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Como los Standards Voluntarios de Calidad Trabajan en la Industria de Frutas y Verduras Congeladas

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Abstracto

A pesar de que el consumo de alimentos congelados en los Estados Unidos ha aumentado 350 por ciento en 10 años, el empaque de productos marinos congelados solo ha aumentado un 12 por ciento. Con un incremento de 7500 por ciento en capacidad refrigeradora en el hogar en ocho años, la industria de mariscos tiene un enorme mercado disponible.

Parece que la falta de los productos pesqueros congelados en mantenerse a la par del resto de los demás productos alimenticios congelados, es lo que causa que la ama de casa dude la calidad de los mariscos ofrecidos. Standards gradatorios parecen ser necesarios. Los standards facilitan el obtener préstamos sobre productos congelados en las bodegas, y son muy útiles para ayudar en la venta a compradores de instituciones grandes. Standards gradatorios aún dependen del juicio humano y será difícil en la pràctica el obtener una uniformidad estricta. La utilidad de los standards depende en la forma en que estos son observados y enforzados.

DISCUSSION

Industry Session

Discussion Leader: JAMES E. BARR

Discussion Panel: LOUIS FISCHER, J. C. FERGUSON, J. ROY DUGGAN, PEDRO PINSON

Voluntary Government Standards For Fishery Products

A. W. ANDERSON

Q. Fieger: Mr. Anderson, don't you feel that with frozen food there is the same problem as with fresh food, in that from the time it leaves the plant until it gets to the consumer you don't know what kind of handling is given to the material. I think that we need a lot of education in the stores on the proper handling of frozen foods.

A. Anderson: I would agree, except in degree. I think that the problem is very difficult with fresh fish but not so much with frozen fish, and, of course, much less with canned fish. In collecting samples for the National Fisheries Institute annual "cutting" we have found that there is a great variation in the care taken of frozen fishery products in grocery store freezer cabinets. As our men go around and pick these fishery products out of the cabinets, just exactly as a housewife would, they also take the temperature of the cabinet and the temperature of the product in the cabinet. Frequently the cabinet will show a zero temperature and the product in the cabinet may be 25°. We find also that the packages in the cabinet apparently aren't changed as new products come in. These packages are not necessarily put on the bottom so that the first in are the first out. That seems to be a very serious problem that not only affects fish but also other types of frozen products. It seems to us, on the basis of what experience we have had in the last few years, that one of the biggest needs in the frozen foods industry is a cabinet that would insure that packages put in first would come out first. Checking with various fish companies we have been told that they have found through the code marks on their samples that some of their fish products have been out a year, and they know they have been in cabinets for long periods of time without being moved.

Q. Strasburger: This morning you mentioned, in passing, the use of standards for trading on futures markets. Would you care to enlarge on that?

A. Anderson: Four or five years ago, at a National Fisheries Institute convention in Chicago, the matter of trading shrimp on a futures market was considered. A man from the mercantile market in Chicago explained how various products, e.g. turkeys and onions, were traded on the futures market. This was primarily as a "hedge", or as insurance to protect the company if prices advanced or dropped rapidly. But he made it quite clear that it would be impossible to trade any product on a futures market unless there was a standard for that product, because when you buy a product on the futures market you don't necessarily get delivered exactly what you bought, but rather the "equivalent" of it. So if you bought U.S.#1 shrimp at a certain time you would get a carload of that grade at a later time, but not the same carload that you bought. And obviously under these circumstances you have to have standards for the products you deal in.

Schauffler (Comment): The latest addition in the futures market is in the poultry business, where frozen poultry is now quoted every day for sale on the futures market in New York.

Voluntary Industry Standards For Fishery Products

MAL XAVIER

Q. Barr: Is it necessary, to make voluntary industry standards a success, to have it subscribed to by the whole industry?

A. Xavier: Voluntary standards would involve just exactly what it says, *voluntary*. However, we feel that in order to have these standards there has to be cooperation between the industry and the government agency that is responsible for that particular product. Therefore, before the standards can be established, there would have to be some idea as to what percentage of the industry would be willing to go along before the government would step in to help out with the standards. I am inclined to agree with Mr. Anderson that we should have approximately 50 per cent of the industry agreeing to the standards, because one of the main purposes of the standards is to give the consumer a high quality product and if less than 50 per cent of the industry is going to go along the public is certainly not going to get the product that it deserves.

