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FDA RESPONSIBILITIES AND PROGRAMS IN THE FIELD OF MARINE POLLUTION

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The basic responsibility of the Federal Food and Drug Administration is to provide consumer protection through enforcement of the Food, Drug and Cosmetic Act and related laws. The act and its regulations contain certain requirements that manufacturers and interstate shippers must comply with, and it includes penalties if they fail to do so. Accordingly, we are usually thought of as a law enforcement agency in contrast with those government agencies that provide services to the public. However, we also strongly encourage compliance through education and voluntary actions.

Because the Food and Drug Administration is a scientific organization, applied research plays a significant role in furthering consumer protection. We are constantly devising new and better methods of analysis, seeking not only to benefit from our own research but also from the findings throughout the scientific world.

Data emerging from conferences such as this one are valuable tools useful in meeting our daily challenges. Through a cooperative exchange of information and ideas, and working together with state and local agencies, we can expand the benefits and intentions of the Food and Drug act.

An illustration of this type of cooperation is shown by our recent handling of the problem involving the presence of high amounts of DDT and its analogs in canned jack mackerel. About a year ago, one of our eastern districts found high amounts of DDT and its analogs in canned jack mackerel that had been produced in a southern California plant. We began an immediate investigation to determine whether this was an isolated instance or a widespread occurrence. In carrying out this operation, we obtained samples from every jack mackerel packer in southern California. Unfortunately, the results of the analyses showed a number of additional lots that also exceeded the tolerance of 5 ppm.

Our next decision was to make a choice between regulatory action involving seizures or voluntary action under closely supervised conditions. We called a meeting with California State Food and Drug officials and industry representatives and suggested an approach which we felt would provide the maximum consumer protection. An agreement was reached whereby the State Food and Drug, through the facilities of their cannery inspectors, would sample for analysis every lot of canned jack mackerel produced. Meanwhile FDA would conduct a series of spot checks. Any lots found high were to be withheld from distribution through state embargo. In addition, an exchange of both state and federal analytical findings would continue. This agreement is currently in effect, and it has not been necessary to date for the FDA to invoke seizure action on any other violative lots of canned jack mackerel.

Unfortunately, the presence of pesticides in fish caught off the southern California shores is not confined solely to the mackerel family. In April 1970, we initiated a sampling program to cover a variety of fish which were of commercial significance. As a practical approach, the majority of our samples were obtained from wholesale fish dealers whose lots were ultimately destined for consumer consumption. For laboratory purposes, we usually took a minimum of six fish or sufficient to make up to 50 pounds per sample. Because we wished to determine how much pesticide might be present in the fish, as prepared by the housewife, the head, tail, guts and scales were removed prior to grinding and taking of the aliquot.

We are currently evaluating the preliminary results of this survey. In addition, our San Francisco and Seattle districts are also extending this survey so as to include the entire Pacific coastal waters. One development has occurred that will be of interest to you. We have just completed a seizure action on some lots of kingfish which were found to contain excessive amounts of DDT and its analogs. These fish were caught outside of the Santa Monica Bay area. We are making a further investigation to determine whether this may be in any way correlated with the reported findings in Santa Monica Bay which recently received a great deal of newspaper publicity. We are aware of the considerable work many of you have already accomplished and will be interested in what information you may have.

Some of our other programs currently underway relate to certain particular interests of this conference. We are analyzing a number of our fish samples for mercury, PCB, dieldrin and lead.

Our total diet studies are well known to most of you. They represent a market basket collection of food made six times throughout the year and consisting of the recommended two week diet for a 15 to 20 year old male. Our Los Angeles district is responsible for collecting the samples representative of the region identified as the western area of the United States. Various types of fresh, frozen and canned fish are included in the samples obtained. Analyses performed are for the organochlorides, the organophosphates, the polychlorinated biphenyls, the chlorophenoxy acids and metals such as arsenic, cadmium and mercury.

For years, the FDA has had a program in operation involving the analysis of thousands of fruit and vegetable samples. The significance of this program to the CalCOFI conference lies in the usage of these pesticides and the resultant run-off and possible contamination of the oceans. Because sewage treatment plants have difficulty in removing these chemicals, their outfalls are being investigated with increasingly greater interest to determine if there may be any correlation between the chemicals being ejected and the amount of these chemicals that we might find in fish inhabiting the outfall area. Such studies are a part of our continuing California Coastal Fish Survey.

Increasingly sensitive analytical methods and new instrumentation are constantly producing more revealing data. Our programs must necessarily remain flexible and as additional problems are encountered, needed modifications are made. New programs are accordingly being implemented where required and older programs constantly updated or phased out when no longer applicable towards consumer protection.

Question: Which heavy metals are you looking at in these thousands of samples collected?

Shallit: The thousands of samples I referred to are those collected nationally under our pesticide program. These involve principally fruit and vegetable products. Our analyses by gas chromatograph are principally for revealing the possible presence of the organic phosphates and chlorides. Where we suspect the presence of some chemical not ordinarily revealed through gas chromatographic studies, appropriate analyses are made. The various metals would be such examples and if indicated, atomic absorption or other adequate analytical procedures would be required to reveal their presence.

Question: Do you find any difference in the jack mackerel that is caught offshore such as on Cortes and Tanner banks as compared to what is caught inshore?

Shallit: We are currently reviewing our data to determine if it is possible to find any difference. Our findings do show that a number of the samples obtained offshore from the White Point discharge area have been high in DDT and its analogs. Yet most of the jack mackerel samples from considerably farther out have been well under the 5 ppm tolerance. Additional study is needed.

Question: Are you checking jack mackerel that comes in from Japan and South Africa?

Shallit: Products coming into this country from a foreign country are subject to entry through customs. Whenever canned mackerel or any other food products are offered for entry, customs notifies us and we determine whether we should sample for analysis. Our limited facilities do not allow us to check every lot entered, but we keep a constant surveillance on all these products and perform a significant number of analyses.

Question: Do you do any monitoring of fish that may be used ultimately for the production of chicken feed?

Shallit: We have sampled and analyzed a number of such products. We have found very little DDT in fish meal and believe this is probably due to the fact that fish for fish meal use usually has had the majority of fat expressed from it. As you know, DDT is fat soluble and the absence of fat in fish meal undoubtedly accounts for the very small amounts of DDT found.