

INDUSTRY CODE OF PRACTICE FOR ON FARM FEEDING

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This code was produced by the Assured Food Standards Technical Advisory Committee for animal feed whose members are drawn from the following organisations:

- n Assured Food Standards
- n Agricultural Industries Confederation
- n Local Government Coordinators of Regulatory Services
- n National Association of Agricultural Contractors
- n National Farmers Union

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Advisory Committee on Animal Feedingstuffs



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Disclaimer – This publication has been written in consultation with the Food Standards Agency and is correct at the time of writing (April 2010) and does not cover any guidance or information which may be published by the Food Standards Agency after this date.

1) Overview

This Code of Practice provides practical advice on how to maintain high safety and quality standards for feed by minimising risks and hazards and, by doing so, minimise the potential burdens and costs of extra bureaucracy and to satisfy customers' demands. While it draws on existing feedingstuffs legislation, it is not a comprehensive guide to the law.

The Code is a guide to best practice for all those involved in the feeding of farmed livestock whether by grazing; using single feed materials (formerly known as "straights"); buying in compound, complementary or mineral feeding stuffs; mixing complementary or complete feeds on farm; or any combination thereof. It covers all aspects of feeding on-farm – from the purchase of feed and feed ingredients to the production of your own feeds on farm for use by your own animals. Wherever possible, the guidance in this Code of Practice is based on best agricultural practice and the majority of farmers will find it consistent with what is practised on their farm.

This Code does not cover in detail the use of "premixtures" and feed additives [such as Vitamins A and D and Trace elements (copper, selenium, zinc etc)] which are covered by the specific requirements of the EC Feed Hygiene Regulation (1831/2003 – Annex II). For further advice on your legal obligations when using these products please speak to your local authority.

NB - For the purposes of this Code and the EC Feed Hygiene Regulation, "premixtures" and "feed additives" are those specialist feed products which are sold and labelled only as "premixtures" and "feed additives" respectively. They should not be confused with other commonly used feed products which are sold and labelled as "complementary feedingstuffs" or "mineral feedingstuffs".

Although many of the principles apply, the code should not be regarded as a complete guide to the requirements for farmers mixing medicated feedingstuffs and specified feed additives who must register with, and be approved by, the Animal Medicines Inspectorate (AMI) of the Veterinary Medicines Directorate (VMD). You must comply with the VMD guidance notes on manufacturing medicated feedingstuffs and feedingstuffs incorporating specified feed additives.

2) Registration and Approval

The EC Feed Hygiene Regulation (1831/2003) requires virtually all businesses that make, market or use animal feeds to be registered with or approved by their local authority (Trading Standards), or by the Department of Agriculture and Rural Development (DARD) in Northern Ireland. The requirements for the different types of business in GB are summarised below:

Type of Feed Business	Registration Requirement
Livestock farms that produce and/or use animal feed without mixing.	With local authority Activity code R13
“On farm mixer” who does not mix “premixtures” or “feed additives” nor compound feeds containing “premixtures” or “feed additives”.	With local authority Activity code R13
“On farm mixer” mixing “premixtures” or “feed additives” or mixing compound feeds containing “premixtures” or “feed additives”.	With local authority Activity code R10 or 11 NB – not required if previously registered under Feeding Stuffs (Establishments and Intermediaries) Regulations 1999 and local authority was notified by 1 Jan 2006 that this activity was continuing.
“On farm mixer” mixing medicated feeds or specified feed additives	With the Animal Medicines Inspectorate (AMI) of the Veterinary Medicines Directorate (VMD) (see Annex 2)
Arable farms that grow or sell crops for feed	With local authority Activity code R14
Other feed businesses such as agricultural merchants, hauliers, storers of feed, etc	With local authority Activity code - Various

“On farm mixing” is defined as the mixing of any feed ingredients at the same location as the livestock to which it is being fed.

A model application form for registration / approval can be found on the FSA website at www.food.gov.uk/multimedia/pdfs/feedfoodguidance.pdf

In Northern Ireland, registration is with DARD however farmers are not required to take any action as the relevant information for this has been compiled via Single Farm Payment applications.