Q. Pinson: I wanted to elaborate on Mr. Barr's question. It takes us to the financing of an inspection system for quality control or standards. Do you think that everybody in a certain industry should carry the weight of the financing or should it be individually those plants or groups that would want to use those standards?

A. Xavier: On voluntary standards the people who subscribe to the standards would naturally be the ones that would have to contribute to the setting up of the service. If you have compulsory standards, which naturally would have to be government standards, then it would be up to the government to foot the bill and everyone then would contribute indirectly through taxation.

Q. Duggan: We have made quite a bit of progress, I believe, in developing what would be voluntary standards in breaded shrimp. It was my understanding at the last meeting that possibly 75 per cent of the industry, volume-wise, was represented and was in favor of the tentative standards that were set up. I know it takes longer for the Food and Drug, for example, to set up permanent standards, but is there anything that would prevent them from enforcing industry standards which were set up on a voluntary basis and represented approximately 75 per cent of the volume produced? And if not, when are they going to start giving some enforcement to the ones that have already been agreed to?

A. Xavier: The standards for breaded shrimp which the committee set up, were tentative standards, and at the two meetings that we held, approximately 75 per cent of the production was represented in person or by proxy. I believe 5 or 10 per

cent later indicated their approval of the standards. Then it became necessary to go to Food and Drug and ask them what they thought about the standards and whether they would approve them or not. Food and Drug wouldn't tell us yes or no because they didn't know, and they suggested that a survey be made to find out what the consumer wanted. I learned some time ago, since our Cleveland convention, that the Fish and Wildlife Service has started a consumer survey along these lines. Possibly within a short time we should learn what the consumer preferences are concerning breaded shrimp.

Q. Ferguson: We know that on a government order for breaded shrimp a certain proportion of breading to shrimp is specified. Outside of that, this argument about the amount of breading in proportion to the shrimp concerns what would constitute a "good quality" pack. If I remember correctly, in your paper this morning there was a variance of about 20 to 60 per cent in the amount of breading in different packages of shrimp. Has it been determined yet what would constitute a "good" pack in relation to the breading of the shrimp?

A. Xavier: No. The general consensus of those in the industry, however, is that, for sizes of up to 42 count the breading should not be over 42 per cent of the net weight. Over 43 count, that is smaller shrimp, it can go to 50 per cent breading.

Q. Fischer: Mr. Xavier, do you think that the trade associations, such as the Southeastern Fisheries Association and National Fisheries Institute, should enter into a program of certain standards for their members?

A. Xavier: The standards would have to be industry standards, or we might run foul of the law. We haven't quite gone into the matter that far, but I am sure that any standard set up would have to be industry-wide and not just National Fisheries Institute or Southeastern Fisheries Association standards. I'm afraid that Federal Trade Commission might object to that.

Quality Standards For Crab Meat

LORAIN SZABO

Q. Duggan: Some plants operate primarily on crabs that are caught in traps or caught on trot lines; the ones that come into the plant live and kicking are certainly better than those that are caught in shrimp trawls and have been dragged for perhaps two hours, some of them coming on deck actually dead. Have you noticed any difference in the bacteria counts on the crabs from these sources?

A. Szabo: We haven't made a comparison between these two types of crabs. By the time crabs caught in any of these ways have been cooked there should be no difference in bacterial loads because the ideal cooking temperature-time pressure relationship should take care of all the contamination that previously existed. The purpose of the cooking is to kill the bacteria.

Q. Duggan: But some of these crabs that have been caught in the shrimp boats and that are not properly iced are actually spoiled before they are delivered to the crab plant. You don't mean that by cooking you're going to get rid of the decomposition.

A. Szabo: That raises another point. If some of the crabs have died, and they have been in the heat for a long time, certainly much decomposition will have taken place. No cooking will alter that, and that is certainly something which the crab operation has to reckon with. Some of the operators try to be careful and discard any dead crabs, but this depends upon the integrity of the crabbers. In the Florida-Georgia area the crabs are loaded in metal drums, and for all the producer knows, the bottom of the drum may be full of dead crabs, and he won't learn that until he's ready to cook them.

