MANCP

Multi-Annual National Control Plan

Annual report 2018

Netherlands Food and Consumer Product Safety Authority
Ministry of Agriculture, Nature and Food Quality

INHOUDSOPGAVE

Introduction and structure			2
Chapter 1	Management summary of the MANCP Annual Report 2018		3
	1.1	Relevant developments	3
	1.2	Key figures	4
	1.3	Effectiveness of the controls	5
	1.4	Analysis of the findings	5
	1.5	Actions taken on non-compliance	11
	1.6	National audit system	11
	1.7	Budget/resources	12
	1.8	Actions taken to improve the official controls	12
	1.9	Actions taken to improve compliance by businesses	13
	1.10	NVWA Intelligence and Investigation Service (NVWA IOD)	13
Chapter 2	Key figures		14
	2.1	Available resources of the inspection services	14
	2.2	Total number of inspections and certifications (in hours) by domain, 2014–2018	14
	2.3	Total number of samples/analyses by domain, 2014–2018	15
	2.4	Summary of decisions imposing fines	16
	2.5	Key data and performance indicators	16
Chapter 3	Reports on areas of supervision in 2018		18
	3.1	Introduction	18
	3.2	Animal health – monitoring and control	19
	3.3	Animal health – prevention (live animals and live products)	24
	3.4	Animal welfare	31
	3.5	Animal feed	40
	3.6	Animal by-products	43
	3.7	Meat supply chain (slaughterhouses, cutting plants and cold stores)	47
	3.8	Meat products and composite products (industrial production)	54
	3.9	Imports of veterinary consignments	59
	3.10	Fish, fishery products and aquaculture	61
	3.11	Dairy, eggs and egg products	64
	3.12	Food services industry and artisanal production	75
	3.13	Food labelling and compliance with additives legislation	78
	3.14	Contaminants, residues and genetically modified organisms (GMOs) in food	79
	3.15	Veterinary medicinal products	88
	3.16	Microbiology (pathogens, food-borne infections and zoonoses)	91
	3.17	Nutrition and health, special foods and drinks	96
	3.18	Plant health	100
	3.19	Plant protection	104
	3.20	Organic products	112
	3.21	Protected geographical designations: protected designations of origin (PDO), protected geographical indications (PGI) and traditional specialities guaranteed (TSG)115	
Chapter 4	Audits		120
Chapter 5	NVWA Intelligence and Investigation Service (NVWA IOD)		125
Chapter 6	Developments in relevant organisations		127

INTRODUCTION AND STRUCTURE

Since 2007, every Member State of the European Union has produced a Multi-Annual National Control Plan (MANCP). Member States report to the European Commission on the implementation and results of official controls with an annual report. This document is the MANCP Annual Report for the Netherlands for 2018. In the Netherlands, the Netherlands Food and Consumer Product Safety Authority (NVWA) is responsible for coordinating and drafting the annual report.
The MANCP annual report describes the official controls in the areas of food safety, animal health, animal welfare, animal feeds, phytosanitary matters and organic production. In the Netherlands, a range of organisations are involved in producing this report.

Supervision under Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 is conducted by:
- the Netherlands Food and Consumer Product Safety Authority (NVWA);
- the Netherlands Controlling Authority for Milk and Milk Products (COKZ);
- the Netherlands Controlling Authority for Eggs (NCAE), a department of the COKZ;
- GD Animal Health (GD).

Supervision under Council Directive 2000/29/EC of 8 May 2000 (plant health) is conducted by:
- the Netherlands Food and Consumer Product Safety Authority (NVWA);
- the Netherlands General Inspection Service for agricultural seeds and seed potatoes (NAK);
- the Netherlands Inspection Service for Horticulture (Naktuinbouw);
- Flower Bulb Inspection Service (BKD);
- Quality Control Bureau (KCB).

Supervision under Council Regulation (EC) No 834/2007 of 28 June 2007 (Organic Production and Products) is conducted by:
- Skal Biocontrole

Chapter 1 sets out the management summary, containing the key findings and conclusions on the controls in 2018.

Chapter 2 deals with the key figures in the area of enforcement within the food supply chain.

Chapter 3 contains the reports for the various areas of supervision, covering 20 different subjects.

Chapter 4 provides a report of the conclusions of the internal and external audits carried out in 2018.

Chapter 5 reports on the activities on the NVWA Intelligence and Investigation Service (NVWA Inlichtingen- en Opsporingsdienst).

Chapter 6 outlines a number of developments in the organisations involved in the implementation of the controls.

The MANCP annual reports are available on the NVWA website (in Dutch and English).

CHAPTER 1
MANAGEMENT SUMMARY OF THE MANCP ANNUAL REPORT 2018

The Annual Report 2018 still relates to the MANCP that was drawn up in 2011 for the period of 2012-2016 and the Multi-annual National Control Plan for 2014-2018. The new NVWA multi-annual agenda for 2021-2023 will be published in 2020 and will constitute the basis for the new MANCP.

1.1 Relevant developments

NVWA reorganisation

Following the reorganisation of 1 July 2017, which set out a more future-proof structure for the NVWA, 2018 is the first full year in which experience has been gained with the new structure. The new NVWA structure represents a shift from a domain-oriented organisation to an organisation that is designed to function on the basis of logically recognisable process steps that enable more efficient, more uniform and more effective operations, supported by improved data management.
In 2018, certain aspects of the cooperation between the Strategy, Enforcement, Inspection, CFO/Finance and Operational Management departments, as expected in a major structural change, proved to require further adjustment and refinement. In addition, the implementation of the process-driven method will require additional efforts from the employees.

Integrated supply chain analyses

The NVWA is currently evolving towards a knowledge-driven and risk-based authority, which intervenes effectively and in a targeted manner in the supply chains based on integrated chain analyses and a robust foundation of knowledge and information. The integrated supply chain analyses reflect the risks that may present themselves in the supply chains and are based on scientific risk assessment, fraud assessment and information from regulatory and supervisory practices. They allow supervisory practices to be aligned with the developments that the risks undergo within the relevant supply chains. As such, they are highly relevant to the regulatory authority and to businesses themselves, which, after all, are responsible for risk management. Integrated supply chain analyses are also crucial tools for policy makers.

State of Food Safety

The NVWA first published the 'State of Food Safety' in 2018, which provides an assessment of food safety in the Netherlands from the perspective of the regulatory authority. The periodic publication of the "State of ..." on each of the public interests represented by the NVWA is part of the NVWA 2020 improvement programme. Knowledge-driven and risk-based supervision takes centre stage, which also means that there is more attention for reflecting on supervisory outcomes. The purpose of the 'State' is not only to pass on the supervision findings to citizens, consumers, businesses, civic organisations, policy makers and politicians, but also to enable us to focus more closely on potential risks arising from social trends and developments.

Brexit

The United Kingdom's (UK) departure from the EU, Brexit, will have an impact in many areas and on a great many organisations, including the NVWA and the relevant agricultural inspection agencies. The free movement of goods will no longer be possible, given that the UK will become a third country. In 2017, the Netherlands kicked off its preparations for Brexit, based on the worst-case scenario in which there would be no trade agreements in place between the EU and the UK. This will lead to an enormous volume increase in imports and exports to third countries. The UK, after all, is the Netherlands' third biggest trading partner. All consignments from the UK or with the UK as their destination will have to be controlled, inspected or certified by the NVWA – this will be a colossal additional task to undertake.

In 2018, the NVWA made a successful start with a recruitment and training campaign for the 143 full-time positions that we believe will be necessary to take on that immense challenge.

New EU regulations

In 2018, the Ministry of Agriculture, Nature and Food Quality, the NVWA and the relevant agricultural inspection agencies took important steps in relation to the further implementation of the Plant Health Regulation (Regulation (EU) No. 2016/2031) and the Official Controls Regulations (Regulations (EU) No. 2017/625). These regulations come into force on 14 December 2019, and continued collaboration between the NWVA and the relevant agricultural inspection agencies is crucial to finalising implementation in 2019.

Fipronil - Sorgdrager report

The discovery in 2017 of the use of a chemical against red mites in chickens, which included the banned substance fipronil, led to the publication of the 'Investigation of fipronil in table eggs' report of the Sorgdrager committee on 28 June 2018. The fipronil incident revealed the weaknesses of the food safety compliance system. The Sorgdrager committee formulated recommendations both for the private sector, the NVWA and for the government and public authorities. The committee took a favourable view of the way in which the NVWA implemented the intervention policies, but equally highlighted that food safety should be given greater priority, including at the NVWA. This should be achieved in part by improving the follow-up on indications and reports, closer cooperation between investigation services and regulatory supervision, the expedited introduction of risk-based supervision and effective communication on food safety incidents with other EU countries. This is in line with the changes that the NVWA has initiated as an organisation.

1.2 Key figures

In 2018, the NVWA carried out a total of over 135,000 inspections, which is roughly 10% less than in previous years. The table below shows the number of inspections per area of supervision.

number of inspections	2014	2015	2016	2017	2018
Identification and registration (I&R)	2,316	2,028	1,783	1,401	496
Animal health – prevention	6,951	6,258	6,723	6,955	5,913
Animal welfare (during transport)	9,359	11,889	12,097	12,436	10,690
Animal feed	1,127	1,107	1,896	1,416	1,260
Animal by-products	3,655	3,804	3,356	2,384	2,004
Meat supply chain	2,772	3,017	3,736	4,021	4,379
Meat products and composite products	5,349	4,670	6,920	6,532	4,508
Imports of live animals and animal products	60,938	60,289	61,279	61,585	60,805
Fish, fishery products and aquaculture		1,574	1,343	1,336	1,117
Milk and dairy products	930	1,166	1,227	1,309	1,368
Egg sector	830	729	714	727	751
Food service industry and retail	36,403	33,502	28,263	29,818	25,550
Residues and contaminants in food	7,529	7,844	9,772	9,478	7,452
Veterinary medicinal products	620	628	645	316	332
Claims for foods for particular nutritional uses	1,862	1,613	1,611	1,045	1,176
Pesticides	868	944	1,053	1,075	894
Organic production	4,908	5,148	5,805	6,482	6,127
PDO, PGI and TSG	861	936	1,005	926	879
Total	**147,278**	**147,146**	**149,228**	**149,242**	**135,701**

The number of inspections has more or less remained stable:

inspections (in hours)	2014	2015	2016	2017	2018
Meat supply chain	281,747	279,405	287,562	289,729	294,896
Certification for live animals	108,028	103,933	107,553	106,326	94,150

1.3 Effectiveness of the controls

The inspection services carry out measurements of the effectiveness of controls through specific projects. Projects such as the Meat supply chain improvement plan (Verbeterplan vleesketen) and the Improvement plan for approved assembly centres for cloven-hoofed animals (Verbeterplan erkende verzamelcentra evenhoevigen), including the Compliance monitor for red meat slaughterhouses and poultry slaughterhouses (Naleefmonitor slachthuizen roodvlees en pluimvleesslachterijen), and even the specific project on the use of disinfectants at all approved, registered and simple cleaning and disinfection sites, provide more insight into the compliance of specific target groups and the effectiveness of official controls. Throughout the food chain, in respect of microbiological risks, the number of reports regarding unsafe batches of foods by companies themselves is a key indicator of companies' awareness. These reports are compulsory under the General Food Law Regulation (GFLR) and are being submitted with increasing frequency. In 2018, the number of reports relating to microbiology increased by roughly 20% compared with the previous year, despite the fact that the NVWA's 2018 sampling programme did not indicate an actual increase in unsafe batches of food.

In 2018, the NVWA carried out work in some domains on target group analyses and the development of supervisory strategies in anticipation of impact assessments. The dairy farmer target group was studied due to a large group of dairy farms suffering from a high calf mortality rate. If farmers do not provide calves with adequate or correct care, this can ultimately lead to calf mortality. The reason why dairy farmers withhold the necessary care for calves has been examined more thoroughly.

1.4 Analysis of the findings

Animal health

Yet again in 2018, there were cases of the Avian influenza (AI) virus in the Netherlands, both in commercial poultry farms and among wild birds. Two commercial poultry farms were affected by highly pathogenic avian flu and the low pathogenic avian flu virus was found in 1 commercial poultry distributor. It is crucial that actors continue to comply with the duty to report any cases of AI and that the NVWA continues to monitor wild birds and commercial poultry farms.

Continuous monitoring and control of zoonotic salmonellosis in poultry is essential, due to the risk of human contamination through food. In 2018, compulsory monitoring of this type of zoonosis in breeding and laying hen farms identified contaminations of one or more housing units of 16 farms.

In 2018, the NVWA received 98 reports of psittacosis, 22 of which related to potential cases among birds. The Municipal Health Service reported 76 cases of psittacosis in human patients. In the Netherlands, further research is being carried out aimed at improving the diagnosis and the prevention of psittacosis.

In order to keep the animal disease expert group at strength, 11 new animal disease experts were trained in 2018. In general, the NVWA encounters relatively few shortcomings in inspections in the context of animal health and prevention. This means that farms generally meet the EU requirements in terms of organisation and working methods.

There is some strain between the reduced resources and number of hours available on the one hand, and the numbers of and time required for I&R controls for cattle, sheep and goats on the other. In 2017, an investigation was launched into alternative enforcement options that meet the European requirements. This innovation process was discontinued due to the study in 2018 in the context of the phosphate rights trading system, but it will be picked up again in 2019. The I&R inspections that corresponded to the phosphate rights trading system primarily focused on detecting potential

instances of malpractice in relation to birth reports. In general, these inspections were also more intensive than the regular inspections in the context of the 3% requirement, and constitute the overwhelming majority of cattle I&R inspections carried out.

In 2018, the NVWA launched a major African swine fever prevention campaign aimed at preventing the introduction of this highly contagious viral disease from Eastern Europe and Belgium. These activities continued until March 2019. The prevention campaign provided a clear insight into compliance in relation to the cleaning and disinfection of transport vehicles for pigs in the field of animal health. The cleaning of livestock transport vehicles is largely in good order, but particularly compliance regarding the use and application of disinfectants is insufficient.
Furthermore, better preparation of controls for the use of so-called PT03 disinfectants proved to lead to more risk-based controls at cleaning and disinfection (C&D) sites and therefore to earlier identification of shortcomings and redress of any such shortcomings where necessary.

Animal welfare

A great deal of the supervision carried out by the NVWA is based on risk, meaning that the focus of the organisation is on businesses with the highest likelihood of non-compliance. In addition, the NVWA regularly carries out compliance measurements to monitor the impact of its supervision. In 2018, the principal focus was on risk-based supervision in this area.

The NVWA and the private sector spearheaded several initiatives aimed at improving animal welfare both in the transport sector, in slaughterhouses and in the primary sector. The NVWA has increasingly been using communication strategies to improve compliance. This also involves the use of communication through social media.

The NVWA continuously works to improve official controls, including through enforcement communication, cooperating with scientific research and evaluating inspection results. It is vital to establish scientifically substantiated guidelines for the supervision of open standards.

In 2018, the NVWA carried out project-based inspections regarding the climate conditions in pig housing units, based on indicators for inadequate housing climate conditions developed by Wageningen Livestock Research.

Animal feed

In general, the level of compliance in the animal feed sector with regard to the Annex II requirements of Regulation (EC) No. 183/2005 is good. Key areas of focus have been and remain traceability, carry-over (cross-contamination) and Hazard Analysis and Critical Control Points (HACCP). Incorrect and/or incomplete information on labels and the assertion of unjustified claims also remain a concern. Furthermore, compliance with the reporting obligation of businesses and laboratories is not yet at the desired level. The sector takes responsibility in the event of incidents and proactive steps are taken to prevent further spread.

2018 saw the start of the drafting process of the integrated supply chain analysis for feed crops and plant-based animal feed. This analysis will provide more insight into the interactions between links in the supply chain and thereby yield a better understanding of the opportunities for risk management improvements. In addition, it will reveal the ways in which the NVWA can strengthen its information position. This integrated supply chain analysis will be completed and published in 2019.

Animal by-products

Regarding animal by-products, it has been shown that this sector is significantly vulnerable to fraud. Supervision businesses engaged in fraudulent activities requires extensive knowledge, excellent administrative skills and time. In addition, the number of businesses operating in this sector is increasing each year. An unchanged number of inspectors has led to inspections increasingly having to take place on the basis of risk. Moreover, part of the organisation's supervision capacity had to be reallocated as a result of new legislation relating to third-country exports of processed animal protein.

Regarding businesses producing animal by-products, compliance is good in the dairy industry and among primary businesses. At red meat and poultry slaughterhouses, compliance varies from moderate to reasonable. This remains a key focus for this sector.

Traceability inspections and securing supply streams continue to be priorities in the supervision of approved and registered businesses. Supervision of illegal third-country export of animal feed has resulted in the cessation of illegal export of processed animal proteins by 10 of the 12 businesses involved, and 2 businesses are currently in the legal process aimed at cessation.

Meat supply chain

The NVWA dedicated a total of 294,896 hours to the inspection of red meat and poultry slaughterhouses. These hours not only encompass inspection activities (AM and PM (meaning ante mortem and post mortem) inspections and supervision of PM inspections), but also includes a large part of the supervision activities in the slaughterhouses. Compared to 2017, the number of requested inspection hours for red meat and poultry rose by 1.8% and 1.7% respectively. On the other hand, the number of slaughtered red meat animals rose by 2.6%, whereas the slaughter volume for poultry fell by 1.4%. It may be that market developments in relation to broiler chicks (sharp increase in the import of poultry meat in autumn 2018) affected this decline. For red meat, the increase of the slaughter volume is primarily caused by the greater number of slaughtered pigs.

In 2018, more audits and inspections were carried out within this domain, but fewer re-inspections were carried out at a stable number of target businesses. The number of written measures taken by the NVWA decreased by 14% in 2018 compared to 2017. Significantly fewer written warnings were issued at red meat slaughterhouses, but more fine reports were issued. Roughly twice as many written measures were still taken at poultry slaughterhouses than at red meat slaughterhouses. The measures taken at cutting plants and cold stores were similar to 2017.

Meat products and composite products (industrial production)

During official controls, omissions are often identified at the businesses that produce, import, store or distribute meat products or composite products (more than 20%). In regards to meat products and composite products, it seems that many (43%) producing businesses continue to struggle with compliance with the requirements of Regulation (EC) No. 2073/2005. A specific evaluation was carried out in mid-2018 (with a planned follow-up in 2019) of the substantiation of the shelf-life of perishable products, particularly in relation to the potential growth of listeria. The compliance rate is expected to improve as a result of the increase in the knowledge available to inspectors and businesses.
Due to the reduced availability of capacity among the various inspection teams, the number of scheduled audits and inspections and those carried out is significantly lower compared to previous years. On the one hand, this requires a more risk-based approach. However, the reduction of inspection capacity is worrying, given the high rates of non-compliance.
Establishments that are certified under a Private Quality System (PQS) based on the BRC, FSSC 22000 or IFS food safety standards were subject to modified supervision in 2018. The guiding principle in this regard is that the NVWA will increasingly be using the inspection results of these systems. The NVWA is using a pilot to examine the extent to which the NVWA is able to rely on the safeguarding of food safety under a PQS and the operation of the certifying institutions.

Imports of veterinary consignments

In 2018, the number of consignments offered for inspection showed a slight decrease. The number of laboratory analyses remained the same, given that the measures in respect of Brazil, meaning more intensive controls, had to remain in force throughout 2018. There was an increase in the overall number of interventions, despite the fact that the number of interventions relating to Brazil decreased in 2018. The interventions relate to denying entry to the territory of the EU. In most cases, this was caused by problems with the relevant documentation. As part of a collaborative project between the government and the private sector, a start will be made in 2019 on reducing the number of incorrect documents provided. This will initially take place in Rotterdam, given that most documents are assessed there.

Fish, fishery products and aquaculture

Within the fish and fish processing industry, official controls frequently identified omissions (30%).
In 2018, the NVWA published the inspection data of all EU-approved fish processing businesses on its public website.
The presence and growth of *Listeria monocytogenes* in smoked fish during its shelf life remains an issue that requires attention. These businesses seem to struggle carrying out shelf life studies.
In order to identify the presence of norovirus in oysters, a cross-Europe baseline study is to be carried out into the presence and spread of that virus in finished products and product areas. This study will see a continuation of cooperation with the European Commission.

