additional unnecessary cost to the consumer as taxpayer cost and product cost.

Gerber Products Company strongly opposes the Special Dietary Foods proposal for percent ingredient labeling of baby foods.

We do not believe it would serve the consumer as does nutritional labeling but would likely result in misunderstanding and confusion.

The preceding narrative and attached appendices document the basis for our opposition. (Seven appendices)

We respectfully request no further action be taken in regard to these proposals.

Sincerely,

LYLE LITTLEFIELD,  
*Government Relations Manager.*

Attachments.

RESPONSE TO QUESTIONS RAISED BY THE COMMISSIONER ON PAR. 125.5—  
PERCENTAGE DECLARATION OF INGREDIENTS

The commissioner has requested specific replies to the five questions considered of prime importance. Even though these questions are discussed in other parts of the comments, the following comments specifically address these questions.

1. The proposal specifies that percentage declarations be made on the basis of weight of ingredients, i.e., quantitative "recipe" labeling. The question asked is "Are there alternative methods of calculating percentages of ingredients that would be more informative to consumers?"

The really pertinent information for the consumer and the most valid index of the value of a food is the nutrient content. The most informative methods for the consumer would be to expand, elucidate and educate the consumer in the meaningful use of the nutrient label for comparative purposes and to insure adequate nutrition for the consumer. Since sugar is an issue, it can provide an example.

It is considerably more informative to the consumer to know the total carbohydrate content than the added sugar content. Many fruits and desserts contain considerably more sugar in ingredients than the added sugar used in some of these products. For example; plums contain from 3-5% natural sucrose plus fructose and glucose to yield a total natural sugar content of 7-13%. The amount

of sugar added to strained plums depends on the natural sugar level and will vary from 6 to 12%. No useful information is actually provided to the consumer by declaration of added sugar content. An additional breakdown of carbohydrate on the nutrient label to indicate a proximate proportion as sugar and more complex carbohydrates (dextrins, starch) would be much more valuable.

2. The proposal specifies that percentage declaration be made for each ingredient present at a level of 5% or more. Is the 5% threshold realistic?

Any arbitrary threshold level has limitations and could be criticized. Since nutrient content, caloric density and feeding consistency are the most important considerations in the design of baby foods, nutrient labeling is the only truly informative way to evaluate the products. The relatively minor components of some baby foods can be important, but the consumer is not capable of evaluating the importance of these minor components other than by noting acceptance of the product and its nutrient levels. If ingredient labeling were required, 5% would be a reasonable threshold.

3. The proposal specifies 5% increments to the nearest multiple of 5%. Is there an alternate spacing that would be more appropriate?

The comments noted in the previous question are also applicable to this question. Arbitrary increments of 5% would be realistic for some ingredients but not realistic for others, as can be seen from the information provided on variability of raw agricultural components. For products where the total content of one ingredient is 70% or more, we believe that 10% increments would be more realistic—they should be based on the *nearest* increment for both 125.5 and 102.26 in order to be most meaningful. For ingredients that compose between 20% and 70% an increment based on the nearest 5% could be realistic in most situations. For ingredients that compose between 5% and 20%, 2% increments would be realistic. Variation allowance based on individual statistical variation, possibly a coefficient of variation of 20%, will be required for all ingredients. For reasons noted in the main text of our comments, these percentages can be misleading in many instances, regardless of the increments used.

Scientific control in manufacture of baby food involves selection and adjustment of foods to fulfill the vital nutritional requirements for the infant in the form of a product that will be consumed. Percentages of ingredients must be varied to accommodate these sophisticated preparation practices. The formulation of baby food must be flexible to permit adjustment of consistency, and this is not recognized and allowed for by the proposal. Consistency and nutrient content can be accommodated to afford products with appropriate characteristics, but flexibility must be maintained in ingredient usage.

4. What are benefits to the consumer not presently available? What will be costs for production, labeling and marketing?

The consumer will not derive any beneficial information not already available in more precise form as nutrient labeling. The consumer will almost certainly be confused by the complexity of information presentation, especially since the percentages of ingredients and characterizing ingredients will not necessarily agree. As a result of restrictions proposed, neither nutrient label values nor percentage ingredient values can approach precision. The space limitations and diminished print size would make product identification more difficult. The consumer will not gain benefit, but will be confused by a lack of basis for comparison without percentage labeling for other foods consumed by infants and recipe preparations.

The costs of percentage labeling have been detailed elsewhere and include substantial manufacturing costs involved with line breaks to record weights of ingredients. These line breaks will also adversely affect quality by increasing holding times of prepared raw produce. In addition, substantial costs will be incurred in formulation to maintain apparent competitive declarations. (Substantial reformulation costs will have to be made to adjust formula to the arbitrarily selected increments.) Labeling costs will be substantial, and will continue beyond design. Separate labels will be required to accommodate the variation in ingredients, and this will necessitate design for separate labels, inventory for different labels and the administrative costs for maintaining a multiple inventory. Marketing costs cannot be anticipated, but will certainly be existent.

A danger exists that competitive requirements will encourage formulation changes to take advantage of increases in ingredient percentage which will

not necessarily benefit the consumer, e.g., an ingredient horsepower race. Larger percentages for less expensive ingredients can be utilized to mislead the consumer without nutritional advantage. Examples are inferior varieties or quality of vegetables and fruits.

5. The proposal would require percent declaration of ingredients at point of formulation. Would it be misleading to declare an ingredient, for example sugar, without indication of the proportion or amount from other sources?

The contribution of ingredients by other ingredients is a contingency not addressed by the proposal. Virtually all basic nutrient components are contained as a part of other ingredients. Obvious examples are the sucrose content of fruit (1.5-5%), which is not noted as a component, the water content of most produce (fruits and vegetables) range 80-90%, and the natural salt content of some foods and meats.

The proposal is applicable only to baby foods while other foods used for infants may have unlabeled and unquantified ingredients. This leads to deception since the consumer has inadequate information for comparison.