Q. Pinson: How is crab meat packed and about what percentage is sold frozen and what percentage fresh?

A. Szabo: Crab meat is usually packed in one pound tins, and is usually sold in the fresh form, that is, shipped under wet refrigeration. The principal markets are in the N. Y., Washington, Philadelphia areas, where the people like the fresh delicate flavor of crab meat. There is very little sold as a frozen product because it is difficult to freeze crab meat without seriously affecting the flavor, and causing it to become badly dehydrated. There is some crab meat canned, but the gourmet prefers a fresh packed product.

Q. Fischer: I understand that some packers are putting up crab meat in sealed tins, under refrigeration. Can you tell us about this?

A. Szabo: Some years ago the Fish and Wildlife Service experimented with pasteurized crab meat, with some interesting results. We've tasted some of the pasteurized meat and we noticed that unless the packer is careful with the pasteurization process, the meat is slightly discolored, also, it might have a carmalized flavor and be a product different from crab meat. It is possible to produce a product that resembles fresh crab meat in flavor, color and textures, but it's going to take a little work before the gourmet will accept the pasteurized product in lieu of the fresh packed product. The temperature of pasteurization may range from 160° F. to approximately 211° F. and of course the higher the temperature the shorter the time of treatment.

Q. Fieger: What was the range of the total bacteria counts on the 400 samples that you ran?

A. Szabo: There are two ways of handling crabs after they come from the retorts. In areas south of North Carolina the hot crabs are dumped upon a concrete or other solid table to cool them. The cooking process is finished about 10:00 p.m., and the crabs are left there until a crew of packers comes in at about 5:00 in the morning. North of the Carolinas the operations are considerably smaller and it is possible to leave the crabs suspended in the cooking baskets. In northern areas there is faster cooling of the crabs. On the mass of crabs on a table in the southern areas, we ran bacterial counts on crabs from various positions in the fill. In the middle of the stack there might be 5,000 to 600,000 per gram while at the botttom of the stack the count was innumerable. This proved to us that this method of cooling is a bad one, and we have convinced some of the packers to alter their methods.

Q. Robas: Is there any practical reason why a batch of cooked crabs could not be plunged in the chlorinated ice water as they are removed from the cooker?

A. Szabo: We feel that the less water there is around the crabs during the cooling process the better, because even though the crab shell is good protection, there is not much protection around the joints, which are possible sources of entrance of bacteria. Also, with a large operation handling 25,000 to 50,000 pounds of cooked crabs, it would be quite a problem trying to dump the baskets into chlorinated ice water. We don't like to get too much water on crabs at this stage unless picking operations can begin immediately, and sometimes that's not very practical. So even after you have cooled them and had to let them remain on tables several hours, you might undo some of the good you have tried to accomplish.

Q. Xavier: How long can you keep a can of fresh crab meat under wet refrigeration?

A. Szabo: This depends on the bacteriological quality of the can of meat to begin with, but with meat of good bacteriological quality (and by good I would mean one that meets the proposed standards that New York City is going to put into effect), I would say that the meat should keep ten days to two weeks under wet refrigeration.

Q. Whiteleather: Is there any one in the industry who is dating crabmeat so the consumer knows the age of the meat that he is buying?

A. Szabo: As far as I know, that is not a general practice. It is a good idea but the way the sale of crab meat works the larger producers ship to commission merchants and here there may be many a slip between the cup and the lip. The product may have been good at the time it left the plant, and also at the time that it arrived at the commission mer-

chant, but if his sales are slow and he has had the meat around for a week or ten days under questionable conditions of storage, and not wanting to lose his product, he will try to sell it anyway. There is where coding would be of a real help.

Whiteleather (Comment): I know one retail outlet which coded its crabmeat and this company increased its sales about 6 or 7 times in a short period by dating the product and not keeping any crab meat in their cabinets beyond a two-day period. They had other outlets, of course, and the meat they didn't move through the cabinets they make into crab meat cakes on the third or fourth day. This struck me as such a fine piece of merchandising, and represented so much progress in the matter of handling crab meat that I wonder why it wasn't continued and why it wasn't more common.

