



Federal Ministry
of Food, Agriculture and
Consumer Protection

Feed control in Germany

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Organisation



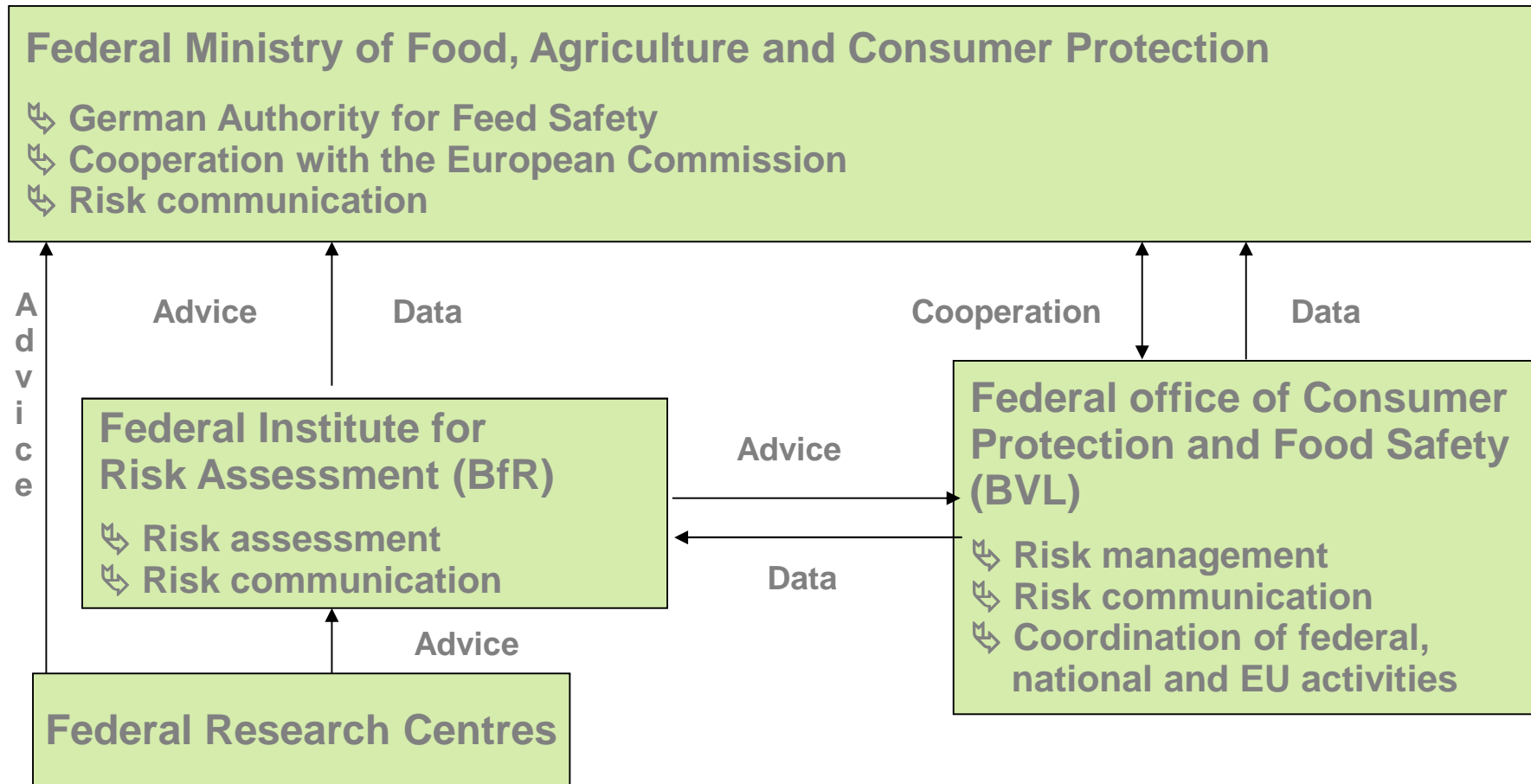
16 Federal States („Länder“) with

- their own governments and parliaments
- their own state constitutions
- very different sizes (404 km² – 70,000 km²)
- very different numbers of inhabitants (660 000 – 18 000 000)
- very different financial budget