3) Selling Feed

Producing compound feedingstuffs and feed ingredients for sale involves extra requirements under the law in addition to registration with your local authority and the provisions of this Code (for further information please speak to your local authority). Many assurance schemes require their members to purchase feed only from assured sources.

4) Producing Your Own Feed Ingredients

Well-produced feed ingredients are the essential first step to producing good, wholesome feed. Producing crops to recognised assured standards will provide you and your customers with confidence in your production standards. Many of the provisions set out below will already be part of the standards of such schemes. If you are not a member of a scheme, following the requirements set out in this section will provide you and your customers with additional confidence in your production system.

- a) Ensure that you comply with maximum permitted dose rates, restrictions on repeated applications and harvest interval recommendations for crop protection products.
- b) Ensure applications of compost and sewage sludge are in accordance with current legislation. For sewage sludge, the Sludge (Use in Agriculture) Regulations 1989 (as amended)] and the current Code of Practice for the Agricultural Use of Sewage Sludge and the BRC/ADAS Safe Sewage Sludge Matrix. For up to date information on compost visit www.wrap.org.uk/composting. Note that some assurance schemes may impose restrictions on the use of compost. Record all applications of compost and sewage sludge to land.
- c) Take regular soil and crop analyses for contaminants and recognise the potential for soil contaminants to affect feed raw materials.
- d) Do not allow livestock on land treated with digestive tract content for three weeks following treatment.
- e) Where organic fertilisers or soil improvers have been used keep pigs off treated land for two months. Keep other farmed livestock off the land for three weeks.

5) Buying Feed and Feed Ingredients

If you are a member of an assurance scheme, you will be required to purchase compound feedingstuffs and other feeds from a supplier belonging to a recognised feed assurance scheme such as UFAS. Even if you are not a member of a livestock assurance scheme, you should purchase feed from assured sources that are subject to independent audits as recommended by ACAF, reducing the need for you to undertake your own in depth checks.

- a) Co-products from the food production industry can be an important and nutritious feed material source. Buy co-products from merchants or manufacturers that belong to a recognised relevant assurance scheme such as FEMAS as required by your assurance scheme, or seek warranties from the supplier on the quality and provenance of the co-product.
- b) Rejected and unused fruit and vegetables and other materials from the end of the food chain can also be a nutritious source of feed, but always be aware of the reasons why food has been rejected and be aware of the hazards that this may present to farmed livestock.
- c) Co-products must not be purchased if the packaging material is still present. Check that any packaging has been completely removed from the co-products and rejected food products.
- d) Ensure that you receive all the appropriate documentation (the Statutory Statement) relating to the co-product to help with traceability.
- e) Be mindful of what may appear to be abnormally cheap or unfamiliar ingredients, particularly if offered by e-mail or over the internet, which may not be what they seem and could even be illegal to use in the UK. *Under the Feed Hygiene Regulations you may only buy feeds containing additives such as vitamins and trace elements from countries outside the EU from establishments that appear on an official list. Products from these countries can only enter the EU through companies which have a representative in the EU.*

6) Banned and Restricted Feed and Feed Ingredients

In order to maintain the UK's high standards of animal health and feed and food safety, there are a number of legal requirements that have been introduced to ban or restrict the feeding of certain products to farmed livestock. The main issues are set out below.

- a) It is illegal to feed any farmed livestock, including fish and horses, with prohibited processed animal proteins in particular mammalian meat and bonemeal, poultry meal, feather meal etc and gelatine from ruminants.
- b) Restricted animal proteins such as fishmeal can be fed but only to non-ruminant animals. If you intend to either use complementary feedingstuffs or mix feeds which contain fishmeal for non-ruminant feed use you must contact your local Animal Health office to establish whether you need to be registered or authorised.
- c) Permitted animal proteins such as milk and milk products can be fed to farmed livestock. However if you process, store, supply or use milk as a feed you will need to be registered with DEFRA Animal Health (Tel: 01905 763355) or DARD in Northern Ireland. This is additional to the registration requirements under feed hygiene.
- d) It is illegal to feed rejected food that contains meat, or has been in contact with meat.