#### APPENDIX I

##### EXAMPLE OF FORMULA MANIPULATION

The facilitation of value comparisons can be exemplified by formulation changes that can readily be made without apparent change in product appearance or organoleptic quality. An example that can be cited is Strained Cottage Cheese with Pineapple Dessert. A nutritional commitment is made as nutrient labeling, and the formulation needs to be adjusted to meet that declaration for protein and calories. Cottage cheese, without the consumer's knowledge, varies from 4-8% fat according to the level of creaming of cottage cheese. To compensate for this variation in fat and resulting calories an adjustment is made by addition of dry curd or "uncreamed" cottage cheese. An example of this necessary adjustment follows:

Nutrient Label:

	Per jar (grams)	Conversion per 100 g	
Calories.....	160	118	
Protein.....	9	6.6	
Carbohydrate.....	28	20.7	
Fat.....	1	.74	
Percent U.S. RDA, protein—50 percent.			
	Protein	Fat	
Pertinent ingredients: With 4 percent fat cottage cheese:			
Nonfat milk at 3.5 percent protein 32.7 percent.....	1.14		
Cottage cheese 4 percent fat 13 percent protein 18.9 percent.....	2.45	0.75	
Cottage cheese 8 percent fat 12 percent protein.....	2.26	1.52	
Dry-curd cottage cheese 20 percent protein, 12.8 percent.....	2.56		
Total—31 percent cottage cheese.			
	Protein	Fat	Calories
With 4 percent fat (plus protein from other ingredients).....	6.8	0.75	116
With 8 percent fat.....	6.0	1.52	123

Several points can be made from this example:

1. The protein, fat and calorie nutrient label declarations cannot be met without adjustment of cottage cheese contents within the range of total cottage cheese content.
2. Declaration of cottage cheese and dry curd cottage cheese separately does not truly reflect the content of cottage cheese for its intended purpose.
3. The variability and quality of ingredients cannot be reflected in percentage ingredient labeling since items such as cottage cheese are variable.

The conclusion that should be made from this example is that percentage ingredient labeling is by far the best basis the consumer has for food comparison since nutrient content is the most consistent index of food quality. Another observation that should be made from this example is that the logical adjustment of formulation would be to shift the entire ingredient to creamed cottage cheese to increase apparent ingredient content (31%+) and make the necessary adjustment in nutrient label to accommodate. The consumer would lose in this case with a higher calorie, lower protein product. This should be considered an example of deception to the consumer.

This is only one example of the deficiencies of percentage labeling. Virtually any formulated food could be subject to a similar result. Meat usage, while not a part of this proposal, would be a more dramatic example.

A change in nutrient label would not be necessary as a result of these formulation manipulations.

#### APPENDIX II

##### EXAMPLES OF TRIMMING AND PREPARATION LOSSES

Examples of trimming and preparation losses can be stated several ways, each of which will provide a slightly different interpretation. The most precise measure would involve yield information which presumes the initial produce is the ingredient as it enters the preparation area. The more common method of expression is the "trimmed weight" after material leaves the preparation area and prior to entrance into the formulation area. Potential confusion exists to the consumer since the form of the ingredient is not defined.

Some preliminary examples of trimming and preparation losses can be cited:

1. Raw carrots, as purchased, trim loss, not peeled, 6.5 percent loss; after cooking, blending, 13 percent loss.

2. Raw apples, washed and cored, not peeled, 6.6 percent loss; after cooking, blending, 24 percent loss.

3. Beets, raw, as purchased, peeling, trimming (after cooking), 13 percent loss.

Another consideration that contributes confusion to the consumer is the water absorption by vegetables during cooking. Estimates can be made:

Carrots: 4 percent uptake.

Beets: 10 percent uptake.

Estimates calculated from USDA Handbook No. 456 for water content differences between raw and cooked produce have been calculated as follows:

	Percent water		
	Raw	Cooked	Increase
Peas.....	78.0	81.5	3.5
Spinach.....	90.7	92.0	1.3
Carrots.....	88.2	91.2	3.0
Beets.....	87.3	90.9	2.6
Applesauce.....	84.4	88.5	4.1
Peaches.....	89.1	91.1	2.0
Plums.....	81.1	86.8	5.9

Source: Agriculture Handbook No. 456, issued November 1975.

#### APPENDIX III

##### EXAMPLES OF FREE SUGAR CONTENTS OF SELECTED FRUIT VARIETIES

Sugar addition has been an issue regarding percentage labeling, however, this overlooks completely the inherent content of sugar in fruits, and to a lesser extent, in other produce. Compensation for variability in inherent sugar content is also either ignored or probably not recognized. An extensive evaluation of free sugars in fruits and vegetables was published by Lee, Shallenberger, and Vittum in 1970. (Food Sciences: Food Science & Technology 1:7, 1970). Some examples of sucrose, fructose and glucose contents are as follows:

	Sucrose	Fructose	Glucose
Apples:			
Rome.....	4.4	6.5	0.7
Spy.....	3.8	5.3	1.1
Golden Delicious.....	3.8	7.1	1.0
McIntosh.....	3.0	6.1	1.3
Greening.....	3.9	5.2	1.3
Red Delicious.....	3.6	6.0	1.6
Pears:			
Bartlett.....	1.3	7.9	1.0
Bosc.....	2.5	6.2	1.1
Clapp.....	1.1	6.2	.8
Plum:			
Green Gage.....	5.5	1.5	3.3
Prune.....	5.7	2.4	4.6
Stanley.....	3.7	.7	2.5

The variability in inherent sucrose and other sugars for fruits must be accommodated in processing if a uniform and acceptable product is to be presented to the consumer. The method for accomplishing uniformity is by adjustment of Brix or soluble solids. Brix can be measured quickly and readily for different lots of fruit by use of a portable refractometer since it is a measure of refractive index. Since inherent sugar is extremely variable, Brix are adjusted to a uniform level and this cannot be accomplished by formulation. The apparent added sugar content is extremely variable and an accurate label percentage cannot be anticipated for labels that require advance preparation. The consumer would not practically have an accurate percentage for comparison even though appearance on the label would bear an aura of precision. This would be misleading to the consumer as it would cloud the important information contained in the nutrient label.

#### APPENDIX IV

##### EXAMPLE OF INGREDIENT VARIABILITY IN FORMULATION

The example of larger amounts of lower nutritional quality ingredients to distort the apparent ingredient content to the consumer can be exemplified by the case of High Meat Dinner. This is with knowledge that meat products would not be under the jurisdiction of this regulation, but the example can be most understandably presented.

