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hearing forum was the proper method for getting other input into the decision-making (See FOOD CHEMICAL NEWS, June 10, Page 20).

In the toxicological testing program being conducted as part of the GRAS review, FDA said 34 substances will be tested for teratogenic activity during 1974. Results of 42 tests completed so far have been forwarded for incorporation in the scientific literature reviews, FDA said.

Statistical evaluations of 20 chick embryo and mutagenic tests conducted in 1972 will be completed in 1974, FDA said.

FDA also confirmed that it would undertake a cyclic review of food additives, with the agency making a final decision in 1975 concerning the procedural steps necessary to sustain the cyclical review (See FOOD CHEMICAL NEWS, May 6, Page 75).

In the color additive area, FDA said it will:

- Develop model systems in conjunction with industry designed to demonstrate the stability of colors during the manufacture of food products to which they are added (See FOOD CHEMICAL NEWS, Dec. 3, Page 3).
- Chemically and toxicologically review the stability data submitted by color petitioners.
- Continue the toxicological review of 25 reproduction studies submitted by industry (See FOOD CHEMICAL NEWS, March 11, Page 2).

BRITISH STANDARDS COMMITTEE RECOMMENDS REVISED STANDARDS FOR BREAD, FLOUR

A report of the British Food Standards Committee has recommended that the standards for bread and flour in that country be revised to set maximum usage limits for bleaching and improving agents and to specify permitted raising agents in future bread and flour regulations, superseding a food standard for self-rising flour.

The Committee, which conducted their review of the standards with the assistance of the Food Additives and Contaminants Committee and the Committee on the Medical Aspects of Food Policy, saw no need for changes in the addition of chalk to flour and the addition of the nutrients, iron and Vitamin B₁ (thiamin).

No need was seen to extend the regulations to include flour confectionery and biscuits.

In another recommendation, the Committee said that bread sold as "light" bread should be regarded as bread with a slimming claim, subject to the controls in the Labeling of Food Regulations.

During 1974, the materials said, FDA will also begin an epidemiological study of the interaction of DDT, mercury and PCBs to determine what happens to the overall toxicity of these compounds when found together in fish.

Work is also continuing on PCBs alone, FDA said, noting that in order to assess the hazards of PCBs in fish, the agency is determining the amount of PCBs ingested from fish by a selected exposed population and the possible correlation between the level in the subjects' blood and the amount of fish ingested. Another study is being sponsored to determine the consumption of cadmium, selenium and zinc in humans from shellfish.

FDA is also continuing work on the hazards of PCBs in animal tests, using rats, sheep and swine.

In the area of new methodology, FDA said a method has been developed for the simultaneous determination of lead, cadmium and zinc in some foods with a range of sensitivity from 0.02 to 0.5 p.p.m.

Promising results were also obtained from another multi-element method for determining arsenic, mercury and selenium, with a sensitivity of 0.005 p.p.m. for mercury and 0.05 p.p.m. for arsenic and selenium, the agency reported.

FDA said it has awarded a contract to Iowa State University to develop a method which can simultaneously measure micro amounts of about 15 metals in food.

The agency noted that it is continuing the monitoring of pesticides both in the Total Diet Program and in others covering both domestic and imported foods. The agency noted declines of BHC levels in European cheeses as a result of monitoring effects, and said new programs have been established to deal with endrin and endosulfan residues in strawberries and Monitor-4 residues in peppers coming to the U. S. from Mexico.

New Elements Are Added to Total Diet Program

In the Total Diet Program, FDA said it will measure levels of antimony, chromium, tin, copper, beryllium, germanium and thallium to determine whether they may be excessive.

In an update on the review of "generally recognized as safe" substances, FDA said the evaluation will have covered substantially all of the non-flavor substances on the published GRAS list by the end of 1975.

CORRECTION: FOOD CHEMICAL NEWS in the June 20 issue on Page 20 erroneously reported that the first contract with the Flavor and Extract Manufacturers Association for "scientific literature reviews" of 276 flavors amounted to \$500,000. The figure should have been \$250,000.