- e) Packaged pet foods containing animal proteins intended for pets or working dogs must not be kept in the same store on farm as any livestock feed products and the feeding of pets or working dogs must be restricted to an area where farmed animals do not have access at any time.

7) Water

Your farm will have various water sources from which your livestock may drink. These will include streams, boreholes, troughs and other dispensers. Ensure that farmed livestock have access to clean water suitable for animal consumption. In order to achieve this:

- a) Observe application rates and minimum distance requirements when using chemical fertilisers, slurry, manure, pesticides or dairy effluent near sources of water.
- b) Avoid using chemicals or pesticides where there is a possibility of contaminating water sources. Always follow manufacturers' instructions.
- c) Site, regularly clean, and maintain water distribution systems and troughs to ensure sufficient supply and minimise possible contamination.

8) Taking delivery of feed and feed materials on your farm

Ideally, you, or someone appointed to act on your behalf, should be present for all of the deliveries to your farm. If you are not, ensure that you give clear instructions to the person delivering feed and feed materials on where to place feed deliveries. It may be useful to mark bins as part of this process. Make hauliers and other visitors to your farm aware of the biosecurity arrangements on your farm and ensure that they follow them. Before feed or feed ingredients are discharged:

- a) Seek assurances that the feed supplier and/or haulier are a member of UFAS, TASCC or other similar scheme. If they are not, seek written assurances that the haulier has followed proper procedures to maintain the integrity of the feed ingredient during transit.
- b) Check that the feed or feed ingredients delivered conforms to your order and that the relevant paperwork is correct.
- c) Visually inspect the feed or feed ingredients before unloading for any obvious defects (e.g., split bags and mould).
- d) If the feed or feed ingredients do not pass a visual inspection or paperwork check then, agree an appropriate course of action with the supplier. This can include rejection of the load.
- e) Ensure discharge facilities are suitable to avoid contamination of the load. Inform the vehicle's driver of the position of the correct discharge point.
- f) Retain the delivery notes so you can demonstrate traceability of all your feed.

9) Transporting and handling feed materials on your farm

Wherever possible, use dedicated equipment to handle feed ingredients. Where you are using your own transport to haul feeds and feed materials, take every step to keep it contaminant free.

Undertake effective cleaning and disinfection to ensure the cleanliness of all vehicles and other equipment used to handle and transport feed and feed materials, particularly where they have been used to handle any other materials which are potential contaminants.

10) Storing Feed and Feed Materials

Dry, moist and liquid feeds will require different storage regimes. Some of the main issues that you should consider in respect of each are set out below.

a) General requirements

- i) Store all feed or feed materials, including root crops, in a way that maintains its suitability as a feed or feed material.
- ii) Prepare and maintain all feed storage facilities on the farm in a clean condition, disinfecting as necessary, before use and between batches.
- iii) Take appropriate steps to exclude vermin, birds, domestic animals and wildlife from the stored material.

b) Dry feeds and dry feed materials

- i) On farm storage needs to be adequate to store the quantities delivered. If your storage capacity on farm is less than optimal, consider taking smaller, more frequent deliveries of feed.
- ii) Do not store feed or feed materials in close proximity to any products that could contaminate the feed (e.g., chemicals, treated seed, other feed ingredients or compound feeds).
- iii) Do not store feed or feed materials in close proximity to animals or animal waste, including manure.
- iv) Store products in such a way that make it easy for you to identify products and avoid any confusion that could lead to contamination.
- v) Before storing, critically assess the store, prepare, clean and, if necessary, disinfect all storage bins, silos, tanks, sheds or other farm stores
- viii) Be aware of other potential storage problems, such as humidity.

c) Forages and Roots

- i) Store hay, straw and silage in conditions that protect them from deterioration.
- ii) Store fodder beet and other root crops aerobically in a purpose built clamp. For longer-term storage (more than two weeks), keep the crop dry to prevent rotting.

