

the press, published by the Meat Board, titled "Challenge and Opportunity". It is what the Meat Board is doing in response to the diet/health issue. I hope that you all take a copy after this session and read it thoroughly. Basically, our position is to *not* be spending all of our energies on trying to counteract all the misinformation but rather to take a *positive* approach. We need to go out and get the positive story told about the nutrition of our product and not be constantly on the defensive.

I would like to give you a little more detail about some of the Meat Board programs directed to this positive approach, as outlined in this folder. I'll just give you a few specifics of what is going on. I have categorized these into things that are aimed at the whole public (in random situations) and into those programs we are doing with multiplier groups.

A great deal of money is going into our beef advertising campaign, both through the electronic media and through print ads. This particular ad (shown on screen), is definitely a positive nutrition message, and is appearing in a number of magazines directed to the consuming public.

In addition to what the Beef Industry Council of the Meat Board is doing for beef, I am sure you are also all aware that a great deal of effort has gone into NPPC's program with its new lean image of pork and the "Lean On Pork" campaign. Through advertising, we are definitely working in the nutrition area.

Dealing with consumers more in random groups, there are a couple of programs that will be going on in the future that are directed toward providing nutrition information at the meat counter. One of those is a "Nutrition Information Project", currently in the developmental stage, which is a joint effort between the Meat Board, American Meat Institute and Food Marketing Institute. Currently, the committee is designing a format for presenting nutrition information at the meat counter. The format chosen will be extensively test-marketed.

Still another program with retailers is a campaign coming this fall, which the Beef Industry Council is sponsoring. It will take the form of a nutrition game. Consumers will have a form to fill out at the meat counter, which will ask questions about the nutrition information in the advertising campaign. When they send in the form (or the card), they will be eligible for a prize drawing. So that is another effort at the retail level.

Moving into the area of working with multiplier groups, the Pork Industry Group, just this month, is running an insert in the *Journal of the American Dietetics Association*. It is their dietitians' version of a quiz on pork for physicians. Throughout the coming months, either the physician's quiz or the dietitian's quiz will appear in the *American Family Physician*, *Patient Care* and the *Journal of the American Medical Association*.

Another way we are reaching health professionals is through exhibits. Currently, the nurse's convention is going

on. Tomorrow, Burdette Briedenstein is going to be presenting our white paper entitled "The Meat We Really Eat". One of the key points in our exhibit for the nurse's convention is this new information. We will also be featuring it at the Society of Nutrition Education convention in July and then at the American Dietetics Association convention in September.

Another group that we are trying to work with more is pediatricians. We have developed a new booklet on feeding children one to five years old. One of the things we are going to do with this, besides providing it to daycare centers, is to provide a copy to every pediatrics instructor in every medical school in the country in the coming months. So, we are going to begin reaching the medical community on a larger scale (a direction which our board of directors has mandated).

For many years, we have been reaching home economics teachers. We currently have a kit on beef nutrition and also one on pork nutrition which we have provided to a great number of home economics teachers throughout the country.

We are beginning work on a program on nutrition for health and physical education teachers that will probably be ready in a year and a half. Another publication we developed recently about nutrient density was inserted in 200,000 copies of *Learning* magazine for 4th to 6th grade teachers. What we are trying to do is create more credibility for the Meat Board. We are introducing the Meat Board to more and more elementary school teachers as a source of credible, balanced information; not just information specifically related to red meat. Another project we will be working on this year is a piece of microcomputer software on nutrition for elementary school teachers. Teachers are begging for software. This material has been around for a number of years and we are now revising it. It is geared for very young children, kindergarten through third grade.

So, that is a very quick overview of some of the Meat Board programs going on. You may have other program ideas you want to share during the discussion.

In conclusion, here are some questions I think we should deal with. The one that interests me the most is: Does knowledge really lead to an improved attitude and does an improved attitude lead to behavior change? Another big question is, what really drives the active-lifestyle and the health-oriented groups of consumers to be cutting back on meat? What is the common factor? Is it their high level of education, or what is it? Should we be dealing with the positives or negatives? Can the negatives be approached from a positive angle and, if so, how? Should we be trying to spread our efforts over all five of those target groups or concentrating on the last two who seem to be cutting back the most on meat use? Should we be doing more in the early years when people are forming their attitudes and their habits? Are there any of those multiplier groups that we haven't thought of and with whom we ought to be working?