Organisation

- The **Ministry of Food, Agriculture and Consumer Protection** (BMELV) is the Central competent Authority in the field of animal nutrition, mainly responsible for the drafting of the legislation at federal level and for the coordination of the implementation.
- The **Federal Office of Consumer Protection and Food Safety** (BVL), in particular, co-ordinates, drafts guidelines and provides advice to the Länder as regards the execution of the control programme.
- Other relevant bodies in this area are the **Federal Institute for Risk assessment** (BfR), which is responsible for the assessment of risks to public health in respect to food and feed and risk communication, as well as the **Institute for Animal Nutrition**. This belongs to the Federal research Centre for Agriculture.

Organisation



Legal Basis

- **Regulation (EC) No. 882/2004 of the European parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules**

- ↳ same principles for food and feed
- ↳ requirements for the official control of feed
- ↳ requirements for the competent authorities

Regulation (EC) No 882/2004 on food and feed Control

- ☒ Requirements for control authorities
- ☒ Training of control staff
- ☒ Control procedures and guidelines
- ☒ Delegation of specific controls
- ☒ Methods of sampling and analysis
- ☒ Border-Control of feed from third countries
- ☒ Laboratories and reference laboratories
- ☒ Control plans and reports
- ☒ Financing of official controls
- ☒ Inspections of control-authorities of the Member States by the EC
- ☒ Actions in case of non compliance and penalties

Regulation (EC) No 882/2004 on food and feed Control

General obligations

- ☞ Member States shall ensure that official controls are carried out
 - ☞ regularly,
 - ☞ on a risk basis,
 - ☞ with appropriate frequency.
- ☞ Member States shall
 - ☞ develop multi-annual national control plans.
- ☞ Member States shall
 - ☞ control the duties of the operators.

Regulation (EC) No 882/2004 on food and feed Control

Requirements regarding the competent authorities

- ☞ The competent authorities must ensure
 - ☞ that staff carrying out official controls are free from any conflict of interest,
 - ☞ adequate facilities and equipment,
 - ☞ sufficient number of suitably qualified and experienced staff,
 - ☞ the quality of their work by internal and external audits.
- ☞ Control authorities must apply suitable methods in the field of
 - ☞ sampling
 - ☞ and analysis.
- ☞ Control laboratories must be accredited and shall be supported by Community and National Reference Laboratories.

Feed control in Germany



European legislation

- Regulation (EC) No 178/2002
- Regulation (EC) No 882/2004
- Regulation (EC) No 183/2005
- Regulation (EC) No 1831/2003
- Regulation (EC) No 999/2001



German legislation

- Law on Food and Feed and Consumer Goods as framework law
- Complementary rules for feed, e.g. Feed Regulation



Federal States ("Länder")

- Competent for control of feed control and enforcement of feed legislation
- Organisation and execution of the control lies in the responsibility of the Federal States

Feed control in Germany

For organisation and execution of control the Länder are responsible:

- The **authorities** in the Länder are responsible for granting **approval and registration**. They keep updated lists of all approved and registered establishments and intermediaries operating in the animal feed sector.
- The authorities in the feed sector carry out the official control on the basis of the **National Control Programme**.
- The authorities designate the **laboratories** carrying out analyses in the field of animal nutrition. They include both private and public laboratories.