Dairy

The integrated risk analysis of the dairy supply chain (2017) showed that 96% of milk was industrially processed through pasteurisation or comparable means, killing any pathogenic microorganisms. In addition, this risk analysis showed that the risks associated with food safety in the dairy sector chiefly occurred in raw milk and raw milk products. There has been an increase in the popularity of raw milk products, in addition to the production of raw milk products taking place primarily in the category of small-scale producers and farmhouse dairy producers. A high percentage within this category does not fully comply with the statutory requirements. In 2018, this led to the Netherlands Controlling Authority for Milk and Milk Products (COKZ) increasing the focus of its supervision efforts on the sale of raw milk to consumers and on the production of raw milk products. This will be fleshed out in 2019. In addition, 2019 will also see the start of a process that aims to identify and map out the target group of farmhouse dairy producers and small-scale producers in greater depth using the enforcement management cycle, in order to formulate a new enforcement mix aimed at increasing compliance in the field of hygienic practices (from milking to the production of raw milk products) within this target group.

The percentage of microbiological abnormalities of dairy samples and the number of reports (Rapid Alert System for Feed and Food (RASFF) and the General Food Law Regulation (GFLR)) that relate to microbiological issues remains consistently high (ranging from approximately 8% to 36%), in particular for raw milk and raw milk products of small-scale producers and farmhouse dairy producers and requires the special attention of both the COKZ and the relevant businesses. The COKZ monitors compliance in line with NVWA intervention policy.

Eggs and egg products

The results of the supervision in 2018 show a slight decrease in the number of shortcomings compared to 2017. Several incidents in this sector, however, including the fipronil incident, show that the sector is somewhat unaware of the applicable legislation and of its own responsibilities. The NVWA ensured that appropriate measures were taken and imposed penalties. The Netherlands Supervisory Authority for Eggs (NCAE) monitors compliance in line with NVWA intervention policy.

Food service industry and artisanal production (HAP)

In 2018, more than 25,000 inspections and re-inspections were conducted at food service businesses, artisanal businesses, institutions and retail outlets. This is a decrease compared with 2017 and is the result of a number of factors, including the implementation of a new inspection registration system. A total of 8,514 measures were taken in 2018.
As a result of a more stringent intervention policy, the penalty rate showed a further increase in 2018 compared with 2016 and 2017 (from 25% and 34% up to 41% in 2018 respectively).
Over 3/4 of companies that fell under more stringent supervision were food service businesses.
The NVWA makes use of private-body inspection systems in its supervision. At the end of 2018, 2,631 companies (≈2.3%) took part, meaning that controls were conducted within the private-body inspection system and that the NVWA conducts a reduced type of supervision for these companies. The 9th private-body inspection system was accepted in 2018.
The supervision of the NVWA within this domain will be pursued by means of a broad range of instruments in the years to come with the aim of increasing compliance. Supervision will largely take place on the basis of risk. In addition, it remains essential that compliance should be supervised by means of compliance measurements.

Food labelling

Compared with previous years, 2018 showed an increase in the number of reports, received in the context of the General Food Law Regulation, regarding the switching of labels or packaging, resulting in the incorrect allergens being listed on the list of ingredients. This year, the NVWA did not carry out specific supervision on food labelling, but nevertheless did supervise companies that trade in additives. In addition, the NVWA followed up on reports on misleading or erroneous labelling.
Furthermore, the NVWA has investigated whether the companies traded in the additive sulphite and to which companies it was supplied. This investigation showed that sulphite was supplied to meat processing companies, primarily butchers. In 2019, this information will be used to carry out targeted supervision activities among buyers of sulphite to monitor the illegal use of sulphite in meat preparations.
In 2018, the NVWA began compiling a web dossier on food labelling and a web dossier on food additives. These web dossiers clarify the legislation and the various positions and views of the NVWA.

Contaminants, residues and genetically modified organisms in food

Testing for pesticide residues has revealed that the percentage of irregularities for crops grown in the EU is still low. Nevertheless, the percentage of violations in products from outside of Europe has remained relatively high, but seems to have decreased slightly in 2018, following an increase in recent years. The number of different substances found in 2018 was comparable to the number found in 2017. Pitayas, goji berries and wine leaves stand out in particular as products that exceed the maximum residue limit (MRL) for various pesticides. In addition to the removal of the relevant products from circulation in the event that they exceed MRLs, this has led to more stringent control regimes for these products following a report to the European Commission.

As the severity of fungal attacks may vary in each harvesting season and by country of origin, the enforcement of EU regulations governing mycotoxins remains a key area of focus each year. Sampling of relevant products has been tailored accordingly. Most abnormalities are found in nuts, seeds and herbs and spices (nutmeg in particular). More violations of the MRL for mycotoxins have been found in mulberries (in the dried fruit (including Mediterranean fruit) product group) as a result of the increased popularity of superfoods. As in previous years, there was significant focus on the importers in relation to the mycotoxin sampling scheduling. The NVWA also implemented an additional control instrument this year. Company data was confiscated from a number of importers and analysed for the presence of irregularities. The findings are currently still being investigated by the Public Prosecutor.

Veterinary medicinal products

In 2018, the NVWA carried out a number of inspections based on reports and projects. The parties that were inspected included farmers, private smallholders, veterinarians and permit holders. The abnormalities that were found were diverse and related to a number of issues, including issues in the area of prescription, delivery, availability and the application of veterinary medicinal products, administrative requirements and veterinary practices.

Moving forward, the NVWA will continue its efforts to tackle the risks in the field of production, distribution, accurate prescription and the application of veterinary medicines from an animal health, animal welfare, public health and environmental perspective. This will take place using a risk-based approach as much as possible.

A total of some 35,665 analyses were carried out in 2018 in the context of the National Residues Plan in products of animal origin. The results of 56 of these analyses (0.16%) were non-compliant.

The NVWA conducts targeted inspections on poultry and veal farmers who are not affiliated with a quality system (181 total) in order to assess whether they meet the statutory self-control requirement. The NVWA initially communicated about enforcement, resulting in all farmers receiving a letter, after which the NVWA inspected 41 poultry businesses who did not align with an inspection system as a result of the letter. This enforcement action resulted in an increase in the number of businesses affiliated with the poultry quality system of 100%. A similar result was achieved for veal farmers.

Microbiology

The increase in GFLR reports (roughly 20%) submitted by food companies, the results of the NVWA's monitoring programmes and the source investigations in relation to outbreaks of food poisoning show that microbiological risks continue to require the attention of food companies themselves and of the regulatory authority. Risk-based supervision shows that targeted monitoring of specific foods (exotic meats, herbs/spices, smoked fish), targeted inspections of compliance and control of microbiological hazards can have advantages, and can provide businesses and consumers with a framework for action.

The reduced availability in 2018 of both sampling and analysis capacity for the monitoring and surveillance of pathogens in imports, industry and wholesale distribution is partly the result of the knock-on effect of the handling of the fipronil incident. It is crucial that the available capacity be managed more effectively in 2019.
In recent years, both in the Netherlands and across the EU, the realisation of the commitment obligation regarding the definition of the minimum number of isolates for a number of specific pathogens in the antibiotic resistance sampling plan has been a problem. The decrease in the number of isolates analysed in 2018 compared to 2017, 906 compared to 1,467 respectively, can be explained as a result of a similar decrease in the number of samples taken. In the meantime, the NVWA has initiated a number of targeted steps aimed at improving this, based on the results of a recent HFAA mission (Health and Food Audits and Analysis of DG SANTE of the European Commission).

Nutrition and health, special food and drink

Supervision of special food and drink has a broad scope, ranging from tube feeding to herbal preparations. This domain is characterised by the fact that many products do not have a legal status that is clear in advance. Certain products could be classified simultaneously as a medical aid, a medicinal product or a food supplement.

In 2018, the NVWA carried out an investigation similar to the one in 2014 in relation to food and health claims for cereal-based breakfast products. In 2014, compliance rose from 49% to 100% following the NVWA's intervention. Since then, compliance has fallen yet again to 69% in 2018. At the level of the individual companies, the NVWA found that compliance had risen from 27% of companies in 2014 to 44% of companies in 2018. This means that roughly half of all companies that sold and supplied breakfast products in 2018 and which were assessed did not meet the requirements of the Nutrition and Health Claims Regulation (Regulation (EC) No. 1924/2006).
The inspections that were carried out at companies focused on labelling, nutrition and health claims and the use of medical claims in terms of key points, the advertising of infant formulae, new foods and banned herbs. Inspections were also carried out as a result of 118 reports (RASFF or GFLR reports or reports by consumers and companies). In 44% of cases, the report was deemed to be well founded (and therefore measures were justified). This is a very small increase compared to 2017, when this was 42%.

Plant health

The number of reports from the Netherlands to third countries due to the discovery of a quarantine organism has increased quite significantly, with 501 intercepted consignments in 2018, up from 358 consignments in 2017. The main cause is the regulation of Thaumatotibia leucotreta as a quarantine organism as of 1 January 2018. This organism is mainly found in cut roses from Africa, but it may also be found on fruits from Capsicum sp. and Citrus sp. from Africa. The key changes concerning the status of the pest in 2018 are related to the outbreaks of the Tomato ringspot virus and Tetranychus mexicanus (both 'Transient, under eradication') and Potato spindle tuber viroid organisms, which are currently considered 'Present, in ornamentals' due to the scrapping of measures for ornamental plants.

Plant protection

A specific approach was used in 2017 and 2018 to achieve improvements in terms of compliance in this domain. This approach of collaborating with organisations of growers, communication, and transparency in practices and actions seems to be effective. This approach will therefore be continued and possibly expanded with alternative instruments.

A significant contribution to compliance came from the NVWA's efforts to create an appropriate and effective package of measures and funds to combat pests and diseases. Efforts are being made nationally and internationally to increase

the package of measures and funds. The emphasis is on low-risk funds, solutions for small-scale applications and the promotion of integrated plant protection.

The controls, reports and measurements carried out inter alia showed that compliance in the flower bulb growing industry has improved significantly compared to 4 years ago, and that compliance in the vegetable greenhouse horticulture sector has deteriorated compared to previous years. Compliance for plant protection outside of the agricultural sector is low, and there were a significant number of reports that parties were insufficiently aware or unaware of the ban of the professional use of plant protection products (pesticides) outside of the agricultural sector. Furthermore, there is a need for continued focus on the supply of and trade in products not authorised in the Netherlands; the use of products that are banned for one type of cultivation, but which are permitted for other types of cultivation; improper or absence of drift-reducing measures.

Organic products

Skal monitors compliance with European regulations in the Netherlands at all stages of the organic supply chain. To that end, Skal carried out a total of 6,127 inspections in 2018 (of which 963 were unannounced).

2018 was a year of growth for Skal. Growth in terms of personnel and professionalism, growth of the organic sector and of the complexity of the work itself. Unfortunately, 2018 also proved to be a difficult year, given that Skal was unable to inspect all registered companies.

Based on the inspections conducted by Skal, it can be said that by far most organic companies in the Netherlands are in good compliance with organic regulations. Skal identified a critical deviation in less than 1% of the registered companies during the inspections. It is only in relation to a critical deviation that the organic status of the product is at stake. The number of certified companies is growing steadily, whereas the number of deviations identified during the inspections in 2018 remained the same as in previous years. This is also a positive sign regarding compliance with organic regulations.

Geographical indications: protected designation of origin (PDO), protected geographical indication (PGI) and traditional specialities guaranteed (TSG)

The results of the 2018 control show that the protected types of cheese generally meet the requirements in the corresponding product registration dossiers. A number of violations, however, were established, primarily for Gouda Holland and Edam Holland, with regard to the moisture content and the fat content in the dry matter. Corrections take place effectively by means of penalties, which take away the economic advantage of the relevant party.

1.5 Actions taken on non-compliance

The table below sets out a multi-year summary of administrative fines.

decisions imposing fines	2014	2015	2016	2017	2018
Number of decisions imposing fines (Commodities Act)	5,327	3,626	3,975	4,801	4,296
Total amount of fines (x 1000 euros)	6,183	4,593	4,874	5,642	5,425
Average fine	1,278	1,267	1,226	1,175	1,263

1.6 National audit system

In accordance with the Official Controls Regulation (Regulation (EC) No. 882/2004), the NVWA carries out internal and external audits to assess the effectiveness of the official controls. The internal audits are carried out by the Internal Audit Service (IAD), with the external audits being carried out by the inspectors of the NVWA.

Each year, the internal audits relate to the verification of the accreditation of the feed and food safety laboratory, the national reference centre (NRC), the fish inspection teams, the external-boundary inspection centres and the

warehouses. In addition, in 2018, the execution of re-inspections was the subject of an internal audit. The principal conclusion is that an appropriate and effective quality system is in place, which complies with the ISO 17025 or ISO 17020 standards. Nevertheless, regarding re-inspections, the general conclusion was that the process of re-inspections within the NVWA as a whole is inadequate, resulting in insufficient guarantees that re-inspections will be scheduled, carried out and invoiced within the prescribed period of time.

The external audits focused on several organisations, including the COKZ and NCAE, the Animal Sector Quality Inspection (Kwaliteitskeuring Dierlijke Sector, KDS) and on the phytosanitary inspection services (BKD, KCB, NAK and Naktuinbouw). The results of these external audits indicate satisfaction with the way in which the activities of the various services are carried out. However, regarding the food safety criterion on *Listeria monocytogenes*, the recommendation of the NVWA audit for the COKZ has been designated as an assignment that must be carried out as soon as possible.

1.7 Budget/resources

The following table lists the available budget and staffing levels for the relevant inspection services as at 31 December 2018.

inspection service	2017 capacity		2018 capacity	
	budget (x 1,000 euros)	staff (FTEs)	budget (x 1,000 euros)	staff (FTEs)
NVWA	344,157	2,393	352,518	2,459
COKZ/NCAE	8,697	52	9,152	57
NAK	22,079	199	22,931	228
Naktuinbouw	28,188	272	29,832	294
BKD	9,094	98	8,859	102
KCB	17,138	152	17,897	135
GD Animal Health	58,180	323	60,000	500
Skal	4,334	42	5,287	49

1.8 Actions taken to improve the official controls

Within the domains, concerted efforts have been made to improve the quality of the official controls. This has resulted in the following actions, including:

- training programmes, courses and exercises;
- NVWA Improvement Plan (NVWA 2020);
- use of data analysis;
- improvement of uniformity through improvement of working instructions (quality management);
- application of an enforcement strategy;
- execution of integrated chain analysis, risk-based practices;
- updated intervention policy;
- innovation in supervision, such as using improved or new methods of analysis, adapted supervision in the event of private-body quality inspection systems;
- cooperation with other Dutch or foreign services, exchange of ‘best practices’;
- use of enforcement communications;
- measurement of satisfaction among registered businesses.

1.9 Actions taken to improve compliance by businesses

In order to improve compliance by businesses within each of the domains, some of the following actions have been taken:

- intensive contact and consultation with the sector and/or businesses concerned;
- targeted information provision, such as via the NVWA website, web dossiers, information sheets;
- implementing enhanced supervision in the event of inadequate performance of industrial production companies (meat products and composite products);
- strictly applying intervention policies;
- providing compliance assistance to companies, including by way of a 'Prevent African swine flu via animal transport' flyer and a project aimed at achieving an enforcement approach for 'green' resources;
- publishing inspection results, e.g. in the field of fish, fishery products and aquaculture;
- publishing fact sheets containing the findings of animal welfare inspections;
- communicating on enforcement in a manner that encourages compliance with regulations, including through the use of Twitter and press releases;
- developing education campaigns on regulations and enforcement;
- consulting with the owners of private quality systems (including in the food, animal feed and dairy sectors, and in food service/artisanal production);
- making NCAE contribution to the egg supply chain self-regulation working group, following the fipronil incident;

1.10 NVWA Intelligence and Investigation Service (NVWA IOD)

The NVWA Intelligence and Investigation Service (NVWA IOD) is active in all NVWA domains. The NVWA IOD is deployed in the event of serious or systematic infringements of the law within the NVWA's enforcement domains. The NVWA IOD focuses primarily on complex, supply chain-related, organised and international criminality. The core tasks of the NVWA IOD are:

- collecting and refining intelligence;
- carrying out analyses to improve insight into the nature and extent of compliance and non-compliance;
- conducting investigations on the basis of a wide range of powers.

In 2018, the subjects tackled in investigations included:

- fraud involving meat or meat products;
- fraud involving the sale of manure;
- fraud involving rejected foods;
- trade in unauthorised plant protection products;
- fraud involving raw materials for animal feed;
- fraud involving EU subsidies for greenhouse horticulture.

CHAPTER 2
KEY FIGURES

This chapter reviews the key enforcement figures.

2.1 Available resources of the inspection services

The following table lists the available budget and staffing levels for the inspection services involved as at 31 December 2018 (see Chapter 6 for a description of the services).

inspection service	2017 capacity		2018 capacity	
	budget (x 1,000 euros)	staff (FTEs)	budget (x 1,000 euros)	staff (FTEs)
NVWA	344,157	2,393	352,518	2,459
COKZ/NCAE	8,697	52	9,152	57
NAK	22,079	199	22,931	228
Naktuinbouw	28,188	272	29,832	294
BKD	9,094	98	8,859	102
KCB	17,138	152	17,897	135
GD Animal Health	58,180	323	60,000	500
Skal	4,334	42	5,287	49

2.2 Total number of inspections and certifications (in hours) by domain, 2014–2018

The following tables list the total number of inspections and certification hours for each of the domains. See Chapter 3 for a specific description of each of the domains.

number of inspections	2014	2015	2016	2017	2018
Identification and registration (I&R)	2,316	2,028	1,783	1,401	496
Animal health – prevention	6,951	6,258	6,723	6,955	5,913
Animal welfare (during transport)	9,359	11,889	12,097	12,436	10,690
Animal feed	1,127	1,107	1,896	1,416	1,260
Animal by-products	3,655	3,804	3,356	2,384	2,004
Meat	2,772	3,017	3,736	4,021	4,379
Meat products and composite products	5,349	4,670	6,920	6,532	4,508
Imports of live animals and animal products	60,938	60,289	61,279	61,585	60,805
Fish, fishery products and aquaculture		1,574	1,343	1,336	1,117
Milk and dairy products	930	1,166	1,227	1,309	1,368
Egg sector	830	729	714	727	751
Food services industry and retail	36,403	33,502	28,263	29,818	25,550
Residues and contaminants in food	7,529	7,844	9,772	9,478	7,452
Veterinary medicinal products	620	628	645	316	332
Claims for foods for particular nutritional uses	1,862	1,613	1,611	1,045	1,176
Pesticides	868	944	1,053	1,075	894
Organic production	4,908	5,148	5,805	6,482	6,127
PDO, PGI and TSG	861	936	1,005	926	879
Total	**147,278**	**147,146**	**149,228**	**149,242**	**135,701**

inspections (in hours)	2014	2015	2016	2017	2018
Meat supply chain	281,747	279,405	287,562	289,729	294,896
Certification for live animals	108,028	103,933	107,553	106,326	94,150

plant health inspections	2014	2015	2016	2017	2018
Results for arable agriculture	36,696	38,785	40,578	38,973	19,930*
Results for fruit and vegetables	117,768	122,560	146,019	125,323	90,931**
Results for floristry	184,068	167,965	187,787	184,851	175,356
Results for tree nurseries and green spaces	13,971	14,109	12,371	13,148	11,978
Total	**352,503**	**343,419**	**386,755**	**362,295**	**298,195**

** exact figures for National seed potato crop inspections unavailable at the time of publication of this report*

*** exact figures for the export of vegetables and fruit to third countries unavailable at the time of publication of this report*

2.3 Total number of samples/analyses by domain, 2014–2018

The following table lists the total numbers of samples/analyses for the various domains. See Chapter 3 for a specific description of each of the domains.

number of samples/analyses	2014	2015	2016	2017	2018
Animal health – monitoring	133,406	132,849	261,906	305,176	302,377
Feed[1]	5,420	2,640	2,673	2,360	1,926
Animal by-products	177	160	87	36	38
Meat supply chain	159,284	155,036	158,560	162,189	167,451
Imports of live animals and animal products	1,530	1,386	1,275	4,029	4,180
Fish, fishery products and aquaculture	2,050	2,831	2,949	3,056	2,494
Milk and dairy products	5,366	6,104	6,481	7,818	14,347
Egg sector	306	244	227	777	621
Food services industry and retail	7,155	5,681	8,371	6,759	4,764
Residues and contaminants in food	9174	7,844	9,772	9,478	7,462
Veterinary medicinal products – National Residues Plan	32,810	33,064	34,719	34,300	35,665
Microbiology	15,193	15,463	16,077	13,304	8,801
Claims for foods for particular nutritional uses	579	694	678	193	162
Organic production	199	196	326	352	441
PDO, PGI and TSG		6,419	6,292	5,433	6,400
Total	**372,649**	**370,611**	**510,393**	**555,260**	**557,129**

1) From 2015 onwards, the number of samples is reported instead of the number of analyses.