## Discussion

*Dick Epley*: I am just going to make four quick points that are strictly my opinion on educating the public about meat nutrition.

First of all, we should all do it. I think we have a tendency,

myself included, to not get involved perhaps when we should. This applies whether we are in extension or non-extension, with a university or not with a university.

The second point is that we should use all methods.

Barbara listed some, but specifically for those of us in extension this may mean publications, letters to the editor, radio-TV, talking to local civic groups, working with the professional home economist in your area on a one-to-one basis or in a training-type session. We have found in Minnesota that working with home economists, food editors, dietitians, etc., has been very fruitful. I don't think we should leave any stones unturned and maybe we should look at some different and unique ways that we haven't even thought of in the past, or that we have used with other groups. I am open for suggestions and looking for ideas myself.

A third point is that we must discuss both positive and negative aspects of meat, particularly those of us from universities. If we do not, we are going to lose our credibility very quickly. We have to admit when we are talking about the positives, such as protein or heme iron, that there are some meat items that have too much fat and that meat is not the perfect food, since it is low in fiber and Vitamin C, etc. I think we have been remiss in that, and I know it has cost me credibility in the past. I really feel strongly about this even though at times it is very difficult to do.

Lastly, it seems we are fighting an uphill battle in getting our point across when it comes to educating the public. The point is, we must never, never give up repeating the message. I find myself in a situation where I say, "Well, I have completed a radio program on this topic and now the whole state knows about it." Well, baloney! Repeat the message, repeat the message, repeat the message. Maybe in different ways, in different places, or at different times; but keep plugging away because I think there are probably more people that hear and appreciate us than sometimes we give ourselves credit for.

*Curtis Melton:* When I read the study Barbara referred to, I was curious about the fact that the educated people seem to know the least about the positive aspects of meat and are the most concerned about cutting back on meat consumption. Could it be that these people are the ones who read more and watch more educational TV? Maybe they are not getting the right information from our media! The educated should be the best informed.

*Chris Salm:* I, too, would like to comment on the point that Barbara mentioned about the educated being the ones that are cutting back the most on meat. The dietitians coming out of the universities (and I know the dietitian at St. Mary's Hospital in Madison), are telling people to eat between two and four 3-ounce servings of meat a week and that is it. Where are they getting this information and what are we doing to help educate dietitians to prevent this in the future?

*Hicks:* I am not sure where they are getting this information, but I would guess they are trying to interpret the Dietary Guidelines. The answer, as to what we do, is the very thing we are talking about. Somehow, we have to reach these groups, but it is not easy. The Heart Association spent years promoting the point that animal fat is bad for one's health. If it goes back to one single cause, it is the Dietary Goals and Guidelines.

*Joe Regenstein:* I think what we are saying here today is that if everything else is equal, people will buy nutrition – but they are not prepared to pay for it or make any changes in lifestyle. My second point is that in our Poultry Science Department we have to deal with more cholesterol than any

of you folks in the red meat area. I find that we are often immediately written off in terms of our credibility, regardless of what we say, and to that extent we probably do ourselves a disservice by going out and conducting nutrition education. Our main role is to try to get our own nutrition groups on campus to at least present the facts, even as bad as they see them. As long as they stick to the facts, we can live with that. What we are finding in many cases is that these people are going out and actively promoting an anti-egg posture in the State of New York. This has caused some rather rough times internally. We have to do a better job of educating our own state specialists and all the nutrition people throughout the states whose job it is to educate the general public. At the same time, one has to recognize that our products have problems and I agree on the point that you cannot duck them. I don't eat a lot of red meat as a rule, but since being at this meeting, I have been served meat with an awful lot of fat on it when compared to poultry or fish where we do not see the fat. I really think you have a problem. You have a visible, obvious fat which I am not eating and most people probably don't either.

