

FEED

Feedingstuff	Analytes	Examples of feeds to sample (please check applicability before sampling beyond these suggestions)	Priority and comments
Feed additives	<ul style="list-style-type: none"> • Hazardous elements (cadmium, arsenic, mercury or lead) • Dioxins, dioxin-like PCBs (DL-PCBs) and non-dioxin like PCBs (NDL-PCBs) • Melamine 	<ul style="list-style-type: none"> • Trace element products, e.g. <ul style="list-style-type: none"> ○ cupric sulphate pentahydrate (CuSO₄.5H₂O); ○ cupric carbonate (CuCO₃); ○ cupric oxide (CuO); ○ zinc oxide (ZnO); ○ manganous oxide / manganic oxide (MnO / Mn₂O₃); ○ manganous sulphate monohydrate (MnSO₄.H₂O); • binders; or • anti-caking agents. • Metallic compounds of trace elements (e.g. copper / manganese / zinc / iron / molybdenum / cobalt compounds) • amino acids ; or • urea & derivatives. 	<p>High priority</p> <p>The UK was required to prioritise sampling and analysis of feed additives by the Food and Veterinary Office in 2009.</p> <p>Due to the importance of this area, it is desirable that each bid include analysis of feed additives. If this is not possible, justification should be provided.</p>
Biofuel materials /co-products	<ul style="list-style-type: none"> • Dioxins, dioxin-like PCBs (DL-PCBs) and non dioxin-like PCBs (NDL-PCBs) • methanol • ethanol • hazardous elements (cadmium, arsenic, lead, mercury) • mycotoxins (aflatoxin B1 (AFB1), deoxynivalenol (DON), zearalenone) 	<ul style="list-style-type: none"> • wheat; • sugar beet; • tallow; • DDGS (mycotoxins); • glycerol; or • mineral salts. 	<p>High priority.</p> <p>There have been two incidents in the EU involving biofuel co-products in the last 3 years, most recently dioxins in</p>

	(ZON), ochratoxin A (OA), fumonisins B1 & B2 (FUM B1 & B2) and T2 & HT-2)		<p>animal feed oil/fats in Germany. Therefore, we are keen to focus sampling and analysis on biofuel materials/co-products.</p> <p>Several indicator NDL- PCBs should be included in the standard analysis of dioxin and DL-PCBs, so there should be no extra cost associated.</p> <p>Additionally, concerns have been raised over the levels of methanol, ethanol, hazardous elements and mycotoxins in biofuel co-products.</p> <p>We will consider bids for UK, EU and 3rd country samples in this case.</p>
Feed materials	<ul style="list-style-type: none"> Dioxins, DL-PCBs and NDL- PCBs 	<ul style="list-style-type: none"> Feed materials (e.g. anything ground, heated, smoked <i>etc.</i>) particular focus on feed oils/fats 	<p>High priority due to the latest incident regarding contamination of feed oils/fats with dioxins in Germany. It is likely that the FVO will cover this issue in their next mission to the UK in 2011.</p>

		<p>Due to the importance of this area, each bid should include dioxin, DL-PCB and NDL-PCB analysis of feed materials.</p> <p>We will consider bids for UK, EU and 3rd country samples for feed oils/fats in this case.</p>
<ul style="list-style-type: none"> • <i>Salmonella</i> species. 	<ul style="list-style-type: none"> • fishmeal; • oil seeds and their derivatives (e.g. soya or soya meal <i>etc.</i>) • wheat protein; • rape seed meal; or • sunflower cake. 	<p>Medium priority.</p> <p>Although there are no prescribed limits set in legislation, we feel that it would be useful to have some sort of idea of <i>Salmonella</i> contamination levels in imported feed to aid UK negotiations on microbiological controls in feed. Results should specify the strains. Please note that follow up action may be difficult.</p> <p>Sampling guidance to prevent cross contamination is available on request.</p>
<ul style="list-style-type: none"> • Hazardous elements (Cadmium, Arsenic, Mercury or Lead) 	<ul style="list-style-type: none"> • Any, but particularly fishmeal. 	<p>Medium priority</p>

			Ongoing sampling priority. In previous years' survey.
	<ul style="list-style-type: none"> • Mycotoxins (aflatoxin B1 (AFB1), deoxynivalenol (DON), zearalenone (ZON), ochratoxin A (OA), fumonisins B1 & B2 (FUM B1 & B2) and T2 & HT-2) 	<ul style="list-style-type: none"> • Cereals; • oil seeds; but • not groundnuts, unless sampling is to take place at a point of entry or packer/manufacturer <u>and</u> the groundnuts are not from a country of origin named in <u>Annex I of Regulation 669/2009</u>. 	<p>Medium priority.</p> <p>Ongoing sampling priority. In previous years' survey.</p> <p>Maximum permitted limits are set for aflatoxin B1, but only guidance levels are set for DON, ZON OA, FUM B1 & B2. No levels are set for T2 and HT2, but more data is required on their presence in feed.</p> <p>We recommend LAs carry out analysis of all the aforementioned mycotoxins, not just AFB1.</p>
	<ul style="list-style-type: none"> • Melamine (focusing on high protein feed materials) 	<ul style="list-style-type: none"> • High protein feed materials, but not samples from China that are part of 	Medium priority.

		<p>the current controls under <u>Commission Regulation 1135/2009</u>.</p>	<p>Ongoing sampling – in previous years' survey.</p>
	<ul style="list-style-type: none"> • <i>Ambrosia</i> seeds (ragweed) 	<ul style="list-style-type: none"> • Wild bird feed; or • Un-ground grains from the US. 	<p>Low priority</p> <p>Limits for this undesirable substance have just been set under Directive 2002/32. It is known to be a significant health problem from hay fever in Europe due to distribution in un-ground grains and wild bird feed. The maximum permitted limits do not take effect until January 2012, but we wish to see measure UK compliance before the limits come into force.</p> <p>The FSA will fund a few samples of these feeds, but due to low priority we do not encourage bids for a large number of samples under this category.</p>