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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

AD HOC INTERGOVERNMENTAL CODEX TASK FORCE ON ANIMAL FEEDING

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CHAIRMAN'S PROPOSAL FOR A REVISED DRAFT CODE OF PRACTICE ON GOOD ANIMAL FEEDING

1. INTRODUCTION

It is the purpose of this code to establish a feed safety system, which covers the whole production chain from farm to table in order to eliminate the potential risk to human health, animal health and the environment.

2. SCOPE AND PURPOSE

This code applies to the production and use of raw materials, feed materials and additives, manufacturing of feedingstuffs and the use of all feedingstuffs at farm level. The objective of the code is to encourage adherence to Good Manufacturing Practice (GMP) during the procurement, handling, storage, processing, and distribution of feedingstuffs for food producing animals. A further objective is to encourage good feeding practices on the farm.

There are potential risks to human and animal health and the environment associated with the contamination of feedingstuffs with chemical or biological agents or incorrect use of additives. This Code outlines the means by which these hazards can be controlled by adopting appropriate procedures for production, processing, handling, monitoring and use of feedingstuffs. The Codex International Code of Practice - General Principles of Food Hygiene[1] should serve as a model.

Complying the feedingstuff legislation should be supervised by national surveillance and control systems. A universal warning system with procedures for withdrawal of feedingstuffs from the market where there is a risk to human or animal health and the environment should be established.

The Code specifies the need for documentary control and labelling requirements for feedingstuffs to secure traceability of feed materials, technical supports and additives in feedingstuffs. The HACCP principle should be preferred to guarantee traceability on the production, handling, storage, transport and processing of feed materials.

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[1] *Recommended International Code of Practice - General Principles of Food Hygiene:* CAC/RCP 1-1969, Rev.3 (1997) in Codex Alimentarius, Volume 1B-Suppl.1, FAO/WHO, Rome 1997.

Handling of feedingstuffs at farm level and use must be included into the Code.

3. FRAMEWORK FOR THE CODE

3.1 DEFINITIONS

3.1.1. ***Feedingstuffs***: Organic or inorganic substances used singly or in mixtures, wether or not containing additives, for oral animal feeding.

3.1.2. ***Raw materials***: Various products of vegetable or animal origin and inorganic substances, where the destination has not been finally decided.

3.1.3. ***Feed materials***: Various products of vegetable or animal origin and inorganic substances used singly or in mixtures, whether or not containing additives, for oral animal feeding.

3.1.4. ***Compound feedingstuffs***: Organic or inorganic substances in mixtures, whether or not containing additives, for oral animal feeding in the form of complete or complementary feedingstuffs.

3.1.5. ***Complementary feedingstuffs***: Mixtures of feed materials, which have a high content of

certain substances but which , by reason of their composition , are sufficient for a daily ration only if used in combination with other feedingstuffs(concentrates).

3.1.6. ***Complete feedingstuffs***: Mixtures of feed materials which, by reason of their composition, are sufficient for a daily ration.

3.1.7. ***Additives in feedingstuffs***: Substances or preparations used in animal nutrition in order to effect the characteristics of feed materials, feedingstuffs or animal products or to satisfy nutritional needs or improve animal production or to meet specific nutritional needs of animals at a particular time or to reduce the harmful effect of animals excretion or to improve the animal environment.

3.1.8. Medicated feedingstuffs: Any mixture of a veterinary medicinal product or products and feed, which is ready prepared for marketing and intended to be fed to animals without further processing, because of its curative or preventive properties or other properties as a medicinal product.

3.1.9. Processing aids: Technical support, which does not leave residues in feedingstuffs after processing.

3.2. LEGISLATION AND OFFICIAL INSPECTION

The Code should be included in Codex Member nations feedingstuff legislation and information systems on feedingstuffs.

Codex Member nations should establish official inspection and control systems for feedingstuffs.