*Epley:* Your point of working with our own nutrition people, particularly those of us at universities, is well taken. They can help us do our job better. I recently obtained copies of Breidenstein's "white paper" and I immediately sent two copies to the Extension Nutrition people (with whom I should be working more closely than I am).

The other thing about being associated with the department is true. Many times I have found in my own case that, when sending correspondence with the state, or when writing letters to the editor concerning controversial topics, it helps to use the title of Professor of Food Science and Nutrition rather than Professor of Animal Science or Extension Meat Specialist.

*Lyle Ernst:* About five years ago in Rochester, Minnesota, we introduced a different meat packaging concept, and invited the nutritionists and home economists from the area to attend a private meeting at the Midway Motor Lodge. A group of 15 or 20 people showed up for the meeting because they were sure no press would be there. But then, when they were invited to tour the plant and attend a luncheon a day or so later, none of them showed up. They bowed to peer pressure because meat and packaging was an unpopular thing. On the other hand, one of them mentioned that if a Merle Ellis or a James Beard had introduced the subject, it would have been OK for everyone to participate in it. In many cases, I feel the nutritionists and home economics people, in their minds, feel as we do, but they bow to peer pressure whether it be administrators in hospitals, institutions or foodservice personnel who want to go with the popular fad.

*Person not identified:* Often times we are overly critical of the media. Sometimes they have very good credibility across the board. If we provide opportunities for them to use the facts provided by the Meat Board and other reliable sources, then we may be surprised to learn that we get very good play, especially in some of the mass media, i.e., newspapers, magazines, etc., where you reach a lot of people. By supplying educational and nutritional materials which include recipes and pictures, they can provide excellent coverage and it is a good way to get our message across. I think we should approach it from a positive standpoint of nutrition

education, i.e., getting the facts out, rather than sitting back and fighting the issue with negative comments.

*Bill Moody:* We should adopt some method of sensationalizing our message of nutrition education. We have to be psychologists when it comes to promoting our product. Smart advertisers have successfully capitalized on this procedure for years. We would be much further ahead by doing this than trying to rebut those who say meat is bad. I am in favor of using our energy to promote the positives in unique and clever ways and forgetting about defending our product from those who speak out against it.

*Norm Marriott:* I am wondering where the Animal Rights Group fits into the picture? Do they fit into the health-oriented group or what? I realize this is a relatively small group but it is one that is gaining momentum and it is an issue that does not appear to be going away, although many of our people are saying this is a fad that will disappear.

*Hicks:* By health professionals, I am referring to dietitians, doctors, and possibly health teachers. I think Animal Rights activists tend to have health as a concern but I don't think they are made up of a whole variety of people. Are you suggesting this is a group we should try to reach with positive information?

*Marriott:* All I am suggesting is that it is a group that will not go away, we will have to deal with them.

*Tom Carr:* This Animal Rights thing is a real issue and something we must combat, especially with small children. This group distributes flyers showing a picture of rabbit or pig and which asks, "Do you want to eat this animal?"

*John Carpenter:* Since I do not work in extension, I can feel free to offer suggestions. We need to keep up information on a broad front but at the same time, in order to go over on the offensive, we need to pinpoint areas where we can really place some emphasis. I would like to suggest a couple of areas that need particular attention. First, we need to do a better job of educating our doctors and physicians on nutrition. Many of them are pitifully ignorant. Inserts in their medical journals do help in this regard, but we need to do more.

Secondly, young children need to be reached because they are very receptive and have a lot to do with shaping the attitudes of the family. There are other groups of people that, no matter how much information you give them, are not going to change their minds.

*Hicks:* I ran across a study that was conducted in 1973 by FDA where a group of people who knew something about nutrition were asked where they learned it. Forty-one percent (by far the largest single group) said they learned it in school. Their attitude was positive toward meat and this was just ten years ago.