High Meat Dinner, by agreement, contains a minimum of 30% meat. An internal standard has been applied that High Meat Dinners should contain 6% protein (8 grams per jar), and calories less than 100 per jar. This is accomplished by purchase specification for low fat meat (in the case of beef 18% fat). If ordinary standards for ground beef were to be applied, the amount of fat would approximate 30%. Therefore, if the 30% meat standard were retained with the two qualities of beef, the following approximate nutrient label values would result:

	30-percent beef	
	With 18-percent fat	With 30-percent fat
Calories per jar.....	100	160
Protein (grams).....	8	6
Carbohydrate.....	7	7
Fat.....	5	12
Percent U.S. RDA—Protein.....	45	35

This obviously does not meet either internal nutritional standard, e.g., protein or calories. Also the caloric density is increased by 60%.

If the formulation is adjusted to meet the protein requirement (and to inflate the apparent percentage meat content), the following will result:

	With 18-percent fat, 30-percent beef	With 30-percent fat, 40-percent beef
	Calories per jar.....	100
Protein (grams).....	8	8
Carbohydrate.....	7	7
Fat.....	5	16
Percent U.S. RDA—Protein.....	45	45

The result is double the calorie content for the food, which is contrary to good pediatric nutrition recommendations which suggest that caloric content should be minimized. Also, the animal fat content is tripled with the higher meat content, which is contrary to good nutritional practice. Percentage ingredient labeling would suggest that the product is a better buy since it contains 40 percent meat, and this is a clear cut case of a misleading piece of information for the consumer.

## APPENDIX V

## VARIABILITY IN INGREDIENT USAGE

Ingredient usage in preparation of baby foods has been examined by evaluation of produce (fruit and vegetable) input and finished product. The information represents average production usage for each of the five Gerber manufacturing plants. The following table represents average percentage produce usage for fruits and vegetables. Other examples can be provided.

	Samples	Percent usage			Coefficient of variation
		Average	Low	High	
Peas.....	62	100	72	127	11.6
Squash.....	43	100	76	124	9.4
Sweet potatoes.....	42	100	90	134	10.0
Peaches.....	65	100	86	119	7.1
Pears.....	60	100	86	130	8.3
Applesauce.....	86	100	82	134	9.2

## APPENDIX VI

## COSTS

Initial expenditures: Building modification, equipment, and installation (including materials).....	\$7,000,000
Annual: Product analysis, label revision and maintenance, and additional manufacturing detail.....	1,500,000
<b>Total</b> .....	<b>\$8,500,000</b>

<sup>1</sup> No inflationary factors are included. These costs would increase at the approximate rate of 10% per year.

## APPENDIX VII

## PERCENTAGE INGREDIENT LABELING—MARKET RESEARCH STUDIES

Market Research studies were conducted in October, 1976 to evaluate several aspects of consumer attitudes and understanding of percentage ingredient labeling and common or usual name for baby foods. These evaluations were by necessity very preliminary due to extreme limitations of time.

The objectives of the studies were to obtain an indication from the consumer of the interest in percentage labeling, the utilization of percentage labeling and common or usual name labeling relative to nutrient labeling and the understanding of labeling forms, thereby providing a basis for comparison of foods.

The studies were conducted impartially by Criterion Research in a shopping mall by personal interview with a trained interviewer. Mothers were selected with a child less than 4 years old. Samples of products used can be provided, however, they were commercial baby foods with specially prepared labels, copies of which are attached (Exhibits 6 & 7). Copies of the interview forms are also attached.

A general observation can be made that studies to establish the true consumer attitude will have to be extremely detailed and extensive since the preliminary results indicate considerable variation in attitude of the consumer.

Two panels were evaluated. Panel 1 consisted of 76 consumers and Panel 2, 40 consumers.

Panel 1. The objective of Panel 1 was to evaluate the responses to percentage ingredient labeling and to nutrient labeling separately and to both sets of information on the same label. The premise was that nutrient labeling provides the most important and valuable information, and that the consumer is capable of recognizing this fact. Also, comments were recorded to assess the confusion that would result from presentation of extensive information on the label.

Results are summarized in Exhibit 1 for percentage ingredient labeling, Exhibit 2 for nutrient labeling and Exhibit 3 for both.

## EXHIBIT 1

*Question.* Thinking about the applesauce label you have read, what does it tell you?

*Percentage of ingredients*

*Nutritional labeling—62 responses from 76 respondents:* Added Vitamin C, Vitamins added, Not much Vitamin C, Less than 5 percent Vitamin C.

*Percentage labeling—66 responses from 76 respondents:* 95 percent Apples, Mostly apples/applesauce, It's applesauce, Almost pure applesauce.

*Clarify percentage label—14 responses from 76 respondents:* Tell ingredients, Percent of ingredients.

*Want more information relative to water—34 responses from 76 respondents:* Contains water, Less than 5 percent water, Tells how much water, 5 percent water, Seems like a watered-down product.

*Weights—21 responses from 76 respondents:* Tells weight, 4½ oz. size jar, 128 grams, Don't know what grams are.

*Sugar question—5 responses from 76 respondents:* No sugar added, I think it has less sugar, Doesn't say if it has sugar in it.

*Questions lack of information—8 responses from 76 respondents:* What is the other 5 percent?, Doesn't tell what other 5 percent is, Is 5 percent water?, 5 percent something that isn't applesauce, Had asterisk (\*) said what 5 percent was, Not sure what \* means in relation to water and Vitamin C, Don't know what makes up 5 percent—misleading, There are additives, it's not 100 percent pure.

*Miscellaneous—21 responses from 76 respondents:* Strained, it's a sample.

It should be noted that after examination of percentage of ingredients labels, 62 of 76 respondents made observations relative to nutrition, specifically Vitamin C, and that most represented a lack of meaningful response (not much Vitamin C, less than 5 percent Vitamin C) which is a result of the threshold ingredient percentage at 5 percent. The comments of 66/76 reflected a reassurance that the product was mostly applesauce. Only 14 of 76 observed that the percent ingredients clarified the label, and 34 of 76 related the percentage to water, even though only 5 percent water was declared. These observations should not be taken out of context, but should be compared to the results reported in Exhibits 2 and 3.

## EXHIBIT 2

*Question.* Now, after reading this label, what does it tell you?

*Nutritional Labeling*

*Nutritional labeling—181 responses from 76 respondents.* Vitamins in it, Number of calories, Vitamin C, Protein, Carbohydrates, More informative/complete, Nutritional information, U.S. recommended daily allowance, Fat content, Nutritional value, No protein value, Iron, Vitamin and mineral content, Less than 2% required nutrients, Low iron content, No grams fat.

