

Legal basis for Food Additives, Standards and Limitations.

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Since the beginning of the 1950's a still growing demand has been heard all over the world to facilitate the international trade by eliminating the trade barriers constituted by different national food legislation.

Considerable work has been put into setting up treatises, resolutions, agreements, codes of practice and food standards.

So far little seems to be attained, but is it because the work done has not been good enough?

Some people think so, but to be fair in their judgement the working conditions must not be neglected.

Promotors of all this work have been the developed countries which have a long tradition for food legislation even though very few have a food law, which dates back before this century.

No wonder that these countries think that their particular food law and regulations rank among the best in the world.

Perhaps they are right when it is applied to ^{harmonize} their country alone but the request to them is to seek to ~~their~~ harmonize their requirements with those of other countries to obtain a free flow of food products across the borders; not just in order to solve the shortage of food in certain parts of the world but also that the free trade might be an economic advantage to all of us.

Despite the small progress achieved in harmonizing food regulations the work on standards goes on.

The Latin America Codex Alimentarius is still under revision, ECE, the Council of Europe, ISO and Codex Alimentarius elaborate standards and a number of African countries have agreed within the framework of Codex Alimentarius to consider elaboration of standards peculiar to that region.

Not all of these organizations elaborate standards for meat and meat products but what they have in common are regulations on food additives which usually are the most difficult part to agree on.

Definition on food additives differ widely. In some countries the traditional concept of a food additive is any "foreign matter" whereas other countries consider all chemicals to be food additives.

To reach a common language in this respect it could be hoped that the definition of food additives which was adopted by the Codex Alimentarius in 1972 could in the future gain entrance in all food laws.

"Food additive means any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the international addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly) in it or its byproducts becoming a component of or otherwise affecting the characteristics of such foods. The term does not include "Contaminants" or substances added to food for maintaining or improving nutritional qualities".

This definition which may seem very long and complicated defines food additives by their function in the food whether this is technological or organoleptic or both.

It shall be noticed that ingredients such as starch, caseinate, soy proteins and the like which are used as binders or extenders in meat products are not considered as food additives.

All the matters considered food additives by this definition must be evaluated toxicologically and in order to procure uniform evaluation of food additives WHO and FAO in 1956 established "The Joint FAO/WHO Expert Committee for Food Additives" (JECFA) to evaluate food additives on the basis of all available data and, where appropriate, establish ADI's and chemical specifications for the additives.

The large number of food additives which has been offered the food industry from about 1960 made it almost impossible for the Committee to keep pace with the development.

This situation was relieved after the Codex Alimentarius established the Codex Committee on food additives which should work in close cooperation with the JECFA.

One of the responsibilities of the Codex Committee is to prepare lists of food additives for Toxicological evaluation by the JECFA. In the drawing up these lists due consideration shall be given to the technological justification for the use of the additives in specified products.

This has necessitated the establishment of criteria for, when the use of additives is justified.

Criteria for justified use of food additives.

The use of food additives is justified only where they serve one or more of the purposes set out from (a) to (d) and only where these purposes cannot be achieved by other means which are economically and technologically practicable and do not present a hazard to the health of the consumer:

- (a) to preserve the nutritional quality of the food; and international reduction in the nutritional quality of a food would be justified in the circumstances dealt with in sub-paragraph (b) and also in other circumstances where the food does not constitute a significant item in a normal diet;
- (b) to provide necessary ingredients or constituents for foods manufactured for groups of consumers having special dietary needs;
- (c) to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that this does not so change the nature, substance or quality of the food as to deceive the consumer;
- (d) to provide aids in the manufacture, processing, preparation, treatment, packing, transport or storage of food, provided that the additive is not used to disguise the effects of the use of faulty raw materials or of undesirable (including unhygienic) practices or techniques during the course of any of these activities.

These criteria are also used by JECFA in their consideration of food additives which have been passed on to the Committee through other channels than Codex.

In the past some food additives have not been permitted by the Codex Committee on Food Additives for the only reason that a satisfying technological justification was not produced.