*Nancy Cook:* I have a comment with reference to Barbara's statement on dietary goals and what has happened to attitudes in the last ten years. When you look at the school lunch program now and for the last ten years, you will find out what has happened to your meat eaters. Now, children get peanut butter and grilled cheese sandwiches and tacos once a week, so it is no wonder they don't learn to appreciate meat. Even though we do try to supply a good government ground beef product, I think we end up with a lot of distortion in what is actually being supplied to school children. We must do something about this, whether it be

through legislation, or just working with folks in local communities to provide a whole beef, pork or chicken product in lunch programs.

In the Clay Center area, we have started supplementing the school lunches with a whole-meat product, such as beef shoulder clods and goose neck round roasts, which are relatively low priced. These products are provided once or twice a week, and the students have really responded well. This is something I think we need to emphasize.

*Person not identified:* This question is about credibility. Is there some way we can persuade the medical profession and the Heart Association to say that meat is good for you? For some reason, the general public is more apt to believe the information if it comes from these groups as opposed to our own people saying the same thing.

*Hicks:* There is some dialogue going on between the Meat Board and the American Heart Association. We are moving more in that direction and it does seem to be an excellent suggestion.

*Person not identified:* In our Food Science Department at California Polytechnical Institute, we have about 280 to 300 dietetic students. We have tried some innovative things to get them to think more positively about meat and nutrition in general. We have even tried to bring them into the School of Agriculture where we can "brainwash" them a little better. This might not be the practical approach but the point is that we really must reach out to these people who represent one of the most significant multiplier groups. Most schools around the country have these same types of students, and we are missing the boat if we don't spend time educating them on the topic of meat nutrition.

We did a little study trying to figure out how to reach students. We give them a lot of material on nutrition, and most of them read it and retain it just long enough to pass the test, and then they throw it in the waste can. We took the information from the handouts and prepared it in a form that would be accepted by the local newspaper. We found that when the students read the information in the paper, they accepted it as being of more value and superior to that information handed out in class. We have a challenge to work out ways to get our information accepted. One way to do it is to work with the media and to not be frightened by them.

*Moody:* I heard somewhere the other day that a group of doctors were talking about the value of yogurt for people who are allergic to milk. Nutritionists have known this for some time but it will not make the press, and people will not listen until the doctors talk about it. I don't know what it is about the general public, but often times we can talk and talk about good nutrition and nobody seems to pay much attention. Just let a doctor, who has had one or two courses at most in nutrition, or a holistic practitioner make some comment about eating meat or other animal products, and then everybody seems to listen. Somehow we have lost our credibility to a group that is less well trained and informed than our own people. This is an unfortunate and embarrassing situation which must be corrected.

*Dean Galloway:* Maybe we can learn from other industries that use athletes, movie stars, or other well-known public figures to convey their message to the general public. As long as the correct information is disseminated, it may not be important who tells the story so long as people listen. To get

people's attention, particularly young people, we might have to use this approach. I do not see us doing a lot of this. Maybe that is the boat we are missing.

*Person not identified:* Where does producer education come into the picture? We know that these programs cost money, and until the producer is willing to pay for it, we will never have enough money to fully implement the type of advertising program that is needed to promote meat education. You all know that the beef referendum was not a big success in this country.

Until producers are ready to provide dollars to support these programs, we are not going to have enough budget to reach the market like a McDonald's. They sell hamburgers because they put millions of dollars into advertising – not because they have a great product.

*Hicks:* We have come a long way in the last few years but we still have a lot to do.

*Estes Reynolds:* There is a lack of producer knowledge about the products they are producing. Many producers are being asked questions about basic nutritional values and other controversial issues that relate to their product. They are unable to defend either themselves or their occupation because of their lack of knowledge concerning the products they produce. I think we need to help these producers to become educators because they have to defend themselves and their occupation.

*Regenstein:* I would like to go back to the point that physicians get so little training in nutrition. We need to reach these people at the medical school level because, by the time you put the information in their journals, most of them do not have time to read it.

We must interact with our nutrition people, because they are going to carry the ball and have more credibility than those of us closest to the product. After all, these are the people who are training our teachers and who, in turn, teach the little kids. The nutritionists then are the ultimate multiplier group since they are the ones who train all the rest.