*Weights—28 responses from 76 respondents.* Weight, 4½ ounces, Serving size, 128 grams.

*Mentioned variety—12 responses from 76 respondents.* Applesauce, strained applesauce.

*Percentage labeling—21 responses from 76 respondents.* Doesn't show percent of applesauce, Doesn't show percent of water, Didn't put 5% water, 95% applesauce.

*Ingredients—15 responses from 76 respondents.* Tells what ingredients are in it, Breakdown of contents.

*Sugar question—1 response from 76 respondents,* No sugar.

*Questions lack of information—1 response from 76 respondents.* Doesn't show percent of Vitamin C, Doesn't tell if there are preservatives.

*Miscellaneous—23 responses from 76 respondents.* Strained, Water added, Better than other label. Not a label reader, Not as good as first label, Not important to know nutrients, Don't pay attention to daily requirements, Don't understand all of the nutritional content.

After examination of the label with nutrition information, 181 responses were noted from 76 respondents with pertinent observation of nutrition information. Percentage labeling was only a concern with 21 of 76 respondents, even though they had been conditioned by evaluation of percentage label first. Other observations related to other pertinent material on the label—net weight, variety. It is pertinent to note that 21 of 76 persons observed the ingredient panel as a breakdown of contents.

## EXHIBIT 3

*Question.* After looking at this label which states both the percentage of ingredients and nutritional labeling, which one of the two would be more helpful when buying this type of product?

Prefer nutritional labeling.....	45
Prefer percentage of ingredients.....	30
No preference.....	1
<b>Total</b> .....	<b>76</b>

*Reasons for buying product with nutritional labeling*

<i>Base</i> .....	45
Know what baby is getting.....	15
Tells how good it is for child.....	10
Know how many calories, etc.....	7
Shows what it contains.....	7
It is more important.....	5
Look for nutritional value.....	5
I like to know how much of each vitamin it contains.....	4
More helpful.....	3
Child on special diet.....	3
Helps plan well-balanced meal.....	3
Avoid carbohydrates.....	3
More informative/tells more.....	3
Protein is important.....	1
Percentages are misleading.....	1

*Reasons for buying product with percentage of ingredients*

<i>Base</i> .....	30
Want to know amount of additives.....	7
Prefer pure/natural foods.....	6
I want to know percentages.....	5
Want to know what I'm buying.....	4
Know how much applesauce it has.....	3
You are getting apples, not additives.....	3
Quicker look at contents.....	2
Tells what is in it.....	2
Understand percentage, not nutrients.....	2
Ninety-five percent applesauce sounds more nutritious.....	2
Don't read labels on nutritional information.....	1
Nutritional value comes from amount of product.....	1

After examination of the label with both percentage ingredient and nutrient labeling, the response to the question of which would be preferred provided a 1.5:1 preference for nutrient labeling. A review of reasons suggests that the bases of preference for nutrient labeling are valid. Review of the reasons of preference for percentage labeling, on the other hand, indicates that about half are reflecting a concern for "additives." Another substantial portion of the respondents reflected a lack of understanding of nutrients.

The conclusions that can be made from Panel 1 are:

- (1) Most consumers prefer nutrient labeling (1.5:1).
- (2) The understanding and intended use for nutrient labeling was generally favorable, and understanding and use of percentage labeling was confused and misleading.
- (3) There is no clear cut response to indicate a conclusive desire for percentage labeling.
- (4) Information was obtained to support the premise that nutrient labeling provides the most important and valuable information and that the consumer is capable of recognizing this fact.

Panel 2. The objective of Panel 2 was to assess differences in percentage labeling that would be reasonable within the scope of the proposal. A label for applesauce was prepared to reflect 90 percent apples and 95 percent apples.

This option would be available to the manufacturer depending on the method chosen for calculation of the basic ingredient. The degree of understanding by the consumer of subtle differences which would be a consequence of percentage ingredient labeling were intended to be assessed.

The second portion of Panel 2 involved a sample of orange pudding which demonstrates a quality factor which could not be controlled in the case of percentage ingredient labeling. Orange juice varies several fold in Vitamin C content depending on the time during the season when oranges are picked. Either very early or very late season oranges have low Vitamin C values while mid-season oranges have a higher level. This subtle difference in ingredient quality can make a difference between the contents of a jar of orange pudding between 10 percent of the U.S. RDA and 45 percent. The purpose of the evaluation was to demonstrate the importance of nutrient labeling for appraisal of food quality—which cannot be controlled with percentage ingredient labeling.

## EXHIBIT 4

*Question.* Now that you have looked at both of these jars of Applesauce, which one would you buy if you were shopping for this item?

Prefer jar with 95 percent apples.....	37
Prefer jar with 90 percent apples.....	2
No preference.....	1
<b>Total</b> .....	<b>40</b>

*Reasons for buying product with 95 percent apples*

<i>Base</i> .....	37
More applesauce/apples.....	22
Ninety-five percent apples.....	14
Less water.....	13
More nutritious.....	3
Looks better.....	2
Less other things in it.....	2
Seemed like it would have more vitamins.....	1
Better for baby.....	1
Smoother.....	1
Not too thick.....	1

*Reasons for buying product with 90 percent apples*

<i>Base</i> .....	2
Lighter color.....	1
More vitamins.....	1

The overwhelming preference for the product with 95 percent stated apples 37/40 indicates that the consumer can be misled by percentage labeling. The comments are particularly pertinent—other than those that reflect more apples. This is clearly a case that the labeling can be misleading to suggest to the consumer that there is less water, looks better, more nutritious and less other things in it when the products are in fact identical and the apparent difference is within the scope of the proposal. This demonstrates that when the characterizing ingredient is listed by percentage, the consumer will ignore the most meaningful nutrient labeling in a comparison of two products listing different percentages of characterizing ingredients.

## EXHIBIT 5

*Question.* After looking at the two jars of Orange Pudding, which one would you buy if you were shopping for this item?

Product w/45 percent of RDA of vitamin C.....	31
Product w/10 percent of RDA of vitamin C.....	1
No difference.....	8
<b>Total</b> .....	<b>40</b>

*Reasons for preferring higher levels of vitamin C*

<i>Base</i> .....	31
More vitamin C .....	18
Forty-five percent vitamin C .....	7
Both say the same/no difference .....	5
Better formula .....	2
More vitamins, the better the product .....	1
Better for baby .....	1
Looks better .....	1
Brighter color .....	1
Offers more .....	1

*Reasons for preferring lower level of vitamin C*

<i>Base</i> .....	1
Lighter color .....	1
Looks better .....	1

The difference noted in nutrient labeling is pertinent and straightforward, 31/40 of the consumers preferred higher Vitamin C levels for the most part for good reason. The two observations indicating a preference for lower percentage orange pudding based their preference on appearance alone.

