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Feed Legislation –

Update and Development

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AGENDA

- **Introduction (to foster your interest)**
- **Regulations / Directives (step by step)**
- **"Exams questions" (you can test yourself)**
- **Together: answers on "open questions"**
- **Final discussion / comments**

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EU – Feed legislation: some comments in advance

- **A matter of low "palatability"**
  → **how to enhance the taste?**
- **A matter of day to day work of nutritionists**
  → **how to ease an overview?**
- **A matter of changes/political decisions**
  → **how to achieve an up to date knowledge?**

Feed legislation: to foster your interest

Have a look in the constitution/aims/intentions of the ESVCN/ECVCN

in the catalogue of REQUIRED KNOWLEDGES/SKILLS

… feed additives, undesirable substances, feed hygiene, legislation related to animal nutrition, feeding … use of diets for particular nutritional purposes …

Your knowledge regarding feed legislation is also tested in the exam

- give three examples of undesirable substances in feeds/diets with an impact on animals' health, food safety or the environment?
- scandals, in which feed contaminations were the main cause?
- what is your opinion on application of feed additives via drinking water?

Feed legislation – you can test yourself

- **What is a "feed" or "food" -**
  where can you find definitions?
- **What is the main difference – under legislative aspects -**
  between macro minerals and trace elements?
- **What are the main differences between**
  a complete feed and a complementary feed?
- **What is allowed regarding mixing for**
  a farmer (primary production) and a feed company (non-primary production)?
- **What is the principle of regulation regarding**
  an "undesirable substance" and a "prohibited substance"?

Recent changes in feed legislation

- Fat of animal origin is permitted in milk replacers for ruminants (different regulations in Europe)
- Slaughterhouse by-products can be used as protein and energy sources in aquaculture (feeding of fish)
- Insects as feed materials for non-food-producing species → requirements regarding the feeds for insects?
- Reduction in upper levels of trace elements that are used above requirement – harm the environment?
- In discussion: vitamin A, selenium, iodine in feeds for food producing animals → levels in diets for carnivorous species?

EU-LEGISLATION

There is a need to differentiate between:

- **Regulations („Verordnungen“)**
  - **directly applicable in all member states**
  - **enter into force without transfer into national legislation/law**
- **Directives („Richtlinien“)**
  - **bind the member states to the aimes!**
  - **have to be transfered into national legislation!**
- **Decisions („Entscheidungen“/„Beschlüsse“)**
  - **directly applicabel! Addressed to:**
    - **member states (all/individual)**
    - **companies (on food/feed sector)**
    - **person(s)**

Regulation No. 178/2002:	principles … food safety
Regulation No. 1831/2003:	feed additives
Regulation No. 882/2004:	official controls
Regulation No. 183/2005:	feed hygiene
Regulation No. 396/2005:	residues of pesticides in feed/food
Regulation No. 767/2009:	feed placing on the market/use of feeds
Regulation No. 1069/2009:	animal by-products/derived products
Directive 2002/32/EG:	undesirable substances in animal feed
Directive 2008/38:	feedstuffs → „particular nutritional purposes“

Essentials of Regulation (EC) No. 178/2002 (01/28/2002) laying down the general principles and requirements of food law … in matters of FOOD SAFETY

- **Protection of human health and consumers‘ interest in relation to food… in matters of FOOD and FEED SAFETY**
- **Definition of „food“ and „feed“: „… intended to be used for oral feeding to animals“**
- **… tracebility … to trace and to follow a food, feed, … animal**
- **Article 15: FEED SAFETY REQUIREMENTS - What does it mean „unsafe“?**
  - ➔ **an adverse effect on human or animal health**
  - ➔ **make the food unsafe … for human consumption**
  - ➔ **complying (or not) with specific provisions of the community/national law!**
- **Article 20: RESPONSIBILITY for FEED: Feed business operator**
- **European food safety authority**
- **Rapid alert system, crisis management and emergencies**

Essentials of Regulation (EC) No. 882/2004 (04/29/2004) on OFFICIAL CONTROLS performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules

- Preventing, eliminating or reducing to acceptable levels risks to humans and animals and to guarantee fair practices in feed and food trade … including feed labeling
- Definitions: official controls …"any form of control that the competent authority … of compliance with:
  - feed and food law
  - animal health rules
  - animal welfare rules
- Member states ensure that official controls are carried out
  - regularly
  - on a risk basis
  - with appropriate frequency
  - without prior warning
  - any stage of production, processing
  - feed … including storage … } !
- Control of
  - live animals
  - feed
  - food } taking samples for analyzing!