*Epley:* How do we get more nutrition in the medical schools?

*Jim Kemp:* We are beginning to get some more of that through our clinical nutrition department. But we are woefully lacking in knowledge among some of our people on our medical staff. For example, one of my graduate students went to the Medical Center. The doctor, not knowing the student was in meat science, recommended he "better lay off red meats." We still have a long way to go.

*Dave Cramer:* How about turning the advertising around to read, "Use lard for cooking instead of vegetable oil for shortening because it is so low in *trans* fatty acids. These *trans* fatty acids are beginning to show carcinogenic effects and cause premature aging as well as gallstone formation." Not only do margarines and shortenings contain 30% to 35% *trans* fatty acids, but vegetable oils, when heated as in frying, will cause all kinds of free radical formations. Turn it around the other way and advertise "eat meat as a good source of cholesterol – one of the most vitally needed nutrients we have!" I think we could really just push the *trans* fatty acid thing.

*Hicks:* Do most scientists agree with that?

*Cramer:* There is a lot of controversy in the literature, but I have read a lot of papers where they have demonstrated they

are carcinogenic. In fact, there is some pig work where they fed pigs *trans* fatty acids and animal fats with the *trans* fatty acids being about 30% of total fat. The pigs that were fed the *trans* fatty acids were much higher in serum cholesterol than those fed animal fats. They were even higher in serum cholesterol than the pigs that were fed cholesterol.

*Epley:* I agree that there are things we could do to turn it around. For example, Bill Moody mentioned earlier that we haven't emphasized the leanness of the loin muscle itself when referring to a steak or chop. On the other hand, maybe we can use some of the negative things to our advantage. Bill talked about the hot dog being 30% fat and that is a negative, but then we can compare the hot dog with peanut butter, which has 49% fat. This way you can turn a negative into a positive.

*Bob Kauffman:* It seems like we are always saying that one meat is better than another meat. Why not simply talk about the merits of the product rather than making a comparison? Frankly, I am very tired of hearing people compare poultry, fish, and the red meats. I know why the Meat Board does this, but we as meat scientists should talk about all meat foods in a positive and constructive manner. If they have deficiencies (which they do), then we should include them in our discussion. I do!

*Hicks:* There is a big temptation to do this by those who want to use fish and poultry as a case against red meats.

*Paul Berg:* What is the proper way of comparison? There is considerable difference in the dry-matter content among species as well as between plant and animal proteins. There is a lot of difference in moisture content. What basis should we be comparing? Is the dry-matter approach appropriate, or is as-is-basis good enough?

If you compare raw oysters (100 calories per 100 grams) to a cooked beef steak, then how do you make the comparison?

*Epley:* I don't know the answer to your question, but I do feel we get carried away with percentages, myself included. We don't eat percentages – we eat absolute amounts.

*Melton:* Your question about what basis to make comparisons is difficult, but since I have been in extension, I have learned quickly that you do not get into a discussion about dry matter because people will tune you out. You just have no chance. Therefore, just keep it positive, and act like you know what you are talking about. Do not apologize.

I made some statements lately that were publicized in the newspapers and on TV for which I thought the medical profession would lynch me. I did not hear from a single one of them. So, they are not really sold on what they are saying. That is all they know. I think, if we educate them, they will start telling a different story. Just recently, my son was in the hospital, and the first meal they served him was a pork chop. I didn't think they served pork in the hospital. So, you see, we are making some progress.

*Epley:* Another good point was the need to get more nutrition or some nutrition in medical schools for the students. The question is how do we get them to add a nutrition course to their curriculum? If anyone has an idea on this, let us have it.

*Verlin Johnson:* I thought your questionnaire that you included in the *Journal of Dietetics* and in the *Medical Journal* is an excellent way. That is the type of thing people

will retain when they read through the journals. It is somewhat unusual and it is amazing how much they will grasp from this little bit.