Comparison of orange pudding results with applesauce results demonstrates that the consumer noted and used nutrient labeling for comparison only if percentage ingredient labels were identical in this set of samples.

The conclusions that can be made from Panel 2 are :

(1) A potential exists for misleading and deceiving the consumer with percentage labeling, and the consumer has no basis to assess this deception.

(2) Nutrient labeling is a perceptive communication device for the consumer and most consumers are able to recognize pertinent differences in food quality.

The preliminary scope of these studies should be restated, and extreme caution should be used in interpretation of results. The studies should serve several valuable functions :

(1) Indicate the question of consumer attitude concerning labeling is complex and difficult to measure.

(2) Provide a basis for further studies in considerably more detail if the topic is to be pursued.

EXHIBIT 6

(Panel 1)

LABEL STUDYPERCENTAGE LABELSAMPLE  
NOT FOR SALESTRAINED-VITAMIN C ADDED  
**APPLESAUCE**CONTAINS 95% APPLES  
NET WT 4½ oz 128 gINGREDIENTS:  
APPLES 95%,  
WATER\* and  
VITAMIN C.\*  
\*Contains less  
than 5%.NUTRITION LABELSAMPLE  
NOT FOR  
SALESTRAINED-VITAMIN C ADDED  
**APPLESAUCE**

NET WT 4½ oz 128 g

NUTRITION INFORMATION PER SERVING  
SERVING SIZE 1 JAR - SERVINGS PER JAR - 1

CALORIES	60	CARBOHYDRATE	15 GRAMS
PROTEIN	0 GRAMS	FAT	0 GRAMS
PERCENT OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA) FOR INFANTS			
PROTEIN	0	NIACIN	0
VITAMIN A	0	CALCIUM	0
VITAMIN C	45	IRON	2
THIAMIN - VIT. B 1	6	VITAMIN B 6	6
RIBOFLAVIN - VIT. B 2	6		

\*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THESE NUTRIENTS

INGREDIENTS:  
APPLES, WATER  
AND VITAMIN C.PERCENTAGE AND NUTRITION LABELSAMPLE  
NOT FOR  
SALESTRAINED-VITAMIN C ADDED  
**APPLESAUCE**CONTAINS 95% APPLES  
NET WT 4½ oz 128 g

NUTRITION INFORMATION PER SERVING  
SERVING SIZE 1 JAR - SERVINGS PER JAR - 1

CALORIES	60	CARBOHYDRATE	15 GRAMS
PROTEIN	0 GRAMS	FAT	0 GRAMS
PERCENT OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA) FOR INFANTS			
PROTEIN	0	NIACIN	0
VITAMIN A	0	CALCIUM	0
VITAMIN C	45	IRON	2
THIAMIN - VIT. B 1	6	VITAMIN B 6	6
RIBOFLAVIN - VIT. B 2	6		

\*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THESE NUTRIENTS

INGREDIENTS:  
APPLES 95%,  
WATER\* and  
VITAMIN C.\*  
\*Contains less  
than 5%.Test 494-1  
OCTOBER, 1976

OCTOBER, 1976  
KALAMAZOO

Test #494-1  
(Panel 1)

LABEL STUDY

Hello, I'm \_\_\_\_\_ from Criterion Research.  
Today we are talking to mothers with young children about foods.

1. Do you have any children 4 years or younger?

1. Yes

2. No → THANK & TERMINATE

2. What are the ages of your children?

\_\_\_\_\_

We are interested in knowing what you think about some baby food labels.

TAKE RESPONDENT TO BOOTH. SHOW RESPONDENT THE LABEL WHICH STATES PERCENTAGE OF INGREDIENTS.

Would you please look at this label on the jar?

3. Thinking about the Applesauce label you have read, what does it tell you?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SHOW RESPONDENT THE LABEL WITH NUTRITIONAL LABELING

4. Now, after reading this label, what does it tell you?

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SHOW RESPONDENT LABEL WHICH STATES PERCENTAGE OF INGREDIENTS AND NUTRITIONAL LABELING.

5. After looking at this label which states both the percentage of ingredients and nutritional labeling, which one of the two would be more helpful when buying this type of product.

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- 5a. Why? (PROBE)

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6. Most baby food labels have nutritional information on them. Would you be willing to pay a slight premium, say 1¢ per jar, to have the percentage of ingredients stated on the label in addition to the nutritional information?

1. Yes

2. No

Why? (PROBE)

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THANK & TERMINATE

EXHIBIT 7

(Panel 2)

LABEL STUDYLABELS USED WITH QUESTION 3STRAINED-VITAMIN C ADDED  
**APPLESAUCE**

CONTAINS 90% APPLES

NET WT 4 1/2 oz 128 g

SAMPLE  
NOT FOR  
SALE

NUTRITION INFORMATION PER SERVING			
SERVING SIZE - 1 JAR - SERVINGS PER JAR - 1			
CALORIES	60	CARBOHYDRATE	15 GRAMS
PROTEIN	0 GRAMS	FAT	0 GRAMS
PERCENT OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA) FOR INFANTS			
PROTEIN	*	NIACIN	*
VITAMIN A	*	CALCIUM	*
VITAMIN C	45	IRON	2
THIAMIN (VIT. B 1)	4	VITAMIN B 6	8
RIBOFLAVIN (VIT. B 2)	6		

\*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THESE NUTRIENTS

INGREDIENTS:  
APPLES, WATER  
AND VITAMIN CSTRAINED-VITAMIN C ADDED  
**APPLESAUCE**

CONTAINS 95% APPLES

NET WT 4 1/2 oz 128 g

SAMPLE  
NOT FOR  
SALE

NUTRITION INFORMATION PER SERVING			
SERVING SIZE - 1 JAR - SERVINGS PER JAR - 1			
CALORIES	60	CARBOHYDRATE	15 GRAMS
PROTEIN	0 GRAMS	FAT	0 GRAMS
PERCENT OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA) FOR INFANTS			
PROTEIN	*	NIACIN	*
VITAMIN A	*	CALCIUM	*
VITAMIN C	45	IRON	2
THIAMIN (VIT. B 1)	4	VITAMIN B 6	8
RIBOFLAVIN (VIT. B 2)	6		