d) Other Moist Feeds and Feed Materials

- i) Ensile moist feeds (e.g. brewers grains, pressed pulp) in clamps if they are to be stored for more than 1 month.
- ii) Short term storage (less than 1 month) doesn't necessarily require clamp storage though the material ought to be stored in a defined area, consolidated, sheeted and weighted down to avoid contamination and reduce deterioration.
- iii) Only use clamps and storage areas that have sufficient drainage to allow the efficient removal of effluent and washings. Collect and properly dispose of effluents and washings.

e) Liquid Feed Materials

- i) Ensure all liquid feed stores are watertight with all openings sealed effectively to prevent liquid loss.
- ii) Where used, keep heating coils in good repair and free from leaks.
- iii) Clean the tanks at regular intervals. Always clean tanks between storage of different types of liquid feed materials (i.e. vegetable liquid feed and molasses).
- iv) Ensure stores have sufficient drainage to allow the efficient and safe removal of washings.
- v) Regularly check and clean filters and strainers to avoid build up of potentially harmful material.
- vi) Cap the exposed ends of flexible hoses when not in use.

11) Mixing and Processing Your Own Feeds on-Farm

On-farm mixing can be defined as the mixing of ingredients which takes place at the same location as the livestock to which it is being fed. It may or may not include home-produced feeds. This operation can be as simple as mixing together two separate feed ingredients or the production of complex complete feeds using dedicated machinery such as feeder wagons.

- a) Undertaking on-farm mixing can be an economical way to feed your livestock but care must be taken in the mixing process and you are advised to consider the key general points below. Additionally, when producing more complex mixes, particularly those containing 'premixtures', feed additives or medicated ingredients, more detailed guidance is provided in Annex 4.
- b) Ensure personnel have the appropriate skills to match the scale, risks and complexity of the feed mixing operation.
- c) Keep the feed preparation site and all handling and mixing equipment clean, tidy, in serviceable condition and free from accumulated waste.
- d) Undertake measures as appropriate to avoid cross-contamination between different finished feeds either within the mixing equipment or in store.

- e) For sampling and record keeping in relation to on-farm mixing, follow the requirements indicated in Sections 13 and 14 below.
- f) If you employ a contractor to undertake the mixing on your behalf, then ensuring that they are certified to the NAAC Code of Practice for Mobile Feed Milling and Mixing will provide you with assurances over the quality of their operation.
- g) If you are using a contractor ensure that you provide a clean, safe working area together with clear instructions on feed formulation and storage.

12) Feeding Animals

Implement a feeding plan appropriate to the animal species. Be aware of the nutritional needs of your livestock and attempt to meet them through an effective, well-managed feeding regime. If in doubt, seek professional advice to help you with your feeding regime.

a) General

- i) Check labels on feed bags and purchased feed materials for nutritional information and expiry dates to ensure that each animal has access to a ration appropriate to its daily needs for health and maintenance.
- ii) Regularly clean all troughs and hoppers to minimise the risk of contamination from old feed.
- iii) Maintain and regularly calibrate all dispensing equipment.
- iv) Provide adequate trough space to ensure that livestock can obtain sufficient feed intakes.

b) Grazing

Consider the following points in respect of all grazing land. Spreading manures onto pastures can play a role in transferring disease to healthy stock. The main risk is from spreading fresh, unstored slurry. Risks can be reduced by storage, using low application rates and leaving the pasture for as long as possible before grazing.

- i) Manage grazing to minimise the possible contamination by physical, biological or chemical hazards and to ensure that the area is free from toxic plants such as ragwort.
- ii) Store slurries and organic manures for at least one month before spreading. Allow a rest period of at least three weeks, or eight weeks with respect to pigs, before letting livestock graze on land that has been treated with manure, to minimise biological cross contamination.
- iii) Observe withholding periods following agricultural chemical applications to the grazing area.
- iv) Composts produced from organic materials originating off farm may be beneficial but the application must be appropriate to the source of the compost, how it has been treated, the land to which it is applied and in accordance with regulations.