In other materials submitted to Whitten, FDA confirmed that it had abandoned the idea of using consumers in the reviews conducted by the Federation of American Societies for Experimental Biology, noting that it was determined that a public

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RONK SAYS PVC DATA SHOW LOW MONOMER LEVELS WITH CURRENT USES

Richard Ronk, Director of the Division of Food and Color Additives, reported last week that the Food and Drug Administration is getting data that indicate that the vinyl chloride monomer in polyvinyl chloride rigid plastics under current manufacturing procedures is being detected at about 5 p.p.m., and vc monomer migration is about 20 p.p.b. in food.

Ronk outlined the current status of PVC to FDA's Ad Hoc Consumer Representatives at their meeting with FDA June 12.

He told the consumers that FDA has gotten little data from its formal request in the Federal Register (See FOOD CHEMICAL NEWS, April 29, Page 21), indicating that most of the information had been supplied through a request made earlier to the Society of the Plastics Industry (See FOOD CHEMICAL NEWS, April 22, Page 21).

Ronk said SPI's response would be made available at the Office of the Hearing Clerk when the agency publishes its proposal on the monomer limits the agency expects to set.

FDA had been expected to propose to limit vinyl chloride to less than 10 p.p.m. in rigid PVC plastic, with a limit in an end test of 50 p.p.b. For PVC films, the limit was expected to be 1 p.p.m., with an end test limit of 50 p.p.b.

In his presentation, Ronk noted that previous information supplied FDA indicated that the PVC monomer levels were much higher in practices used several years ago, but these have been substantially refined.

Desmond Continues Battle Against Use of Poultry Waste for Feed Use

During the meeting, Ruth Desmond, President of the Federation of Homemakers, reiterated her objection to FDA's sanctioning the use of dried poultry waste for animal feeds, saying she had learned that Chairman Whitten (D-Miss.) of the subcommittee on Agriculture -- Environmental and Consumer Protection Appropriations was now attempting to influence the agency's decisions (See FOOD CHEMICAL NEWS, Feb. 4, Page 28). She suggested the waste be used for fuel instead of food.

Commissioner Schmidt said the subject must be approached "realistically," and said FDA is, in fact, studying the conditions under which the poultry waste may be used safely as a feed ingredient.

He said there are six major issues of concern, five dealing with adulteration requiring elimination of (1) heavy metals, (2) pesticides, (3) mycotoxins, (4) drug residues; and (5) microbiological contamination.

(2) Interstate Restaurant Supply Company, Inc., Los Angeles, Calif., and an individual, on charges various types of rice were held under insanitary conditions and were insect contaminated; and (3) Pacific Macaroni Company, Los Angeles, Calif., the firm's general manager and its plant superintendent, on charges dried whole egg solids, spaghetti, and macaroni were held under insanitary conditions.

Recent insanitation seizures involved:

(1) modified food starch, in possession of Green Boys Foods, Inc., Los Angeles, Calif., on grounds it was held under insanitary conditions; (2) multiple foods, in possession of Great Lakes Terminal Warehouse Company, Toledo, Ohio, on grounds they were held under insanitary conditions and were rodent contaminated; (3) sesame seeds, in possession of Stockton Port District, Stockton, Calif., on grounds they were held under insanitary conditions and were rodent contaminated; (4) soybeans, in possession of Crispy Corn, Inc., Bellingham, Wash., on grounds they were held under insanitary conditions and were rodent contaminated; (5) Spanish shelled peanuts, shipped by Columbian Peanut Company, Pelham, Ga., to Banner Candy Manufacturing Corp., Brooklyn, N. Y., on grounds they were held under insanitary conditions and were rodent contaminated; and (6) macaroni products, shipped by Porter-Scarpelli Macaroni Company, Portland, Ore., on grounds they were prepared, packed and held under insanitary conditions, and labeling did not comply with the Fair Packaging and Labeling Act.