\*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THESE NUTRIENTS

INGREDIENTS:  
APPLES, WATER  
AND VITAMIN CLABELS USED WITH QUESTION 5STRAINED  
**ORANGE PUDDING**

CONTAINS 30% ORANGE JUICE

NET WT 4 3/4 oz 135 g

SAMPLE  
NOT FOR  
SALE

NUTRITION INFORMATION PER SERVING			
SERVING SIZE - 1 JAR - SERVINGS PER JAR - 1			
CALORIES	120	CARBOHYDRATE	26 GRAMS
PROTEIN	1 GRAM	FAT	1 GRAM
PERCENT OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA) FOR INFANTS			
PROTEIN	6	NIACIN	7
VITAMIN A	10	CALCIUM	8
VITAMIN C	10	IRON	*
THIAMIN (VIT. B 1)	10	VITAMIN B 6	8
RIBOFLAVIN (VIT. B 2)	10		

\*CONTAINS LESS THAN 2% OF THE U.S. RDA OF THIS NUTRIENT

INGREDIENTS: ORANGE JUICE  
FRUIT CONCENTRATE, WATER,  
NECESSARY FOR PREPARATION,  
MILK SUGAR, NUTRIENT MILK,  
MODIFIED CORN STARCH, EGG  
YOLKS, IODIZED SALT, LEMON  
JUICE FROM CONCENTRATE,  
CITRIC ACID AND NATURAL  
ORANGE FLAVORINGSTRAINED  
**ORANGE PUDDING**

CONTAINS 30% ORANGE JUICE

NET WT 4 3/4 oz 135 g

SAMPLE  
NOT FOR  
SALE

NUTRITION INFORMATION PER SERVING			
SERVING SIZE - 1 JAR - SERVINGS PER JAR - 1			
CALORIES	120	CARBOHYDRATE	26 GRAMS
PROTEIN	1 GRAM	FAT	1 GRAM
PERCENT OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA) FOR INFANTS			
PROTEIN	6	NIACIN	7
VITAMIN A	10	CALCIUM	8
VITAMIN C	45	IRON	*
THIAMIN (VIT. B 1)	10	VITAMIN B 6	8
RIBOFLAVIN (VIT. B 2)	10		

\*CONTAINS LESS THAN 2% OF THE U.S. RDA OF THIS NUTRIENT

INGREDIENTS: ORANGE JUICE  
FRUIT CONCENTRATE, WATER,  
NECESSARY FOR PREPARATION,  
MILK SUGAR, NUTRIENT MILK,  
MODIFIED CORN STARCH, EGG  
YOLKS, IODIZED SALT, LEMON  
JUICE FROM CONCENTRATE,  
CITRIC ACID AND NATURAL  
ORANGE FLAVORINGTest 494-1  
OCTOBER, 1976

OCTOBER, 1976  
KALAMAZOO

Test #494-1  
(Panel 2)

LABEL STUDY

Hello, I'm \_\_\_\_\_ from Criterion Research. Today we are talking to mothers with young children about foods.

1. Do you have any children 4 years or younger?

1. Yes

2. No → THANK & TERMINATE

2. What are the ages of your children

\_\_\_\_\_

TAKE RESPONDENT TO BOOTH. SHOW BOTH JARS OF APPLESAUCE WITH INGREDIENT PERCENTAGE LABELING; LET HER READ BOTH LABELS.

3. Now that you have looked at both of these jars of applesauce, which one would you buy if you were shopping for this item?

1. 90%

2. 95%

4. Why would you buy that one?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SHOW BOTH JARS OF ORANGE PUDDING TO THE RESPONDENT AND LET HER READ BOTH LABELS.

5. After looking at these two jars of Orange Pudding, which one would you buy if you were shopping for this item?

1. Low

2. High

6. Why would you buy that one?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Most baby food labels have nutritional information on them. Would you be willing to pay a slight premium, say 1¢ per jar, to have the percentage of ingredients stated on the label in addition to the nutritional information?

1. Yes

2. No

Why? (PROBE)

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NATIONAL FOOD PROCESSORS ASSOCIATION,  
Washington, D.C. August 15, 1978.

Re: 21 CFR Part 125  
(Docket No. 76P-0329),  
Infant foods, percentage declaration of ingredients.

Ms. JENNIE C. PETERSON,  
Hearing Clerk, Food and Drug Administration,  
Rockville, Md.

DEAR Ms. PETERSON: Attached is a report by Opinion Research, Inc., which was funded by the Technical Service Corporation and supports statements made in the National Food Processors Association filing of January 7, 1977, and the Gerber Products Company filing of January 4, 1977, in response to the Food and Drug Administration proposals for characterizing ingredient labeling of baby foods and percentage ingredient labeling of baby foods.

In a letter dated February 7, 1978, National Food Processors Association on behalf of the baby food manufacturers filed a request for reopening and extending the comment period to September 1, 1978. There has been no response to that request. We respectfully request the following comments be given full consideration.

We believe that this report demonstrates that with some types of products, characterizing ingredient labeling in particular, but also percentage ingredient labeling, can mislead the consumer and cause many consumers to make an incorrect choice. Both of the examples presented in the attached consumer tests represent likely and reasonable situations that could develop from pureed products made directly from raw fruits or vegetables because of natural variations in moisture content and/or from fresh meats because of various fat levels available in meat.

We recognize that the same type of discrepancy between percentage of ingredients and nutritional data may not be present with many other types of strained and junior food products, which are formulated from multiple ingredients, where consistency can be controlled by means other than by varying the usage of raw fruits and vegetables. One manufacturer, however, notes that 24 strained and junior baby food products are produced directly from raw fruits or vegetables with no means of consistency control other than by variation in usage of the fruit or vegetable ingredients, all of which have significant natural variations in moisture and other components which may affect consistency.

We certainly believe that these results demonstrate that it is not proper and consistent with the consumers interests to take a broad class of foods, such as all infant and junior foods, and apply characterizing ingredient labeling or percentage ingredient labeling to them without consideration of the types of raw materials they're made from and the manufacturing processes used.

We'll appreciate your consideration of these factors in the evaluation of our previous comments and those of Gerber Products Company.

Sincerely,

IRA I. SOMERS, *Executive Vice President.*

Enclosure.