*Morris Solomon:* I attended a recent AMA convention for cardiologists in Washington. It seemed that the general consensus was that everyone was recommending that their patients avoid red meat. However, I noticed that the doctors themselves were eating red meat at this meeting. When I asked why they were eating the steak, their answer was that they didn't know if it made any difference. The problem I have with this paradox is that they don't feel it will have any effect on *their* health but yet they advise *their patients* against eating red meat.

*Dennis Buege:* Something that might be helpful is to have a clearinghouse for developing information that says meat either has no effect, or that it has a possible effect, and then separate these from those reports that say that there is a possible danger from eating meat. Just how much evidence is there on both sides? Information of this type would be especially helpful on the cholesterol, fat and cancer issues which are so broad, and contain so much research on both sides. We keep talking about the two sides of the story, but I wish I could see what the scales say about how much evidence is available on both sides.

*Epley:* Who is going to be the clearinghouse?

*Dennis Buege:* Perhaps the Meat Board! – I really don't know!

*Hassel:* I would like to comment on consumer behavior. I have got to believe that a lot of this inconsistency is a result of a weight-conscious country. People hear about cholesterol, and about reducing salt in the diet, but the social pressure to maintain a slimness is probably an overriding force in people's choices of their diet today. An aggressive campaign stating something like "stay lean with beef" and noting the merits of meat products on a per-calorie basis, or something like that, would go a long way in convincing people to rethink the health issue.

*Hicks:* I have long thought that if we could really go out and aggressively promote exercise, it would justify eating more calories. If we are burning them off, then it doesn't matter. Someone pointed out to me the other day that those with a sodium problem would not be bothered by it if they exercised more and in so doing lost the sodium through sweating. Proper eating and proper exercise must go hand in hand.

*Epley:* The diet thing is good and I think most of you are familiar with the data on per capita consumption of fat in this country over the last 60 years. During the last 15 or so years, the majority of this increase in fat consumption has come from vegetable fats and oils. A lot of people don't realize this.

*Bob Cassens:* How important is price in the groups other than the group that is price-driven?

*Hicks:* It seems to be primarily in that group.

*Cassens:* You mentioned one of the other groups that had a number of retired people, and mentioned that they had a rather low income. I would think that price has to be a fairly important factor in the list, doesn't it?

*Moody:* We can talk about why people don't buy more red meats all we want, but I feel the biggest reason for the reduction in beef consumption, for example, is strictly economics. We can say it's fat or negative image, but I personal-

ly believe it is price. I will almost bet that people will buy beef over other meats if the price is the same or competitive. I realize this may be a whole different issue, but it is one that is very important.

Another point relates to the responsibility of the meat industry itself. I still feel that the industry has the responsibility of lowering the fat in some of its processed products. This may raise or lower the price. My feeling is we should be producing a hot dog with 20% to 25% fat as opposed to 28% to 30%. I realize why fat is added to wieners, but there is no reason why the level of fat cannot be reduced to benefit all segments.

While we are talking about image and fat, why not label beef steaks 93% fat free? The ribeye of most beef today is less than 10% fat and yet the consumer has the image of beef being too fat. Most of this fat is on the outside of the steak or in the form of seam fat which most people don't eat. I don't really think consumers are thinking so much about cholesterol or saturated fat as much as they are total calories. If our advertising could take a different approach and accent the positive, such as "beef steak 93% fat free", I think it would have a positive impact on consumers' buying choices.

*John Kahn:* A number of years ago, I recall a merchandiser distinguishing between selling the sizzle and selling the steak. I think the red meat industry can sell both and get more money even if chicken is cheaper.

Has anyone surveyed these people that are buying less meat? Would they prefer a good steak taste to chicken? If there was such a survey, it would be very interesting. If not, possibly it would provide some good data we could use.

*Hicks:* Somewhere in the study, I know that there was information which said that the people preferred the taste of chicken. I do not know what the percentage was. Do you know, John Huston?

*John Huston:* There was a quality study reported by the Meat Board, and if I remember correctly, 50% of the people rated chicken ahead of beef.

That was the first study we have ever done that had this kind of an outcome. In other studies, red meat would always be invariably the preferred meat at the table.

This is one image we do not want to get out of context, but it did show that there are a significant number of people who prefer the taste of chicken along with the taste of beef.