2.4 Summary of decisions imposing fines

Total number of decisions imposing fines in 2018

legislation	number	total amount of fines	average fine amount	amount of fines paid
Commodities Act	4,296	€5,424,783	€ 1,263	€ 4,665,193
Tobacco Act (Tabakswet)	1,326	€ 1,914,436	€ 1,444	€ 1,247,719
Plant Protection Products and Biocides Act (Wgb)	245	€ 317,313	€ 1,295	€ 341,183
Medicines Act (Gmw)	31	€ 434,648	€ 14,021	€390,263
Animal Health and Welfare Act (Gwwd)	40	€ 115,500	€ 2,888	€ 136,176
Animals Act (Wet dieren)	934	€ 3,602,000	€ 3,857	€ 3,180,694
Total	**6,872**	**€ 11,808,680**	**€ 1,669**	**€ 9,961,228**

Multi-year summary of decisions imposing fines, 2014–2018

becisions imposing fines	2014	2015	2016	2017	2018
Number of decisions imposing fines (Commodities Act)	5,327	3,626	3,975	4,801	4296
Total amount of fines (x 1000 euros)	6,183	4,593	4,874	5,642	5,425
Average fine	1,278	1,267	1,226	1,175	1263

2.5 Key data and performance indicators

The NVWA has adopted a number of indicators for the assessment of the services it provides.

Complaints about NVWA actions

complaints about NVWA actions	2014	2015	2016	2017	2018
Inspections	47	44	71	105	85
Sample analyses	0	2	5	4	1
Inspections	29	22	31	33	5
Total	**76**	**68**	**107**	**142**	**91**

Information requests and reports

The following table lists the developments in the number of requests for information and reports received by the NVWA's Customer Contact Centre. The Customer Contact Centre can be contacted by phone or email 24 hours a day and 7 days a week. As the NVWA's name awareness has increased among consumers, more consumers are familiar with the complaint notification procedure. From 2017, the term 'reports' is no longer used within the NVWA. Only the term 'complaints' is used.

complaints/requests received	2014	2015	2016	2017	2018
Number of phone calls	55,561	56,330	53,983	49,532	50,980
Number of complaints, concerning:	15,065	16,397	17,650	20,380	24,245
- animal welfare/neglect	2,556	2,664	2,127	2,144	2,743
- smoking in hotels/restaurants/cafés	1,339	1,403	1,040	886	*
- food poisoning	1,157	1,250	1,615	1,910	2,187
- hygiene issues	1,315	1,163	1,163	1,283	*
- General Food Law Regulation issues	918	1,141	1,724	2,722	4,029
- inadequate conditions/past the Use By date	563	553	502	507	*
- RASFF issues	422	542	502	860	930
- miscellaneous international alerts	229	515	590	873	1,031
- pests in food businesses	624	505	897	620	*
- improper food advertising and promotion	407	478	496	367	*
Percentage of justified complaints	65%	64%	64%	64%	68%
Percentage dealt with within six weeks	58%	47%	52%	60%	72%

** a number of reports are logged in Inspect – this system is currently unable to provide any information on decisions and choices within the type of notification.*

RASFF reports

RASFF stands for Rapid Alert System for Food and Feed. This is the European notification system that Member States use to inform each other about food and animal feed that poses a public health risk. If something is found to be wrong with a product being imported or already on the Dutch market that could potentially have cross-border consequences, the NVWA will report this in the system. There are also reports from other Member States about products with a link to the Netherlands.

The following table provides an overview of all reports involving the Netherlands. The increase in the number of border rejections is primarily due to chicken from Brazil.

action	2015	2016	2017	2018
Alerts	244	262	327	580
Border rejections	139	132	305	217
Notifications for information	60	72	76	115
Notifications for follow-up	95	123	173	2
Total	**538**	**589**	**881**	**914**

CHAPTER 3
REPORTS ON AREAS OF SUPERVISION IN 2018

3.1 Introduction

Chapter 3 contains the reports on the various domains in 2018.

The following domains are discussed in the following order:

3.2 Animal health – monitoring and control
3.3 Animal health – prevention (live animals and live products)
3.4 Animal welfare
3.5 Animal feed
3.6 Animal by-products
3.7 Meat supply chain (slaughterhouses, cutting plants and cold stores)
3.8 Meat products and composite products (industrial production)
3.9 Imports of veterinary consignments
3.10 Fish, fishery products and aquaculture
3.11 Dairy, eggs and egg products
3.12 Food services industry and artisanal production
3.13 Food labelling
3.14 Contaminants, residues and GMOs in food
3.15 Veterinary medicinal products
3.16 Microbiology (pathogens, food-borne infections and zoonoses)
3.17 Nutrition and health, special food and drink
3.18 Plant health
3.19 Plant protection
3.20 Organic products
3.21 Protected geographical indications: Protected designation of origin (PDO), protected geographical indication (PGI) and traditional specialities guaranteed (TSG)

The following will be reviewed for each domain, to the extent that relevant data is available:

- applicable legislation and regulations;
- size of the control file;
- control results;
- findings on compliance;
- projects in 2018;
- incidents;
- impact measurement;
- actions taken to improve the official controls;
- actions taken to improve compliance by businesses;
- key conclusions.

3.2 Animal health – monitoring and control

Controlling authorities: NVWA and the GD Animal Health (GD)

List of the main legislation under which controls were carried out in 2018

EU legislation	
Directive 64/432/EEC	Intra-Community trade in bovine animals and swine (TB, brucellosis, leucosis)
Directive 82/894/EEC	Notification of animal diseases
Directive 91/68/EEC	Intra-Community trade in sheep and goats (Brucella melitensis).
Directive 92/65/EEC	Balai Directive on trade in live animals and live products
Directive 92/66/EEC	Introducing Community measures for the control of Newcastle disease (NCD)
Directive 92/119/EEC	General Community measures for the control of certain animal diseases and specific measures relating to swine vesicular disease
Council Directive 2000/75/EC	Council Directive 2000/75/EC laying down specific provisions for the control and eradication of bluetongue
Council Directive 2001/89/EC	Community measures for the control of classical swine fever
Council Directive 2003/85/EC	Community measures for the control of foot-and-mouth disease
Council Directive 2005/94/EC	Community measures for the control of avian influenza
Regulation (EC) No 999/2001 of the European Parliament and of the Council	Rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies

National legislation: Animal Health and Welfare Act (Gwwd)

Size of the control file in 2018

type of business	**number 2017**	**number 2018**
Cattle farms	42,240	43,077
Farms with small ruminants	35,469	35,294
Pig farms, including non-commercial farms[1]	10,509	10,766
Poultry farms	1,960	1,757

1) This concerns businesses with more than 5 pigs (the UBN registration system does not distinguish between non-commercial farms and pig farms).

The number of businesses relates to the number of registered businesses, including those with no animals (what are referred to as 'o businesses'). The databases used include: Animal registrations Netherlands Enterprise Agency (RVO.nl) and GD Animal Health (GD).

By way of derogation from this chapter, Chapter 3.3 on Animal health – prevention only refers to businesses that actually kept animals in the past year.

Reference to specific reports

- reports on the basis of Council Directive 64/432/EEC;
- reports on the basis of Council Directive 91/68/EEC;
- reports on Salmonella Controls (on the basis of Regulation (EC) No 2160/2003);
- semi-annual avian influenza monitoring/surveillance;
- reports on animal welfare regarding the killing of animals in relation to animal disease control under Regulation (EC) No. 1099/2009.

Animal health, results in 2018

type of case	total case ID	demonstrated [a]	positive [b]	negative	no action [c]
African swine fever	16			13	3
Aquaculture animals	2			1	1
Aujeszky's disease	5			4	1
Avian influenza	181		10	111	60
Blue tongue	27			8	19
Borna disease	1				1
Bovine spongiform encephalopathy	1				1
Brucellosis abortus (Bang's disease)	68			59	9
Brucellosis canis	9		1	5	3
Brucellosis ceti	1	1			
Ovine brucellosis (Brucella melitensis)	44			44	
Ovine brucellosis (Brucella ovis)	3			3	
Swine brucellosis	54			54	
Campylobacter	3	3			
Chlamydia abortus	3	1			2
Corynebacterium ulcerans	3			1	2
Dourine	1			1	
Epizootic haemorrhagic disease	1			1	
Equine infectious anaemia	2			1	1
Equine viral arteritis	1				1
Erysipelothrix rhusiopathiae suis	8				8
Escherichia Coli	2				2
Hantavirus	1				1
Herpes B virus	1				1
Infectious haematopoietic necrosis	2				
Classical swine fever	13			13	
Small hive beetle	3			3	
Koi herpes virus	2		1		1
Leptospirosis	3	1			2
Leucosis	27			23	4
Listeriosis	4	2			2
Glanders	4			3	1
Anthrax	2			1	1
Mycobacterium avium	5	2		2	1
Mycoplasma gallisepticum	4			4	
Mycoplasma mycoides	1			1	
Newcastle disease	12		2	5	5
Psittacosis (animal)	22		13	6	3
Psittacosis (human)	76		23	19	34
Q fever (animal)	1			1	
Q fever (human)	5				5
Q fever (bulk tank milk)	1			1	
Human/bat rabies	34		2	19	13
Mammal rabies	6			4	2
Human/mammal rabies	10			4	6
Non-zoonotic salmonella in poultry	1			1	
Zoonotic salmonella in poultry	227		18	23	186
Salmonellosis	93 (1 will follow)	91		1	
Swine vesicular disease	8			5	3

type of case	total case ID	demonstrated [a]	positive [b]	negative	no action [c]
Tuberculosis	33		1	31	1
Tularaemia	8		4	4	
Viral haemorrhagic disease	1				1
West Nile Virus (birds)	1			1	
West Nile Virus (horses)	2			1	1
Source tracing zoonoses	2				2

a. 'Demonstrated' is the term used in Article 10 of Regulation (EC) No 999/2001 of the European Parliament and of the Council: animal pathogens that are not subject to compulsory control, but for which a duty of notification by the veterinarian does exist.

b 'Positive' are the results for animal diseases subject to compulsory control.

c Additional testing, the clinical symptoms, a laboratory report and specific circumstances, etc., did not reveal a need for further action.

 # These are verification tests. See the explanation in the paragraph on zoonotic Salmonella.

Animal health monitoring

monitoring in 2018	number of farms	number of samples	number not negative	positive after confirmation
Brucellosis testing aborting animals	5,322	10,175	39	0
Brucella melitensis	1,496	18,054	40	0
CSF, ASF, Aujeszky's disease in wild boar (serology)	N/A	476	0	0
Aujeszky pigs	4,688	77,832	0	0
AI monitoring serology (ELISA)	2,283	195,840	1,364 (*)	83

** Number of 'non-negatives' for AI monitoring serology (ELISA) = number of samples (i.e. not the number consignments) that tested positive at GD Animal Health in the AI ELISA and was referred to the national reference laboratory (NRL), namely Wageningen Bioveterinary Research (WBVR) for confirmation. Number of 'positive after confirmation' for AI monitoring serology (ELISA) = number of samples (not the number of consignments) that tested positive at WBVR for H5 or H7.*

(2) Serological testing for FMD and SVD in wild boar has not been performed since 2015.

Incidents

Avian influenza

At the start of February 2018, HPAI H5N6 contamination was identified at a commercial poultry farm or business with parent stock. The farm was culled, and a 10-km transport area was established. In addition to the 3 poultry farms within the 3 km zone, 2 contact holdings were screened inside this area. The eggs of the contaminated parent group farm had been transported to 6 hatcheries.

In March 2017, an outbreak of HPAI H5N6 was yet again identified at a duck rearing farm that had previously been contaminated in 2014 and 2016. The contaminated farm was culled. Two further farms were situated within a 1 km radius of this farm. The broiler farm situated immediately adjacent to the contaminated farm was culled. The farm containing parent groups, situated further away, was not culled but was subjected to more stringent screening measures. A further 3 poultry farms were screened within the 3 km zone: no AI was found.

At the end of December, LPAI H5N3 was identified at a business trading in birds. It was decided that the introducers should be euthanised and that the other birds should be allowed to weather the disease and that they should be sampled again. In addition, a 1 km zone was established. No other poultry farms or businesses were present within this zone.

Zoonotic salmonella in poultry

In monitoring for zoonotic Salmonella at breeding and laying poultry farms, zoonotic Salmonella infections were identified at 16 laying poultry farms in 2018.

Monitoring efforts regarding breeding poultry farms did not detect any zoonotic Salmonella infections in 2018. Salmonella infection was identified in 2 rearing parent animal groups. 1 group was slaughtered, and the other group was culled using big bag gassing.

Psittacosis
A significant number of psittacosis infections were again detected this year. Psittacosis was diagnosed in 13 of the 22 birds that were reported in relation to clinical symptoms. In 23 of the 76 cases of infected human patients, psittacosis was subsequently detected in birds that were examined for that purpose. In 34 cases, the source could not be traced.

Animal disease control organisation training

In 2018, the following training programmes, courses and exercises were held for the animal disease control organisation:

- 11 new animal disease experts were trained to keep the group of animal disease experts at strength.
- 2 training days were organised for existing animal disease experts. The 1st training day dealt with new killing methods, procurement and tenders and new contracting parties, factual reporting, exposure prospects, zoning and practising putting on a mouth and nose mask. The 2nd training day focused on African swine fever in the morning session, featuring various speakers (Ministry from Belgium, hunting coordinator, laboratory, with the afternoon session focusing on discussing cases, allowing people to learn from one another.
- Basic training was organised for the new members of the front team. The following topics were covered: what is a front team, reflection on crisis and future, occupation health and safety and hygiene, practising use of protective equipment, review of external contractors, attitude and conduct within a front team and specific issues in the context of the various roles of a front team.
- A training day and a field exercise were held for the existing front teams. The training day was organised for all non-veterinary staff making up the front team and included all the same topics as the 1st animal disease expert training day of 2018. The major field exercise was held in Barneveld, focusing on the theme 'Teamwork works!'. The following topics/exercises were discussed and covered during the training day: Kahoot quiz, organising a cull, establishing a secure zone at a culling location, demonstration of the new gassing equipment, record keeping and compiling dossiers, practising interaction with affected stakeholders during a cull, practising communication with the farmer, practising use of protective equipment in conjunction with breaks.
- An annual emergency response (BHV) training day is held for the hygienists and enforcement officers who are part of the front teams.
- This year, the Incident & Crisis Management department has yet again taken on 3 groups of senior veterinary students and brought them up to speed on the relevant issues surrounding animal disease control and the reporting obligation.

Risk assessments

In 2018, the following risk assessments (RAs) were drawn up following outbreaks of animal diseases in other countries:

animal disease	country	number of RAs
African swine fever	Belgium	1
African swine fever	Bulgaria	1
Newcastle disease	Belgium	1
African swine fever	Romania	1

The conclusions of the RAs carried out in 2018 were that no animals and/or veterinary products susceptible to animal disease were imported from a country in which there was an outbreak of the animal disease within a period of 6 weeks before the official report of the infectious animal disease.

Conclusions

Yet again in 2018, there were cases of the Avian influenza (AI) virus in the Netherlands, both in commercial poultry farms and among wild birds. The following outbreaks took place:

- HPAI: 2 commercial poultry farms were affected by highly pathogenic avian influenza;
- LPAI: 1 commercial poultry distribution company was affected by low pathogenic avian influenza.

It is crucial that actors continue to comply with the duty to report any cases of AI and that the NVWA continues to monitor wild birds and commercial poultry farms.

Zoonotic Salmonella: mandatory monitoring for zoonotic Salmonella on breeding and laying hen farms identified 16 farms where contamination was detected in one or more barns. It is essential that the NVWA continues to manage zoonotic salmonellosis in poultry, due to the risk of human contamination through food.
Psittacosis: 98 notifications of psittacosis were received in 2018. Of these, 22 related to suspected cases in birds and 76 were made by the Municipal Health Service in relation to human patients in whom a psittacosis infection had been detected. In the Netherlands, further research is being carried out aimed at improving the diagnosis and the prevention of psittacosis.

3.3 Animal health – prevention (live animals and live products)

Controlling authority or authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Directive 90/425/EEC	trade in live animals and products
Directive 64/432/EEC	trade in bovine animals and swine
Council Directive 2009/156/EC	import and trade in equidae
Directive 90/427/EEC	zootechnical and genealogical conditions for equidae
Council Directive 2009/158/EC	trade in poultry and hatching eggs
Directive 91/68/EEC	trade in sheep and goats
Directive 92/65/EEC	balai directive on trade in live animals and live products
Directive 88/407/EEC	bovine semen
Directive 90/429/EEC	porcine semen
Directive 89/556/EEC	bovine embryos
Directive 92/102/EEC	i&r of animals
Council Directive 2006/88/EC	aquaculture animals and products thereof
Directive 90/425/EEC	control directive
Regulation (EC) No. 1760/2000 of the European Parliament and of the Council	i&r of bovine animals
Council Regulation (EC) No. 21/2004	i&r of sheep and goats
Commission Regulation (EC) No. 504/2008	i&r of equidae
Commission Regulation (EC) No 318/2007	bird quarantine
Council Regulation (EC) No. 1255/1997	staging points and amending the route plan (animal transport)
Commission Regulation (EC) No. 1739/2005	circus animals
Regulation (EC) No. 998/2003 of the European Parliament and of the Council	non-commercial movement of pet animals
Council Regulation (EC) No. 708/2007	use of exotics in aquaculture

National legislation

Animal Health and Welfare Act with details in the form of specific regulations, including:

- Regulation on the Prevention, Control and Monitoring of Infectious Animal Diseases, Zoonoses and TSEs Live Animals and Live Products Trading Regulation (Regeling handel levende dieren en levende producten)
- Regulation on Equine Semen (Regeling paardensperma)
- Regulation on Bovine Semen (Regeling rundersperma)
- Regulation on Porcine Semen (Regeling varkenssperma)
- Regulation on the Identification and Registration of Animals (Regeling identificatie en registratie van dieren)
- Regulation on Aquaculture (Regeling aquacultuur)

Size of the control file and number of 'Animal health – prevention' inspections in 2018

type of business	**number as of December 2018***	**number of inspections in 2018****
Approved assembly centres (VC), of which approved as:	77	258
• VC pigs	20	37
• VC cattle	63	170
• VC sheep/goats	28	51
• VC horses	1	0
Control post, of which approved as:	4	6
• control post (cattle)	3	4
• control post (sheep/goat)	1	1
• control post (pigs)	1	1

type of business	number as of December 2018*	number of inspections in 2018**
Cleaning and disinfection facilities, of which: • approved • designated, poultry+ • simple and authorisation holder**	332 166 44 113	991 505 146 340
Semen collection centres (SCC), of which approved as: • bovine SCC • porcine SCC • equine SCC • national equine SCC • ovine/caprine SCC	125 6 19 18 89 1	76 9 38 21 6 2
Quarantine, of which approved as: • quarantine for porcine SCC • quarantine for bovine SCC • quarantine for sheep/goat SCC	22 14 7 1	32 22 8 2
Storage centres, of which approved as: • bovine semen storage centres • equine semen storage centres • bovine embryo storage centres	19 14 5 1	17 13 3 1
Embryo teams, of which approved as: • bovine embryo production teams • equine embryo production teams • bovine embryo teams • equine embryo teams	15 4 1 8 3	3 - 2 1 -
Approved institutions under Directive 92/65/EEC	22	22
Registered circuses	5	-
Bird quarantine stations	1	1
Approved poultry farms, of which approved as: • hatchery; • hatching egg export station • poultry breeding farms • pedigree breeding farms • rearing farms	584 43 5 287 34 269	578 39 - 246 see below 293 (breeding + rearing)
Approved aquaculture production businesses (fish farms)	47	14
Approved aquaculture production businesses (molluscs)	143	-
Registered Put and Take fish farms	65	-
Cattle farms	32,461	404
Sheep/goat farms	37,244	92
Pig farms, including non-commercial farms	11,537	7
Owners of horses	851,054++	5
Poultry keepers	2,126	95
Approved livestock dealers	591	-
Registered dealers in other species	266	-
Destination controls Selection of live animals and live animal products (semen/hatching eggs)	-	3,808
Total business inspections by visit frequency	-	6,409
Inspections for certification in hours***	-	94,150

= derived from MOS approvals (unless otherwise specified)

+ = from the NVWA website

***= from the MSpin lists*

++ = number of registered horses: I&R of equidae takes place at level of individual animal, holders are not registered. This is a vast overestimation, given that many horses were not reported as deceased in the past; a rough estimate would yield some 500,000-600,000.