REPORT ON THE UTILIZATION OF PERCENTAGE INGREDIENT LABELING FOR BABY  
FOODS

ABOUT THE STUDY

*Introduction*

The Food and Drug Administration has published a proposed regulation which would require certain foods for infants and toddlers to be labeled with a percentage declaration of their principal ingredients. The purpose of such labeling would be to assist mothers in their selection of foods for their infants and toddlers. In an effort to assess whether this information would be utilized by consumers, and whether it could help consumers to make the best choice of food for their infant, the Technical Service Corporation commissioned Opinion Research Corporation to conduct this study.

*Objectives*

The objectives of this study were to see the degree to which percentage ingredient labeling influences the choices of mothers make in selecting products for their children and to see the extent to which this information helps or hinders them in selecting the best product.

### Methodology

The results of this study are based on data collected in ORC's May 1978 Caravan. A National Probability Sample of 2,110 private households was screened to locate mothers of children four years of age and younger. This report presents the findings of those personal interviews conducted with the 303 qualifying mothers. All interviews were conducted in the homes of the respondents. With a sample of this size, results are accurate to within  $\pm 7\%$ .

The most advanced probability sampling techniques were employed in the selection of interviewing households for Caravan. One callback was required in all cases where the qualifying mother in the household was not available at the time of the initial call to that housing unit. To further ensure the representativeness of the sample, the generated data have been subjected to ORC's weighting program, which takes into account probability of being-at-home information and six different demographic variables.

Each respondent was asked to examine one pair of labels for a beef with vegetables product and another pair of labels for an applesauce product. (To avoid position bias, some mothers were shown the beef labels exhibit first, while others were shown the applesauce labels exhibit first.) After viewing each set of labels, either both beef or both applesauce, the exhibit was removed and the respondent was briefly interviewed about the product labeling just viewed. (A copy of the questionnaire and sample labels appear at the end of this report.)

### RESEARCH FINDINGS

#### Major Findings

Regardless of the specific food product in question, respondents overwhelmingly choose the jar with the higher percentage of either beef or apples. As the table below indicates, mothers are significantly more likely to choose the 40% beef product over the 30% beef product by a margin of two to one (63% vs. 31%). Preference for the 40% beef product is exhibited, to at least some degree, by mothers from all demographic groups examined (occupation, household income, region, city size, composition of household, owner or renter).

Product more likely to choose:	Total mothers of toddlers (percent)
Label No. 1—30 percent beef.....	31
Label No. 2—40 percent beef.....	63
They are the same/No difference.....	2
Neither one.....	2
Don't know/no answer.....	2

The largest percentages selecting the 40% beef with vegetables baby food (which also contains a higher percentage of calories and fat) are found among those in households where the head of the household is a blue-collar unskilled or semiskilled worker, among those with household incomes of \$15,000 to \$25,000 per year, and among those living in multifamily dwellings within cities. The largest percentages selecting the 30% beef product (which is lower in calories and fat) are found among those in households where the head of the household is an executive, professional, or manager; among those with household incomes of \$25,000 per year or more; and among those living in the western region of the United States.

As seen below, overall the most frequently given reason for choosing one product over another is that it contains more meat or a higher percentage of meat. Fewer calories and less fat are also each mentioned as reasons for product selection by one mother in five.) For these two latter responses, the response rate increases as household income increases.)

#### Reasons for selecting one jar of beef with vegetables over another<sup>1</sup>

	Total mothers of toddlers (percent)
More meat/higher percentage of meat.....	61
Fewer calories.....	20
Less fat.....	20
More calories.....	6
More nutritional.....	4
Get more for your money.....	3

<sup>1</sup> Multiple answers given.

The following table shows a breakdown of reasons for jar selection according to product preference. Among those who prefer the 40% beef product, more than nine in ten select it because it contains a higher percentage of meat. Among those who prefer the 30% beef baby food, 63% give as a reason for selecting it that it contains fewer calories, and nearly as many say that it contains less fat.

*Reasons for choosing jar selected<sup>1</sup>*

	Mothers preferring 30 percent beef (percent)	Mothers preferring 40 percent beef (percent)
More meat/higher percentage of meat-----	6	94
More calories-----	0	9
Fewer calories-----	63	2
Less fat-----	62	1

<sup>1</sup> Multiple answers given.

In making their choice between the two beef products, over half of the mothers overall say they consider percentage of beef and vegetable ingredient information; one-third indicate that they use carbohydrate, fat, protein, and calorie information; and 28% say they use ingredient information. The following table shows which label information mothers consider according to product preference.

*Information considered in making jar selection<sup>1</sup>*

	Mothers preferring 30 percent beef (percent)	Mothers preferring 40 percent beef (percent)
Nutritional information (nonspecific)-----	26	16
Calories, fat, protein, carbohydrate-----	68	20
Percent of U.S. recommended daily allowances (U.S. RDA) of vitamins and minerals-----	17	27
Ingredients-----	26	31
Percent of beef, vegetables-----	19	77

<sup>1</sup> Multiple answers given.

It is quite apparent from the choices made with regard to the beef product that both the information the mother uses in making her selection and her desire to buy the product containing more beef or less beef, or more or less of some other product characteristic, very strongly influence her ultimate choice.

In the second test of the impact of percentage ingredient labeling, mothers were shown labels for two different jars of applesauce, one containing 95% apples, and the other containing 90% apples; the two labels were identical except for percentage of apple content indicated. After examining the two labels, 85% of the mothers choose the jar containing the higher percentage of apples, as shown below. Again, mothers from all demographic groups exhibit this preference.

*Products more likely to choose*

	Total mothers of toddlers (percent)
Label No. 1—90 percent apples-----	6
Label No. 2—95 percent apples-----	85
They are the same/no difference-----	4
Neither one-----	2
Don't know/no answer-----	3

Overall, the most frequently cited reason for choosing one applesauce product over the other is that it contains more apples or a higher percentage of apples. As the table below indicates, mention of other reasons is almost negligible.

*Reasons for selecting one jar of applesauce over another<sup>1</sup>*

	<i>Total mothers of toddlers (percent)</i>
More apples/higher percentage of apples.....	83
Less water.....	6
Get more for your money.....	3
Less apples.....	3
Fewer additives.....	3
More vitamins.....	3

<sup>1</sup> Multiple answer given.