- v) Carefully consider the grazing or conservation of crops grown near factories or other industrial facilities where harmful emissions could lead to elevated levels of certain environmental pollutants.
- vi) Prevent livestock from accessing areas where redundant farm machinery is kept to prevent ingestion of grass contaminated by leaking batteries, flaking paint, etc.
- vii) If you use land other than your own for grazing your livestock, seek assurances about the previous use of the land and that it is suitable for animal grazing.

13) Sampling

a) On Farm Mixed Feeds

If you mix your own feeds on farm, take and retain representative samples of both the dry feed ingredients and the finished feed whenever you change batches of ingredients or formulations.

b) Keeping Samples

Store samples under conditions that prevent abnormal change in the composition of the sample or adulteration. Label samples clearly to show the type of feed and the date they were taken.

14) Record Keeping

Record keeping is an important element of traceability in the event of any problems. Keep records of the information listed below in an accessible place and make it available when required.

The names and addresses of the suppliers of all raw materials and other feed ingredients. Most of the information is contained on the delivery invoice or feed label.

- i) Details of where feedingstuffs were stored.
- ii) Detailed feed formulations of all mixes produced on the farm together with the date that each formulation started and ceased to be used.
- iii) Records providing details of the feed that was produced and when. A *'barn sheet'* or *'day book'* would usually fulfil this requirement.
- iv) The batch number, where one exists.
- v) Where appropriate, the complementary feedingstuff or mineral feedingstuff used, how much was used, into which feedingstuff it was incorporated and the date that it was used.
- vi) The date on which the feed was fed and to which animals.
- vii) The use of pesticides and biocides, including name of product, date purchased, date used and on which surfaces of which equipment/facility.
- viii) The use of plant protection products (herbicides, fungicides and pesticides) on all growing or stored crops (including grass and forage crops) used for animal feed.

- ix) The use of genetically modified (GM) seeds, including the variety and amount of any GM seeds bought and planted for feed crops. (Note however that in the UK at the time of writing no GM seeds are authorised for commercial planting).
- x) Any occurrence of pests or diseases that may affect the safety of primary products.
- xi) The results of any analysis carried out on samples taken from primary products or other samples taken for diagnostic purposes that have importance for feed safety.
- xii) It is recommended you retain any additional documentation that demonstrates that specific hazards have been addressed. This might include, for example, papers from contractors that a pest control system has been implemented or building work has been undertaken or materials have been purchased to protect supplies of feed.

Annex 1 - Sources and Thanks

The starting point of this code of practice was the NFU's Code of Practice for the Mixing of Feed On Farm. In the time since the code was launched in 2002 there have been a number of significant developments driving the need for a new code. As a result, this is a significantly expanded code. It covers all aspects of on farm feeding and not just on farm mixing.

It draws extensively on the recommendations made in the ACAF Review of On Farm Feeding Practices issued in 2003. It also recognises the requirements of the new EU Feed Hygiene Regulation that came into force in 2006 and has been further updated in 2010. The Code has also drawn some of its recommendations from the draft IFAP Code of Practice for Feeding Farmed Animals.

We gratefully acknowledge the considerable assistance given by representatives of the AFS Feed Technical Advisory Committee, LACORS, the Food Standards Agency's Animal Feed Unit and ACAF in drafting the Code.

Annex 2 - AMI Registration and Approval

This Code does not cover the mixing of medicated feed or the use of specified feed additives. Farmers mixing medicated feedingstuffs and specified feed additives must register with, and be approved by, the Animal Medicines Inspectorate (AMI) of the Veterinary Medicines Directorate (VMD).

For details on how to apply for approval and registration contact the AMI at the following address:

Animal Medicines Inspectorate,
Stoneleigh Park, Warwickshire, CV8 2LG
Tel: 024 7684 9260 fax: 024 7684 9261
e-mail: amienquiries@vmd.defra.gsi.gov.uk

Veterinary Medicines Guidance Note number 22 provides guidelines on the manufacture of medicated feedingstuffs and feedingstuffs incorporating specified feed additives and can be obtained from the VMD at the following address and weblink:

Veterinary Medicines Directorate
Woodham Lane, New Haw, Addlestone, Surrey KT15 3LS
Email : Telephone +44 (0)1932 336911 : Fax +44 (0)1932 336618
<http://www.vmd.gov.uk/General/VMR/vmgn/VMGNote22.pdf>

Annex 3 – Quick Guide/Checklist

On farm feeding practices are critical to ensure that the food chain is not compromised. As a producer of food you have responsibilities not only for the welfare of your animals but also to ensure that the animal itself does not affect the food that we eat.