This has happened also in the Codex Committee on Processed Meat Products where some countries were interested in having the option to use the food colour Erythrosine in Luncheon Meat, where offals and poultry meat are permitted.

When this request was first send to the Codex Committee on Food Additive it was rejected as the technological justification was deemed not to be convincing.

At the latest meeting of the Meat Products Committee we succeeded to set up a more elaborated argumentation for the

use of Erythrosine, which recently was accepted by the Food Additive Committee.

One of the difficulties in this case was, that despite it is well known, that the muscle pigment in a comminuted cooked meat product is unstable and fades rapidly by exposure to light and air, it was difficult to find research data which shows this.

More cases could be cited here, for instance justification for the use of Iso-ascorbic acid, but all of them will show the same need for a closer collaboration between the meat research workers and the food legislators.

If such collaboration is not established we run the risk that one day an essential food additive is forbidden, simply because its technological justification was not produced.

Some food additives of special interest to the meat-industry have not yet been evaluated namely smoke, smoke condensates and liquid smoke.

At the 19th meeting of JECFA in April this year the Committee put a questionmark on the safety of natural smoke and asked for additional information on the types of raw materials, the composition of smoke and the end-products, particularly those smoke components required to impart flavour and colour to the product. The effect of combustion on the composition of smoke, including the formation of impurities such as methanol and polycyclic aromatic hydrocarbons also need further elucidation. Furthermore information on the availability of a generally accepted analytical procedure for the determination of polycyclic aromatic hydrocarbons was asked for.

In considering smoke condensated and liquid smoke the Committee had insufficient toxicological information and the components were not evaluated.

As a result of the collaboration between JECFA and Codex Committee on Food Additives the latter has in 1973 published a list or rather a set of lists giving the present status of all food additives which have been evaluated. This list is intended to be supplemented regularly and the first supplement was issued in 1974.

One list contains food additives finally evaluated and given an ADI.

Another list shows food additives which have only temporarily been endorsed due to insufficient available data.

Up to now the Codex Committee for Processed Meat Products has only been mentioned in passing.

Some of you may not have had the opportunity to follow the work of this Committee so I shall try to summarize the work so far.

The Committee elaborates world-wide standards for Canned Corned Beef, Cooked Ham, Cooked Shoulder, Luncheon Meat and Chopped Meat. A Code of Hygienic Practice for Processed Meat Products has been elaborated alongside with the Code of Hygienic Practice for Fresh Meat elaborated by the Codex Committee for Meat Hygiene.

The standards for Corned Beef and Luncheon Meat and the Code are now finalized by the Meat Products Committee and sent to the Codex Alimentarius Commission for adoption at its next meeting in February 1976.

If these standards are adopted they will be sent to all member countries of Codex Alimentarius Commission with a request for possible acceptance.

The standard for Cooked Ham has been the most difficult, primarily due to the wide range of Cooked Ham products which should be covered to avoid encouragement of unfair trade practice and secondly because all existing expressions for the meat content were unacceptable to all countries except those countries where they were in use.

As a consequence the Committee had to find a new expression. The chosen and finally accepted expression was found in a Canadian paper by C. H. Perrin and P. A. Ferguson where the meat content was expressed as protein on fat-free basis (PFF).

The remaining problem in this standard is to find a minimum limit for PFF and have this combined with an appropriate sampling plan.

In the future the Committee has envisaged to deal with

- (a) levels of collagen-free protein in meat products.
- (b) standard for mechanically deboned meat and
- (c) non-meat protein in meat products.

A standing issue for a number of meetings has been and will probably be for some time microbiological sampling and inspection procedures.

In this respect the Committee works together with the ICMSF. Some voices have been heard, that microbiological standards for the end-product should be looked into by the Committee.

You all know the strong arguments for and against such stan-

dards so if the Committee, also in this respect, is not provided with sufficient scientific data the microbiological standards may be rather sophisticated.

Whether such high standards are accepted or not they will inevitably have an impact on national food legislation which may not be advantageous neither to the consumer nor to the meat industry.

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