Q. Franco: I would like to ask Mr. Szabo about the food poisoning due to crab meat in New York.

A. Szabo: I understand that in all cases of food poisoning that could be directly attributed to crab meat they have found it due to the hemolytic staphylococci, the same kind of bacteria that causes food poisoning from spoiled cream puffs and the like.

Shrimp Industry Standards of Quality

LAWRENCE W. STRASBURGER

Q. Pinson: Isn't there a certain obsolescence in the type of packing we're all doing? A very high percentage of our production is packed with the shell on in 5 pound cartons. Is it possible that the market isn't willing to take this product in these quantities?

A. Strasburger: I am not a marketing specialist; however, I have seen a number of ways in which shrimp may be prepared, still in its uncooked or unprocessed form, which I believe will give additional marketing opportunities. As to the second part of your question, I do not believe that the market is saturated for shrimp in frozen 5 pound cartons. At the present time, we are faced with a relatively large inventory. There are a number of factors which have caused the holding of large inventories, part of which can be attributed to two things. One of them is the very high prevalent prices of the spring and fall of 1953. The high prices also caused a lot of poor quality shrimp to be placed on the market. These factors caused a lot of people to stop eating shrimp, and to keep it off the menus so that at the present time it may seem that we have reached the saturation point. But good quality shrimp, placed on the market properly and properly merchandized, can be sold. I don't believe that the saturation point has been reached yet by any stretch of the imagination.

Q. Duggan: This morning when discussing the matter of standards you touched on what would be a maximum freezing time to produce a good quality product. You were talking there, I believe, primarily of frozen fresh shrimp but I am interested in it from the stand-point of breaded shrimp. We have long held to the belief that the quicker that we could freeze, the better product we would have. This is a view that is not exactly shared by some of our competitors. What is the scientific opinion on this?

A. Strasburger: There are several variables involved. Under our SAOTA standards for frozen headless shrimp we have put up a maximum freezing time of 24 hours. This is not the best, but in setting up any standards you have to bear in mind the general set-up in the industry as it presently exists, and while in time you may be able to encourage gradual changes in certain physical equipment, you can't get everyone in the industry to change all their equipment overnight. Insofar as breaded shrimp is concerned, I believe the freezing time should be much faster than a 24 hour period. You must bear in mind that in breading materials there are eggs, milk and some highly perishable proteins which make it a wonderful bacteria medium, so that breaded shrimp should be frozen at a much faster rate than frozen headless shrimp.

Q. Ferguson: Boats out of Ft. Myers usually carry three men, but during the low months of production on Campeche Banks we have several boats that try to get along with two men. We have noted consistently that those two-man boats have brought in a poor quality of shrimp. Have you found the same situation existed in Texas or elsewhere?

A. Strasburger: At any time that you have long periods of exposure of shrimp on the deck of the boat the poorer will be the quality of the shrimp. In this case, apparently, two men cannot get the shrimp on ice fast enough.

Q. Fischer: What percentage of the shrimping industry is grading their shrimp as to size? Is this helping in the control of quality?

A. Strasburger: It's rather hard to give a percentage figure. The *frozen* shrimp industry of the west coast of Mexico is grading its shrimp 100 per cent. *Fresh* shrimp shipments from the west coast of Mexico are not being graded to any great extent before they are shipped into the United States. The east coast of Mexico, which does not produce any fresh shrimp, is also grading 100 per cent. Texas, within the last two years or three years, has shown a tremendous increase in the amount of grading of shrimp. I would hazard a guess that at least 75 per cent of the shrimp being frozen in Texas is being graded. In Louisiana the major portion is not being graded. In Mississippi a large number of graders have been installed. Alabama follows approximately the same pattern of Louisiana. In Florida there have been some plants which have installed graders, but the principal producers do not grade them.

The grading of shrimp is a very definite quality factor. Buyers and restaurateurs are looking for "portion controls" and unless shrimp are graded for size they cannot go into portion control.