Are you satisfied that the source and selection of feedingstuffs is from a reputable supplier?

Ensure the safety of the animal feed and that it is suitable for your particular animals.

Obtain adequate information allowing you to provide rations to meet your animals' nutrient needs.

What are the hazards on farm that may affect the quality of the feed?

Store feed in conditions that do not encourage mould growth (damp conditions).

Implement an effective pest control system.

Store feed in an area where there is no risk of cross contamination.

The transport of feed could introduce contamination into your feed.

Regularly clean and disinfect vehicles used to transport feed.

Wherever possible, use dedicated equipment to handle feed ingredients.

Good feeding practices are paramount.

Ensure all animals get the required intake of feed.

Avoid any cross contamination between different types of feeding stuffs - look at the label.

Make sure that banned substances and animal-by products are not being fed to particular species.

Assess the risk of contamination of land where animals are grazing. Typical problems would include not leaving an adequate time to introduce animals back to grazing land treated with manure or copper toxicity issues for sheep allowed to graze on land treated with pig manure.

Mixing feeds correctly is critical for feed safety.

Follow the various agencies' guidance and the attached information.

Consider introducing HACCP principles to identify the hazards. If in doubt, seek advice.

Annex 4 – Additional On-Farm Mixing Guidance

The following is a more detailed and expanded set of guidance for on-farm mixing (see Section 11) and would be considered appropriate for farmers conducting more complex mixes. In particular this would be relevant to mixers that incorporate premixtures, feed additives or medicated ingredients.

1) Personnel

Ensure that those mixing feed have the appropriate skills to match the scale, risks and complexity of the feed mixing operation. Ensure that they know from whom to seek advice and instruction where necessary. Record any training, either by practice or by instruction, and such skills developed. Even where a person can demonstrate competence by length of experience and on-the-job training it is useful to evaluate and record these skills.

- a) For operations where more than one person is involved, devise an organisational chart detailing all persons working in feed preparation and the tasks that they are authorised to perform.
- b) Ensure that you and your employees keep up-to-date with the legislation on the composition of animal feed (e.g., the Feeding Stuffs Regulations).

2) Equipment

- a) Keep the feed preparation site clean, tidy and free from accumulated waste.
- b) Clean all equipment used for handling feed and feed materials before use.
- c) Regularly calibrate all weighing and dispensing equipment.
- d) Keep feed machinery clean, in a serviceable condition and free from accumulated waste.
- e) Ideally, site and store machines under cover. Visually inspect machines on a regular basis. Maintain and clean handling equipment in accordance with manufacturers' instructions. Keep a record of all maintenance and cleaning carried out.
- f) Where the feed formulation is changed, consider dead spaces and other difficult to access areas of the plant to determine if any physical cleaning out is required.
- g) Ensure that the machinery can achieve an even mix and that it operates for a minimum specified time to achieve consistency in the finished feed. Seek advice from the machinery manufacturer or make regular checks to ensure that this happens.

3) Quality control

- a) Designate a competent person to be responsible for production and quality control and list their responsibilities. If nobody is designated, responsibility will fall on the farm business owner.