Essentials of Regulation (EC) No. 183/2005 (01/12/2005) laying down requirements for FEED HYGIENE

- To ensure a higher level of protection of human health and animal health and of the environment
- Food and feed **SAFETY**
- Definition of **FEED HYGIENE**: „measures and conditions necessary to control hazards and to ensure fitness for animal consumption of a feed".
- **GENERAL OBLIGATION** (article 4):
  „…to keep the risk of **BIOLOGICAL, CHEMICAL** and **PHYSICAL CONTAMINATION** of feed, animals and animal products as low as reasonably achievable".
- All STEPS in the primary production (incl. storage, handling, mixing)
- HACCP concept in feed industry (feed business)

Annex 1: Primary production → **FEED SAFETY**

Annex 2: Requirements for feed business → **CROSS CONTAMINATION**

Annex 3: Good animal feeding practice → **FEED/WATER**

Annex 4: Details concerning diff. additives → **APPROVAL** of feed businesses

Regulation (EC) No 767/2009

Objectives: … harmonize the conditions for the placing on the market
… ensure a high level of feed safety
… protection of public health
… **information** for users and consumers

Definitions: … feed materials … of vegetable or animal origin
… compound feed: ≥ 2 feed materials
… complete feed: sufficient for a daily ration
… complementary feed: high content of **certain** substrates
… mineral feed: complementary feed with ≥ 40 % crude ash
… feed for „particular nutritional purpose" … dietetic

General requirements: … safe
… not have direct adverse effects on the environment or animal welfare
… for food and non-food producing animals
… is sound, genuine, unadulterated, **fit for its purpose**
… is labelled, packaged and presented in accordance
… impurities … Annex I

Regulation (EC) No 767/2009

Responsibilities

… a person … labeling
… further information … percentages of feed materials …

Restriction

… not contain materials … is restricted/prohibited (Annex III)

Feed additives

… complementary feeds: max. 100 times the max. content of complete feed
… coccidiostats: max: 5 times of complete feeds

Feeds for particular nutritional purposes

… list of intended use (by adding or removing)

Regulation (EC) No 767/2009

Labeling principles:

… not mislead the user

… characteristics of the feed + species – categories – of animals

… tolerances for discrepancies between labeled – and – analysed values

… **mandatory** labeling requirements
… feed business operator
… minimum storage life (best before …)
… instructions for proper use
… listing in descending order or percentages
… additives' content

… **voluntary** labeling
… additional information (for example amino acids)

Regulation (EC) No 767/2009 - contents of annex I - VIII

I	**- impurities/botanical purity/iron level/ash/moisture content**
II	**- provisions on labelling/instructions of/for proper use/max. feed additives**
III	**- prohibited substances – „zero tolerance"/for example feces, waste**
IV	**- permitted tolerances: labeled composition/found, analyzed composition**
V	**- declaration for feed materials (for example starch in cereal by products)**
VI	**- labelling of additives/constituents in complete feed/complementary feed**
VII	**- labelling of feeds for non-food producing animals**
VIII	**- labelling of feeds with excessive contents of undesirable substances**

List of prohibited substances based on Regulation 767/2009, Annex III

List of materials whose placing on the market or use for animal nutritional purposes is restricted or prohibited

Chapter 1: Prohibited materials

1. Faeces, urine as well as separated digestive tract content resulting from the emptying or removal of digestive tract, irrespective of any form of treatment or admixture,
2. Hide treated with tanning substances, including its waste,
3. Seeds and other plant propagating materials which, after harvest, have undergone specific treatment with plant protection products for their intended use (propagation), and any derived by-products,
4. Wood, including sawdust or other materials derived from wood, which has been treated with wood preservations as defined in Annex V of Directive 98/8/EC of the European Parliament and of the Council,
5. All wastes obtained from the various phases of the urban, domestic and industrial waste water as defined in Article 2 of Council Directive 91/271/EEC treatment process, irrespective of any further processing of these wastes and irrespective also of the origin of the waste waters,
6. Solid urban waste, such as household waste,
7. The packaging from the use of products from the agri-food industry, and parts thereof

Regulation (EC) No. 1831/2003 (09/22/2003) of the European Parliament and of the Council on ADDITIVES for use in ANIMAL NUTRITION (1)

- **Procedure for authorising the placing on the market and use of feed additives and to lay down rules for the supervision and labeling of feed additives … to protect:**
  - human health
  - animal health and welfare
  - environment
  - users‘ and consumers‘ interests
- **Definition of „feed additives”: substances or microorganisms” … added to feed or water**
  → to perform one or more functions/affect:
  - the feed
  - animal product
  - color of ornamental fish and birds
  - nutritional needs
  - environment
  - animal performance
  - coccidiostats/histomonostats