Q. Kahn: Mr. Strasburger, you described in detail shrimp quality control, but what would you say about the responsibility of the plant after shrimp have left the plant? Going back to my personal experience as manager of a potato marketing association, the potatoes travelled over 2000 miles from the point of production to the point of marketing. When prices went down usually the potatoes arrived in bad shape; when prices went up they usually arrived in good shape. I think something similar may happen in the shrimp industry when shrimp are shipped from the producing area, say in Texas, to marketing and consumption areas, say in Chicago. We attempted to solve the problem by having an inspector, appointed by the Association, in the producing area and another one in the consumption area. Do you have in mind to establish control at the point of loading and at the point of receiving, and how should shrimp be controlled in the freezers in Chicago and other consuming areas?

A. Strasburger: Under the standards for quality control which have been adopted by the Shrimp Association of the Americas, there is no provision for control to be exercised after the shrimp have left the producer's warehouse. While there is marked room for improvement in quality control in the marketing of the product, this is something that is completely beyond the producer's power. It could possibly be handled through a warehousing organization.

Q. Sanchez: About a week ago in the markets of Havana, I found some shrimp from India, bound for Atlanta. They were beautiful shrimp, about 15-20 to the count. They were retailing for 60c a pound. I understand that in the United States they market for 65c a pound, frozen in a 5 pound box. I wondered if there was any reason for dropping the shrimp into Cuba or whether that shrimp was difficult to enter into the United States because of high duty there. Maybe the quality was not what they wanted?

A. Barr: There is no duty on shrimp entering the U. S. A. As to the price that they are retailing for here, of course that depends a lot on the cost of the importer. Certainly we have no control over that at the present.

Voluntary Grade Standards For Fish Sticks

CHARLES BUTLER

Q. Barr: Have you noticed any change in quality after temperature fluctuations, comparing fish with breaded shrimp, due to

the greater quantities of oil present in fish than in shrimp? Do you think it is necessary to hold breaded fish sticks at a more constant temperature than breaded shrimp?

A. Butler: No, fluctuations in temperature do not affect the oil; however, at high enough temperatures the oil would become rancid if any air was present in the package. A good practice is the use of stabilized oil for cooking.

Q. Pinson: What effect do you think the time required for freezing would have upon the maintenance of quality during the storage life?

A. Butler: The effect of the rate of freezing shows up in a number of ways during the storage period. First of all, contrary to what has been argued for many years, the particle size of the ice crystals in the fish is not too serious with present methods of freezing. The breading material on fish sticks is very susceptible to bacterial action, and the fish itself wouldn't spoil as readily as the breading. During the storage period the changes that might take place would be largely in texture. A change might take place in the *flavor* of the breaded material as a result of fluctuation in temperature. If fish sticks have picked up an onion flavor, for example, this would be accentuated in the sticks during the storage and fluctuating temperatures would aggravate it. But fluctuations in temperatures *per se* shouldn't greatly change the over-all flavor, there would be more of an effect on the texture.

Q. Menzel: Do you think it would help the sale of fish sticks if the packer told exactly what species it is? I think they state that it is one of several species and some people have preference as to what kind of fish they eat.

A. Butler: According to the Food and Drug regulations, the label can say "cod or haddock" and does not have to tell how much of either one. But it can't say "cod, haddock or ocean perch," any longer. Ethically the label is supposed to say specifically what the species is, and that is the recommended practice.

How Voluntary Quality Standards Work In the Frozen Fruit and Vegetable Industry

HARRY K. SCHAUFFLER

Q. Duggan: Is there now a probability that a government grade, A, B etc., will be required on frozen food labels?

A. Schauffler: That has been urged at one time or another and it has been used on a voluntary basis by particular brands where it was thought that an advantage would be gained. I don't think that there is any serious thought at the present time to make this compulsory. I would have to disagree with Mr. Barr when he said it would be necessary to have at