Control plan

Artikl 41 Regulation (EC) No 882/2004

*„In order to ensure the effective implementation of Article 17(2) of Regulation (EC) No 178/2002, of animal health and animal welfare rules and of Article 45 of this Regulation, each Member State shall prepare a **single integrated multi-annual national control plan**.“*

- ➔ An orientation for the Member States for elaborating the MANCP is given by Decision 2007/363/EG (OJ EU No L 138 from 30.5.2007,p.24)

Control plan

Sectors which are included in the MANCP:

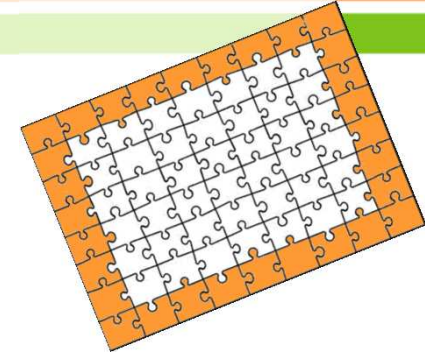
- ↪ food safety
- ↪ **feed safety**
- ↪ animal health
- ↪ animal welfare
- ↪ plant protection

MANCP of Germany

1 General plan for Germany

16 Plans of the Länder

Control plan



General plan:

- Authorities of the Federal Republic and their responsibilities
- Responsibilities of federal, regional and communal authorities
- Coordination of the 5 sectors between federal and regional authorities
- National reference laboratories
- Control and monitoring programmes
- Collection of data and reporting to the EU
- Requirements on education and training of control personnel
- Contact office for the cooperation between Member States
- Rules for the evaluation and adaptation of the control plan

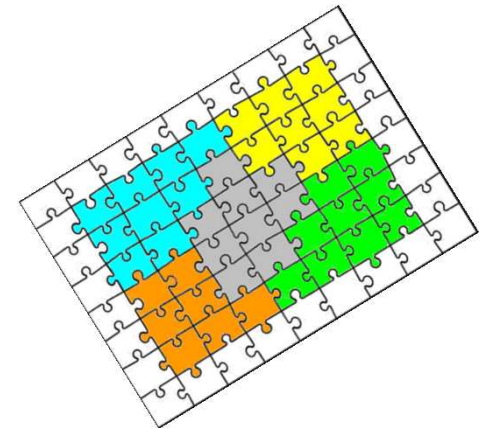
Control plan

Plans of the 16 Länder:

- Uniform concept for the 5 control sectors (food and feed safety, animal health and welfare, plant protection)
- Individually elaborated by the 16 Länder
- Structures follow the EC guidelines (Decision 2007/363/EC)

The MANCP is published:

http://www.bvl.bund.de/DE/02_Futtermittel/01_Aufgaben/02_Amt_Futtermittelueberwachung/02_mnkp/lm_mnkp_node.html



Feed Control Programme

- The **National Feed Control Programme** covers five years (2012-2016) and implements the concept of the multi-annual-control-plan.
- It implements aspects of feed hygiene.
- The objective is the protection against risks for human health and the protection against risks for animal health.

- **The National Control Programme** covers
 - control of establishments
 - risk-oriented sampling and analysis
 - recommendations regarding the EU-coordinated control programme

The National Control Programme is published:

http://www.bmelv.de/SharedDocs/Downloads/Landwirtschaft/Tier/Futtermittel/KontrollprogrammFuttermittel_2012_2016.pdf?__blob=publicationFile

Feed Control Programme

The objectives of the official feed control is

- to ensure the safety of food from animal origin,
- to protect animal health,
- to prevent risks for the environment and
- to protect the feed users against misleading.

Feed Control Programme

Methods of control

- **Control of establishments** (process control, control of operations)
- **Control of products** (feed additives, undesirable substances, prohibited substances, residues of pesticides, designation and labelling of feedstuffs, rules to protect against misleading and to ensure fair advertising)
- **Control of documents** (records, certificates)

Feed Control Programme

The control activities and intensity should reflect the importance of the objectives :



Official control should be concentrated

- ✓ on undesirable substances,
- ✓ prohibited substances and
- ✓ illegal substances.