**** = from the MCS overview LDD2018 of Control (codes LE LDD and M2 LDD)*

Supervision of 'Animal Health – prevention', results in 2018

supervision of animal health and prevention	number
Orders subject to a penalty imposed on assembly centres	1
Official reports relating to assembly centres	-
Reports of Findings by the Administrative Measures Team (TBM) relating to assembly centres	
Written warnings to assembly centres	3
I&R CDO (cease and desist order) procedure for traders	2
WW relating to RHLDLP issued to exporter	1
WW relating to RHLDLP issued to poultry holder	1
WW relating RHLDLP issued to approved institution	1
Orders subject to a penalty imposed on transporters	
Reports of Findings by the TBM relating to transporters	1
WW issued to transporters	1
Orders subject to a penalty imposed on slaughterhouses (cleaning and disinfection (C&D))	1
Reports of Findings by the TBM relating to slaughterhouses (C&D)	
WW issued to slaughterhouses (cleaning and disinfection (C&D))	3
I&R communications – cattle	129
I&R administrative law – cattle	-
PV issued for I&R of bovine animals	97
WW issued for I&R of bovine animals	46
I&R communications – sheep and goats	15
I&R administrative law – sheep and goats	-
WW issued for I&R of sheep and goats	5
PV issued for I&R of sheep and goats	37
WW issued for I&R of livestock farm	2
Administrative I&R equine passports (JZ)	4

CDO = cease and desist order (order subject to penalty)
VW = verbal warning
PV = official report (proces verbaal)
RHLDLP = Live Animals and Live Products Trading Regulation (Regeling handel levende dieren en levende producten)
RoF = report on findings
WW = written warning

Controls by transport teams	Number of inspections	Number non-compliant
Transport controls in transit and on arrival at or departure from businesses, of which		total not approved, C&D: 127 (30 VW, 58 WW, 30 RoF, 9 PV)
• regulations on prevention	1,435	total not approved other prevention issues: 29 (3 VW, 9 WW, 5 RoF, 12 PV)
• trade Regulation	876	total not approved trading regulations: 106 (25 VW, 53 WW, 2 RoF, 26 PV)
• I&R in conjunction with prevention/trading	19	total unapproved I&R in conjunction with prevention/ trading: 16 (1 VW, 10 WW, 5 PV)
Simple washing stations on sheep/goat farms*		
Simple washing stations on cattle farms*		
Simple washing stations on pig farms*	138	• Not approved: 25 • VW: 1 • WWs: 23 • PV: 1
Unloading animals at multiple addresses	6	• Not approved: 3 • WWs: 3
Complaints/reports: • prevention	9	Not approved: 9 (1 VW, 4 WW, 4 PV)
• live animals trading regulations	6	Not approved: 2 (1 VW, 1 WW)
• I&R in conjunction with prevention/trading	3	Not approved I&R: 3 (1 VW, 1 WW, 1 PV)
Assembly of animals (cloven-hoofed)	10	• Not approved: 6 • WWs: 5 • PV: 1
* Inspections at the primary business		

Reference to specific reports
Relating to I&R: annual report pursuant to Regulation (EC) No 1082/2003 (Commission Regulation (EC) No 1082/2003 with regard to cattle and Regulation (EC) No 1505/2006 (Commission Regulation (EC) No 1505/2006 with regard to sheep and goats.

Explanatory notes to the results from the supervision of 'Animal health – prevention'
In 2018, the NVWA carried out risk-based supervision on all approved, registered and simple cleaning and disinfection sites for (poultry) livestock means of transport, which also involved taking samples from the disinfection and disinfection agents used. This regular and risk-based sampling study showed that not all of the disinfectants had been used according to the guidelines (both underdosage and overdosage). A banned agent was also found in two cases. The table below lists the number of samples taken and the number of non-compliant samples.

sampling	number of samples	number of samples non-compliant (under and overdosage)
Sampling of disinfectants used for animal transport, of which		
• Improvement plan (risk-based supervision)	261	141
• African swine fever (prevention)	110	54
Total	**371**	**195**

In the autumn of 2018, in the context of African swine fever prevention, additional C&D inspections were carried out at pig slaughterhouses, assembly centres and the most widely used C&D sites for a second C&D for livestock transport vehicles from abroad. These inspections examined whether C&D was being carried out correctly, and additional samples were taken of the disinfectants used. In addition, the NVWA's administrative verification of the submission of the documentary evidence of the 2nd C&D has been tightened to 100% control (of transports to and from high-risk

countries). Furthermore, this control period saw a greater level of focus on the basic washing facilities at pig businesses. The results of this spearheading action were documented in a fact sheet that was shared with businesses and published on the NVWA website.

- In-transit transport controls relate to controls on livestock transport vehicles for irregularities in connection with arrival at or departure from businesses, complete or partial unloading, correct assembly on the trucks, C&D registration, etc. The C&D of vehicles, including empty vehicles, is monitored as well. Consequently, cattle trucks may also be diverted from the road for controls.
- At the end of 2018, controls, in relation to the outbreak of African swine flu, were carried out that focused on the presence or implementation of C&D at washing stations at pig businesses. In total, 31 findings were made during these controls.
- The controls relating to the gathering of cloven-hoofed are a continuation of the project that was carried out on this issue in 2017.
- In 2017, risk analyses were carried out in respect of assembly centres and animal transport. In 2019, the controls at the assembly centres were resumed, in part as a joint effort between the Enforcement Department and the Inspection Department. In 2018, specific controls were carried out in relation to a number of annual horse trading fairs.
- At livestock farms (cattle and sheep/goats), during all I&R controls, the mandatory presence and functioning of a simple washing station is also checked.
- In 2018, a large number of hours were spent on I&R inspections that related to the phosphate right trading system. These inspections were specialised in nature and primarily focused on detecting potential instances of malpractice in relation to birth notifications. In general, these inspections were also more intensive than the regular inspections in the context of the 3% requirement, and constitute the overwhelming majority of cattle I&R inspections carried out. This means that the total number of inspections was lower than planned. Due to the significant capacity allocated to this case file, less capacity could be allocated to the I&R inspections for other animal species than initially planned.
- Cattle, sheep and goat I&R controls are focused on compliance with the percentage prescribed by the EU (3%) and on actively tracking down non-compliant businesses. The controls are usually a combination of random and selective controls. In 2018, only 1.2% was achieved for I&R of bovine animals, with less than 1% for I&R of sheep/goats.

Projects in 2018

Threat of African swine fever (ASF)
In 2018, the NVWA launched a major African swine fever prevention campaign aimed at preventing the introduction of this highly contagious viral disease from Eastern Europe and Belgium. The campaign saw a number of articles on African swine fever being published on the NVWA website, the distribution of various ASF flyers and posters and the placement of information signage at car parks along motorways and near nature conservation areas. In addition, the NVWA carried out additional inspections and sampling at relevant veterinary sites. In order to support businesses, the NVWA drafted a list of all the disinfection agents permitted by the Dutch Board for the Authorisation of Plant Protection Products and Biocides (Ctgb) for ASF and published it on its website. The activities as a result of this animal disease threat continued from mid-2018 until March 2019.

Impact measurement
Since 2016, the NVWA has been working with all red meat slaughterhouses and poultry slaughterhouses, through the 'Meat Supply Chain Improvement Plan'. In 2018, an improvement plan was introduced for approved assembly centres for cloven-hoofed. With the introduction of the improvement plans, the NVWA has targeted its supervision of the 'Cleaning and disinfection of means of transport' according to the risk profiles that have been estimated/established for each slaughterhouse and assembly centre. Following the introduction of the improvement plan, the NVWA has drawn up impact reports. These show that the compliance picture with regard to C&D remains mixed.

In 2018, the NVWA also took samples of the disinfectant solutions provided at all approved and basic cleaning and disinfection facilities. These samples showed that by no means all of the disinfectant solutions were being used in accordance with the regulations (underdosing and overdosing). As a result of these findings, the NVWA will be continuing its sampling investigation in 2019 and carrying out enforcement efforts regarding any shortcomings. Following a baseline measurement in 2017, further research was carried out in 2018 into the concentrations of disinfectant solutions used in the cleaning and disinfection of animal transport vehicles. In roughly 50% of cases of the vehicles and equipment examined, there appeared to be non-compliance with the Biocidal Products Regulation.

Actions taken to improve official controls

- *Internal newsletters*
  NVWA's internal newsletters devote a great deal of attention to animal health situations in Europe, changes to legislation, new or improved control methods, changes to the inspection lists and improved instructions.
- *Accreditation*
  The Inspection Division wishes to obtain accreditation for various parts of the department. Further efforts were made in 2018 to rewrite working instructions to ensure they would be able to be accredited.
- *Briefing veterinarians and inspectors*
  Kick-off meetings are held at the start of every year to discuss the work instructions with the inspectors. There are regular meetings of sub-core group (SKGO), made up of the Development & Support division and the senior supervising veterinarians (STDAs), that focus on discussing issues from professional practice.
- *Surveillance plan*
  In 2018, inspections at approved bodies saw additional focus on the quality of the surveillance plans.
- *Supervision of C&D for poultry transport*
  Enforcement efforts in relation to inadequately cleaned and disinfected poultry crates or containers at poultry slaughterhouses primarily focused on the operator of the slaughterhouse. With a view to 2019, enforcement will be brought in line with European regulations (for hygiene and animal health) and will exclusively focus on the C&D obligation of the transporters.
- *Protocols for C&D sites*
  In order to support the industry, the NVWA has drawn up a new working protocol for approved cleaning and disinfection sites, in which the manner of operation and of cleaning and disinfection is laid down. This protocol will be a manual for the business and forms the basis for the NVWA controls.
- *C&D water quality*
  From an animal disease prevention perspective, it would be prudent for the NVWA to carry out a further investigation into the quality of the water used at C&D sites. In order to improve enforcement of this inspection item, the corresponding standard should be laid down in a policy rule.
- *Livestock trailers from abroad*
  The NVWA must set up a sound and robust control system to verify compliance of the 2nd C&D of poultry transport vehicles from countries with an elevated risk of HPAI. The control system for livestock transport and ASF, which was made stricter in 2018, will serve as a template.
  - A kick-off meeting is held at the start of each project, to inform inspectors about the relevant legislation and the strategies to be applied.
  - For each project, a specific work instruction is drawn up for inspectors, to ensure inspections are performed in a uniform manner.
  - Controls are increasingly being carried out based on the results of data analyses. This means the available time can be used more efficiently. Given that the analyses lead to risk-based inspections, individual inspections do require more time.

Actions taken to improve compliance by businesses

Regular consultations are held with organised associations of businesses, during which questions and difficult issues from daily practice are discussed. Similar consultations also take place with the Policy Department of the Ministry of Agriculture, Nature and Food Quality and private sector associations.
In 2018, the NVWA supported businesses with regard to compliance, using a flyer on 'Prevention of African swine fever via animal transport', which was distributed to transporters/drivers by the official veterinarian during certification.
In 2018, the NVWA sent out signals to the relevant sector organisations about compliance with specific components that are a source of concern for the NVWA. The sectoral organisations subsequently picked up on the NVWA's signals and shared the relevant concerns with their members, or called upon their members to ensure better compliance with the hygiene regulations and use of PT03 disinfectants.

Conclusions

In general, the NVWA finds relatively few shortcomings during its inspections.
On this basis, it can be concluded that the businesses and farms meet EU requirements in terms of their organisation and methods. By preparing controls for the use of PT03 disinfectants more effectively, risk-based controls may take place at C&D sites, with any shortcomings able to be identified more quickly and remedied where necessary. The African swine fever prevention campaign in 2018 provided clear insight into compliance in relation to the cleaning and disinfection of transport vehicles for pigs in the field of animal health. The cleaning of livestock transport vehicles is largely in good order. There is, however, insufficient compliance in relation to the use and application of disinfectants.

There is a tension between the reduced resources and number of hours available on the one hand, and the numbers of and time required for I&R controls for cattle, sheep and goats on the other. In 2017, an investigation was launched into alternative enforcement options that meet the European requirements. As a result of the study in the context of the phosphate rights trading system, this innovation system was discontinued in 2018, but it will be picked up again in 2019. This avenue will be pursued in 2019.

3.4 Animal welfare

Controlling authority or authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 1/2005	Protection of animals during transport and related operations
Regulation (EC) No 1099/2009 of the European Parliament and of the Council	Protection of animals at the time of killing
Council Directive 93/119/EEC	Protection of animals at the time of slaughter or killing
Regulation (EC) No 853/2004 of the European Parliament and of the Council	Hygiene rules for food of animal origin
Council Directive 98/58/EC	Protection of animals kept for farming purposes
Council Directive 1999/74/EC	Minimum standards for the protection of laying hens
Council Directive 2007/43/EC	Minimum rules for the protection of chickens kept for meat production
Council Directive 2008/119/EC	Minimum standards for the protection of calves
Council Directive 2008/120/EC	Minimum standards for the protection of pigs

National legislation

- Animals Act, part of Chapter 2: Animals
- Animal Keepers Decree (Besluit Houders van dieren)
- Regulation on Animal Keepers (Regeling Houders van dieren)
- Enforcement and other Animals Act Matters Decree (Besluit handhaving en overige zaken Wet dieren)
- Regulation on Enforcement and other Animals Act Matters (Regeling handhaving en overige zaken Wet dieren)
- Animal Welfare Policy Rules (Beleidsregels dierwelzijn) 2009
- Animal Disease Specialists Decree (Besluit Diergeneeskundigen)

Size of the control file

Size of control file in 2018: slaughterhouses and transporters

type of business	**number**
Livestock transporters (short journeys)	1,146
Livestock transporters (long journeys)	279
Large ungulate slaughterhouses (continuous supervision)	22
Small and medium-sized ungulate and farmed game slaughterhouses	142
Large poultry slaughterhouses (continuous supervision)	18
Small poultry slaughterhouses	9

** approved as of 31-12-2018 source: MOS approvals*

Size of control file in 2018: primary businesses

type of business	number as at 01/04/2018*
Laying hens	680
Calves	1,580
Pigs	4,140
Chickens kept for meat production	540
Cattle	23,810
Sheep	5,540
Goats	550
Chickens kept for meat production parent stock	250
Flightless birds**	3
Ducks	50
Geese**	11
Fur animals	140
Turkeys	30

CBS, The Hague/Heerlen

*** Data from the Combined Return, 10 animals or more*

Results of animal welfare controls 2018

Journey log controls and GPS controls

journey log controls and gps controls	number	*number of violations
Controls on journey logs (100%)	5,860	129
GPS project (approx. 10% of the logs)	657	62

* *With regard to journey log and GPS controls, generally, violations in multiple journey logs will result in 1 intervention in respect of the transporter or in a complaint directed abroad. Source: Overview of IBD journey log control reports*

Explanatory notes to the results:
The count by the Animal Intervention Agency (IBD) has been adjusted accordingly, resulting in more violations compared with respect of 2017.

Number of transport controls

welfare during transport in 2018 (inspections by transport teams)	number of inspections	number non-compliant	% non-compliant
Transporters	1,110	192	17
Slaughterhouse	132	19	14
Assembly centres	100	18	18
Primary business	194	83	43
Total	1,536	312	20
Reports/complaints	283	238	84
Total	**1,819**	**550**	**30**

Explanatory notes to the results:

- The inspections carried out by animal welfare transport teams have been broken down, on the one hand, into inspections following notifications/complaints, and into independently initiated inspections that related to the mentioned control objects, on the other. The independently initiated inspections may relate both to inspections during transport and administrative investigations.
- The total number of independently initiated inspections has remained virtually the same. In total, the percentage of non-compliance in this category increased from 18% in 2017 to 20% in 2018. No further conclusions can be attached to this minimal discrepancy.

- The total number of inspections as a result of reports and complaints has decreased from 499 in 2017 to 283 in 2018. The percentage of non-compliances increased further from 57% in 2017 to 84% in 2018. Of the 283 reports and complaints, 260 reports related to cattle in an advanced state of pregnancy from IBD of which 225 were not approved.
- A total of 18 inspections were carried out with key areas of focus being extreme temperatures, Eid al-Adha, or the Festival of the Sacrifice, and the catching of ducks. The percentage of non-compliance for these areas of focus was 22%.
- In addition to the reports on cattle in an advanced state of pregnancy, 65 further inspections were carried out as part of the project on vulnerable animals. The percentage of non-compliances was 93%. These inspections were carried out on the basis of risk.
- Fewer inspections were carried out at primary businesses compared with 2017 (329), due to the high number of inspections at poultry farms as part of the poultry project in 2017.

Slaughterhouses

reports of findings by supervising veterinarians at slaughterhouses and assembly centres	number	number of interventions
Council Regulation (EC) No. 1/2005 of the European Parliament and of the Council	605	437
Of which in respect of		
• transporters		134
• livestock farmers		280
• other		23
Commission Regulation (EC) No 1099/2009	203	149
Of which in respect of		
• slaughterhouse		130
• other		19
Animal Holders Decree – poultry welfare irregularities	305	266

** Numbers, status and processing as of 8 April 2019, source: Spin - Interventie*

Explanatory notes to the results:
- Council Regulation (EC) No. 1/2005 In addition to the interventions (written warning and Report of Findings), 2018 saw some 112 reports, primary relating to catching injuries, transferred abroad.
- The interventions may relate to the stakeholder as a livestock farmer, as an assembly centre, as the transporter or driver. This means, for example, that in the case of 1 animal that was unsuitable for transport, an intervention will have taken place on two occasions, namely against the transporter and the livestock farmer.
- As of 8 April 2019, the IBD still listed 12 reports from 2018 that were still pending, for which no conclusive resolution had been reached.
- Council Regulation (EC) No. 1099/2009 From 1 January 2018, any slaughter without stunning of the animals, including ritual slaughter, will always require direct supervision by the NVWA. This will ensure that slaughter without stunning is carried out in an appropriate way and ensuring that the distress of the animal during slaughter is limited.
- As of 8 April 2019, the IBD still listed 29 reports from 2018 that were still pending, for which no conclusive resolution had been reached.

Animal Holders Decree – poultry welfare irregularities
- As of 8 April 2019, the IBD listed 2 reports from 2018 that were still pending, for which no conclusive resolution had been reached.

Primary businesses (farms)

statutory supervision of laying hens (Council Directive 1999/74/EC and Council Directive 98/58/EC)	number
Inspections	22
Measures	2

statutory supervision of calves (Directive 2008/119/EC and Directive 98/58/EG)	number
Inspections	82
Measures	41

statutory supervision of pigs (Council Directive 2008/120/EC and Council Directive 98/58/EC)	number
Inspections	174
Measures	32

statutory supervision of chicks kept for meat production (Council Directive 2007/43/EC and Council Directive 98/58/EC)	number
Inspections (full inspection)	143
Measures	64

statutory supervision of chickens kept for meat production (Council Directive 2007/43/EC)	number
Inspections (administrative, select, in relation to overstocking)	123
Measures	123

statutory supervision of chickens kept for meat production (Council Directive 2007/43/EC)	number
Inspections	PM inspection
Measures	250

statutory supervision of cattle (Council Directive 98/58/EC)	number
Inspections	427
Measures	218

statutory supervision of sheep (Council Directive 98/58/EC)	number
Inspections	190
Measures	54

statutory supervision of goats (Council Directive 98/58/EC)	number
Inspections	75
Measures	17

statutory supervision of broiler parent stock (Directive 98/58/EC)	number
Inspections	0
Measures	0

statutory supervision of ducks (Directive 98/58/EC)	number
Inspections	0
Measures	0

statutory supervision of fur animals (Directive 98/58/EC)	number
Inspections	1
Measures	0

statutory supervision of turkeys (Directive 98/58/EC)	number
Inspections	3
Measures	0

statutory supervision of the killing of animals at primary businesses (Regulation (EC) No. 1099/2009)	number
Inspections	1
Measures	0

Reference to specific reports

- Annual report in accordance with 2013/188/EU: Commission Implementing Decision of 18 April 2013 on annual reports on non-discriminatory inspections carried out pursuant to Council Regulation (EC) No. 1/2005 on the protection of animals during transport and related operations.
- Annual reports to the European Commission as referred to in 2006/778/EC: Commission Decision of 14 November 2006 concerning minimum requirements for the collection of information during the inspections of production sites on which certain animals are kept for farming purposes.

