



FEMAS Sector Note No. 11 – Root Crops

These Sector Notes apply to businesses producing or placing on the market root crop products for use as animal feed.

These Notes are not exhaustive, are intended to assist in the application of the corresponding requirements of the FEMAS Standard and are not to be considered in isolation.

Section 1 of these Sector Notes includes definitions of specific relevance to this sector.

Section 2 of these Sector Notes includes additional sector-specific information to assist Participants in complying with **Requirements, Interpretation, Guidance and Further Information** of the FEMAS Scheme. The FEMAS Scheme Rules provide the following definitions:

Requirement – Sets mandatory standards with which Applicants and Participants must comply to achieve and maintain certification.

Interpretation – Provides specific means for Applicants and Participants to achieve the desired outcome of the preceding Requirement. Applicants and Participants are expected to consider Interpretation and apply as relevant to their business. Failure to follow interpretation, resulting in the desired outcome of the Requirement not being achieved will lead to a non-conformance being raised against the requirement.

Guidance – Non-mandatory suggestions of useful tools and techniques for achieving and maintaining compliance or continuous improvement.

Further information – External sources of useful information, typically including references/web links to documents or other sources of information.

NOTE: Revisions introduced in this edition of the Sector Notes are highlighted in Blue.

1 Definitions

Root Crops	Tubers and roots of plants processed for use in human food or animal feed, including but not limited to sugar beet, potato, carrot and other edible root crops and their by-products.
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2 Sector-Specific Notes

HACCP and Feed Safety Risk Assessment		
B 1.7	<i>Interpretation</i>	<p><i>Sector-specific potential hazards include but are not limited to:</i></p> <ul style="list-style-type: none"> • <i>The presence of heavy metals in minerals and clays used in the process</i> • <i>The presence of Dioxins and PCBs in minerals and clays used in the process</i> • <i>Natural contamination of soil by heavy metals</i> • <i>Presence of pollutants, such as Dioxin and PCBs, and heavy metals dispersed from nearby industrial incineration and other industrial activities</i> • <i>The presence of animal protein/ bone spicules during harvesting</i> • <i>The presence of animals in root crops collected from field storage</i> • <i>Toxins produced by moulds known to attack the root crop species being processed</i> • <i>Glass, metal and other hazards entering harvesting machines due to human activity</i> • <i>Hazards introduced by applications of fertilisers, soil improvers etc. e.g. accumulated undesirable substances present in the soil (e.g. cadmium, lead, mercury, arsenic, etc.), manure, slurry or sewage sludge applied on the fields</i> • <i>Failure to comply with specified harvest interval periods following the use of agrochemicals, fertilisers or other applications to the land.</i> • <i>Treatments used on stored root crops to control sprouting, mould development or maturation</i>

Raw Materials and Raw Material Suppliers		
C 1.3	Interpretation	<i>It is recognised that the carriage of Root Crops may result in the presence of soil inside load compartments and transport delivering raw materials will often be inherently 'dirty'. Nevertheless, Participants should ensure that this does not adversely affect feed safety.</i>

Premises		
G 1.1	Requirement	<p>Where whole root crops, intermediate products or feed are stored outside, Participants must be able to demonstrate that no additional hazards are created by this practice. Among those issues to be considered are:</p> <ul style="list-style-type: none"> • Spoilage through mould activity • The development of toxins through mould activity • Ingress by pests and their potential incorporation into feed products • Contamination with pathogens through contact with bird and other animal droppings and urine • Contamination through vehicle movements and by litter, mud and ground water

Receipt of Bulk Raw Materials/ Feed		
H 2.5	Interpretation	<i>Where vehicles transporting Root Crops are not sheeted, or otherwise covered, Participants should demonstrate that this will not lead to unacceptable hazards as a consequence.</i>



Agricultural Industries Confederation Limited
First Floor, Unit 4 The Forum,
Minerva Business Park, Lynch Wood,
Peterborough, PE2 6FT.
Telephone: 01733 385230

E-mail: enquiries@agindustries.org.uk
www.agindustries.org.uk

