



Quality Assurance. **From farm to shop.**

FEED

# MONITORING-REPORT

Figures and facts on contaminants in animal feed



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scheme for food.

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## FIGURES AND FACTS ON CONTAMINANTS IN ANIMAL FEED

More than 1.6 million individual analyses were evaluated for the Monitoring Report 2014. This poster depicts the undesired substances and the feeds in which they were most frequently detected. To enable proper classification of the results, the related readings ranges of each analysis result are also shown. They help to illustrate the results in relation to the limit values for the various feeds. This poster helps businesses to compare the analysis results with those for their own feeds.

**Data basis: Analysis results of QS feed monitoring from January 2008 to September 2014**

Aflatoxin B1			
Parameter	Number of tests	No. of results exceeding maximum level	...in feed/ raw materials
Aflatoxin B1	19,167	5 in total	
	Of the 19,167 tests, a value was measured in 2,019 (10.5 %)	4	Corn
		1	Corn gluten

Test results for aflatoxin B1 in detail			
Feed	Results	Results	Results
Feed material Of the 1,543 tests in which a value was measured, there were...	0-10 µg/kg 1,457 between 0 and 10 µg/kg	> 10-20 µg/kg 81 between 10 and 20 µg/kg	> 20 µg/kg 5 above 20 µg/kg
Compound feed Of the 476 tests in which a value was measured, there were...	0-5 µg/kg 469 between 0 and 5 µg/kg	> 5-10 µg/kg 7 between 5 and 10 µg/kg	> 10 µg/kg No value above 10 µg/kg was measured

Deoxynivalenol			
Parameter	Number of tests	No. of results exceeding EU reference value	...in feed/ raw materials
DON	29,137	43 in total	
	Of the 29,137 tests, a value was measured in 15,297 (52.5 %)	15	Agricultural business: own mixture – pig fattening/sows/piglets
		9	Complete feed for sows
		9	Complete feed for fattening pigs
		3	Piglet rearing feed
		4	Supplementary feed for sows/piglets/fattening pigs
		1	Corn plants
		1	Wheat
		1	Oats

Test results for DON in detail			
Feed	Results	Results	Results
Feed material Of the 9,512 tests in which a value was measured, there were...	0-5 mg/kg 9,421 between 0 and 5 mg/kg	> 5-8 mg/kg 40 between 5 and 8 mg/kg	> 8 mg/kg 51 above 8 mg/kg
Compound feed Of the 5,785 tests in which a value was measured, there were...	0-0.9 mg/kg 5,639 between 0 and 1 mg/kg	> 0.9 mg/kg 146 above 0.9 mg/kg	

Zearalenone (ZEA)			
Parameter	Number of tests	No. of results exceeding EU reference value	...in feed/ raw materials
ZEA	27,358	7 in total	
	Of the 27,358 tests, a value was measured in 9,809 (35.9 %)	2	Piglet rearing feed
		2	Corn (plants)
		1	Triticale
		1	Own mixtures – pig production
		1	Own mixtures – cattle production

Test results for ZEA in detail			
Feed	Results	Results	Results
Feed material Of the 5,314 tests in which a value was measured, there were...	0-1 mg/kg 5,228 between 0 and 1 mg/kg	> 1-2 mg/kg and 32 between 1 and 2 mg/kg	> 2 mg/kg and 54 above 2 mg/kg
Compound feed Of the 4,495 tests in which a value was measured, there were...	0-0.1 mg/kg 4,327 between 0 and 0.1 mg/kg	> 0.1 mg/kg and 168 above 0.1 mg/kg	

## Dioxins, dioxin-like PCBs (dl-PCBs) and non-dioxin-like PCBs (ndl-PCBs)

Parameter	Number of tests	No. of results exceeding maximum level	No. of results exceeding guidance value/intervention value	...in feed/ raw materials
Dioxins and dl-PCBs	38,186	5 in total	5 in total	
Dioxins	Of the 16,494 tests, a value was measured in 14,261 (86.5 %)	1	1	(Sugar) beet molasses chips, (sugar) beet pieces
		1	1	Fatty acids from chemical refining (refining fatty acids)
		1	–	Fruit pulp
		–	1	Salts of fatty acids
		–	1	By-products from the milk processing industry
dl-PCBs	Of the 14,486 tests, a value was measured in 11,874 (82 %)	There were no results exceeding the maximum level	1	(Sugar) beet molasses chips
Total of dioxins and dl-PCBs	Of the 7,206 tests, a value was measured in 5,943 (82.5 %)	1	–	Fatty acids from chemical refining (refining fatty acids)
		1	–	Shrimps
ndl-PCBs	10,904	1 in total	–	Mixed fatty acids
	Of the 10,904 tests, a value was measured in (50.4 %)	1	–	