Explanatory notes on the results

General

A large part of the inspections take place on the basis of risk. This means that the NVWA aims to carry out inspections at businesses that run the highest risk of not complying with regulations. As a result, those findings do not represent the conduct in the sectors listed below as a whole.

Compliance measurements are carried out periodically: a representative random sample of the population is inspected to determine the level of compliance within that sector as a whole. This can then subsequently serve as a basis for risk-based supervision.

Laying hens

In 2018, 22 random inspections were carried out at businesses with laying hens. In addition, 6 inspections were carried out as a result of reports. The level of compliance at the businesses inspected came to 91%. No general conclusions can be drawn regarding compliance within the sector as a whole as a result of these inspections.

Calves

In 2018, the level of compliance with the rules regarding calf welfare came to 61%. The non-compliances mainly related to buildings and housing, and to the water and feed (and the lack of water). The figures are mostly based on inspections in the dairy farming sector and to a lesser extent on inspections in the veal calf sector. The inspections were mainly carried out as a result of a report or a risk-based inspection at a high-risk business. As such, the figures do not provide a representative picture of compliance regarding calves in the dairy and veal calf sector. Non-compliance regarding the necessary care due to calves may inter alia result in higher calf mortality. For that reason, it is vital for the NVWA to continue its efforts in this area, to encourage businesses to increase compliance (at a structural level).

Pigs

In 2018, the NVWA checked for compliance with the rules for the protection of pig welfare. A total of 174 production sites were inspected, of which 138 were found to be compliant. One or more non-compliances were observed at 36 production sites. Most of the non-compliances observed in 2018 related to flooring, buildings and housing units, adequate space and loose materials. These deficiencies related to a number of issues including the minimum prescribed

floor area, the solid parts of the floor, the maximum gap width between grating bars and the pen enrichment material. Other non-compliances observed in 2018 related to the provision of feed and water, the inspection of the animals and minimum lighting. In particular, these deficiencies related to the provision of a permanent supply of fresh water, care for pigs who appear sick or injured, sharp edges or protrusions in the housing pen and the provision of a light intensity of at least 40 lux for at least eight hours per day.

Cattle
In 2018, cattle inspections were conducted in response to reports or a risk analysis (high-risk business). Compliance at the cattle businesses inspected was mediocre, at 60%. Instances of non-compliance primarily relate to the inspection of and provision of timely care for animals (failure to call in a veterinarian in a timely manner, lame animals), buildings and housing units (lack of sanitary housing or broken housing components), freedom of movement, feed and water.

Chickens kept for meat production
In 2018, the NVWA carried out both targeted and random animal welfare inspections at broiler chicken farms. The supervision data relating to the physical inspections shows that the average level of compliance did not exceed 59% for the 1st inspection. Violations were mostly identified in relation to the brightness of the light, the lighting arrangements, the litter and the inadequate referral or failure to refer group data to the Avined registration system. No general conclusions can be drawn regarding compliance within the sector as a whole as a result of these inspections.

At re-inspections, the rate of compliance was 83%. These businesses had been previously advised of their deficiencies, as a result of which a higher level of compliance can be expected.

123 targeted administrative inspections were carried out based on the data available in the Avined registration system – these inspections focused on overcrowding in housing units. These violations were dealt with through the issuance of written warnings or imposition of administrative fines.

In 2018, the observations during the PM inspections led to 188 written warnings and 62 administrative fines. Each year, over 44,000 flocks are slaughtered in Dutch slaughterhouses, which means that an administrative measure will have been imposed for a serious animal welfare violation in roughly 0.57% of flocks.

Chickens kept for meat production parent stock
Between 2015 and 2017, all businesses keeping chickens for meat production parent stock in the Netherlands, numbering 245 in total, were inspected. Due to minimal risks to animal welfare, it was decided that no inspections on these businesses would be carried out in 2018.

Sheep
In 2018, 190 inspections were carried out regarding sheep, or ovine animals, primarily in response to reports. Some 54 measures were imposed, where any non-compliances chiefly related to the withholding of necessary care. In addition, infringements of the regulations regarding procedures in animals, such as tail docking and application of ear tags, were identified.

Goats
In 2018, 75 inspections were carried out for goats. The inspections were primarily carried in response to reports, with 9 inspections having been carried out on a project basis. In the context of this project on the care provided to billy goats, inspections were carried out at 6 goat fattening farms and 3 large dairy goat businesses in 2018. Non-compliances with various regulations were identified at 3 businesses. These instances related to recording data, such as mortality, in medical records. Sick or weak billy goats, for which no veterinarian had been called in, were found at 1 of these businesses.
In 2018, a total of 17 measures were imposed, where the non-compliances primarily related to the care of the animals or to the withholding of necessary care from the animals.

High-risk businesses
Each year, targeted inspections are carried out at high-risk businesses. High-risk businesses and farms are businesses at which high risks to animal welfare have been identified, including, for example, insufficient management skills on the part of the animal holder, inadequate hygiene standards, insufficient knowledge, insufficient consultation of a veterinarian and high animal mortality. Any high-risk business will remain of interest to the NVWA as long as the risks are present and there are no prospects of improvement with regard to compliance behaviour. In 2018, 80 targeted inspections were carried out at high-risk businesses, primarily in the dairy sector – 52% were not acceptable. In addition, follow-up controls and inspections take place at these high-risk businesses as a result of reports/complaints.

Projects in 2018

Climate conditions in pig housing units
In 2018, the NVWA carried out project-based inspections regarding climate conditions in pig housing units. The inspections in 2018 were announced in a press release and information was provided on the NVWA website, including information on the inspections specifically relating to climate conditions in pig housing. In order to provide pig farmers and inspectors assessing the housing unit climate conditions with more concrete guidelines, Wageningen Livestock Research carried out a study into indicators of inadequate climate conditions for housing units in 2016, commissioned by the Ministry of Agriculture, Nature and Food Quality. The study focused primarily on determining indicators of non-compliance with the open standard for climate conditions in pig housing units. An initial indicator of this nature may give rise to a subsequent investigation. Wageningen Livestock Research identified 5 characteristics that may indicate whether or not the climate of the housing unit is harmful or not. These characteristics relate to environmental properties (gas concentrations, carbon monoxide and ammonia) and animal characteristics (red/dirty eyes, tail/ear biting and soiling habits). The inspectors of the NVWA examine these 5 characteristics to assess the climate conditions of pig housing units. In the event that a combination of high gas concentrations alongside a number of animal traits is observed, this indicates that the housing climate conditions are harmful to the animals. In addition to these 5 characteristics, the inspectors also assess other animal and environmental properties, such as coughing and the operation of climate control equipment, which can be used as supporting evidence.

In this project, the NVWA carried out inspections of the animal welfare rules laid down in the Animal Holders Decree at 53 businesses and carried out inspections of the housing unit climate conditions. Some 59 inspections were carried out at these businesses relating to the climate conditions of the housing units of piglets and/or fattening pigs, meaning that multiple inspections were carried out at a number of businesses, because both piglets and fattening pigs were present. According to the 5-indicator approach, there was no indication at any of the inspected businesses of inadequate housing unit climate conditions. At 4 businesses, the air quality in the housing unit was assessed to be not-approved for various reasons. In 1 case, a written warning was issued, given that malfunctions were identified in the climate control equipment. In addition, the business health plan drawn up by the veterinarian included that the climate conditions should be assessed, but the livestock farmer was unable to demonstrate that this had taken place. Upon reinspection, the deficiencies appeared to have been resolved. The remaining 3 inspections were settled with a verbal warning. In a single case, the deficiencies were remedied on the spot immediately thereafter. The verbal warning related to the measurement of high gas concentrations. In these cases, too few or no animal indicator characteristics were observed. The verbal warning served to bring the livestock farmers' attention to the deficiency, allowing them to take appropriate action.

Incidents

Animal welfare at the primary business
An enforcement request was submitted, which included video footage, calling for enforcement action to be taken against 3 pig businesses. The NVWA carried out inspections at these 3 businesses – the inspectors approved the conditions at 2 of the businesses, with conditions not being approved at the third. A Report of Findings was drawn up for this business, which led to a fine. In addition, remedial measures were imposed.

Impact measurement/target group analysis

No impact measurements took place in 2018.

A target group analysis was carried out among dairy farmers to determine why dairy farmers had withheld necessary care to calves, which can lead to calf mortality. This analysis was initiated because a large group of dairy farms is suffering from high calf mortality, which is a risk to animal welfare. The environment and the reasons underlying the behaviour of dairy farmers were investigated and identified by way of desk research, an expert consultation session and interviews with relevant actors, such as dairy farmers. The target group analysis provides insight into which behavioural mechanisms should be addressed in the enforcement mix that is to be developed in 2019.

Actions taken to improve official controls

Animal welfare at the time of stunning and killing
Performance levels as they are recorded by the NVWA during supervision and inspections at slaughterhouses are published in a uniform manner. Initially, this took place anonymously, but they increasingly include mention of the slaughterhouse. Performance relates to both animal welfare and hygiene aspects.

Actions aimed at improving animal welfare supervision at the primary business
In 2018, inspectors carrying out animal welfare inspections took part in a number of meetings, specifically relating to grazing livestock, pigs and poultry. This involved analysis of case studies, question and answer sessions and extra time for (external) speakers.

Checklists and working instructions are kept up to date. Changes to legislations and interpretations are added.

The Netherlands Enterprise Agency was provided with input for the Improvement Plan format that farmers with a high average footpad dermatitis score in broilers must provide. This format will assist the farmer in drafting an improvement plan that meets the minimum requirements.

In 2018, the NVWA took a clear step in the direction of defining open standards in the regulations. In 2016, Wageningen Livestock Research carried out a study into indicators of inadequate climate conditions for housing units commissioned by the Ministry of Agriculture, Nature and Food Quality. The study identified 5 characteristics that indicate whether the housing unit's climate conditions are harmful or not: environmental properties (gas concentrations, carbon monoxide and ammonia) and animal traits (red/dirty eyes, tail/ear biting and soiling habits).
On this basis, the working instructions and the checklist regarding housing unit climate conditions were updated.

Use of communications
The NVWA is also increasingly focusing on enforcement communications to improve compliance with regulations, including the use of Twitter as well as press releases to actively keep the sectors informed.
Furthermore, a number of fact sheets were published in 2018 containing the findings of animal welfare inspections in 2017. Prior to publication, the content was discussed with representatives of the various sectors. The information in these fact sheets was picked up by specialist publications (trade press) and other media channels.

In one instance, information regarding timely reporting of flock data by broiler farmers was distributed via Twitter. This message was then picked up by various trade journals.
A press release was drawn up regarding inspections at pig farms relating to housing unit climate conditions, which was subsequently distributed throughout the pig farming sector.
In 2018, a press release highlighted the fact to the primary sector that feed bales wrapped in plastic cannot be offered to domestic farm animals, due to the potential animal welfare risks when eating or picking at the plastic.

Actions taken to improve compliance by businesses

Animal welfare during transport
The agreements (National plan) and sectoral protocols for measures during periods with extreme temperatures have been evaluated and tightened. This relates inter alia to periods in which no transport of animals may take place, vehicle loading rates, adjustment of certification times; times at which animals are delivered to slaughterhouses; additional measures to promote cooling.

Animal welfare at the primary business
The NVWA and the Ministry of Agriculture, Nature and Food Quality conduct joint consultations with the duck farming industry on lighting arrangements, establishing a desirable day and night rhythm and on identifying and preventing footpad dermatitis. The sector indicated that it would conduct further investigations into the latter.
Discussions took place with the sector for broiler parent stock for meat production regarding the desirability of perches for the parent animals, for which further studies are to be carried out, partly on behalf of the sector.

The dairy sector will actively notify the NVWA when they intend to halt collection of milk at businesses based on their quality inspection system (so-called milk refusal). These reports will be regarded as high priority by the NVWA in the context of risk-based supervision and resulting inspections, which will often lead to non-compliance.

The pig farming sector has been involved in the drafting of a Pen Enrichment brochure that was developed by Wageningen University in 2018, commissioned by the Ministry of Agriculture, Nature and Food Quality. The sector is also involved in the development of a risk assessment instrument by Wageningen University, which allows various risk factors in relation to tail and ear biting to be assessed, and its use in professional networks.

Conclusions concerning animal welfare at the time of killing and stunning, during transport and at the primary business

The NVWA is working hard to improve official controls, including through enforcement communication, cooperation in scientific research, evaluations and consultations.

Much of the statutory supervision carried out by the NVWA is risk-based in nature and focuses on businesses at which the risk of non-compliance is highest. In addition, the NVWA regularly carries out compliance measurements to monitor the impact of its supervision. In 2018, the principal focus was on risk-based supervision.

The NVWA and the private sector spearheaded several initiatives aimed at improving compliance both in the transport sector, in slaughterhouses and in the primary sector.

It is vital that scientifically substantiated guidelines are established for the supervision of open standards.
The NVWA has increasingly been using communication strategies to improve compliance. This also involves the use of communication through social media.

3.5 Animal feed

Controlling authority or authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Regulation (EC) No 178/2002 of the European Parliament and of the Council	General Food Law Regulation
Regulation (EC) No 183/2005 of the European Parliament and of the Council	Feed hygiene
Regulation (EC) No 767/2009 of the European Parliament and of the Council	Placing on the market and use of feed (prohibited materials)
Regulation (EC) No 1831/2003 of the European Parliament and of the Council	Additives for use in animal nutrition
Council Directive 2002/32/EC	Undesirable substances in animal feed
Regulation (EC) No 1829/2003 of the European Parliament and of the Council Regulation (EC) No 1830/2003 of the European Parliament and of the Council	GMOs in animal feed and foodstuffs
Regulation (EC) No 999/2001 of the European Parliament and of the Council	TSE Regulation
Council Directive 2008/38/EC	Diet Directive
Commission Regulation (EC) No 669/2009	Import controls on high-risk products
Council Directive 90/167/EC	Medicated feedstuffs

National legislation

- Animals Act (Wet dieren)
- Animal Feedstuffs Decree (Besluit diervoeders) 2012
- Regulation on Feedstuffs (Regeling diervoeders) 2012
- Veterinary Medicinal Products Decree (Besluit diergeneesmiddelen)

Size of the control file 31-12-2018

type of business	**number**
Total number of businesses with one or more approvals, registrations, consents, authorisations or permits*	5,206
Approved production businesses	171
Approved traders (with/without storage)	94
Establishments approved in connection with dioxin requirements	21
Registered production businesses	926
Registered traders (with storage)	1,318
Registered traders (without storage)	833
Registered retail traders	451
Registered storage businesses (no trading or transport)	805
Registered road transporters (with storage)	600
Registered road transporters (without storage)	1,175
Registered rail transporters	28
Registered inland shipping transporters	1,242
Registered food business operators with waste flows being used for animal feed	416
Establishments with registration or a consent under the TSE Regulation	75
Establishments with approval under the TSE Regulation	125
Establishments with a permit to produce medicated animal feed	65

** 32% of businesses are approved or registered for a single activity involving animal feed. The remaining businesses hold an approval, registration, consent, authorisation and/or permit for a range of activities involving animal feed, or for comparable activities involving a range of products (such as feed materials, additives, premixes, compound feed for food-producing animals and/or compound feed for non-food-producing animals).*

Supervision of 'Animal Feed', results in 2018

Supervision domain name	Number
Inspections	1,260
Samples	1,926
Measures	
• written warnings	211
• reports of findings	45
• official report	1

Explanatory notes to the results from the supervision of 'Animal Feed'
In general, the level of compliance in the animal feed sector with regard to the Annex II requirements of Regulation (EC) No 183/2005 is good. In relation to incidents, the sector has taken responsibility and proactive steps are taken to prevent further spread.
Key areas of focus include traceability, cross-contamination and HACCP. Incorrect and/or incomplete information on labels and the assertion of unjustified claims also remain a concern. Furthermore, compliance with the reporting obligation of businesses and laboratories is not yet at the desired level.

Projects in 2018

- Inspections related to approval and registration conditions for animal feed businesses (including HACCP audits): inspection of animal feed businesses for compliance with the requirements of Annex II of Regulation (EC) No 183/2005.
- Sampling under the National Animal Feed Plan: annual monitoring programme for prohibited and undesirable substances in animal feed. The NVWA takes animal feed samples from the businesses and the RIKILT Institute of Food Safety tests the samples. In 2018, 1926 samples were taken on the basis of which 3,914 analyses were carried out.
- Inspections on labelling: supervision of the labelling requirements under Regulation (EC) No 767/2009.
- Supervision of health claims: supervision of claims made about animal feed, carried out in collaboration with the Veterinary Medicinal Products Unit (BD).
- Feed ban controls: controls relating to cleaning and disinfection in the context of Regulation (EC) No 999/2001.
- Laboratory reporting obligation and supervision of the quality of analyses: supervision of laboratories' compliance with their reporting obligation when animal feed is found to be non-compliant. This is a follow-up to the project started in 2016.

Specific projects in 2018
- Supervision of food-feed waste flows: inspections of food business operators whose food waste is intended for use in animal feed. This report is currently in its draft phase.
- Supervision of damaged goods: concerns the supervision of the correct disposal and documentation of batches of animal feed that are no longer suitable for animal nutrition due to 'damage'. The report is currently being prepared.
- Import of additives: analysis of data supplied by the NVWA and Dutch Customs that relates to identifying importers and third-country representatives.
- Supervision of so-called 'home mixers: primary businesses and farms that create their own mixed feed for use on their own farm.

Reports/incidents

In 2018, 407 case files (including animal by-products) were handled that related to RASSF notifications, GFL reports and 'self-reporting' under the National Animal Feed Plan, for example. One case file may involve multiple reports. Most case files concerned incorrect labelling or excessive concentrations of undesirable substances. No major incidents occurred in 2018.

Actions taken to improve official controls

- *Enforcement strategy*
  The Animal feed compliance risk management strategy document was updated in 2018. This document outlines the various chains and target groups in the animal by-products sector. For each target group, a description was given of

the risk factors, risk analysis, level of compliance, blind spots and enforcement methods. This document is updated periodically based on the compliance risk management strategy cycle. Supervision projects will be determined on a risk assessment basis partly on the basis of this document. Issues such as the trade in damaged batches of goods and the supervision of 'home mixers' are outlined in this document.

- *Integrated supply chain analysis for feed crops and animal feed*
  2018 saw the start of the drafting process of the integrated supply chain analysis for feed crops and animal feed. This analysis identifies the risks, instances of fraud and the results of supervision for the entire supply chain. Thus revealing where the chain is performing effectively and where risk management needs to be improved. This analysis will provide more insight into the interactions between links in the supply chain and thereby yield a better understanding of the opportunities for risk management improvements. In addition, it will reveal the ways in which the NVWA can strengthen its information position. This integrated supply chain analysis will be completed and published in 2019.

- *Education*
  - In monthly consultations with the inspectors, various topics relating to supervision are discussed and explained (including new legislation, issues that officials may encounter during inspections, the progress of inspection projects).
  - Participation in BTSF courses (Better Training for Safer Food) contaminants in food and feed, animal feed law, HACCP audits.
  - Course for inspectors on how to draft accurate reports of findings.
  - Training to deal with aggression and violence.
  - Permanent retraining and continued training of special investigating officers (BOAs).

Actions taken to improve compliance by businesses

- Improving and updating the information on the website.
- Consulting with and supplying targeted information to the organised business sector and individual businesses.
  A consultation is held with all relevant stakeholders in the animal feed sector 4 times a year, which is organised by the sector itself. In 2018, this was supplemented by an animal feed supply chain consultation. This meeting is held twice a year, with the focus being on difficulties in supervision and enforcement. Two working groups operate under the auspices of this supply chain consultation, which focus on:
  - resolving any problems surrounding the management of cross-contamination, and;
  - improving the reporting obligation and the quality of analyses from private laboratories.

Conclusions

In general, the level of compliance in the animal feed sector with regard to the Annex II requirements of Regulation (EC) No 183/2005 is good. Key areas of focus include and remain traceability, cross-contamination and HACCP. Incorrect and/or incomplete information on labels and the assertion of unjustified claims also remain a concern. Furthermore, compliance with the reporting obligation of businesses and laboratories is not yet at the desired level. In relation to incidents, the sector has taken responsibility and proactive steps are taken to prevent further spread.

