

THE CONSUMER LOOKS AT CHEMICALS IN OUR FOOD

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The topic you have given me is a timely one, for there is a serious demand from consumers for information about chemical food additives and a disturbing lack of knowledge about the subject.

First, let us reach a common understanding about what we are discussing--the chemicals that appear in food. Chemicals are not new and unusual components of food. All food from table salt to complex proteins is composed of chemicals. But there are some chemicals in use today that were not known a few years ago. They cause the most concern.

The problem is not new. The misuse of chemicals in food was responsible in part for the enactment of the Pure Food and Drugs Act in 1906.

You may ask, "Well, if we are dealing with an old problem, why is there so much concern? Why not enforce the law and let the chips fall where they may?" The answer is that the law is not adequate to cope with the problem we face today. The original Food and Drugs Act of 1906 declared that food would be adulterated if "it contains any added poisonous or other added deleterious ingredient which may render such article injurious to health." Under it our power to keep poisons out of food was severely limited because the Government had the obligation of proving that a food containing an added poison might be harmful to health. Under that law each food was considered alone, and, if it did not contain sufficient added poison to render it injurious to health, we were powerless to act.

But the total intake of poison by a consumer could not be controlled on a single-product basis. For example, if each of three items of food contained one-third of the amount of poison required to make it injurious, each would have been legal under the 1906 law, but the consumer who was unfortunate enough to eat these three items at a single meal might have been injured.

The Food, Drug, and Cosmetic Act of 1938 attempted to remedy this by forbidding the addition of any poisonous or deleterious substance to any food except where it is required or cannot be avoided, in which event the Secretary shall establish by regulation, the quantity that may be present without hazard to the public health.¹

Present Laws Inadequate

This doesn't solve the problem. It forbids the addition to food of any substance known to be poisonous or deleterious, leaving uncontrolled the addition of chemicals that have not been tested enough to show whether they are poisonous.

The present law permits untested or inadequately tested chemicals to enter the food supply. If the manufacturer who chooses to use new chemicals decides that he does not care to conduct adequate toxicity tests, the burden of determining whether the new chemicals should be in food then falls upon someone else, ordinarily upon the Food and Drug Administration. But we do not have the facilities to conduct independent tests on even a small fraction of the new compounds being proposed for food use. If we did have the facilities and conducted the tests, the law still would permit untested materials to be used in food during the time they are under

¹Sections 402(a) and 406(a).

investigation. The safety testing of a chemical additive ordinarily requires a minimum of two years and often it takes longer.

I am not critical of the food industry in general. Most manufacturers recognize the great responsibility they have to the consuming public and do test new ingredients before adding them to food. They declare the presence of the additive on the label as required by law. And a few of them advise consumers of the reason for using the additive and the benefits resulting from its use.

But there are some who have used chemicals without adequate testing. They try to hide the facts by declaring them inconspicuously and in vague terms. And sometimes they bring pressure to try to get us in the Government to agree that they may label their products without showing the presence of the chemicals at all. In the past few months we have had to resist pressures of this type from segments of the food and chemical industries who do not wish to declare the presence of a preservative in common use.

Granting some consumers are opposed to any kind of additives it is certainly no solution to conceal their use. The experience of the past 50 years has shown that manufacturers are better off and promote greater confidence on the part of consumers by being frank and truthful about their products.

The need for better control was brought to public attention in 1951 and 1952 by the House Select Committee to Investigate the Use of Chemicals in Foods and Cosmetics -- the Delaney Committee. It pointed out that the number of chemicals entering the food supply of the Nation had increased tremendously in the previous decade. It concluded that in some instances chemicals had been utilized in and on the food supply of the Nation without adequate and sufficient testing of their possible long-range injurious effects; that the public is entitled to greater protection with respect to foods it must necessarily consume; and that such protection is not afforded by the existing legislation under which the Government may take no action until after the food has been placed on the market and injury may have occurred.

Other responsible groups have considered the problem of making a reasonable determination of the safety of food additives and have concluded that it needs to be faced now.