*Liz Wanderlick:* As we were discussing the problem of getting more nutrition education in the medical profession, what would be the possibility of supporting a non-industry person who would be a speaker at an American Medical Association meeting? The idea would be that this individual would expound on the virtues of meat and show statistically, without a doubt, how and why meat is good for you and why it should be included in the diet. By not being industry related, it might have more of an impact.

*Hicks:* One of the commodity groups is funding a visiting professorship where they selected a certain number of scientists to speak to medical students. The sponsoring group does not have any control over what the scientists say, but they tend not to be anti-fat or anti-animal products. That seems to be a successful program. It is expensive, but certainly it offers a lot more credibility when a research scientist or a university professor from another school comes

in and teaches the course. We could never do this ourselves. That is what you are talking about.

*Paul Lewis:* We had better be careful that all the facts come out – that if the Meat Board supports this person, it should be pointed out and made known. Don't let the general public get the idea that you don't want to admit this affiliation. I think it would do more harm than good if it came out that way.

*Huston:* Are we getting enough interfacing between our meat scientists and food scientists with other disciplines at the land-grant schools? Is there something we can do to help enhance this information exchange at the university level?

*Epley:* You are right. We probably are not doing enough with our extension nutritionists and others involved in teaching.

*Thayne Dutson:* In answer to John Huston's question, I think there are some places where that interaction takes place, and it is working very effectively. The Department of Food Science and Human Nutrition is merged together as a pretty good interaction department at Michigan State. Al Boreen, our extension meats specialist, gives many programs for the nutritionists. The attitude of the student dietitians is very scientifically based. It is not a faddish kind of attitude, but rather one based on scientific facts. I think we need to create more of an environment for this type of attitude to develop. I have been very impressed in the short time I have been there.

*Bob Kelly:* One thing that I found very popular that came out from the Meat Board in the last year or so, is that reprint on the *Nautilus* article. I give out a lot of handouts in my classes and some of them find their way to the waste basket right after I pass them out. You never find those *Nautilus* articles in the waste basket, and students are coming up to get a copy for their friends. These seem to appeal to a group of people who are active and interested in *Nautilus*-type things. That article is very well received. I think it is on the positive side and appeals to those involved in exercise and an active lifestyle.

*Dutson:* How many of you have seen the new General Foods Fitness Nutrition Program? That is something that not only ties in the nutritional aspects of some of the food products, but it also has a fitness program along with it. I think more of these programs tie in with nutrition and fitness. In reference to your comments earlier about our society being conscious of leanness and fitness, this General Food Program really capitalizes on that, and I think we could tell a pretty good story by tying those two together.

Young people, especially, will pick that up and take it if there is nutritional information in there. They will get that information too, because they are interested in the other side.

*Moody:* I have one comment relative to labeling. We had a short course this spring called the "Lean Beef Conference", which stressed the importance of leanness and muscle. We were trying to promote the positive aspects of beef by talking about its merits. The same day we offered the short course, the Kroger Company came out with their label "Grain-fed" on all their beef. To me, the connotation of grain-fed implies fatness which is similar to the term "fat stock show" which we used back in the 40's and 50's in referring to our steer shows. I would rather promote the virtues of muscle rather than take

the approach that it contains extra fat because the animal ate grain in the finishing period. I'm in favor of relabeling our meat and calling it by such names as "Gourmet Beef", "Nutrient Beef", etc. – just to emphasize muscle and play down the fat.

*Melvin Riley:* Do you foresee an increased problem with the negative connotation associated with slaughter of animals? It appears that down the road, four or five years, this may be more of a problem. Aesthetically, people do not like to think that their lamb chop once walked around as a little lamb.

*Solomon:* Along that line, it seems that those same people that feel this way also purchase fish. They will go fishing and capture the fish and not think anything about it.

*Riley:* They don't worry that much about pork or chickens, but other animals are different.

*Bill Costello:* I was interested in what John Huston said about interface within the university and among our peers. Everybody in South Dakota is pretty close to a beef steak, even if you live in the middle of Sioux Falls, which isn't that far from the nearest cow.