Regulation (EC) No. 1831/2003 (09/22/2003) of the European Parliament and of the Council on ADDITIVES for use in ANIMAL NUTRITION (2)

- **Categories of feed additives**
  - technological additives
  - sensory additives
  - nutritional additives
  - zootechnical additives (performance, environment)
  - coccidiostats/histomonostats
- **Application for authorisation**
  - identification of the additive
  - description of production
  - studies
    no adverse effects on animal health,
    human health, environment!
    shall not harm the consumer!
  - conditions of use/labelling
- **The end of antibiotic growth promoters (31.12.2005)**

Essentials of Regulation (EC) No. 1069/2009 (10/21/2009) laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing

- Animal by-products, to prevent these products from presenting a risk to animal or public health
- Animal by products (Art. 7): entire bodies or parts of animals or products of animal origin referred to in Articles 8, 9 and 10 not intended for human consumption
- Category 1 material (Art. 8):
  - all body parts of animals (suspected of being) infected by a TSE, animals other than farmed animals/ wild animals, experimental animals, wild animals, when suspected of being infected with diseases communicable to humans or animals
  - specific risk material (brain, spinal cord …)
- Category 2 material (Art. 9):
  - manure and digestive tract content
  - products of animal origin containing residues of veterinary drugs and contaminants
  - including animals killed for disease control purposes
  - fetuses
  - dead-in-shell poultry

Essentials of Regulation (EC) No. 1069/2009 (10/21/2009) laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing

- Category 3 material (Art. 10):
  - carcasses and parts of slaughtered animals, fit but not intended for human consumption !
  - hides, skins, hooves and horns, pig bristles, feathers
  - blood obtained from animals other than ruminants
  - former foodstuffs of animal origin, other than catering waste, no longer intended for human consumption
  - raw milk
  - hatching by-products
- Collection, transportation, disposal, processing, use and storage of animal by-products
- Approval of petfood plants
- Placing on the market of processed animal protein and other processed products that could be used as feed material, petfood, dogchews…
- Controls and inspection

Essentials of Regulation (EC) No. 1069/2009 (10/21/2009) laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing

Art. 11:	Prohibited: … feeding … with processed animal protein (pap) of the same species … catering waste … to farmed animals
Art. 12:	Disposal on use of **Category 1 material** … incineration/co-incineration … fuel for combustion
Art. 13:	Disposal and use of **Category 2 material** … as waste by incineration … co-incineration … composted … into biogas … applied to land … fuel for combustion
Art. 14:	Disposal and use of **Category 3 material** … incineration/co-incineration/biogas … as raw petfood … as organic fertilizers and soil improvers … feeding to farmed animals … on the market of petfood

Directive 2002/32 EG: Undesirable Substances

- **Definition:** any substance or product – with the exception of pathogenic agents – present in/on … intended for animal feed … presents a potential danger to animal or human health or to the environment or could adversely affect livestock production
- **Principle of regulation:** upper values for contamination!
- **Principle of handling:** dilution with non contaminated feed is prohibited !
- **Groups of undesirable substances:**
  - inorganic substances/nitrogen containing compounds (Pb … Melamin)
  - mycotoxins (aflatoxins, ergot)
  - toxins from plants (for example: gossypol)
  - organic compounds containing chlorine (DDT, …)
  - dioxins/dl PCBs
  - poisonous seeds
  - coccidiostats

Essentials of the Commission Directive 2008/38/EC of 5. March 2008 establishing a list of intended uses of animal feedingstuffs

FOR PARTICULAR NUTRITIONAL PURPOSES

- Must be be clearly distinguished – in their characteristics and purpose – from both ordinary feedingstuffs and medicated feedingstuffs
- To meet "particular nutritional needs" of pets/productive livestock
- Must have a specific composition and/or be manufactured using special methods
- In essential to establish the principle that such feedingstuffs have
  - to ensure … have a beneficial effect on animals which ingest it
- A positive list should be drawn up
  - indicating precise use
  - essential nutritional characteristics
  - declaration/labelling
- The expression "dietetic" = a simple qualifying expression → further detailed description!
- Not a subject of a veterinary prescription since these products do not contain "medical substances"

Essentials of the Commission Directive 2008/38/EC of 5. March 2008 establishing a list of intended uses of animal feedingstuffs

FOR PARTICULAR NUTRITIONAL PURPOSES

- Special labelling/intended use is included in the list (Annex)
- "Particular nutritional purposes" … whose process of assimilation, absorption or metabolism …
  - temporarily / irreversibly impaired
  - to derive benefit from ingestion …
- Qualifying expression "dietetic" + description
  - particular nutritional use
  - indication (must comply with the content of the list)
  - declaration (further information for a precise use)
- The expression "dietetic" shall be reserved solely for these feedstuffs
- Annex: List of intended uses

	examples
- particular nutritional purpose	dissolution of struvits
- essential nutritional characteristics	urine acidifying properties
- species or category of animals	dogs
- labelling/declaration	… acidifying substances
- length of time for use	5 – 12 weeks
- other provisions	-