We have had some very narrow escapes because of the use of additives that had no place in food. It is inconceivable that this country should continue to expose itself indefinitely to the risks inherent in the present scheme of food control.

Why Use Chemicals at All?

If new chemicals cause so much concern, why use them? Why not forbid the addition of any new chemical to the food supply?

We are not in a static society. No one is self-sufficient today. The change from an agricultural to an industrial economy requires city dwellers to get food from distant areas. Even the farm gets groceries from the supermarket. It is necessary to grow, process, and package food so that it can be transported for thousands of miles and remain in good condition during extended storage.

When food chemists take foods like soybeans or peanuts and make from them a long list of other foods and food materials such as salad oils, shortenings, and emulsifiers, this contributes to the well-being of the Nation. The wonderful variety of fruits and vegetables that are in supermarkets today would not be there at all were it not for the sprays and dusts that growers now use to combat insects, weeds,

plant diseases, and other pests. Chemical agents are used for a great variety of other useful purposes such as preserving, bleaching, prevention of caking, lubricating, thickening, flavoring, and coloring.

Today approximately 22 million women are employed outside the home. It is a great help to them to be able to buy ready-prepared foods that are ready to eat with a minimum of attention in the kitchen. Many of these foods owe their existence in large part to the use of new chemical additives.

I am reminded of a remark a mother made to her six-year-old son in a supermarket. As he reached for a gaily colored package of food she said, "No, Johnny, don't get that. We'd have to cook it."

We think it would be improper to block the progress that is made possible by the safe, useful employment of chemical additives.

How then can we foster progress and safeguard the public health?

Surely the law should require adequate testing of a chemical before it is employed commercially in food. The test results should be submitted to the Government, and the chemical should not be used until the Government, acting for all the people, agrees that it is safe for the proposed use.

In one form or another these principles for safeguarding the food supply are being proposed to the present Congress. Several bills to amend the Federal Food, Drug, and Cosmetic Act are now before that body.

But a new law will not solve all of the problems. Laws are not perfect. Some of the decisions made in good faith by the administrators of the law will turn out to be less than ideal. When improved scientific procedures reveal new facts decisions may have to be changed. But if we have the best law it is possible to secure, if we give it the best administration possible, if we use the best scientific evidence available, and if the administrators of the law are willing to consider new scientific facts as they become available and make changes when necessary, we will safeguard the public health while securing the benefits of modern technology.

Current Problems that the Consumer Should Understand

There are some immediate problems with respect to chemical additives that may interest you.

There are many groups in this country with unorthodox ideas about food and about the proper method of obtaining wholesome food. Unscrupulous promoters spread these ideas and then cash in by offering vitamin and mineral products as cure-alls for every kind of human ailment. They are beginning to offer concerted opposition to any effort to require their claims to adhere to recognized scientific facts. We have recently prosecuted successfully two of the major peddlers of nutritional quackery. We have an injunction against a third. These and others with related ideas are banding together to fight the Food and Drug Administration and effective law enforcement. They attempt to smear the responsible scientists who make good food protection possible. We need your help in support of good law enforcement and in the education of consumers to the tactics being employed by militant food faddists.

There is considerable public concern about cancer-producing substances. Last August in Rome, Italy, there was an international conference on cancer. Some of the comments made there to scientists and for scientists were reported by the press and publicized widely in this country. They were interpreted as indicating

that many cancer-producing materials are being added to the food supply. The general apprehension was not allayed by several statements recently inserted in the Congressional Record.

I would like to emphasize that the Food and Drug Administration does not know of any evidence that our food supply or any individual food being distributed in this country produces cancer when it is eaten. If we had such evidence we could and would take immediate action to remove the food from the market under the present law.

The Food Protection Committee of the National Research Council issued last December a "Statement on What We Know About Possible Relationships Between Cancer and Food Additives." It is significant that it does not use the alarmist approach.