Programs allowing the industry to establish self-control systems for own checks (GMP-rules) should be established.

The draft code recognises the existing international legislation and rules on animal nutrition.

3.2.1. ***Documentary control***

Member nations shall take all the necessary steps to ensure that when products are introduced into the territory they are subjected by the competent authorities to a documentary check of each batch and to random identity checks in order to verify their nature, origin and geographical destination.

A certificate of origin is required for all feed ingredients.

3.2.2. ***Labelling requirements***

Labels should be consistent with any statutory requirements and should describe the feed and provide instructions for use. Labelling requirements shall ensure traceability for all feedingstuffs of animal orign, full labelling of ingredients, declaration of any genetically modified derived ingredient, the correct use of permitted additives, matters in relation to organic produced feed, monitoring programs for contaminants and nutrition profile and assessment of consequences for human and animal health.

The label must also contain information about the species or category of animal and the purpose for which the compound feedingstuff is intended.

To ensure traceability for all feedingstuffs full labelling of all ingredients, additives and technical supports are required.

Genetically modified organisms (GMO products) and organic produced feed must be labelled. Manufacturers must indicate on the label or in an accompanying document that the product may be produced from, may contain or may consist of genetically modified organisms. For products placed on the market in mixtures with non-genetically modified organisms, the label should indicate the possibility that genetically modified organisms may be present.

Trade name, the name and address of the producer or intermediates, registration number if available, product composition, direction for use, including precautions for use, lot identification and manufacturing date and use before or expiry date must be on the label.

3.2.3. ***Additives***

All additives in feedingstuffs should be approved with conditions for use.

Clarification on the definitions for feed materials, additives and veterinary medicine in animal nutrition must be established. Borderlines between feed materials and additives and between additives and veterinary medicine must be set, to prevent misuse or dual use.

Minerals, processing aids and other additives should be obtained from registered manufacturers who guarantee the concentration and purity of the products and provide instructions for correct use.

Antibiotics should not be used in feedingstuffs for growth promoting purposes.

3.2.4. ***Feed materials***

Monitoring of ingredients should include inspection and sampling of ingredients for contaminants using risk based protocols.

Laboratory testing, where undertaken, should be by standard methods.

Ingredients should meet acceptable, and if applicable, statutory standards for levels of heavy metals and other contaminants, which may give rise to human health hazards.

Standards for quality of fat should be established.

3.2.5. ***Feedingstuffs***

Feedingstuffs may be marketed only if they are wholesome, unadulterated and of merchantable quality.

Feedingstuffs may not represent a danger to human or animal health and may not be presented or marketed in a manner liable to mislead.

Standards for ionising radiation of feedingstuffs have been evaluated by WHO.

3.2.6. ***Feedingstuffs produced and used at farm level***

Good Agricultural Practice (GAP) should be introduced for production of forage crops (beet, potato, grass or seed production) intended for animal feeding.

The principle of Best Available Technology should be introduced together with Good Agricultural Practice for effective plant protection used on forage crops intended for animal feeding.

3.3 FOOD HAZARDS FROM FEED

The most important hazards from feedingstuffs to human health will be outlined in the annexes.

The Codex International Code of Practice - General Principles of Food Hygiene[2] should serve as a model.

Antibiotics should not be used in feedingstuffs for growth promoting purposes.

Dilution of contaminants should be avoided.

Zoonoses and microbiological contaminations of feedingstuffs should be limited.

3.4. INTERNATIONAL TRADE

The code is addressed to the whole feed chain, including producers, traders, transporters, processors, feedingstuff manufacturers and consumers of animal feed.

The Code should also refer to requirements for suppliers of additives, raw material and feed ingredients for animal nutrition in respect to traceability, quality, cross contamination and contaminants.

3.5. HACCP

The Code is implementing HACCP principles, as developed in the Codex "Recommended International Code of Practice - General Principles of Food Hygiene" [3].

