



F E M A S

Whole Cereal Processing

FEED MATERIALS ASSURANCE SCHEME

WHOLE CEREAL PROCESSING SECTOR NOTES

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NOTE: Although these Sector Notes may be translated into various languages for the convenience of users, the English version remains the definitive reference document in the event of any dispute.

NOTES ON THE IMPLEMENTATION OF FEMAS FOR BUSINESSES PROCESSING WHOLE CEREAL GRAINS

Sector Notes are provided to assist FEMAS participants and assessors in establishing some background knowledge of specific feed industry supply sectors where issues may exist that are uncommon, or of less relevance, in other sectors. These Notes are not necessarily exhaustive.

These Sector Notes are relevant to businesses involved in the processing into animal feed of whole cereal grains, including: production of cooked & flaked cereals, by-products & co-products from wheat milling, oat milling, dry maize milling & wet maize milling, rye milling, rice milling and similar processes.

These Notes are laid out in the same format as the FEMAS International Core Standard. Where additional comment is necessary, the clause reference is to the appropriate section of the FEMAS International Core Standard. It is emphasised that the comments included in this document are intended to assist in the application of the corresponding requirements of the FEMAS International Core Standard and are not to be considered in isolation. For clauses where no additional comments are provided in this document, the original requirements of the FEMAS International Core Standard continue to apply without any additions or exclusions.

In subsequent issues, additions and amendments to these Notes will be shown in *blue italics*, for ease of reference.

The assistance of the National Association of British & Irish Millers (NABIM) in preparing these Notes is gratefully acknowledged.

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1.10 Definitions

By-product (Co-product): Product produced as the result of a process primarily intended to produce a different product.

By-products of Whole Cereal Grain Processing: By-products from wheat milling, oat milling, dry maize milling & wet maize milling, rye milling, rice milling and similar processes. Also products of cereal processing 'downgraded' from human food status and offered as animal feed.

Products of Whole Cereal Grain Processing: Whole cereals that have been cooked, flaked, extruded, expanded, cut, cleaned or otherwise processed. Also small grains separated during the processing of whole cereals.

For additional definitions refer to FEMAS International Core Standard

SECTION 3 RESOURCES AND GOOD HYGIENIC PRACTICES

3.7 Driers / Drying

Where participants receive cereals that have been dried prior to receipt, they must be able to demonstrate that no additional hazards have been introduced to the product during the drying process. Of particular interest are any potential chemical contaminants resulting from cereals coming into contact with combustion gases or fuels that are only partially combusted.

3.17 Sieves, Screens, Filters & Separators, Magnets & Metal Detectors

Where cereal processors utilise separators, sieves or screens to clean products, and cleanings from this equipment form a component of the feed ingredients produced, participants must be able to demonstrate that harmful physical contaminants are separated from those cleanings destined for feed use. Harmful physical contaminants must be disposed of and not reincorporated into feed ingredients at any stage.

SECTION 5 PRODUCT SAFETY MANAGEMENT

5.1.5 Hazard Analysis / Identification (CODEX Principle 1)

Where feed ingredients are derived as a consequence of producing another product, rather than being the main products of the business, particular attention must be paid to whether undesirable substances or contaminants may be concentrated in feed ingredients as a result of any processing undertaken.

5.4.1 Raw Materials Suppliers

Where participants are purchasing cereals from non-assured sources, risk assessments must demonstrate that any additional potential hazards associated with non-assured cereals are under control. This may be demonstrated by the auditing of suppliers, additional testing regimes, or a combination of the two. Controls must ensure that both home grown and imported cereals are assessed for potential hazards and suitable controls implemented.

5.13.5 Undesirable Substances

Participants' risk assessments must evaluate the potential hazards arising from naturally occurring toxins produced by moulds and fungi known to attack the cereal species being processed (for example Aflatoxins produced by the various *Aspergillus* species and mycotoxins produced by the various *Fusarium* species). Where identified as potential hazards by the HACCP study, appropriate measures must be put in place to ensure no statutory maximum limits for toxins are exceeded in any feed ingredients produced.

Seasonal conditions may increase the risk of mould or fungal attack in cereals. Participants must be aware of such potential hazards and have procedures in place to ensure that they are properly controlled.

Applicable Regulations

N.B. This section of the Sector Notes is intended to assist participants and assessors in identifying specific regulations that should be considered with regard to this sector. It is not necessarily exhaustive nor does it reduce the obligation of both participants and assessors to ensure they are familiar with any regulations relevant to this sector.

The following Guidance Values for maximum levels of mycotoxins in cereals and cereal products was issued by the EU Commission in July 2006. Although these are not (yet) legal limits the values stated here should be considered in any risk assessment by those offering Products & By-Products of Whole Cereal Processing:

Mycotoxin	Products intended for Animal Feed	Guidance Value mg/kg (ppm) @12% moisture
<i>Deoxynivalenol</i>	<ul style="list-style-type: none"> • Cereals & Cereal Products • Maize by-products 	8 12
<i>Zearalenone</i>	<ul style="list-style-type: none"> • Cereals & Cereal Products • Maize by-products 	2 3
<i>Ochratoxin A</i>	<ul style="list-style-type: none"> • Cereals & Cereal Products 	0.25
<i>Fumonisin B1 + B2</i>	<ul style="list-style-type: none"> • Maize & maize by-products 	60