3.6 Animal by-products

Controlling authority or authorities: NVWA, COKZ, NCAE

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Council Regulation (EC) No. 1069/2009	Basic regulation
Council Regulation (EC) No. 142/2011	Implementation regulation
Council Regulation (EC) No. 999/2001	TSE Regulation

National regulations

- Animals Act (Wet dieren)
- Animal Products Decree (Besluit dierlijke producten)
- Regulation on Animal Products

Size of the control file on 31-12-2018

type of business	**number**
Primary production	+ 30,000
Businesses of origin: - red meat, poultry meat, game - food production companies - food services industry, retail	 + 5,5000 +83,000 + 20,000
Section I: storage of animal by-products (category 1, 2, and 3)	453
Section II: storage of derived products (approved)	133
Section III: incineration/combustion (approved)	48
Section IV: processing businesses	24
Section V: oleochemical businesses	3
Section VI: biogas businesses	119
Section VII: composting businesses	62
Section VIII: pet food	83
Section IX: handling of animal by-products and derived products outside the feed supply chain	141
Section X: registered users	463
Section XI: assembly centres	15
Section XII: manufacture of organic fertilisers/soil improvers	50
Section XIII: other registered operators - transporters - traders - other registered operators	 1,754 441 507

Supervision of 'Animal By-products', results in 2018

Supervision of animal by-products	Number
Supervision of approved/registered/new ABP businesses	750
Supervision of ABP businesses of origin – food	135
Supervision of businesses of origin – livestock farming	57
Supervision of ABP transport	107
Destination controls	476
Export controls on processed animal proteins to third countries	128
Inspections in response to complaints and reports	212
Unplanned inspections	36
Re-inspections	103
Microbiology samples	33
Chemical samples	5
Measures	
- written warnings	238
- fine reports	58
- official reports	12

Explanatory notes to the results for 'Animal By-products'

The number of businesses operating in this sector has been increasing each year. A lack of growth in the number of inspectors has led to inspections increasingly having to take place on the basis of risk.

Moreover, part of the organisation's supervision capacity had to be reallocated as a result of new legislation relating to third-country exports of processed animal protein.

With regard to businesses creating animal by-products, compliance is good in the dairy industry and among primary businesses. At red meat and poultry slaughterhouses, compliance varies from moderate to reasonable. This remains a key focus for this sector.

Traceability inspections and securing supply streams continue to be priorities in the supervision of approved and registered businesses.

Projects in 2018

- Supervision of approved and registered businesses: this relates to routine supervision of businesses' compliance with their approval and registration conditions (including permissions), HACCP and traceability, and additional supervision of high-risk businesses (such as category 1 processing businesses).
- Supervision businesses of origin for food: this relates to supervision the collection and removal of animal by-products (ABPs) at food business operators (slaughterhouses, fish sector).
- Supervision at primary businesses of origin: inspections on livestock farms in relation to the collection and removal of carcasses. The level of compliance is high. Reports were also handled that related to barn fires, as well as to dead animals, which, when collected by the destructor, did not appear to be dead;
- transport supervision: these inspections include controls on road transport.
- Destination controls: inspections that are carried out under Article 48 of Regulation (EC) No 1069/2009 and control of consignments imported from third countries.
- Export controls for processed animal proteins (PAP) to third countries: inspections under Regulation (EC) No 999/2001.
- inspections in response to complaints and reports: inspections conducted in response to a complaint or report received through the RASSF system or the NVWA notification system;
- microbiology samples: this relates to the taking of samples and microbiological testing of pet food or processed animal proteins;
- chemical samples: this relates to the taking of samples and testing of products derived from GTH (glyceroltriheptanoate).
- Supervision illegal exports of processed animal proteins to third countries: the PAP (Processed Animal Proteins) Task Force was set up in 2015 with a specific focus on the illegal export of PAPs derived from ruminants by traders and PAP storage businesses. Since 2015, the task force has been working to tackle the illegal export of processed animal proteins derived from ruminants to third countries. Twelve storage businesses and traders have been involved.

To date, this project has resulted in 10 businesses discontinuing such activities. Progress on this work has been hampered by legal proceedings brought against the NVWA by the businesses involved, complex trading systems and the international component of this trade. These issues have been discussed with the European Commission;
- Waste flows in the fats supply chain. This project specifically focuses on the disposal of waste flows (tank bottoms, cleaning water, etc.) of fat processing companies and fat transporting companies. This project will continue throughout 2019.
- Execution of enhanced supervision of a business as a result of a raid by the Intelligence and Investigation Service. The business trades in animal feed and produces biodiesel.

Reports/incidents

The majority of RASFF reports relate to non-compliances with microbiological standards, primarily *salmonella* in processed animal proteins and raw feed for pets. Other reports relate to traceability issues, such as omissions in TRACES and incorrect commercial documents.
In 2018, there were no specific reports or incidents.

Actions taken to improve official controls

- *Enforcement strategy*
  The Animal feed compliance risk management strategy document was updated in 2018. This document outlines the various chains and target groups in the animal by-products sector. For each target group, a description was given of the risk factors, risk analysis, level of compliance, blind spots and enforcement methods. This document is updated periodically based on the compliance risk management strategy cycle. Supervision projects will be determined on a risk assessment basis partly on the basis of this document.
  Preparations have been made to start with the implementation of an information provision programme in respect of raw feed for pets in 2019.
  The revision of the specific intervention policies for animal by-products (IB02-SPEC33) has also been initiated.
  The Guidelines (Werkwijzer) for ABP inspectors on the intranet has been expanded and currently provides access to all available general and specific information that is required for the execution of inspections.

- *New supervision procedures for the export of processed animal proteins to third countries*
  Work has begun on drafting a new procedure for the supervision of consignments of processed animal proteins that are exported to countries outside the EU, namely, third countries. Agreements will have to be made in this regard with Dutch Customs. This process will continue in 2019.

- *Training*
  - The possibilities of ABP (including insect meal) under Regulations (EC) No 1069/2009 and (EC) No 999/2001 have been discussed with the inspector in specific consultations.
  - The NVWA has conducted training sessions for the police regarding Regulation (EC) No 999/2001 and Regulation (EC) No 1069/2009 and (EU) No 142/2011 (2x).
  - 3 inspectors have completed the BTSF TRACES course.
  - Training to deal with aggression and violence.
  - Continuous development and retraining of special investigating officers (BOAs).

Actions taken to improve compliance by businesses

- improving and updating the information on the website;
- consulting with and supplying targeted information to the organised business sector and individual businesses;
- cooperating on the creation of a guide to best practices for the raw pet feed sector.

Conclusions

The number of businesses operating in this sector has been increasing each year. Moreover, part of the organisation's supervision capacity had to be reallocated as a result of new legislation relating to exports of processed animal protein to third countries. The ABP case file is one that is susceptible to fraudulent activities. Supervision businesses engaged in

fraudulent activities requires extensive knowledge, excellent administrative skills and time. A lack of growth in the number of inspectors has led to inspections increasingly having to take place on the basis of risk.

Traceability inspections and securing supply streams continue to be priorities in the supervision of approved and registered businesses. Supervision of illegal third-country export of animal feed has resulted in the cessation of illegal export of processed animal proteins by 10 of the 12 businesses involved, with 2 businesses being engaged in the legal process aimed at preventing cessation.

3.7 Meat supply chain (slaughterhouses, cutting plants and cold stores)

Controlling authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 178/2002	General Food Law Regulation
Commission Regulation (EC) No 882/2004	Ensuring proper checks on food and animal feed
Regulation (EC) No 852/2004 of the European Parliament and of the Council	Food hygiene
Commission Regulation (EC) No 853/2004	Hygiene rules for food of animal origin
Regulation (EC) No 854/2004 of the European Parliament and of the Council	Food products of animal origin – official controls
Regulation (EC) No 2073/2005 of the European Parliament and of the Council	Microbiological criteria for foodstuffs
Regulation (EC) No 2074/2005 of the European Parliament and of the Council	Implementing measures for certain animal products
Regulation (EC) No 1375/2015 of the European Parliament and of the Council	Rules on official controls for Trichinella in meat
Regulation (EC) No 1069/2009 of the European Parliament and of the Council	Animal by-products regulation
Regulation (EC) No 999/2001 of the European Parliament and of the Council	Laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (TSEs) (Bovine Spongiform Encephalopathy, BSE)

National legislation:

- Animals Act (Wet dieren)
- Regulation on Animal Products

Size of the control file in 2018

type of business (approvals)	**number as at 01/01/2018**	**number as at 31/12/2018**	**inspections management****
Domesticated ungulates slaughterhouses	181	184	184
Poultry slaughterhouses	29	28	29
Rabbit (lagomorphs) slaughterhouses	6	6	6
Farmed game slaughterhouses	21	22	22
Wild game slaughterhouses (WGS)	15	12	15
Cutting plants (all types of meat)*	1,258*	1,242	227***
Cold stores*	530*	544	97

Note: *a business may hold multiple approvals; most slaughterhouses also hold a cutting plant approval, and sometimes a cold store approval as well.*

** This concerns all cutting plants and cold stores approved by the Inspection Department and other NVWA authorities (Enforcement).*

*** Inspections also includes all slaughterhouses and businesses whose main activity is cutting up meat or storing fresh meat.*

**** This relates to stand-alone cutting plants that are not connected to a slaughterhouse and which sometimes hold additional approvals.*

Supervision of 'Meat Supply Chain', results in 2018

audits and inspections in 2018	number of basic inspections	number of re-inspections
HACCP audits	359	29
Approval maintenance	443	51
Inspections for new approval application	52	9
Traceability (tactical and system inspections)	306	5
Microbiological criteria system inspections	included in the HACCP audits as of 2018	
Tactical inspections of hygienic work practices	2,317	147
Other system inspections	902	27
Total	**4,379**	**268 (6%)**

Red meat inspections *(source: RSG, the Dutch database for livestock slaughter data)*

animal type	number of slaughters
Pigs	15,572,931
Calves	1,603,695
Cattle	584,773
Other ruminants*	709,642
Solipeds	2,409
Red meat total	**18,473,450**

** Sheep, goats, farmed deer, lamas, wild sheep*

Poultry meat inspections *(source: PLADMIN, the NVWA poultry administration database)*

animal type	number of slaughters*
Chickens kept for meat production	607,348,594
Chickens	17,955,020
Ducks	8,353,587
Other**	4,226
Poultry meat total	**633,661,427**

** Refers to the numbers of live poultry supplied to the slaughterhouse*

*** Refers to pigeons, geese and turkeys*

Number of hours for Inspections

Meat inspections (No. of hours)	2016	2017	2018
Red meat	180,122	181,126	184,416
Poultry meat	107,440	108,603	110,480
Total	**287,562**	**289,729**	**294,896**

Number of samples/analyses *(source: Labvantage, KBBL, VLG)*

Samples/analyses*	Number of samples	Number of analyses**
Microbiological	90	90
Antibiotics analysis	127	127
Trichina in farmed pigs	164,675	15,782,576
Trichina, other	2,559	7,023

** These are samples taken and analyses performed within the scope of PM inspections at the slaughterhouse.*

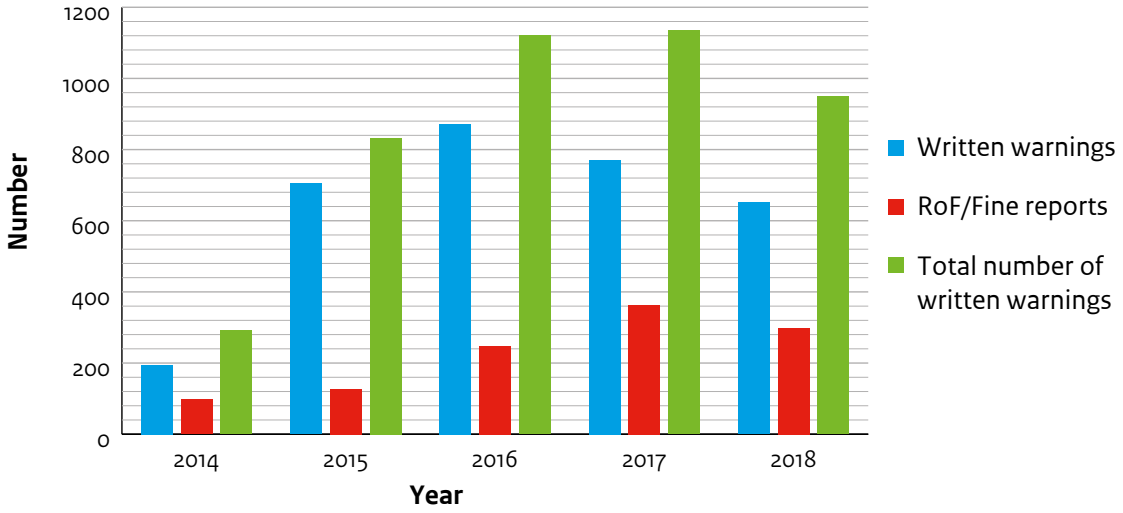
*** Numbers of animals tested based on registration at the laboratories*

Measures taken by the NVWA

2018 measures	written warning	fine reports*
Red meat slaughterhouses	202	118
Poultry slaughterhouses	434	172
Game-processing businesses	0	0
Cutting plants	34	6
Cold stores	5	1
Total	**675**	**297**

** These are reports on findings sent to NVWA's TBM division for compiling a fine report.*

Trend in the numbers of written measures in this area:



Reference to specific reports
A separate report is being issued on the National Residues Plan.

Explanatory notes to the results for the 'Meat Supply Chain'

Approvals for slaughterhouses, game processing businesses, cutting plants and cold stores
As of the reference date, 31/12/2018, 22 slaughterhouses and 162 small/medium-sized slaughterhouses for domesticated ungulates and farmed game were under continuous supervision. Eighteen poultry slaughterhouses were under continuous supervision and 11 approvals were granted for non-continuous poultry supervision, of which 7 businesses actually slaughtered animals in 2018. A number of these businesses also received approval for the slaughter of lagomorphs. In 2018, 227 independent cutting plants were not affiliated with a slaughterhouse or a game processing facility and 97 cold stores whose core activity was the storage of fresh meat (supervision of these businesses was brought under the remit of the Inspection Directorate of the NVWA).

In respect of the audits and inspections that were carried out, it is generally striking that in roughly the same number of targeted businesses, the number of basic inspections increased by 8% compared to 2017 (more in line with the scheduled number) whereas the relative number of re-inspections fell from 14% to 6%. This is in part due to the fact that a large number of traceability inspections were incorrectly logged as re-inspections in 2017; the error was corrected in 2018. On the other hand, it can also be concluded that the results of the basic inspections were often adequate and that a re-inspection was not required.

In 2018, 147 basic audits were carried out for red meat slaughterhouses; 80% of the scheduled audits. The NVWA carried out 118 system inspections for approval review (realisation rate of 64%) and 84 system inspections (SI) for traceability. In addition, 185 shorter traceability inspections (CL) were carried out. In relation to the system inspections for traceability, 1 serious infringement was detected, as well as 14 other infringements, which primarily related to the requirements for packaging and/or identification marks. Deficiencies were detected in 13 instances for the shorter traceability inspections.

All 26 planned audits were carried out at poultry slaughterhouses, in addition to 20 system inspections for approval review (77%). In addition, 93 inspections (CL) for traceability were carried out, which led to 5 re-inspections. The deficiencies chiefly related to the incorrect application of the identification mark. The supervision results relating to hygienic practices in slaughterhouses are explained in greater detail under the Impact measurement/Compliance headings below. At red meat slaughterhouses, the NVWA checks for visible contamination of carcasses at two points in the slaughter line (before the PM inspection and before refrigeration). At poultry slaughterhouses, the NVWA performs this check at the end of the processing line (before refrigeration).
The NVWA carried out 128 audits out at independent cutting plants, which was 15 more than were planned. This was due to the fact that, in addition to the audits scheduled for 2018, a number of audits that were scheduled for 2017 that were not realised in that year. Approval review was carried out 167 times, with realisation comparable to 2017 (70%). Furthermore, several additional inspections were carried out within this target group, to a total of 306 inspections, which also includes administrative traceability controls, carried out by specially trained auditors. These inspections have a greater scope and more depth than other inspections and are currently still undergoing further development. 39 audits were carried out at cold stores (121% realisation). Of the 97 scheduled inspections for approval review, 71 were executed, leading to a realisation rate of 73%, compared to 65% in 2017. In 2018, an additional system inspection for cutting plants was carried out at 22 cold stores in the context of approval review. This additional inspection was for businesses that also held approval as a cutting plant. In 2018, the basic traceability inspection was carried out on 41 occasions.

The results of the HACCP audits at cold stores in 2018 were similar to those of the independent cutting plants, at which no deviations or violations were found in 90% of the evaluated HACCP items (questions in the inspection list); this was 94% for the cold stores. A higher number of minor infringements were detected in the field of HACCP at independent cutting plants. A striking violation, both at independent cutting plants and cold stores, related to the absence of a procedure for dealing with meat that had fallen on the ground, with 50% and 57% of the businesses attended respectively not having outlined any such procedures. Most infringements and serious violations at cutting plants related to the lack of functional facilities for the cleaning, disinfection and storage of materials (at 5% of inspected businesses). Most infringements and serious violations at cold stores related to tracing procedures (at 3% of inspected businesses).

Game processing businesses
In 2018, as a result of the Game Supply Chain Improvement Plan, supervision of approved game processing businesses took on a risk-based focus. In addition to the annual audit and the inspections in relation to approval review and permits, risk-based inspections were conducted for the 3 issues defined as key risks; namely, hygiene, animal by-products (ABP) and tracing. No serious infringements were detected in this regard. The compliance rate for the statutory procedures, based on HACCP, was calculated at 87%. The deficiencies identified primarily related to the architectural/structural conditions and the hygiene requirements and were classified as minor violations. In addition, documentation surrounding the transport of ABP and the correct completion of QP (qualified person) statements[1] remains a key priority. In 2018, more audits and approval review inspections were conducted than in previous years. Execution of regular inspections regarding risk-prone aspects such as hygiene, traceability, animal by-products, etc. is lagging in relation to risk-based planning.

Other inspections
This category includes various types of inspections, including regarding animal by-products, preparation of minced meat, separator meat, identification & registration and procedures for live livestock. In 2018, a significantly higher (50%) number of inspections were carried out compared to 2017, despite the rate of re-inspections remaining roughly the same (3% compared to 2.3% in 2017).

[1] A qualified person (QP, as defined in Regulation No 853/2004, Annex III Section IV) should carry out an initial assessment when shooting free game and record the findings in a statement. This QP statement must be submitted to the game processing business alongside the game that has been shot.

Inspections
The NVWA dedicated a total of 294,896 hours to the inspection of red meat and poultry slaughterhouses. These hours not only encompass inspection activities (AM and PM (meaning ante mortem and post mortem) inspections and supervision of PM inspections), but also include a large part of the supervision activities in the slaughterhouses. Compared to 2017, the number of requested inspection hours for red meat and poultry rose by 1.8% and 1.7% respectively. On the other hand, the number of slaughtered red meat animals rose by 2.6%, whereas the slaughter volume for poultry fell by 1.4%. It may be that market developments in relation to broiler chicks (sharp increase in the import of poultry meat in autumn 2018) affected this decline. For red meat, the increase of the slaughter volume is primarily caused by the greater number of slaughtered pigs.

Measures taken by the NVWA
The stabilisation of the number of written measures (warnings and fine report) reported in 2017 changed to a decrease of 14% in 2018 compared to 2017 (see graph of trend). At red meat slaughterhouses, the number of written warnings decreased significantly (-24%), whereas the number of fine reports showed an increase (+16%), the reason for which is still being investigated. For poultry slaughterhouses, both categories have reduced in number (-12% and -18%). Nevertheless, most of the written measures (62%) are still taken at poultry slaughterhouses, with this being nearly half of the figure at red meat slaughterhouses (33%). The large numbers of measures at slaughterhouses are mainly a consequence of the risk-based supervision system for slaughterhouses, under which the detection of infringements and the associated enforcement in a specific risk area results in an increase in the frequency of controls on this component by the system, which in turn leads to a greater likelihood of further infringements being detected.
A total of 34 written warnings and 6 fine reports were issued to stand-alone cutting plants; cold stores received 5 written warnings and 1 fine report. The results for these two types of business are comparable to 2017.