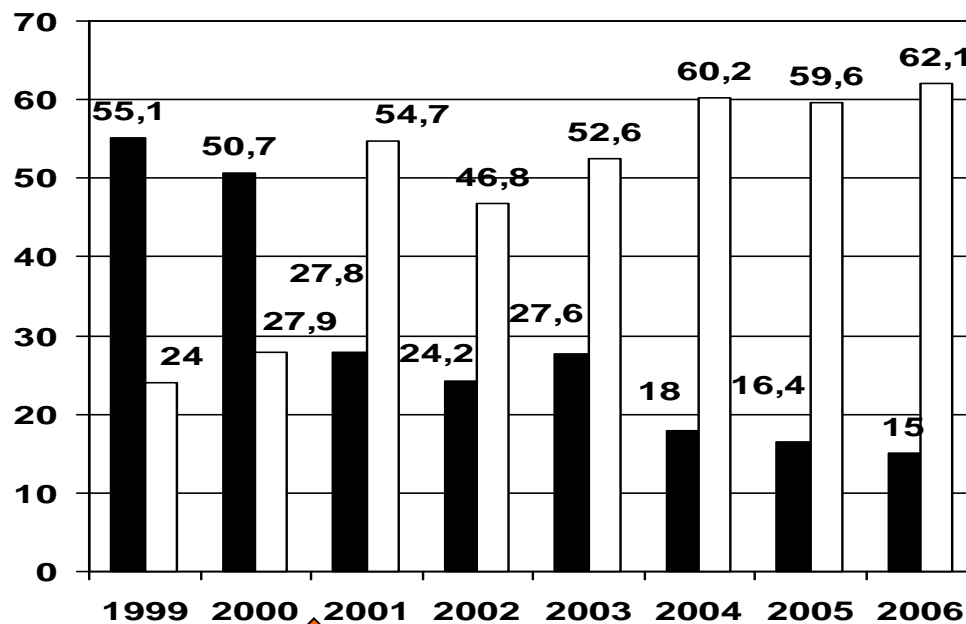
Official control should control nutritional criteria like protein, fat or energy only to avoid misleading.



Consequently Germany has changed the control intensity from nutritional parameters to safety parameters with the first federal control programme.

Feed Control Programme

Percentage of analytical determinations of nutritional parameters (black pillars) and undesirable, illegitimate and prohibited substances (white pillars) from 1999 until 2006.



2001 – first national control programme

Feed Control Programme

Examples of risks in feed based on our experiences:

- **Aflatoxin** in feed for lactating cows
- **Fluorine** in complete feed for fish
- **Dioxins** in artificial dried feed material, fish products, binders and compounds of minor elements
- **Zinc and Copper** in compound feed for calves and pigs
- **Selenium** in feed for cows and pigs
- **Mycotoxins** in cereals, oilseeds and feed materials which have been stored or shipped over sea for a long time
- **Heavy metals** in greenfodder and roughage taking into consideration areas with specific pollution and contamination
- **Chlorinated carbohydrates** in feed materials
- **Cross contamination** of feed materials with coccidiostats
- Use of **illegal substances**

Feed Control Programme

Number of **samples and analyses** per year from 2012 to 2016

	Samples	Analyses	%
Ingredients (without water)	3 579	21 528	<i>12.8</i>
Energy	1 249		<i>4.5</i>
Additives	7 226	22 134	<i>26.0</i>
Undesirable substances	5 697	33 942	<i>20.4</i>
Illegal substances	7 075		<i>25.4</i>
Prohibited substances	197		<i>0.7</i>
Residues of pesticides	1 186		<i>4.3</i>
Composition of compound feed	769		<i>2.8</i>
Microbiological analyses	865	2 595	<i>3.1</i>
Total	27 843		<i>100</i>