USDA TESTING CATTLE IN 9 STATES FOR RESIDUES BECAUSE OF FEED MIXUP

The Department of Agriculture is monitoring dairy cattle in nine states for polybrominated biphenyl residues, after a mixup between a feed supplement and a compound used as a fire retardant led to a broad contamination of herds in Michigan (See FOOD CHEMICAL NEWS, May 27, Page 34).

Inspectors from USDA's Animal and Plant Health Inspection Service have begun monitoring in Ohio, Wisconsin, Georgia, Missouri, Indiana, Illinois, Iowa and Kentucky, in addition to Michigan.

Michigan Chemical Corp., which manufactures both the feed supplement and the fire retardant, has recalled all lots of magnesium oxide, the feed supplement, manufactured since March 1973, from those eight states because the products have been mixed. In addition, a recall was made by Farm Bureau Service in Battle Creek, Mich., for its "24% Hi Moisture Corn & Silage Balancer No. 402" manufactured since March 1973, because the fire retardant was used as an additive instead of the feed supplement.

APHIS inspectors have taken some 120 tissue samples for PBB testing and about half have been analyzed in APHIS laboratories. None has shown any PBB residues.

The Michigan Department of Agriculture has quarantined 34 dairy herds, 3 beef herds, 3 flocks of chickens, 2 hog herds, and one small flock of sheep, preventing the movement of the animals or their products to market. Michigan conducts its own inspection program and is also testing for PBB residues in meat and poultry.

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It is doubtful that many of the cattle can be saved. One official of the Agricultural Research Service stated that his research shows the half-life of the hexabrominated biphenyl compound is about 8 weeks. Since the Food and Drug Administration guideline is 1 p.p.m. in milk, and some of the cattle have concentrations as high as 100 p.p.m., there is little hope for saving the cattle. High concentrations of PBB residues in the cattle tissue make it unlikely the cattle can be slaughtered for meat, either.

The major problem right now is disposing of the cattle. An official of the Michigan State Department of Agriculture noted that the problem now is basically a legal one -- no one has the authority to condemn the cattle and then make indemnity payments. The Michigan State Legislature is working on legislation which hopefully would resolve it.

Cooperative research between ARS and Michigan State University is being conducted to study the reaction of the cattle to the chemical. However, an ARS official stated this is basically just toxicological research, with little hope for alleviating current problems.

USDA Reports Finding First Positive 1974 DES Residue Sample

USDA has found a positive sample for diethylstilbestrol (DES) in the liver of a Nebraska heifer, the first such finding since a U. S. Court of Appeals ruling in January permitted the resumption of its use (See FOOD CHEMICAL NEWS, May 13, Page 30).

The sample was taken as part of the routine random sampling procedure of the APHIS National Residue Monitoring Program. To date APHIS inspectors have taken 1,049 samples in 1974, and this violation is the only one found. USDA inspectors are sampling about 300 carcasses a month for DES residues.

The positive finding was identified as coming from the liver of a heifer owned by Orville Blauhorn of Palmer, Neb. The finding was confirmed by APHIS and the Food and Drug Administration. Both agencies state they are taking necessary regulatory actions to prevent recurrence.

MPJ Bulletin Permits Mixture of MSG and Nitrites

The APHIS Washington Staff has informed the field that plants may receive mixtures of monosodium glutamate and curing mixtures without separating them. The bulletin noted that the formation of nitrosamines has not been demonstrated when the two are mixed, although other spice mixes containing sodium nitrite or sodium nitrate have resulted in nitrosamine formation (See FOOD CHEMICAL NEWS, Nov. 12, Page 51).

The bulletin added, "Of course, if spices or other flavoring or seasoning components are included with the cure and the MSG, then separate packaging would be required for those materials." In another bulletin to the field, APHIS officials stated that Canada has added the Federal Republic of Germany, the Netherlands, and Denmark to the list of countries not using DES. If the U.S. can certify that beef, mutton, or lamb come from one of those countries, it will be accepted into Canada.

He said the other concern involves the establishment of a satisfactory compliance program to insure that proper enforcement of the FDA established standards is carried out.

Desmond contended that FDA does not have enough manpower to police a standard for use of poultry waste, and she argued that the program should not be left to the States to enforce.