Incidents/projects

Salmonella Goldcoast
At the start of October 2018, the National Institute for Public Health and the Environment (RIVM) reported a striking rise in the number of illnesses involving Salmonella Goldcoast to the NVWA. Source detection in response to the warnings of the RIVM in October led back to a pig slaughterhouse in the Netherlands. The source showed a recent modification of the production process of the slaughterhouse (the temperature of the water of the scalding tanks). The slaughterhouse subsequently immediately adapted its production process. In addition, products produced from carcasses between 4 June and 24 October 2018 were traced. The NVWA oversaw the process by taking 27 samples relating to the notifications that had been submitted by the companies in relation to their tracing obligation and companies that had not submitted any notifications. Four companies achieved an insufficient score initially and obtained a sufficient score on a second assessment. The NVWA notified the European Commission and Member States of the EU regarding the tracing actions through the EU Rapid Alert System for Food and Feed (RASFF). In total, there have been 166 RASFF notifications, of which 73 originated in the Netherlands (reference date 28 January 2019). As of 29 January 2019, the incident was de-escalated to 'regular'. The warning in relation to the rise of the number of illnesses involving Salmonella Goldcoast signalled by the RIVM, as well as the DNA analyses (Whole Genome Sequencing) carried out, led to a rapid link between the salmonella samples of the slaughterhouse available and thus to rapid detection of the source.

Fipronil
This incident, which took place in 2017, led to further activities in 2018. In the second half of 2017, the NVWA locked down a large number of poultry farms (358 in total) because the housing units had been treated with fipronil, a substance banned for use in poultry. As a result of these treatments, fipronil was detected in eggs, meat and manure of the animals present. Products came into circulation on the market with residue levels exceeding the statutory threshold (MRL). Once a business had been locked down, it could only be released following a sample analysis to check fipronil levels per housing unit and per component (eggs, meat and manure). In 2018, the activities relating to the release (and control) of businesses were continued, in addition to the monitoring of the levels of fipronil in eggs in the retail sector. This monitoring showed that the levels of fipronil detected, including below the MRL, have become increasingly rare throughout 2018. These monitoring efforts continued into 2019.

Customer satisfaction
A survey conducted by the NVWA in April 2018 showed that customer satisfaction received an average mark of 6.5 from slaughterhouses. If the size of the slaughterhouse is taken into account, customer satisfaction appears to be significantly better at the smallest slaughterhouses than at larger ones. The smallest slaughterhouses (fewer than 10 livestock units (LU)) gave a score of 7.4; the middle group (over 10 LU, but not permanent supervision) gave a score of 5.5, with the group subject to permanent supervision giving a score of 5.4.

Reliable Food Chain Information project
Enforcement communications have been used as part of a project aimed at improving the reliability of food supply chain information (FCI). The project was halted for a period of time and will resume in 2019.

Administrative traceability control project
Administrative traceability controls had been planned for all independently approved cutting plants in this domain in 2018. Work has begun on this innovation in supervision, but too few controls have as yet been conducted (31, of which 7 were re-inspections). This methodology is to be continued and developed further in 2019.

Disclosure of slaughterhouse control data project
The cycle of semi-annual disclosure and publication of compliance data (compliance monitor) was set up and implemented systematically in 2018 for all large slaughterhouses subject to permanent supervision (please also see under Impact measurement heading below).

Impact measurement

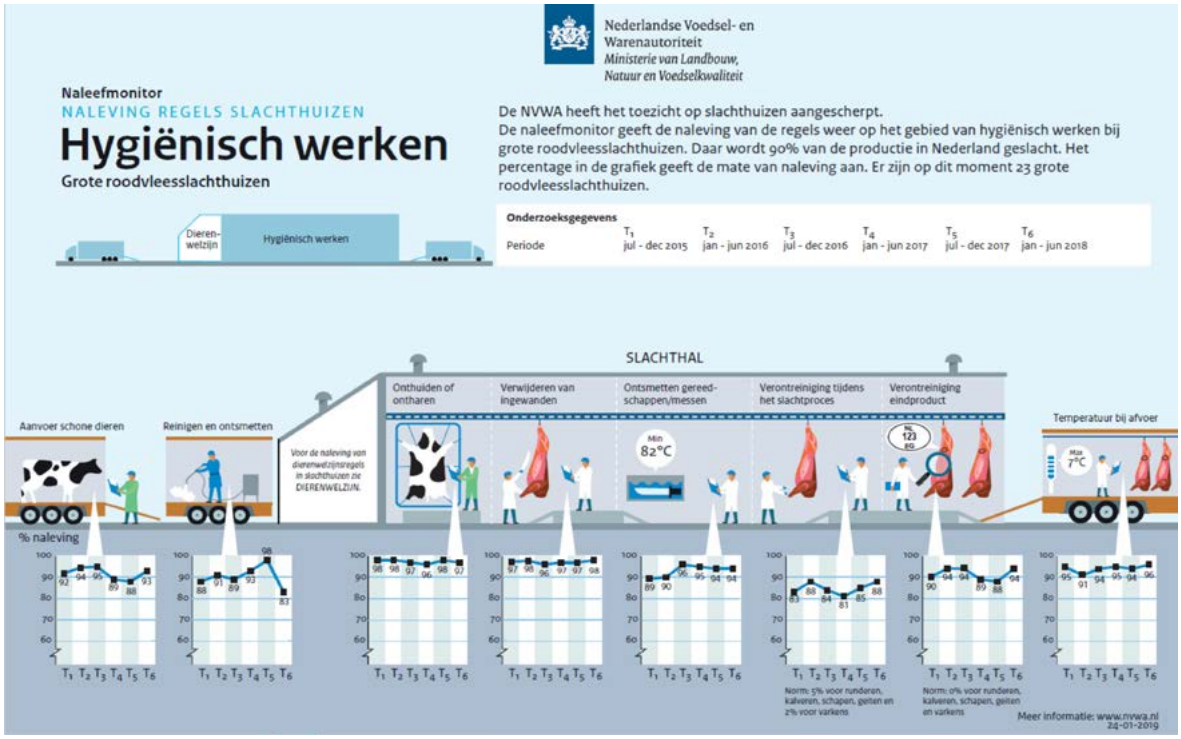
Compliance monitor for red meat slaughterhouses
In 2014, the NVWA started more uniform and risk-based supervision of the large red meat slaughterhouses. From a systematic analysis of the checklists based on a number of key high-risk parameters, a clear picture emerged of compliance at each business. In 2018, this data was published alongside the names of the businesses (https://www.nvwa.nl/onderwerpen/inspectieresultaten-grote-roodvlees-slachthuizen/naleving-hygiene-in-grote-roodvlees-slachthuizen).

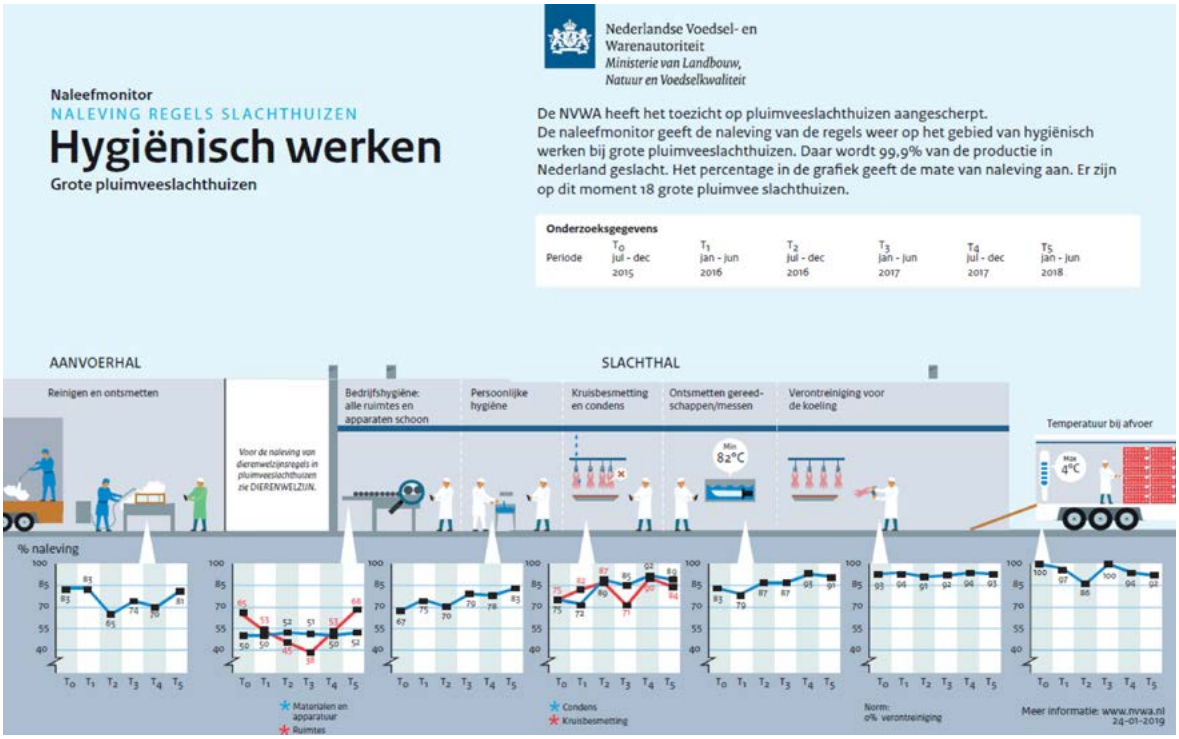
Based on the compliance monitors published for red meat slaughterhouses until now, it appears that compliance at those slaughterhouses has improved since the new method of supervision was introduced. The results (compliance rates) seem to have consolidated in 2018 in respect of 2017. Despite this consolidation, there are still a number of key concerns at a relatively high level. Optimal prevention of contamination during the slaughter process and implementing the correct measures in the event of deviations significantly contributes to the food safety of meat. Operators are able to ensure that the compliance rate increases again, for example by conducting more in-house controls on the slaughter line itself and linking slaughter rates to the findings, and are able to ensure that compliance remains at the highest possible level. The aim is for the final product to be 100% clean and for no contamination to be detected. Operators must ensure the delivery of clean carcasses. The NVWA will continue to ensure that companies and businesses take responsibility in this regard (please see the infographic on large-scale slaughterhouses below).

Compliance monitor for poultry slaughterhouses
The risk-based supervision system was introduced for large-scale poultry slaughterhouses in 2015. With regard to controls on contaminated carcasses, a reasonable level of compliance has been reached since the introduction of the measurements in 2015, of between 91% and 94%. Cleaning and disinfection prior to the start of slaughter activities remains an area of weakness for this target group. However, better scores have been achieved in relation to the personal hygiene of the employees and preventing contamination of the clean areas of the slaughterhouse by the contaminated areas (+12.5%). It would appear that many businesses have taken action in these areas on their own initiative. In the event of non-compliance, the NVWA will take corrective measures to ensure compliance by the business (https://www.nvwa.nl/onderwerpen/inspectieresultaten-pluimvee-slachterijen/naleving-hygiene-pluimvee-slachterijen) (please also see the infographic on large-scale poultry slaughterhouses below).

Conclusions

In 2018, more audits and inspections were conducted than in 2017, as well as fewer re-inspections, with a roughly equivalent number of target businesses. The number of written measures taken by the NVWA decreased by 14% in 2018 compared to 2017. Far fewer written warnings were issued at red meat slaughterhouses, but more fine reports were issued. Roughly twice as many written measures are still taken at poultry slaughterhouses than at red meat slaughterhouses. The measures taken at cutting plants and cold stores were similar to 2017.





3.8 Meat products and composite products (industrial production)

Controlling authority or authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 178/2002	General Food Law Regulation
Commission Regulation (EC) No 852/2004	Food hygiene
Commission Regulation (EC) No 853/2004	Food hygiene of products of animal origin
Regulation (EC) No 2073/2005 of the European Parliament and of the Council	Microbiological criteria for foodstuffs

Size of the control file in 2018

type of business	**number**
Artisanal businesses	312
Importers	809
Trading companies	2,692
Warehouses	843
Production businesses	3,101
Total number of businesses	**7,757**

NB: Due to changes in the classification and definitions of types of businesses, the numbers of businesses listed above may differ significantly from the numbers provided for previous years.

Supervision of Industrial Production – Meat Products and Composite Products, results in 2018

supervision of industrial production	**number**
Audits	125
Inspections	4,383
Samples*	
Measures during inspections	1,466

** The samples that are taken at industrial businesses are reported by the domains responsible for analysing the samples (including microbiology and contaminants).*

Explanatory notes to results for 'Industrial Production – Meat Products and Composite Products'
As a result of reduced inspection capacity, there has been a downward trend in the number of inspections and audits conducted in recent years. In 2016, 6,653 inspections and 267 audits were carried out; in 2017, this was 6,337 and 195 respectively, with 4,383 inspections and 125 audits carried out in 2018.

For a number of years, all industrial food businesses have been categorised according to a risk-based classification system, with each business being assigned a colour: orange, yellow, green and white. This classification into groups on the basis of risk is intended solely for internal use. The visit frequency for businesses and the matters covered during the inspection depend on the colour coding of the business in question.

The consequences of the colour codes for the businesses are as follows:

- **Orange**: these businesses are not in compliance with the legislation at a structural level; these are the businesses subject to 'Enhanced supervision', which is laid down in a specific approach. Supervision of these businesses is customised, and focuses either on improving the situation or on temporary shutdowns, suspensions or withdrawal of approvals. Inspections occur as often as is required.

- **Yellow**: these businesses occasionally fail to comply with the legislation; a measure was imposed due to a deficiency on at least one occasion in the past two years. Routine supervision focuses on eliminating the infringements (through re-inspections). Supervision also focuses on the basic conditions (at least at production businesses) and any other inspection items that may be applicable.

- **Green**: these businesses comply with the legislation and are thus rewarded with the minimum inspection frequency. During previous inspections over the past two years, no infringements were recorded at these businesses. At a minimum, supervision of 'green' production businesses focuses on the basic conditions and one other applicable item. The 'other item' will be chosen by the inspectors, based on their own intuition, but in such a way that all relevant items are addressed every few years. Within other business categories, the basic conditions will not always have to or perhaps cannot always be assessed.

- **White**: no inspections have been conducted at these businesses in the past two years; accordingly, no inspection data are available for that period.

During audits of companies, all aspects of the food safety system of a business are assessed as a rule. Businesses have the option to make use of their own food safety plan or can also make use of an approved hygiene code to meet the requirement of a food safety system. As a result of the limited capacity with regard to inspectors, no audits were carried out at registered businesses in 2018. A decision was made for a limited number of audits to be carried out at approved businesses.

There are 2 types of inspections: inspections relating to basic conditions and system inspections (SI). System inspections primarily relate to the following issues: hazard identification, critical control points, monitoring procedures, verification procedures, reporting and tracing, executing recalls and the testing of microbiological criteria. The table below contains a further 3 items that fall within the SI assessment. Various inspection checklists are also available for these different issues for the requested inspection to be carried and for information to be collected. In 2018, there was specific focus on the requirements of Commission Regulation (EC) No 2073/2005 on microbiological criteria, on tracing and reporting, and on the appropriate way to conduct a recall.

In addition, the inspectors at the businesses are increasingly focusing more on the complaints and reports that are submitted to the NVWA. These may be RASFF notifications, but may also include complaints from consumers, companies or other bodies.

The results of the different types of inspections, expressed in the percentage of 'interventions' are shown in the table below.

inspection item	number of inspections	percentage of interventions
Basic conditions	1,861	22%
Hazard Identification (SI)	206	29%
Critical control points (SI)	79	10%
Monitoring procedures (SI)	406	8%
Verification procedures (SI)	221	28%
Tracing and reporting (SI)	559	15%
Execution of recall (SI)	88	8%
Microbiological criteria (SI)	535	43%
Implementation of hygiene code (SI)	242	25%
No food safety plan (SI)	150	89%
Other system inspections (SI)	31	32%
Total System inspections	**2,517**	**27%**

The overview above of the percentage of interventions shows that in more than 1 in 5 inspections regarding basic conditions, deficiencies are identified that warrant an intervention, i.e. a written warning or a fine report.

In relation to system inspections, more than 1 in 4 inspections appear to result in the identification of shortcomings that are cause for an intervention to be imposed. The system inspections that show the poorest compliance, include: hazard identification, implementation of verification procedure, implementation of the hygiene code and assessment of the microbiological criteria.

It should, however, be noted that the system inspections at businesses are carried out on the basis of a risk assessment and the previous occurrence of violations (risk-based inspections). This means that the percentage of non-compliance in the right-hand column of the table cannot be regarded as a deviation in a random sample from the total number of businesses. System inspections therefore are actually carried out at specific businesses in a targeted manner. This is not the case for inspections regarding basic conditions, which are carried out regardless of any inspection results in the past, meaning that the corresponding results provide an accurate picture of the percentage of non-compliances in relation to basic conditions.

Projects in 2018

- Basic conditions, focusing on a business's architectural infrastructure, hygiene and working methods within the business and correct storage temperatures.
- Supervision of HACCP-related procedures, setting up and implementing such procedures on an ongoing basis.
- Tracing and reporting: businesses must be able to trace their products. They must be able to establish the origin and destination of each product. Specific attention on the obligation for businesses to notify the competent authority if they know that unsafe or harmful food has been introduced to the market.
- Microbiological criteria: do businesses comply with the microbiological criteria laid down in Regulation (EC) No. 2073/2005, which also focuses on the method by which businesses should verify the food safety criteria in this Regulation. Specific attention will be paid to controlling Listeria monocytogenes, particularly in meat and meat products.
- Modified supervision at businesses that use a certification scheme (private quality system (PQS) supervision) approved by the NVWA, meaning the approved BRC, IFS and FSSC 22000 schemes (please see below for more information on the pilot concerning PQS systems).
- Enhanced supervision (verscherpt toezicht, VETO) at businesses that have been issued at least 3 reports of findings within a 2-year period. These businesses will be subject to intensive supervision to achieve structural improvements of the deficiencies. In cases where this cannot be achieved, termination of business operations will be pursued (please see more information regarding enhanced supervision below).

Incidents

There were no notable major incidents in 2018.

Impact measurement

No specific activities were carried out in relation to measuring the impact of supervision.

Actions taken to improve official controls

Modified supervision at PQS-certified businesses
Establishments that are certified under a Private Quality System (PQS) based on the BRC, FSSC 22000 or IFS food safety standards have been subject to modified supervision in 2018 through a pilot programme. The guiding principle in this regard is that the NVWA will increasingly be using the inspection results of these systems. The NVWA is using the pilot to examine the extent to which it is able to rely on the safeguarding of food safety under a PQS and the operation of the certifying bodies.

In 2018, no assessment was carried out regarding the basic conditions during inspections of businesses making use of 1 of the PQS systems mentioned. This principle applies to both registered and approved businesses. Any outstanding or unresolved findings of previous inspections will nevertheless by handled by the inspectors of the NVWA - where necessary, by means of a re-inspection.

If food safety should become threatened and/or a quiet or regular recall has to take place as a result of the shortcomings of a business using an approved PQS system, then the business will be charged by the inspector to set such a recall in motion immediately and with adherence to the applicable intervention policies.

Actions taken to improve compliance by businesses

More stringent supervision
Industrial businesses that have received 3 reports of findings within a period of two years, will be subject to enhanced and intensive supervision by the NVWA. These businesses will have to make significant changes to the hygiene standards at the business as well as to production and storage methods in order to meet statutory requirements. If they do not, they will ultimately have to terminate their business operations.
The process in which these businesses end up is called ‘enhanced supervision’. This approach consists of a number of fixed steps that these businesses will have to follow. On the one hand, there is the ‘roadmap’ in which any deficiencies identified during re-inspections as well as consultations with the food business operator are recorded in detail. On the other hand, there are the follow-up inspections, during which the food business operator is able to demonstrate that he/she is once again in compliance with all statutory requirements and after which regular supervision can resume. Within this process, NVWA inspectors have the authority to exercise a large number of powers in order to compel businesses to comply with statutory requirements. A number of examples of such powers include: imposing a penalty, imposing a decision for the termination of business operations, implementing emergency closure, halting specific processes at a business and confiscating harmful foodstuffs.

Numbers and nature of businesses subject to enhanced supervision
In 2018, 65 businesses were inspected as part of the enhanced supervision approach. This figure includes businesses that were already subject to this approach prior to 1 January 2018 and those that entered the enhanced supervision track over the course of 2018. In 2016 and 2017, the number of businesses was 45, which means a significant increase in the number of businesses subject to enhanced supervision (44%).
A more stringent intervention policy and higher priority of the supervision of the shelf-life investigations relating to listeria by businesses may be contributing factors to this. Most businesses that enter the enhanced supervision track are in the following categories of businesses: bread and pastry businesses, wholesalers of food, fish and fish products and meat and meat products. These 4 categories of businesses collectively account for nearly 60% of the total number of businesses subject to enhanced supervision (VETO). If we were to examine the different types of businesses, it becomes apparent that roughly 75% of businesses subject to enhanced supervision are production businesses, with the remaining types of businesses relating the trading companies and importers of foodstuffs.