Feed Control Programme

Number of analyses of **feed materials** per year from 2012 - 2016

	Analysis 2009	Complaints (%) 2009	Analysis 2012 - 2016
Arsenic	1 520	0.1	1 507
Lead	1 669	0	1 507
Cadmium	1 680	0.1	1 507
Mercury	1 488	0	1 507
Dioxine	1 521	2.0	1 002
Non dioxinlike PCB	707	0	511
dioxinlike PCB	587	0.4	511
Other organochlorides	5 477	0	3.006
Fluorine	202	1.0	301
Nitrite	24	0	50
others	620	0.5	201
Total	15 655	0.3	12 101

Feed Control Programme

Number of analyses of **feed materials** per year from 2012 - 2016

	Analysis 2009	Complaints (%) 2009	Analysis 2012 - 2016
Aflatoxin B1	747	0.4	1.002
Zearalenon	711	0,4	301
Deoxynivalenol	704	0	301
Ochratoxin A	587	0,2	301
Fumonisin B1+B2	485	0	301
T-2 Toxin	789	0,6	301
HT-2-Toxin			301
others	1.487	0,2	553
Total	5.350	0,2	2.870

Feed Control Programme

Number of **samples** per year from 2012 - 2016

Feed	Illegal use of approved feed additives	Illegal use of additives, whose approval was withdrawn	Cross contamination of drugs	Prohibited protein of animal origin	Illegal substances
Compound feed	553	480	1 439	Groups of drugs	
				Chemotherapeutics	
				Hormones	
				Aminoglycosides	
Premixtures	77	73	269	Avermectine	
				Benz imidazols	
Feed material	0	0	50	Quinolones	
				Lincosamides	
Total	651	1 758	1 758	Makrolideantibiotics	
				Nitrofurantol-metabolites	
				Penicillins	
				Pleuromutilin-metabolites	
				Polymyxins	
				Sulfonamids	
				Tetracyclins	

Feed Control Programme

feed control covers all steps of the feed chain:

- Establishments for the production of
 - compound feed for farm animals
 - compound feed for pets
 - feed additives
 - premixtures
 - feed material
- Facilities for artificial drying of wet feed material
- Farms
- Traders and carrier/hauler
- Establishments which use PAP (produced animal by products)
- Veterinaries
- Importers

Feed Control Programme

Selection of the best control points:

Orientation scheme for Germany:

➤ Producers (incl. veterinarians)	50-60 %	} of the total controls
➤ Traders and storekeepers	15-25 %	
➤ Farmers	25-35 %	

Register of Establishments as basis for control

- ✗ Registration number (only internal)
- ✗ Identify number (approval) according to EU Regulation
- ✗ Name or business name of the feed business
- ✗ Address of the feed business
- ✗ Competent Authority
- ✗ Code of activities
A, B, C,...different activities
1, 2, 3,different feed categories

Total 350.000 establishments, thereof 300 000 farms.

Official register

www.bvl...

Feed Control Programme

Procedure of risk assessment for each establishment

Point system:

- Type of company
- Amount of production
- Quality assurance systems
- HACCP-concept
- Facilities, buildings and equipment
- Facility certificates
- Results of control (complaints)
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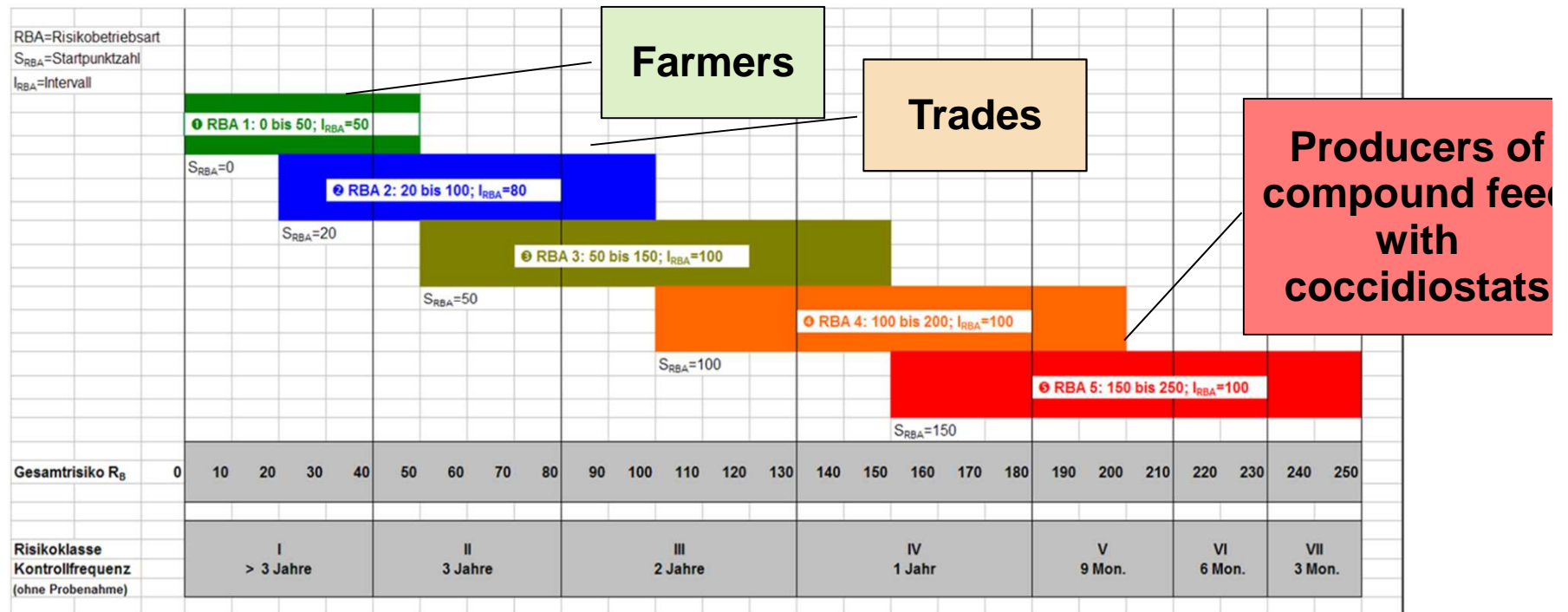
x weighting factors = points

Feed Control Programme

Risk group	Risk points	Control frequency
Group 1	0 - 40 points	> 3 years
Group 2	41 - 80 points	3 years
Group 3	81 - 130 points	2 years
Group 4	131 - 180 points	once a year
Group 5	181 - 210 points	each 9 month
Group 6	211 - 230 points	each 6 month
Group 7	231 - 250 points	each 3 month

Feed Control Programme

Anhang 3: Ermittlung des individuellen Risikos (Überblick)



Results of Feed Control

Number of registered and controlled establishments 2011

	Controlled establishments	Registered establishments total	
Feed producers	3.204	2002 57 175	producers of compound feed, additives or premixtures producers of feed materials
Distributors	2.935	14 024 3 676	retailers storekeepers, forwarder
Farmers	9.438	258 888	farmers
Others	306	e.g. vets, representatives of third countries	
Total	15.883		

Results of Feed Control

Number of controls 2011

- ✓ 16.078 inspections of establishments
 - ✓ 6 824 controls of documentation
 - ✓ 16 638 samples of feed
 - ✓ 138 111 analytical determinations
- + 63 146 analytical results of residues of pesticides

Results of Feed Control

Number of analytical results and complaints 2011

Parameter	Analytical results	complaints %
Nutrients content (without water)	16 511	5.9
Energy	1 139	4.6
Content of additives	13 215	7.1
Illegal substances	27 249	0.2
Undesirable substances	39 393	0.7
Prohibited substances	2 157	0.2
Control of composition of compound feed	942	2.3
Analyses of microbiological deterioration	1 252	3.5
Other controls	2 557	2.9
Total	117 436	2.1