4. RAW MATERIALS, FEED MATERIALS AND ADDITIVES

Raw materials of animal and plant origin should be obtained from well-defined traceable sources, with a supplier certificate (warranty).

A global list of raw materials which may give rise to health hazards and which are forbidden to use in animal feedingstuff production (seed treated with fungicides, waste, by-products from the food industry, the stomach content of slaughter animals, animal manure etc.) is given in annex I.

Ingredients should meet standards for levels of pathogens, mycotoxins, herbicides, pesticides and other contaminants which may give rise to human health hazards or may harm animals or the environment. Standards will be included in Annex II.

Standard for undesirable substances, chemical contaminants and substances, which might pose a risk to human health, will based on Risk Analysis be included in annex II, including agreed maximum contents for contaminants (incl. heavy metals) and residues of pesticides.

Standards for risk material relating to the use of meat and bone meal from ruminants (BSE/TSE) and fallen stock are considered in other Codex Committees.

Guidelines for decontamination of raw materials and ingredients will be developed.

Monitoring of ingredients should include inspection and sampling of ingredients for contaminants using risk based protocols or standards.

Laboratory testing, where undertaken, should be by validated standard methods.

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[2] *Recommended International Code of Practice - General Principles of Food Hygiene: CAC/RCP 1-1969, Rev.3 (1997)* in Codex Alimentarius, Volume 1B-Suppl.1, FAO/WHO, Rome 1997.

[3] Annex to the *Recommended International Code of Practice - General Principles of Food Hygiene: CAC/RCP 1-1969, Rev.3 (1997)* in Codex Alimentarius, Volume 1B-Suppl.1, FAO/WHO, Rome 1997.

5. GOOD MANUFACTURING PRACTICE (GMP)

5.1. GENERAL MANAGEMENT

The ultimate responsibility for the production of safe and wholesome feed lies with the producer or manufacturer who should produce feeds with as low a level of hazard as possible and complies with any applicable statutory requirements.

The effective implementation of GMP protocols will ensure that:

- buildings and equipment, including processing machinery, will be constructed in a manner which permits, case of operation, maintenance and cleaning;
- staff will be adequately trained and that training is kept up to date;
- records will be maintained concerning source of ingredients, formulations including details and source of all additives, date of manufacture, processing conditions and any date of dispatch, details of any transport and destination, delivery dates;
- records are maintained concerning sources of all ingredients (including additives), detailed formulations including, date of manufacture, processing conditions and date of dispatch, details of any transport and destination;
- water used in feed manufacture is of potable quality;
- machinery coming into contact with feed is dried following any wet cleaning process;
- condensation is minimised;
- sewage, waste and rain water is disposed of in a manner that ensures that equipment, ingredients and feed are not contaminated;
- feed processing plants, storage facilities and their immediate surroundings are kept clean and that there are effective pest control programs in place;
- all scales and metering devices used in the manufacture of feeds are appropriate for the range of weights or volumes to be measured. In addition, GMP protocols will require that all scales and metering devices be tested for accuracy at the time of installation, and as frequently as necessary to ensure proper function, but not less than once a year;
- all mixers used in the manufacture of feeds should be appropriate for the range of weights or volumes being mixed, and should be capable of manufacturing homogeneous mixtures. In addition, GMP protocols will require that the functioning of all mixers be verified at the time of installation; and as frequently as necessary to ensure proper functioning, but not less than once a year;
- all feed ingredients should meet minimum safety standards (e.g., heavy metal levels in minerals, maximum mycotoxin levels in grains, etc.);
- the proper use of feed additive medications; including manufacturing strategies to avoid cross-contamination (flushing, sequencing, and physical cleanout);
- the proper use of animal by-product meals; including manufacturing strategies to avoid cross-contamination (flushing, sequencing, and physical cleanout) between batches of feeds containing ruminant meat and bone meal and feeds destined for feeding to ruminants;
- the medicated feeds and medicating ingredients used in the manufacture of feeds be received, inspected, identified, handled and stored in such a manner that their potency and purity are preserved;
- procedures are in place, which allow the rapid recall of any feed, which is determined to pose a threat to animal and/or human health.