I had the opportunity to spend three days on the mall in Washington, DC, about a year ago. It was a rude awakening as people would ask, "Is this meat safer than what I buy in the store?" When fairly intelligent people, many of whom came out of the USDA Building, ask those kind of questions, it is scary because those people think it ought to have a label like a package of cigarettes. It was an education for me, and I think some of us in our business don't recognize it. That was a small percentage of the population, but we got that question asked about once a day during the three days we were there. I think we want to be careful about saying the same thing about other foods that may be good so long as we eat them in moderation.

*Leon Orme:* We have 26,000 students in our university who are required to take 50 to 60 hours of general education. None of those classes have anything to do with consumer education, and probably one-half to two-thirds of these students will fall into these two groups that think they ought to be cutting back on meat as they get a little older, become more professional and have a little more money.

My eyes were opened when I first went to Idaho and took a tour with a nutritionist and a veterinarian. That nutritionist was one of the best ruminant nutritionists in the West, yet the audience paid more attention to the veterinarian. I think credibility is a big factor, and we have a void here. We are teaching on the grade school and high school level but we are teaching the A, B, and C there. We are not talking about chemistry and the other things. We ought to be talking to these consumers on the college level.

*Person not identified:* If you get that in your teaching program, you have to be very careful who teaches these courses. There are biologists plus everybody else who wants to teach them.

*Epley:* At Minnesota, we have a course called, "Food for Thought". Paul Addis teaches this course to some 500 to 600 students. It is well received and, as a result, we gain 5 to 10 students in Food Science from this exposure. You are right. You have to have the right person teaching the course.

*Charlie Adams:* If you want to sell the consumer something, you must price it right. Why don't we price our nutrition

part and deal with that? When people go to buy meat, they want to know how much it costs. I really think we ought to promote the economy of good nutrition.

*Boreen:* I think that Dr. Castello's and Mel Riley's points should be well taken, as they are more than small problems. We need to be working with nutritionists on matters of additives as well as on the subject of slaughter methods and the total concept of meat education. Many times, people don't realize we kill fish. More people are aware of it in poultry, but less so than in the red meat industry. From an educational viewpoint, we need to promote this on an equality basis as it pertains to all areas.

*Person not identified:* I think we need to accept the fact that if these animals don't have economic value, there won't be any animals around.

*Person not identified:* I would like to comment about the horrendous amount of misinformation given out on talk shows and in the printed media, without much challenge from our side. It seems inconceivable to me that this goes on. How do we counter this misinformation? So many people form their attitudes from listening and reading this type material.

*Melton:* Recently, I saw an article on the new cholesterol study which said that the consumption of lower amounts of cholesterol in the diet would prolong health. I tried to find out where this originated, and traced it back to an editorial which came out of a nutritional journal. The coordinator admitted that it was not diet-related but rather a drug study. This is the thing we need to watch.

*Kauffman:* Barbara Hicks, how many psychologists and

psychiatrists do you have on your staff at the Meat Board? It seems to me that we don't need more nutritionists and more meat technologists. Perhaps we need to know more about how people function.

*Hicks:* I agree that we do need to know more about how people function. However, the fact is that the answers aren't in. I strongly feel that what really needs to be done is more basic research into the psychology of food choice and how to affect it. If anyone knew the answers, we wouldn't have nutrition problems today. The fact that there are so many people highly motivated to lose weight who just can't do it is, to my way of thinking, testimony to the fact that psychologists just don't know the answers. So, a psychologist on staff at the Meat Board would not add anything to what we already know.

Also, although we don't have any psychologists on our staff, many of us, as well as the staff at our advertising agencies, have had quite a bit of college coursework in that discipline. The solution isn't a psychologist on staff, the solution will only come from more research in the field of the psychology of eating.

*Moody:* To summarize, I think it was pointed out time and time again that we need to do a better job of educating the medical profession and other key groups that disseminate information to the general public. It is also evident that we as meat and food scientists need to work harder to improve our credibility with other groups as well as with the general public.