Results of Feed Control

Number of analytical results and complaints 2011

Analyses of undesirable substances	Number of analyses			Complaints %		
	2009	2010	2011	2009	2010	2011
Total	26.923	35 088	36 762	0.3	0.3	0.9
Thereof:						
Aflatoxin B1	1 658	1 810	1 811	0.2	0.4	1.5
Organic chlorides	9 471	10 581	15 305	0.0	0.0	0.0
Heavy metals	10 049	10 878	11 272	0.1	0.2	0.2
Dioxins/dl PCBs	2 290	2 396	3 225	1.3	1.5	7.2
ndl PCBs	2 258	2 444	2 993	0,0	0.0	0.0
Mycotoxins (except Afl.B1)	6 293	7 233	7 486	0.1	0.0	0.7

Feed Monitoring Programmes

- The objective of the Feed Monitoring Programme is **to get an overview of the situation** of specific undesirable substances
 - ➔ Dioxin, dl PCB and ndl PCBs in feed
 - ➔ Mycotoxins (DON, ZEA, OTA, Fumonisin, T-2 and TH-2-toxin) in feed materials and compound feed
 - ➔ Polyfluorinated Chemicals in feed materials
 - ➔ Salmonella in rape seed and rape cake
 - ➔ Ergot alkaloids in grain and grass

Results of Dioxin-Monitoring

Dioxins and dl PCB in feed 2004

	median	90 th percentile	<i>EU</i>	
			<i>maximum level</i>	<i>action level</i>
dioxin-like PCBs (ng WHO-PCB-TEQ/kg*)**)				
feed materials (n=58)	0.050	0.186	-	0.35
compound feed (n=49)	0.040	0.543	-	0.50
dioxins (ng WHO-PCDD/F-TEQ/kg*)***)				
feed materials (n=86)	0.068	0.260	0.75	0.50
compound feed (n=95)	0.062	0.227	0.75	0.50
dioxin-like PCBs and dioxins (ng WHO-PCDD/F-PCB- TEQ/kg*)				
feed materials (n=58)	0.124	0.392	1.25	-
compound feed (n=49)	0.110	0.803	1.50	-

Results of Mycotoxin-Monitoring

Mycotoxins in feed materials 2011

Mycotoxin		Corn	Grain	Roughage
DON	analysis	70	451	50
	analysis > LOQ	38	166	22
	median	0.30	0.0	0.0
	95 percentile	1.67	0.93	2.55
	maximum	20.2	98.1	2.88
	guidance value	12	8	-
ZEA	analysis	32	126	49
	analysis > LOQ	40	33	23
	median	0.0	0.0	0.0
	95 percentile	0.47	0.10	0.27
	maximum	1.59	0.85	0.37
	guidance value	3	2	-
OTA	analysis	59	362	40
	analysis > LOQ	0	28	0
	median		0.0	
	95 percentile		0.0	
	maximum		0.84	
	guidance value	-	1	-

Results of PFC - Monitoring

Polyfluorinated chemicals (PFC) in feed materials 2011

PFC		Grain and by products	Roughage and green fodder	Other feed materials	Total
PFOS	analysis	21	164	4	189
	analysis > LOQ	1	1	-	2
	LOQ	2.7 µg/kg	1.3 µg/kg	-	
	analysis < LOD	12	106	4	120
PFOA	analysis	21	164	4	189
	analysis > LOQ	-	9		
	µg/kg		1.6 – 11.0		
	analysis < LOD				
PFHxA	analysis	1	58	-	59
	analysis > LOQ	-	1		1
	LOQ		1.8 µg/kg		
	analysis < LOD	1	47		48

Results of Salmonella-Monitoring

Salmonella spp. in feed 2012

Feed	Number of samples	Number of samples salmonella positive	Samples salmonella positive (%)
Rape seed	90	0	0.0
Rape cake	100	3	3.0

Conclutions