## Test results for dioxins, dioxin-like PCBs and non-dioxin-like PCBs in detail

Parameter	Results	Results	Results
Dioxins Of the 14,261 tests in which a value was measured, there were...	0-0.25 ng/kg 13,132 between 0 and 0.25 ng/kg	> 0.25-0.5 ng/kg 903 between 0.25 and 0.5 ng/kg	> 0.5 ng/kg 269 above 0.35 ng/kg
dl PCBs Of the 11,874 tests in which a value was measured, there were...	0-0.2 ng/kg 11,335 between 0 and .02 ng/kg	> 0.2-0.35 ng/kg 270 between 0.2 and 0.35 ng/kg	> 0.35 ng/kg 269 above 0.35 ng/kg
Total dioxins + dl PCBs Of the 5,943 tests in which a value was measured, there were...	0-0.5 ng/kg 5,448 between 0 and 0.5 ng/kg	> 0.5-1.0 ng/kg 258 between 0.5 and 1.0 ng/kg	> 1.0 ng/kg 237 above 1.0 ng/kg
ndl PCBs Of the 5,500 tests in which a value was measured, there were...	0-5 µg/kg 4,890 between 0 and 5 µg/kg	> 5-10 µg/kg 347 between 5 and 10 µg/kg	> 10 µg/kg 263 above 10 µg/kg

Salmonella			
Parameter	Number of tests	No. of positive results...	...in feed/ raw materials
Salmonella	49,312	54 in total	
	54 of 49,312 samples tested positive (0.1 %)	12	Pig feed
		12	RPost-extraction rapeseed meal, rapeseed cake
		7	Soya (oil) cake, hulls; post-extraction soya meal
		5	Dairy cow feed, cattle feed
		4	Sunflower seed, cake; extracted sunflower seed
		3	Poultry feed
		3	Cocoa shells
		8	Various feed material products

## Heavy metals

Parameter	Number of tests	No. of results exceeding maximum level ...	...in feed/ raw materials
Heavy metals	108,393	13 in total	
Arsenic	Out of 26,478 tests, a value was measured in 8,840 (33.4 %)	1	Supplementary feed for pigs
		1	Supplementary feed for fattening pigs
		1	Shrimps
		1	Yeast
Lead	Out of 27,759 tests, a value was measured in 12,424 (44.8 %)	1	Complete feed for fattening pigs (up to 50 kg)
		1	Calcium carbonate
		1	Yeast
Cadmium	Out of 27,595 tests, a value was measured in 17,528 (63.5 %)	1	Cocoa shells
		1	Growing crops from permanent pastures (fresh, ensiled or dried)
		1	Shrimps
Mercury	Out of 26,561 tests, a value was measured in 2,653 (10 %)	2	Yeast
		1	Supplementary feed for fattening pigs

## Test results for heavy metals in detail

Parameter	Result	Result
Arsenic Of the 8,840 tests in which a value was measured, there were...	0-1 mg/kg 6,936 tests between 0 and 1 mg/kg	> 1 mg/kg 1,904 above 1 mg/kg
Lead Of the 12,424 tests in which a value was measured, there were...	0-5 mg/kg 11,947 tests between 0 and 5 mg/kg	> 5 mg/kg 477
Cadmium Of the 17,528 tests in which a value was measured, there were...	0-1 mg/kg 17,212 tests between 0 and 1 mg/kg	> 1 mg/kg 316
Mercury Of the 2,653 tests in which a value was measured, there were...	0-0.05 mg/kg 2,418 tests between 0 and 0.05 mg/kg	> 0.05 mg/kg 235