least 50 per cent of the industry agree to voluntary quality standards before they could be successfully introduced. It seems to me that the percentage is not so important as the shouting, the propaganda, in connection with putting the grade on a particular package. If you stop to think about the things that we have seen happen in the last year outside of our business, it was not 50 per cent of the cigarette people that decided that it would be a good idea to put in a filter. It was just one or two small firms which started the filter and now all of the big companies are putting a filter on their product. It didn't require 50 per cent for that! I mention that because I think that in the food industry there have been individual firms which have done a great job of raising standards. One packer, we'll say in New Jersey, knows a good deal about lima beans. The best of the beans will be frozen. If the packer gets too many he will can some; the rest he'll send over to the fresh market. Similarly in Florida today a number of packers are not producing frozen citrus concentrate alone. They are shipping some cargoes to the fresh market because they say they aren't good enough for frozen orange juice concentrate. I challenge you people in the fish and shellfish business: Are you choosing the best of your raw material for processing, so that you can stand upon your record in three or six months from today, or do you say, "What we have left over we'll pack; we don't want it to spoil on our hands so we'll freeze it."?

Q. Barr: A problem which has come up repeatedly today concerns the lack of control of the packer over his product in the regular market channels. The onus for a bad package is on the producer. I've seen cases where shrimp were perfect when they left the producer's hand, but were declared bad when the buyer got them. I was wondering what would be the best approach to this problem, since it is one of distribution and handling.

A. Schauffler: The distribution of frozen foods is not by any means what it should be. We have been talking today about the processor and how he can improve the quality of the product in the honest belief that after it has been frozen and kept frozen it will not improve with age. Certainly if the distributor does a clumsy job the product can deterioriate. That does happen on the wholesale level and even more prevalently, I'm sorry to say, in the retail business. We have several educational campaigns on the importance of zero temperatures which are being conducted by different brands and by their distributors. One of the things we have found most difficult to counter is the misinformation about the costs of handling frozen foods. If the cost is driven down too low the corners are cut, with disastrous results to quality. We believe that if more sound information is spread as to the actual cost of merchandizing

and handling frozen foods and a proper markup provided for this, that quality will benefit.

There is also the question of whether it is desirable from a legal point of view to set standards. The state of Connecticut has actually passed a law stating, in effect, that frozen foods must be kept at "proper" temperatures. The enforcement agency is now worrying about what *are* the proper temperatures. Oakland, Calif., is also experimenting with this. They have had the law on the statute books for some length of time; the question is how we are going to enforce it. Enforcement can only be successful if the community is in favor of the law. A speed law is useful, but if nobody pays attention to it, it isn't worth spending the time to pass. If the community wants the speeding to stop, then the policeman can stop speeding.

Q. Kahn: Speaking again from my experience with potatoes, I would like to mention the use of highway inspectors at the producing points and at the marketing points. Would you think it would be feasible for the National Fisheries Institute or any trade association to hire an inspector at the main marketing points, say Chicago and New York, and to make the decision of these inspectors on the quality of the shipment the basis of the future marketing of fish?

A. Schauffler: That would depend upon the demand for such service, the same as in the case of requests for arbitration or for credit information. USDA does not provide free inspection for frozen fruits or vegetables at Chicago or New York. It would obviously not be reasonable to expect a trade association to provide an inspector without charging for him.

Q. Whiteleather: Do any fruits or vegetables in containers have a grade marking on the package so that the consumer can tell whether he is getting U. S. #1 or any other specific grade.

A. Schauffler: Yes, there have been several but they have not generally been the better known ones. Producers of the leading brands, on which there has been a lot of advertisement, have felt that they can stand on the brand's reputation. It has been the smaller producers who have not been in a position to advertise who have been more prone to use grade labeling, with, perhaps, the U.S.D.A. authority behind it, as advertising. Most of this kind of product happens to be aimed primarily to the institutional trade, so the grade sometimes appears only on the price list and not on the label.

Q. Whiteleather: This small producer with a private label that can't compete against a well advertised brand can guarantee quality by putting a grade on the package. Then why can't everybody else guarantee the same thing?

A. Schauffler: I think they can, but the question is whether it would be an asset to them. Obviously, the question in the mind of

owners of well known brands is whether their name will be enhanced by the addition of government grade labeling or whether they feel that their name is itself the asset that lends honor to a package because it is the "best known name" in the country.