5.2. MANUFACTURE OF FEEDINGSTUFFS

Feeds should be stored and handled so as to prevent deterioration and contamination.

Processed feeds should be stored separately from unprocessed ingredients.

Containers and equipment used for transport, storage, conveying handling and weighing should be kept clean.

Equipment should be subjected to reasonable and effective procedures between batches of different formulations to control cross contamination, including physical means (vacuuming, sweeping, washing) and/or flushing and/or sequential production of feed, or other equally effective procedures

Pathogen control procedures, such as pasteurisation (heat treatment) or the addition of an organic acid to inhibit mould growth, should be used where appropriate and results monitored.

Apart from feeds fed moist, such as silage and by-products of brewing, ingredients and feeds should be kept dry to limit fungal and bacterial growth. This may necessitate ventilation and temperature control.

Waste and unsaleable material should be isolated and identified, and not recovered as feed.

Waste and unsaleable material containing hazardous levels of veterinary drugs, contaminants or any other hazards should be destroyed.

Feeds containing medication may only be used as an ingredient in a feed containing the same medication and that feeds containing ruminant meat and bone meal may only be used as an ingredient in feeds intended for feeding to non-ruminants.

Packaging materials and containers should be clean without any residues of foodborne hazards.

Packaging materials previously used for medicated feeds should only be re-used bags used to package feeds containing the same medication and that packaging materials previously used for non-ruminant feeds only be re-used for packaging non-ruminant feeds.

Labels should be consistent with any statutory requirements and should describe the feed and provide instructions for use. Labelling requirements shall ensure traceability for all animal feedingstuffs including full labelling of ingredients and declaration of any genetically modified derived ingredients, the use of permitted additives, matters relation to organic produced feed, monitoring programs for contaminants and nutrition profile, including labelling and assessment of consequences for human and animal health.

To avoid cross contamination feedingstuffs should be stored separately and delivered and used as soon as possible after manufacture.

5.3. RECORDS

Feed manufacturers should maintain records including master formulae, mixing sheets, daily production logs, inventory records, labels, invoices, file of complaints, file on manufacturing errors and corrective actions taken, analytical results and investigations of out of tolerance sample results, records respecting the disposition of returned and recalled feeds, records of the disposition of flush or recovered material**,** records of mixer validation and scale/metering device verification, etc**.**

6. STORAGE AND TRANSPORT

The HACCP principle should be preferred to guarantee traceability on the production, storage, transport and processing of feed materials.

During international bulk transport and on storage avoid contamination by introducing cleaning programs. Traces of detergents or disinfectants should be minimized.

Trucks, containers used for transport of feedingstuffs should be kept clean to avoid-cross contamination. Temperature should be kept as low as possible and avoid condensation.

7. GOOD AGRICULTURAL PRACTICE

7.1 FEEDING PRACTICE

The Code includes standards for good feeding practice by farmers to secure proper use of feedingstuffs.

Standards for animal feeding in relation to animal welfare and the environment will if possible be included in the annex to the draft code.

Drinking water should meet hygienic standards.

7. 2 PRODUCTION OF FORAGE CROPS

Raw material and forage crops must meet Good agricultural practice. Records should be available on use of seed, fertilizer, pesticides, pest control storage etc.

Forage crops and grain should be kept dry at sufficient low temperatures and with a low water content to avoid formation of mould and toxins.

LIST OF ANNEXES

Annex I List of raw materials, eg. quality of fat, which may give rise to health hazards and which will be forbidden in feedingstuffs.

Annex II Standards for undesirable substances, chemical contaminants, decontamination and substances that may pose a risk to human and animal health.

Annex III Standards for good feeding practice.