What about coal-tar colors in foods? Soon after the 1938 law was passed we established as authorized by the law a list of coal-tar colors which, according to the best scientific evidence then available, were absolutely harmless. In the years that followed, the science of pharmacology made great progress. When improved techniques were applied to these materials we found that some of the colors formerly considered harmless could produce adverse effects when fed to test animals in very high dosage. In some instances colors were used in foods in a concentration far greater than normal, and the food so treated caused stomach upsets. Our conclusion is that these colors are not harmful to man when used in a reasonable concentration in food but they certainly do not meet the requirement of the law that they must be "harmless." We have therefore removed two orange colors and a red color from the list eligible for certification, and we are in the process of removing four yellows.

Some people have misinterpreted this action. They have charged that the coal-tar colors are capable of causing cancer because one of the intermediates used in the manufacture of some of the food dyes is recognized as capable of causing cancer. We do not know of any evidence that any coal-tar color now permitted in food, or any of the three colors recently removed from the list of permitted colors, is capable of causing cancer when added to man's food supply. We do not agree that chemicals made from a harmful starting material must themselves be harmful. It is well known, for example, that ordinary table salt, sodium chloride, is composed of two very toxic components--sodium and chlorine--either of which could cause serious effects, if not death, if fed alone to man.

Antibiotics have been proposed as additives to preserve food. We do not know enough yet about the effect on man of long-term consumption of significant quantities of antibiotics to sanction their widespread addition to the food supply. We have established tolerances for two antibiotics in uncooked poultry because poultry is always cooked before it is eaten and because the evidence in our possession shows clearly that no significant residue remains in the cooked bird when the amount of antibiotic in the uncooked bird is within the tolerance level.

Preparations containing penicillin are used to treat dairy cows that have an udder infection called mastitis. To keep the drug out of market milk we required the products to be labeled with a warning that the milk should be discarded for the first three days after treatment. But the dosage per treatment has gradually increased from less than 100,000 units of penicillin a few years ago to as much as $1\frac{1}{2}$ million units, and the precautions originally deemed adequate are not sufficient now. There are minute quantities of penicillin in a significant percentage of today's market milk.

A number of medical experts that we have consulted are concerned about the situation, although they are not sure that an imminent public health hazard has been

demonstrated. So we are seeking means of getting penicillin out of milk. We have asked the U. S. Department of Agriculture to cooperate with us in a very broad educational campaign designed to acquaint dairy men with the steps they must follow to produce clean milk free of penicillin, and we have published a proposed change in the regulations that would limit the amount of penicillin in a mastitis preparation to 100,000 units per dose.

There is considerable opposition to this last proposal. Many veterinarians and dairymen do not want to have the amount of penicillin limited. We have not yet decided what final action to take but I can assure you that the decision will be one that in our judgment will be designed to protect the public health.

Another recent survey shows that some market milk contains measurable quantities of pesticide residues, principally residues of chlorinated hydrocarbons such as DDT. We have not established any tolerance for any pesticide residue in milk. Milk containing the residues is illegal in interstate commerce.

The clean milk program being sponsored by the Department of Agriculture, mentioned a moment ago, is designed also to acquaint dairymen with the precautions they must observe to keep pesticides out of their milk. We do not think the situation here is critical. It deserves attention and is receiving it.

Incidentally, we have some requests from chemical manufacturers right now for the establishment of tolerances for very small quantities of pesticides in milk. We have not reviewed the scientific data submitted to show the safety of these residues and do not know what action will be taken on these petitions. Again we can assure you that the action will be that which in our opinion, based on sound scientific evidence, will protect the consuming public. We will be glad to receive scientific facts from anyone who has them concerning the safety of small amounts of pesticides in milk.

There are many other important problems in this field. For example, there is little doubt that as the peacetime use of atomic energy grows, food will be exposed to small amounts of radioactive waste products. We will have to determine what residues of these substances are without hazard and see that the food supply contains no more than these safe amounts.

Thank you for the opportunity of meeting with you and discussing this most important subject.