When asked why they would buy one jar in preference to another, nearly all of those who would select the 95% apples product say they would do so because it contains more apples or a higher percentage of apples. Eight out of ten of these mothers consider the percentage of apples the product contains when making their choice; another 27% say they consider ingredients information.

These data again indicate that the type of information the mother considers and her desire to buy the product containing more or fewer apples strongly influence product selection.

In summary, percentage ingredient information is frequently used in selecting baby food. To some extent, the space devoted to this information, relative to that given other information, and its newness may have increased the likelihood of usage reported in this test. Insofar as this information adequately describes the difference between the two products, it can be helpful to mothers of young children. To the extent that mothers overutilize this information, perhaps reducing the impact of other available information on the label, it may, in effect, serve to mislead the consumer.

[The following article was submitted by Dr. Tillotson, see p. 12 for his oral testimony.]

[Reprint from Food Product Development, December 1977]

#### EXTENDING THE PRODUCT LABELING CONCEPT

(By J. E. Tillotson/V.P., Technical Research and Development, Ocean Spray Cranberries, Inc./Plymouth, Mass.)

Current tendencies of regulatory agencies, Congress, and consumers indicate that the future will demand more and more disclosure of product information. For those of us involved in commercial communication of product information via labels, labeling, and advertising, this will mean a particularly challenging, if not frustrating, time. Even though it is less than five years since the food industry implemented nutrient labeling, reevaluation of the content, purpose, and form of food labeling (and advertising) is in order.

Present thinking within FDA, USDA, and FTC reflects the desires of both the public and Congress for broader disclosure to foster both nutrition and health education, and thus, attain national nutrition and health objectives. Food labels of the future will be required to divulge new kinds of product information, and we can expect the format and content of labels to change dramatically including even warning labels. (Is the saccharin warning label the beginning of a trend?)

Labeling patterns developed for the drug and pesticide industries might offer some insight into what the future holds for food if other alternatives are not found. In these industries, mandated information is so extensive that to meet regulatory disclosure standards, package inserts and additional labeling are required in addition to product labels.

Until recently, only minimal elements were required on food labels (net contents, no misbranding). The few general standards imposed by the Fair Packaging and Labeling Act and the Federal Food, Drug & Cosmetic Act were met with relative ease, and food labels usually provided ample room to accommodate all the required information while still meeting industry marketing objectives. And, after all, labels are a basic means of communicating with our customers.

How then are we to meet the continuing and intensifying demand for product data on the label while still assuring that this label actually communicates with the consumer? The problem of business communication is becoming critical. Con-

tinuing along traditional regulatory lines, can we feasibly and intelligently include all the mandated information on the label? If we get it all on the label, will the consumer comprehend it? Is there a point where the label cannot convey the message? Mandated label clutter could, in essence, return us to an era of functionally unlabeled food.

Yet, industry recognizes the need to fully inform the public about the composition, stability, nutritive value, and economic worth of packaged foods. We must find another means to provide this information. As part of this effort, regulatory agencies must indulge in research on effective communications via labels, labeling, and advertising. We must become more concerned with the substance of label information and less involved with the process of label regulation.

In our reevaluation process, alternative communication methodologies should be explored. How can we supplement label information, yet make hard to communicate or complex material readily available to consumers?

One method might be to develop manuals of product information which would be available in retail outlets, libraries, and schools. Each product sold in the retail outlet would be coded to correspond with a specific section in the manual. The manual could go into complete detail on product information, and material appearing in the manual could be regulated as labeling in conformance with specific regulations. Manufacturers could easily update information, while constantly providing the information service. The benefits of such a system include relaying very specific data to small interest groups (allergy-prone consumers or those on restricted diets).

While this is only one alternative, this system or some variation of it could provide consumers with more detailed information while leaving product labels to communicate more general data and product messages.

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STATEMENT OF HON. BOB DOLE, A U.S. SENATOR FROM KANSAS

At the first in this series of hearings on nutrition labeling and information, held last August 9 and 10, testimony given made our national predicament look quite grim. In short, confusing and misleading information prevail in our food labeling system.

Not only do we appear to be operating under inconsistent laws and regulations, but we have failed to adequately explain to the public the decisionmaking process this Government follows in labeling foods. And we have failed to educate the public on how to use this potential health tool.

Both consumers and industry are being harmed by the inadequacies of the current system: Consumers because they continue to lack the necessary nutrition information and skills needed to make wise food choices, and industry because they can't adequately plan when they are not certain what laws will soon demand compliance.

Since those earlier August sessions the administration has gone to the people to find out what they need and want on food labels. This morning we seek input from the food industry. There is no question in my mind that the Nation needs a more workable program of nutrition labeling to give all of us consumers the information we need to make intelligent food choices in the marketplace. As the ranking Republican on this subcommittee I pledge my support to this end.

During the earlier hearings we heard a variety of suggestions as to what form nutrition labeling should take. We heard that:

"It should be addressed from a holistic perspective, as an integral component of our overall national food, nutrition, and health policies.

"It should address factors concerned with food consumption, those directly relating to health maintenance and disease prevention.

"It should be based on sound information and a logical format.

"It should address foods as purchased in retail store outlets as well as foods served in away-from-home establishments

"It should consider informational aids in the supermarkets."

We also heard many comments on how to come up with a feasible, cost-effective and beneficial nutrition labeling system:

"Consumers, appropriate professionals, and the food industry must be involved in all stages of the development.

"The communications industry like the food industry must also recognize their role and responsibility.

"Concurrent responsibility among USDA, DHEW and other appropriate departments must be present along with constant communications and coordination among all the agencies.

"Pilot testing for effectiveness prior to implementation must take place.

"A periodic review of any labeling system every 8 years should be considered."

The intent here this morning is to receive more specific views from the food industry—manufacturers and a retail grocery chain. One question to be asked is: How can we make nutrition labeling meaningful and useful to consumers; and at the same time feasible and cost-effective to the food industry; and still assure Government that the safety and wholesomeness of our food supply is being preserved?

We know consumers want honest and fair dealings with respect to safety and wholesomeness in the food marketplace. We know the food industry wants to preserve trade secrets, spend a reasonable amount on new and revised labels, and is concerned about feasibility, costs, and ultimate value. And we know Government wants assurance on matters of food safety and quality, and prevention of false and misleading promotion and advertising.

No one is calling for new laws and new regulatory programs at this time. What is needed, however, is the communications and sharing of points of view that this morning's hearing can provide. I am optimistic about our ability to work together and meet this challenge.



