4. Processing Raw Materials

Scope

This section applies to the further processing of all classes of raw materials and relates to protection from re-contamination, adequacy of preservation and the minimising of hazards in medium risk raw materials.

4.1 Outcome

Further processed raw materials shall be adequately preserved, protected from re-contamination and hazards of concern shall be minimized.

4.2 General Principles

4.2.1 The further processing of raw materials shall be documented by the processor.

The principles in IS 8 are recommended as a guide to documentation.

Note: The Meat Regulations 1969, R261, requires all proprietors of approved byproduct works to keep records, including the nature and origin of the raw materials.

4.2.2 Further processed byproducts shall be stable under the intended conditions of storage and transportation.

4.2.3 During processing, handling and storing further processed byproducts shall be protected from re-contamination by unprocessed raw materials, under processed byproducts and contamination from other environmental sources. Procedures for minimising post-processing contamination shall conform to the requirements in IS 3, IAS 3 or IAIS 003, IAIS 006 as appropriate.

4.2.4 Unless otherwise permitted, all medium risk raw material shall be subjected to a thermal process in a premises licensed for the purpose. The thermal processes shall, at a minimum, render pathogenic vegetative microorganisms and organic substances innocuous.

4.2.5 Byproducts derived from medium risk raw materials that contain articles or substances which are stable under the intended thermal process, and are likely to cause direct or indirect harm to animals or people, shall be subjected to an appropriate laboratory analysis to determine the residue levels of the article or substance.

4.3 Preservation of Processed Byproducts

4.3.1 Meals

4.3.1.1 Meals shall be dried to the extent that they will not deteriorate under the conditions of storage.

The moisture content should be 10% or less.

4.3.1.2 Additives such as antioxidants and organic acid microbial suppressants shall be of an appropriate quality and conform to the following requirements:

(i) those outlined in Manual 15 Chemicals, in respect of additives and other processing aids.

(ii) any limitations on the use of specific additives, or levels of use of any additive, generally accepted for the intended use of meal or imposed by an importing country, see the OMAR.

4.3.2 Tallow and fish oil

4.3.2.1 Antioxidants of an appropriate quality may be added to tallow to minimise oxidative rancidity, see Manual 15, Chemicals.

4.3.2.2 Where antioxidants are used they shall conform to any limitations on their generally accepted use. Refer also to the OMAR.

4.4 Thermal Processing

4.4.1 Application

This section applies to medium risk raw materials where thermal treatment will minimise hazards of concern.

4.4.2 Minimising vegetative microorganisms

4.4.2.1 Except for medium risk material derived from seafood, all thermal treatments shall, at a minimum, eliminate vegetative microorganisms and reach a temperature of not less than 90°C for not less than 10 minutes at all points in the raw material.

4.4.2.2 Seafood shall be subjected to a thermal process that is adequate to minimise the hazard of concern. The processor shall determine and document an adequate thermal process.

When determining the minimum product temperature, the processor should take into account the particle size and the method of heat transfer throughout the material, i.e. convection or conduction, and assess the temperature based on the worst case scenario.

4.4.2.3 Notwithstanding section 4.4.2.1, blood meal may be produced in a ring drier, vertical flash drier or equivalent drying system provided it can be validated that the system achieves the following parameters:

(i) coagulation must involve heating to 88-92 °C for 5-10 seconds or longer,

(ii) during any dwell time before drying, but not exceeding 35 minutes, the coagulated blood must be kept at a temperature of 60-65 °C or hotter,

(iii) coagulated blood must be fed into the drier where the combustion temperature is not less than 350 °C and the exit air temperature is not less than 90 °C.

This process may not satisfy overseas market access requirements, refer to OMAR.

4.4.3 Minimising bacterial spores

Where it is a requirement that bacterial spores are killed, see OMAR, the thermal treatment shall deliver the equivalent of moist heat at 115°C for 60 minutes throughout all points in the raw material.

4.4.4 Microbiological surveillance

Thermally processed byproducts intended for use as animal food shall be subjected to a microbiological surveillance programme to determine the effectiveness of both the thermal treatment and the prevention of contamination.

The monitoring programme should be appropriate to the nature of the operation, the effectiveness of the treatment and risks of recontamination. IS 8: Appendix A and E may be useful in this regard.

4.5 Minimising Chemical or Physical Hazards

4.5.1 Byproducts derived from medium risk raw materials shall not contain chemical or physical agents that may result in harm when used for the intended purpose.

4.5.2 Any dead animal or killed animal harvested from a pest eradication area where any poison has been used, shall not be used for any byproduct unless the poison can be detoxified by the approved thermal process and the byproduct is thermally processed.

4.5.3 Any seafood containing natural toxic substances shall not be used for any byproduct unless the substance can be detoxified by the approved thermal process and the byproduct is thermally processed.

4.5.4 Any raw material derived from scraps and wastes from the processing of products or byproducts where chemical agents have been used shall not be used for any byproduct unless the chemical agent is/or can be rendered harmless.

4.5.5 Any raw material that is used in the formulation of feed for animals shall not contain chemicals that will harm animals, irrespective of whether these chemicals were added during any previous processing or were inherent in the raw material.