For decades a matter of debate regarding feed legislation:

- Feeds for food producing animals should have a hygiene status as required for food, i. e. for human consumption ?
  → ethically acceptable in countries where human beings are suffering from hunger
- Slaughterhouse by products: not allowed for food producing animals due to risks for TSE, when swine/poultry by products are recycled ?
  → worldwide need for protein and phosphorus containing feed materials
- Contamination of "bakery by products" with plastic packaging materials (inspite of techniques for decontamination) ?
  → packaging material = prohibited substance → zero tolerance
- Application of feed additives via drinking water inspite of using complete feeds (containing required essential nutrients) ?
  → risk for misuse of feed additives → exceeding upper limits
- Licensing/permission of substances as feed materials that can't contribute to the energy and/or nutrient supply of animals - like flowers of hop - ?
  → intention: use of "pharmacological" properties/constituents
- Feeding of fattening calves: requirements regarding roughage, iron for animal welfare reasons → market for white calf meat! ?
  → shortage in both with clinically obvious signs/disorders
- Labeling under aspects of information and marketing the feed ?
  → mandatory and voluntary info/data/findings …

Thanks for your attention!

Questions regarding feed legislation

Question	yes	no	Sources
1. Is it allowed to use banana peels as dried by-product in concentrates (complementary feed) for cattle?			See register of feed materials, regulation (EU) 68/2013.
2. A compound feed based on alfalfa green meal shows a crude ash content of 126 g/kg DM; allowed, tradeable?			See Annex I of Regulation (EG) 767/2009; upper values for HCl insoluble ash.
3. A wheat bran contains 180 g moisture/kg, a quite high value; how to label such material?			See Annex I of the EG-Regulation 767/2009
4. It is intended by a feed company to use $CaCl_2$ as Calcium source for cows before calving; allowed? Compare to Calcium compounds with "special function".			Macro elements → register on feed materials (EU) 68/2013; also regulation (EG) 1831/2003 on feed additives
5. A farmer producing porc wants to use Lysine additionally, separately from his complete feed for fattening pigs, allowed?			See EG Regulation 183/2005 → status of primary producer?
6. What is the upper value/maximum iron content in dried green meal? 1200 mg Fe/kg were found.			See Regulation (EG) 1831/2003 in case of exceeding upper values. Cave: "inert iron"
7. In a complete diet for dogs lead was found at a level of 64 mg/kg DM; allowed? Consequences?			See Directive 2002/32 regarding undesirable substances.
8. In a series of official control of complete feeds for laying hens monensin (coccidiostat) was found (7 and 0.07 mg/kg diet), allowed?			See Directive 2002/32 coccidiostats in feeds, diets for non-target animals!
9. In a sample of rye from a farm an ergot contamination was found: 2.5 g sclerotia/kg; allowed?			See Directive 2002/32, regarding mycotoxines mixing with non-contaminated feeds?

Questions regarding feed legislation

Question	yes	no	Sources
10. At an official inspection of a dairy farm a massive load of drinking water by faeces was found! What to do?			See EG-Regulation 183/2005 requirements regarding water! Annex III
11. In a zoo a concentrate (similar to popcorn) is offered, that is fed by visitors (children) to pigs, rabbits, sheep and dwarf goats; allowed?			See Regulation (EG) 178/2002 regarding 'feed safety' – definition.
12. In a batch of dried old bread (prepared for use in compound feeds for pigs) 1.5 g/kg plastic material were found; allowed?			See Regulation (EG) 767/2009 the Annex III! Prohibited substances!
13. At ensiling there was a loss of oil from the tractor used for compaction of the feed material. How to handle the case?			See Regulation (EG) 178/2002 → definition of 'unsafe feed'.
14. In comparison to the labeled value (Ca: 8 g/kg, as fed) in the analysis 9.9 g Ca were found; allowed?			See Regulation (EG) 767/2009 → tolerance for deviations!
15. Is it possible / allowed to offer 'dried lung for carnivorous species' or as 'complementary feed for dogs/cats?'			See EG Regulation 1069/2009 and Regulation 767/2009.
16. In dried 'cereal flakes for dogs' a massive load by mites was detected, immediately after opening the new bag.			See 'general obligations' in the Regulation (EG) 767/2009 article 4.
17. A company wants to sell a complementary feed for horses for particular purpose (against 'nervousness in sport horses').			See Directive 2008/38.