- b) Produce a written quality control plan to be approved, implemented and reviewed by the designated responsible person. Keep this as simple as possible but ensure that it contains:
 - i) details of the whereabouts of various documentation or record keeping systems;
 - ii) details of the sampling frequencies, procedures and retention systems;
 - iii) description and frequency of analysis of samples taken;
 - iv) information on any critical points in the manufacturing process that could give rise to hazard and undue risks (ie HACCP - see Annex 5);
 - v) a summary of the operational procedures in place to ensure the desired quality of feed.
- c) Record any departure from procedures agreed in the quality control plan
- d) Ensure that the feed being mixed is appropriate to the age, species and class of livestock to which it will be fed.
- e) Ensure controls are in place, including appropriate order of mixing different feeds, to prevent cross-contamination between types of feed containing -potentially harmful ingredients to particular animals
- f) Ensure that you are using the correct complementary feedingstuff by checking the label for the target species, the ingredients and its batch number. Always cross-reference this information against your mixing control plan. Accurately weigh all complementary feedingstuffs before mixing to ensure the correct inclusion rate.
- g) Consider the potential need to flush out any residues from a previous mixing if there is a risk of cross contamination.

4) Record keeping for on-farm mixing

In addition to general purchase and feed use records which apply to all livestock farmers some additional records are required when mixing feeds on farm.

- a) Record the batch number of any complementary feedingstuff used in the feed.
- b) Keep feed formula(e) records together with the date that each formulation started and ceased to be used readily available and produce them on appropriate request. Retain these for at least 12 months or 3 years in the case of feed containing medication.
- c) Create a formulation document for each feed produced identifying the ingredients used and their proportion/quantities in the complete feed.
- d) Document rules for scheduling of mixing different feeds that take into account the individual characteristics and any potential hazards identified for individual ingredients used. This is vital for feed mixed which includes medication which has an associated withdrawal period.

Annex 5 – HACCP

HACCP (often pronounced “hassup”) is short for Hazard Analysis and Critical Control Point. It provides a systematic approach to food (feed) safety management. You will identify the problems that may occur in your feed production operation and the key points where they can be controlled most effectively. A good HACCP system also includes ways to monitor that you have done things correctly.

HACCP is a legal requirement under the Feed Hygiene Regulations for certain feed establishments notably on-farm mixers using specialist premixtures and feed additives such as Vitamin A and D and trace elements (copper, selenium, zinc etc)

HACCP follows seven principles:

1. Analyse hazards

There are a number of hazards in animal feeds that can pose a significant risk to animals or even to the consumer of animal products. For feeds these will include:

- n Bacteria, fungi and other microbial pathogens
- n Mycotoxins (such as aflatoxins and ochratoxins)
- n Prohibited processed animal proteins (meat and bone meal)
- n Chemical contaminants ranging from veterinary/medicinal residues, fertilisers, pesticides and other crop protection chemicals, polychlorinated biphenyls and dioxins (from heating oil fumes from grain dryers etc) and lead and other heavy metals.
- n Physical contamination such as metal fragments, glass and similar.

2. Identify Critical Control Points (CCPs)

A HACCP study will analyse every step of the feed process to identify where hazards might occur and where they can best be controlled, the CCPs.

- n For many hazards, the first CCP might be careful selection and inspection of raw materials. If there is excessive contamination when it arrives the feed will be contaminated.
- n Careful storage can prevent contamination from pests and vermin or development of hazards like mycotoxins.
- n Cross contamination in stores or in mixing or weighing equipment can transfer a chemical, (see comments above), from one feed in which it might be acceptable into another where it is not.

3. Establish preventative measures with critical limits for each control

point These might include:

- n Checks on the supply source – for example currently certified in a feed assurance scheme
- n Planned pest control measures
- n Targets for temperature and moisture levels in stored feed materials that might otherwise permit mycotoxins to form.
- n Mixing particular feeds after others and thorough flushing and / or cleaning of the equipment afterwards

4. Establish procedures to monitor the critical control points

How do you know that the controls are being achieved in every batch of feed? Make regular checks against all the critical controls.

5. Establish corrective actions

What can you do if something is not right? It might mean rejecting a batch of feed materials from a supplier if it does not meet your standards. Or even delaying the slaughter of certain animals if they are found to have been given prescription medicines by mistake. A good HACCP system would anticipate all contingencies and have a plan to deal with them.

6. Establish procedures to verify that the system is working properly

Occasional tests of samples of feed for contamination will demonstrate that controls are effective.

7. Establish effective record keeping in order to document the HACCP system

If your plan isn't written down you don't have a plan. Keep simple records of all monitoring and tests.