At the meeting, FDA previewed for the consumers the new film, "Read the Label, Set a Better Table," starring Dick Van Dyke, which is being used to promote nutrition labeling use, and a TV spot featuring Pearl Bailey (See FOOD CHEMICAL NEWS, June 3, Page 36).

Waynes Pines, of FDA's Consumer Education Office, reported that ITT Continental has announced it will use the "Read the Label, Set a Better Table" slogan on Wonder Bread.

James Turner, attorney with the Washington law firm of Swankin, Turner & Koch, asked whether use of the slogan on a food package would trigger nutrition labeling requirements.

FDA-ers at the meeting were not sure, but there was a general consensus that it would not.

FDA IS DEVELOPING METHODS TO DETECT DIOXINS IN FOOD

The Food and Drug Administration has begun the development of analytical methods sensitive enough to detect a wide variety of chlorinated dibenzo-p-dioxins in different types of foods.

In material submitted to Chairman Whitten's (D-Miss.) subcommittee on Agriculture -- Environmental and Consumer Protection Appropriations (See FOOD CHEMICAL NEWS, June 10, Page 30), FDA noted that the dioxins, which are regarded as "highly toxic," have been identified in chlorophenols, in products from chlorophenols and in certain foods and feeds.

Earlier this year, FDA detected residues of pentachlorophenols (PCP) in some food products as a result of migration from wrappings and other containers (See FOOD CHEMICAL NEWS, Feb. 25, Page 3).

In the background information sent to Whitten, FDA noted it has toxicological studies under way on the dioxins.

Dibenzofuran Toxicology, Methodology Work is Begun by FDA

The agency also reported that chlorinated dibenzofurans were found in one foreign commercial polychlorinated biphenyl product, noting that the chlorinated dibenzofurans are generally more toxic than PCBs.

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Examination of domestic and foreign PCBs for dibenzofurans began in 1974 and will continue in 1975, if necessary, FDA said, noting that both toxicological studies and analytical methodology work has begun on the substances.

FDA said it had also detected hexachlorobutadiene, a toxic by-product in the manufacture of perchloroethylene, in some fish in 1973, and a limited field survey was begun to determine the level of contamination of hexachlorobutadiene in fish and other foods grown near industrial plants producing the toxic substance.

FDA said it will continue participating in the establishment of policy statements issued by the Environmental Protection Agency for use of sludge and effluents on food, forage and feed crops.

The report to the Committee indicated that FDA will be establishing guideline levels for cadmium in foods, but first the agency must determine the interaction of zinc with cadmium through more thorough long-term tests.

In another new area of work, FDA said development of analytical methodology will be started to detect phosphate esters in a variety of staple foods, pointing out that current information indicates that these esters have replaced PCBs in some hydraulic fluid applications. Noting that PCBs have contaminated fish, FDA said the phosphate esters "may have a similar effect."

Work continues on lead problems, FDA pointed out, noting that new studies will be undertaken to determine whether lead levels in infants' blood during the first year of life are primarily a reflection of the maternal blood level or are more a reflection of environmental lead exposure, which includes lead ingested from food.

FDA is also investigating diets of young children from high risk socio-economic and cultural groups to determine whether there is a relationship between levels of lead in diets of children and levels of lead in blood, the background support material pointed out, adding that attention has been directed to items that older infants eat, such as canned juices and vegetables.

Noting that there have been indications of a lead problem in some of these products, FDA predicted that guidelines will be proposed where appropriate. Industry is also improving technology to decrease the lead content in both infant and adult canned foods, the agency added.

FDA said it is sponsoring jointly with the National Science Foundation studies in Iraq on the effects of pre- and post-natal exposure to mercury, pointing out that Iraqi poisonings, resulting from misuse of mercury-treated wheat, support the toxicological basis for FDA's guideline of 0.5 p.p.m. of mercury in fish.

Interaction of Mercury, DDT and PCBs to be Studied by FDA

However, FDA emphasized that there are still doubts about the effects of chronic exposure to low levels of methyl mercury, including effects that cannot be measured, such as neuronal loss.

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