Annex 6 – Glossary

ACAF	The Advisory Committee on Animal Feedingstuffs.
ACCS	The Assured Combinable Crops Scheme now the Red Tractor Farm Assurance Scheme for Crops and Sugar Beet.
Additives	Substances added to feed mainly to perform technological or nutritional functions or to improve animal production.
AFS	Assured Food Standards.
AIC	The Agricultural Industries Confederation.
Complementary Feedingstuff	A compound feeding stuff that has a high content of certain substances and which, because of its composition, is sufficient for a daily ration only if it is used in combination with other feeding stuffs.
Complete Feedingstuffs	Mixtures of feedingstuffs which by reason of their composition, are sufficient for a daily ration.
Compound Feedingstuffs	Mixtures of feed materials, whether or not containing any additive, for oral feeding to pet animals or farmed creatures in the form of complementary feeding stuffs or complete feeding stuffs.
Co Products	Usually by-products of food or drink manufacture which have a value in their own right as a feed material (e.g. soyabean meal, brewers' grain, wheat feed).
Daily Ration	The average total quantity of feeding stuff expressed on a 12 percent moisture basis, required daily by an animal of a given kind age group and level of production in order to satisfy all its nutritional needs.
Dry Feed Ingredients	Products with a dry matter above 86% and stable at ambient humidity in aerobic conditions.
Feed Materials	Any products of vegetable or animal origin in their natural state, fresh or preserved; any products derived from the industrial processing of such products; organic or inorganic substances which are intended for oral animal consumption either directly or in a compound feed.
Feeder Wagon	A mixing wagon in which feed is mixed and then delivered to livestock.
FEMAS	The Feed Materials Assurance Scheme.
Forage	High fibrous crops such as grass, grass or maize silage, hay eaten mostly by ruminants.
FSA	The Food Standards Agency.
HACCP	Hazard Analysis and Critical Control Points.
Hazard	The potential to cause harm.
LACORS	Local Authorities Coordinators of Regulatory Services.
Medicated Feedingstuffs	A feedingstuff containing a veterinary medicinal product.

Mineral Feedingstuff	A complementary feedingstuff which is composed mainly of minerals and which contains at least 40 percent by weight of ash.
Moist Feed Ingredients	Products with a dry matter less than 86%.
NAAC	The National Association of Agricultural Contractors.
NFU	The National Farmers' Union.
Permitted Animal Proteins	Milk, Milk based products and colostrums; Eggs & egg products; Gelatine from non-ruminants; Hydrolysed proteins derived from non -ruminants or from ruminant hides and skins.
Premixture	A mixture of additives, with or without a carrier, intended for mixing with feedingstuffs to produce a ration that meets the requirements of the livestock to which it is fed.
Prohibited Processed Animal Protein	Includes:- Mammalian meat and bone meal; Meat meal; Bone meal; Hoof meal; Horn meal; Greaves; Poultry meal; Poultry offal meal; Feather meal; Gelatine from ruminants.
On-Farm Feeding	The feeding of livestock with purchased feedingstuffs and home-grown feed materials.
On-Farm Mixing	The mixing of ingredients which takes place at the same location as the livestock to which it is fed. It may or may not include home-produced feeds (For the purposes of this code it does not include the incorporation of Premixtures/Additives such as Vitamin A and D trace elements (copper, selenium zinc etc).
Restricted Proteins	Fish meal; Blood products; Blood meal, only where fed to farmed fish; Dicalcium phosphate and tricalcium phosphate of animal origin only.
Silage	Feeding material made by the anaerobic fermentation of high moisture forage crops that is stored anaerobically.
Specified Feed Additive	Coccidiostats, histomonostats and all other zootechnical additives except digestibility enhancers, gut flora stabilisers and substances incorporated with the intention of favourably affecting the environment.
Statutory Statement	The particulars, information and instructions required or permitted to be contained or declared in the label.
Straights	Former name for ingredients that are mixed to form a home concentrate - now known as feed materials.
TASCC	The Trade Assurance Scheme for Combinable Crops.
UFAS	The Universal Feed Assurance Scheme.