Inspections conducted at businesses subject to enhanced supervision
The percentage of roadmap inspections accounted for approximately a quarter of the total number of enhanced supervision inspections. Approximately 1/3 of inspections consisted of so-called follow-up inspections aimed at determining whether the businesses had made systematic improvements. A further 1/3 (approximately) of the inspections consisted of verifying the decision that had been imposed on businesses as a sanction at an earlier stage. Approximately 1/10 of inspections related to so-called opening inspections. In cases where businesses did not comply with requirements, this would often lead to temporary closure of the business. Once the business is subsequently convinced that it meets the statutory requirements again, it must contact the NVWA for the organisation to conduct an opening inspection. If this inspection reveals that the business does once again meet the requirements, production can recommence and sales can be started up again.

Violations detected at businesses in the enhanced supervision track
The most common infringements that occur at businesses subject to enhanced supervision are: deficiencies with regard to the design and the implementation of the business's food safety plan (approx. 40%), deficiencies in the area of hygiene (approx. 33%) and the presence of pests within the business (approx. 10%). Several of the deficiencies listed above may occur simultaneously. Deficiencies in relation to the business's food safety system also include any shortcomings regarding shelf life investigations for listeria, where the businesses do not or insufficiently demonstrate that the foods they produce and distribute on the market are safe.

Conclusions for 2018

During official controls, omissions to which intervention policy applies are often identified at the businesses that produce, import, store or distribute meat products or composite products (more than 20%).

With regard to meat products and composite products, it seems that many producing businesses continue to have major difficulties concerning compliance with the requirements of Regulation (EC) No 2073/2005. This is a situation that has become increasingly clearer in recent years, given the high rate of non-compliances regarding this issue. A specific evaluation was carried out in mid-2018 and in 2019 regarding the substantiation of the shelf life of perishable products, particularly in relation to the potential growth of listeria. The compliance rate is expected to improve as a result of the increase in the knowledge available to inspectors and businesses.

As a result of decisions at an annual planning level, there was reduced capacity within the inspection teams, resulting in the number of scheduled audits and audits conducted as well as the number of scheduled and executed inspections being significantly lower than in previous years. This requires a certain amount of attention with regard to planning for the next year and subsequent years. Risk-based selection of businesses, however, allows the limited capacity to be allocated to areas where risks are present.

3.9 Imports of veterinary consignments

Controlling authorities: NVWA, Dutch Customs

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Directive 91/496/EEC	Veterinary checks on animals from third countries
Council Directive 97/78/EC	Veterinary checks on animal products from third countries
Council Directive 2002/99/EC	Animal health rules governing the production, processing, distribution and introduction of products of animal origin for human
consumption	
Council Directive 2004/292/EC	Introduction of TRACES
Regulation (EC) No 282/2004 of the European Parliament and of the Council	Document for the declaration of and veterinary checks on animals from third countries
Regulation (EC) No 136/2004 of the European Parliament and of the Council	Procedures for veterinary checks on products imported from third countries
Regulation (EC) No 882/2004 of the European Parliament and of the Council	Official controls on compliance with feed and food law, animal health and animal welfare rules
Regulation (EC) No 853/2004 of the European Parliament and of the Council	Specific hygiene rules for food of animal origin
Regulation (EC) No 854/2004 of the European Parliament and of the Council	Specific rules for the organisation of official controls on products of animal origin intended for human consumption
Council Directive 2007/275/EC	Lists of animals and products to be subject to controls at border inspection posts
2011/163/EU: Commission Decision of 16 March 2011 on the approval of plans submitted by third countries in accordance with Article 29 of Council Directive 96/23/EC	Residue monitoring plans of third countries

National legislation

In the Netherlands, two ministries are involved with the NVWA at a policy level: the Ministry of Health, Welfare and Sport (VWS) and the Ministry of Agriculture, Nature and Food Quality (LNV).

Health, Welfare and Sport

- Commodities Act (WaW), Section 9
- Import of food from third countries (Commodities Act) Decree (Warenwetbesluit Invoer levensmiddelen uit derde landen)
- Commodities Act Regulation on Veterinary Controls (third countries) (Section 2/4) (Warenwetregeling Veterinaire controles (derde landen)
- Commodities Act Regulation on the Import of Egg Products from Third Countries (Warenwetregeling invoer eiproducten uit derde landen)

Agriculture, Nature and Food Quality

- Decree establishing the mandate, powers and authority of the Ministry of Agriculture, Nature and Food Quality, 2018 (Besluit mandaat, volmacht en machtiging LNV 2018)
- Decision on marketing animals and products and the application of measures relating to animals and products brought into the Netherlands (Besluit inzake het in de handel brengen van dieren en producten en de toepassing van maatregelen met betrekking tot in Nederland gebrachte dieren en producten)
- Regulation governing the veterinary legal rules on trade in animal products (Regeling veterinair rechterlijke voorschriften handel dierlijke producten)
- Live Animals and Live Products Trading Regulations (Regeling handel levende dieren en levende producten)

Size of the control file in 2018

type of business	number
Border Inspection Posts (BIP)	7
Inspection Centres	22
Free warehouses	12
Ship suppliers	7
Special warehouses	13

Supervision of 'Imports of Veterinary Consignments', results in 2018

imports of veterinary consignments	number
Inspections	60,805
Samples	4,180
Measures	666

Explanatory notes to the results for 'Imports of Veterinary Consignments'
Please see Conclusions heading.

Actions taken to improve official controls

Work is being done in the Netherlands to grant accreditation to all aspects of the import process. The process of accrediting the supervision of warehouses and the supervision of the import of food and feed of non-animal origin is progressing, and will probably be completed with regard to the warehouses in 2019.

Actions taken to improve compliance by businesses

Businesses as a group are consulted regularly (four times a year) about import-related matters; a variety of different topics are discussed.

Conclusions

In 2018, the total number of consignments offered for inspection showed a slight decrease. The number of laboratory analyses remained the same, given that the measures in respect of Brazil, meaning more intensive controls, had to remain in force throughout 2018.

There was an increase in the overall number of interventions, despite the fact that the number of interventions relating to Brazil decreased in 2018. The interventions relate to denying entry to the territory of the EU. In most cases, this was caused by problems with the relevant documentation. As part of a collaborative project between the government and the private sector, a start will be made in 2019 on reducing the number of incorrect documents provided. This will initially take place in Rotterdam, given that most documents are assessed there.

3.10 Fish, fishery products and aquaculture

Controlling authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 852/2004	Food hygiene
Commission Regulation (EC) No 853/2004	Hygiene during production of products of animal origin
Council Regulation (EC) No 854/2004	Official controls on products of animal origin
Council Regulation (EC) No 2073/2005	Microbiological criteria for foodstuffs
Council Directive 2006/88/EC	Aquaculture
Council Regulation (EC) No. 708/2007	alien and locally absent species in aquaculture

Size of the control file in 2018

purification centres	**22**
Dispatch centres	69
Cold stores	54
Fish auctions	13
Fresh fish processing	137
Processed fishery products	124
Fish farms	47
Mollusc and crustacean farms	143
Total number of businesses with EC approval	**609**

type of business	**number**
Freezer vessels	14
Factory vessels	214
Total number of vessels with EC approval	**228**

production areas	**number**
Number of production areas (open) • Category A • Category B	14 14 0*
Number of designated rewatering areas* • Mussel rewatering plots • Oyster beds	191 101 90

** Set annually; non-designated rewatering areas are part of the production area in which they are situated.*

Supervision of 'Fish, Fish Products and Aquaculture', results in 2018

supervision of the fish supply chain	number
Inspections	1,117
Samples	452
Measures, of which: • written warnings • fine reports • official reports	375 297 78 -

monitoring	number of samples	number of non-compliant samples/sampling
E. coli in rewatering areas	177	0
E. coli in production areas*	1,120	2/3
Phytoplankton**	349	19/35
Biotoxins	382	0
Chemical contaminants	14	0

** New E. coli criteria for shellfish came into effect on 1 January 2017 (Commission Regulation (EU) No 2015/2285. Five samples were taken per sampling operation and per production area in 2018. Where 2 of these 5 samples exceeded the standard of 230 colony-forming units (cfu)/100g, or 1 of the 5 samples contained more than 700 cfu/100g (=non-compliant), additional measures were imposed. In respect of the non-compliant samples, the numbers of samples >700 cfu/100g was used.*

*** In the event of non-compliance, the number of samples taken within the production area is increased.*

measures/non-compliances	number
Area classification for rewatering areas (E. coli)	0
Area classification for production areas (E. coli)	2
Measures for phytoplankton in production areas	8
Measures for biotoxins in production areas	0
Measures for chemical contaminants in production areas	0
Other (preventative) measures for rewatering areas	1
Other (preventative) measures for production areas	0

Explanatory notes to the results for Fish, Fish Products and Aquaculture

This target group is represented by a relatively large number of small and medium-sized fish processing businesses with a relatively simple production process. The sector also has about 20 large industrial businesses. There are currently 419 EC-approved fish processing businesses in the Netherlands (not including fish farms). The NVWA conducts inspections at these businesses as part of the official controls. The Netherlands also has 214 EC-approved fish-processing vessels, the majority of which are engaged in shrimp fishing, and 14 EC-approved freezer vessels. In 2018, 1,117 inspections were conducted. The NVWA imposed a total of 375 measures in the period from 1 January 2018 up to and including 31 December 2018.

Supervision of aquaculture production businesses is risk based. The selection of the businesses to be inspected and the inspection frequency are based on the risk classification of the fish farms. In 2018, 29 inspections were conducted at aquaculture production businesses.

In order to improve the uniformity of the supervision of food safety regulations in general, the fish inspectors supervision food safety were added to the inspection teams supervising industrial production businesses in mid 2018. At the same time, supervision of sustainable fishing is organised independently.

Projects in 2018

- Basic conditions, focusing on a business's architectural infrastructure, hygiene and working methods within the business and correct storage temperatures.
- Supervision of HACCP-related procedures, setting up and implementing such procedures on an ongoing basis.
- Tracing and reporting: businesses must be able to trace their products. They must be able to establish the origin and destination of each product. Specific attention on the obligation for businesses to notify the competent authority if they know that unsafe or harmful food has been introduced to the market.
- Microbiological criteria: do businesses comply with the microbiological criteria laid down in Regulation (EC) No. 2073/2005, which also focuses on the method by which businesses should verify the food safety criteria in this Regulation. Specific attention was paid to controlling Listeria monocytogenes, particularly in smoked fish products;
- Chemical criteria: are businesses complying with the statutory requirements for contaminants, additives, biotoxins, etc.
- Specific project on the potential 'colouring of tuna'. In 2018, an investigation was carried out into fraudulent activity with regard to tuna, by means of analyses for carbon monoxide (CO), histamine, nitrates and nitrites.
- Publication of inspection data of all fish processing businesses: In 2018, the NVWA published the inspection data of all fish processing businesses on its public website.
- European baseline survey on norovirus in oysters (2016–2018): this baseline survey was initiated in 2016. The aim of the survey was to map the spread and infection of oysters with norovirus across Europe.

HACCP system supervision
In 2018, 1,088 inspections were conducted in the fish sector, including 143 audits of the application of HACCP procedures. Official controls at purification centres focused specifically on validation of the purification process as part of Regulation (EC) No 853/2004.

Incidents

In 2018, 135 inspections were carried out in response to notifications.
The majority of the RASFF notifications related to violations of heavy metal levels in fish, primarily swordfish and tuna, the illegal treatment of fish with CO and excessive histamine levels in fish to a lesser extent.

Actions taken to improve compliance by businesses

The intervention policies adopted will be applied strictly and the inspection results will be published. In addition, systematically non-compliant parties will be placed under enhanced supervision procedures (VETO).

Conclusions for 2018

- Within the fish and fish processing industry, official controls frequently identified omissions (33.6%).
- In 2018, the NVWA published the inspection data of all EC-approved fish processing businesses on its public website.
- The presence and growth of Listeria monocytogenes in smoked fish during its shelf life remains an issue that requires attention. These businesses seem to struggle to carry out shelf life studies.
- In collaboration with the European Commission, a Europe-wide baseline study is underway to chart the presence of norovirus in oysters and the presence and spread of the virus in end products and production areas.

3.11 Dairy, eggs and egg products

3.11.1 Dairy

Controlling authorities:
COKZ, regarding the hygiene package and animal by-products (ABP)

List of the main EU legislation under which supervision was carried out in 2018

EU Legislation	
Commission Regulation (EC) No 178/2002	General Food Law Regulation
Commission Regulation (EC) No 852/2004	Food hygiene
Commission Regulation (EC) No 853/2004	Hygiene during production of products of animal origin
Council Regulation (EC) No 2073/2005	Microbiological criteria for foodstuffs
Council Regulation (EC) No 1069/2009	Animal by-products
Council Regulation (EC) No 142/2011	Animal by-products
Regulation (EC) No 1169/2011 of the European Parliament and of the Council	The provision of food information to consumers
Council Regulation (EC) No 1333/2008	Food additives
Council Regulation (EC) No 37/2010	Veterinary medicinal product residues
Council Regulation (EC) No 1881/2006	Maximum levels for contaminants in foodstuffs
Council Directive 2006/141/EC	Infant formulae and follow-on formulae
Council Directive 1999/21/EC	Dietary foods for special medical purposes

Relevant national legislation

- Dairy decree (Warenwetbesluit zuivel)
- Food Hygiene (Commodities Act) Decree (Warenwetbesluit hygiëne van levensmiddelen)
- Preparation and Handling of Food (Commodities Act) Decree (Warenwetbesluit bereiding en behandeling van levensmiddelen)
- Commodities Act Regulation on Infant Formulae (Warenwetbesluit zuigelingenvoeding) 2007
- Commodities Act Regulation on Dietary Foods for Special Medical Purposes (Warenwetregeling dieetvoeding voor medisch gebruik)
- Food Information (Commodities Act) Decree (Warenwetbesluit informatie levensmiddelen)
- Animal Products Decree
- Regulation on Animal Products

Size of the control file in 2018

type of business	**number**
Primary phase:	
- cow milk farms	+ 17,000
- goat milk farms	+ 500
- sheep milk farms	+ 30
- horse milk farms	17
- buffalo milk farms	4
- donkey milk farms	2
- camel milk farms	1
Total	**17,500**
Secondary phase:	
- farm milk recipients	36
- industrial dairy processors	164
- subsequent processors of cheese	99
- storage locations	59
- small-scale dairy processors and farmhouse dairies	471
- producers of foods for particular nutritional uses	15
Total	**844**

Supervision in the context of the package of hygiene measures (HP) and ABPs, results in 2018

type of business	number
Primary phase (HP):	
• inspections (random and re-inspections) of dairy farms (with a quality system)	41
• audits (routine and re-audits) of dairy farms not covered by a quality system	83
• Inspections of the sale of raw milk directly to consumers	100
Secondary phase (HP/ABP):	
• audits of farm milk recipients	48
• audits of industrial dairy processors (routine and re-audits)	192
• inspections of industrial processors (random, including businesses in the process of shutting down and re-inspections)	19
• audits of subsequent processors of cheese (routine and re-audits)	105
• inspections of subsequent processors (random, including businesses in the process of shutting down and re-inspections)	19
• audits of storage locations (routine and re-audits)	47
• inspections of subsequent processors (sample including businesses in the process of shutting down and re-inspections)	2
• audits of small-scale and farmhouse dairy processors (routine and re-audits)	517
• inspections of small-scale and farmhouse dairy processors (random, including businesses in the process of shutting down and re-inspections)	47
• audits of producers of foods for particular nutritional uses (routine and re-audits)	23
• processed case files as a result of notifications and indicators (including following individual sampling)	100
• inspections of milk from businesses with suspected cases of animal diseases	25
Sampling (results):	
• number of batches tested at dairy businesses - microbiology	801
- number of analyses	4,733
- number of batches breaching the standard (in %)	2 (0.25%)
• number of batches tested at small-scale and farmhouse dairy processors – microbiology	1,823
- number of analyses	4,516
- number of batches breaching the standard (in %)	147 (8.1%)
• number of batches tested at producers of foods for particular nutritional uses - microbiology	57
- number of analyses	3,639
- number of batches breaching the standard (in %)	8 (14.0%)
• number of batches tested at producers of foods for particular nutritional uses - composition	24
- number of analyses	456
- number of analyses breaching the standard (in %)	7 (1.5%)
• number of batches of Category 3 material tested - animal by-products	95
- number of analyses	247
- number of batches breaching the standard (in %)	10 (10.5%)
Microbiological sampling for specific projects:	
• number of batches of surface matured or soft raw milk cheese	56
- number of Shigatoxin-producing E.Coli (STEC) analyses	56
- number of batches breaching the standard (in %)	2 (3.6%)
• number of raw milk samples (for direct sale to consumers)	100
- number of analyses	700
- number of batches breaching the standard (in %)	36 (36%)
Measures pursuant to the intervention policy:	
• warnings	243
- relating to the package of hygiene measures	226
- relating to animal by-products	17
• administrative fines	13
- relating to hygiene package	13
-relating to animal by-products	0
• official reports	0
• withdrawals/suspensions of registrations/approvals	12

More detailed explanation of the results of supervision for the dairy industry

Primary phase

Dairy farms that supply dairy companies sign up to quality assurance systems managed by the dairy companies. For these types of farms, the COKZ conducts random inspections of their compliance with the package of hygiene

measures. A limited number of dairy farms do not use such a quality assurance system; these dairy farms are directly supervised by the COKZ. These farms are audited every year on their compliance with the package of hygiene measures. As in 2017, the findings of the COKZ in 2018 in relation to its supervision of dairy farms were communicated to sector representatives and to the NVWA.
During this consultation, the following topics were discussed: the setting up of the quality assurance system, reports of rejections of milk and exceeding of antibiotics MRLs (see also 'recipients of farm milk'), supervision of animal health and the results of assessments by quality assurance systems compared to COKZ assessments. It was agreed that the quality assurance system will be further evaluated/reviewed by the industry, with the starting point being that statutory and non-statutory assessment points will be assessed separately. Regarding the statutory aspects, there has been an effort to align the quality assurance system with the COKZ assessment list, where the owners of the quality assurance systems have taken note of the NVWA draft intervention policy.
Since 2017, COKZ inspectors have been using a revised assessment list, use of which has continued into 2018, which has resulted in findings being reported more clearly and data summaries being clearer and more reliable. In 2018, 11.4% of dairy farms with a quality assurance system did not fully comply with the requirements applicable to dairy farms in respect of the package of hygiene measures. Of the dairy farms with no quality assurance system (directly supervised by the COKZ), 12.3% were non-compliant.

Secondary phase

Recipients of farm milk

During annual audits, it is assessed whether the established practice in the event of a breach of a standard (plate count and/or cell count or excessive antibiotics MRLs) has been followed. In addition, there is an assessment of whether dairy farms supplying farm milk recipients have signed up to a quality assurance system, and also whether the established practice in the event of a rejection of milk by the recipient has been followed.
In 2018, 22.0% of farm milk recipients were not fully compliant with the statutory provisions.

Industrial dairy processors, subsequent processors and storage locations

These businesses undergo one routine audit per year (system supervision) in relation to approval in the context of the package of hygiene measures. The audit covers the following aspects: general, documentation, HACCP, quality of raw materials, hygiene and design of processing areas and facilities, cleaning and disinfection, water, pests/vermin, cross-contamination, personal hygiene, heat treatment, storage, refrigeration/freezing, packaging and labelling, transport, sampling and testing. Regular supervision in accordance with the above is also carried out in businesses that are not subject to approval, such as ice-cream makers.
Supervision with regard to the assessments listed above is also carried out for compliance in relation to animal by-products, with an assessment of the extent to which businesses correctly handle the identification, storage and sale of such products.
Besides the assessments above relating to the package of hygiene measures, random samples inspections are also conducted in addition to regular audits.
In 2018, 21.5% of industrial processors were not fully in compliance with the statutory provisions with regard to the package of hygiene measures. For subsequent processors, this rate was 12.5%, and 7.7% of storage locations were not fully in compliance with the applicable statutory provisions.
With regard to animal by-product compliance, the levels were as follows:

- 5.4% of industrial processors and 1% of subsequent processors were not fully compliant;
- 5% of the storage sites did not comply with animal by-product legislation.

In addition to assessments, microbiological sampling is used to check whether dairy products meet the standards in the package of hygiene measures. The frequency of testing and the parameters for the tests depend on the product type and the risk assessment for the business type.
In 2018, 0.25% of batches tested at dairy businesses did not meet the applicable statutory microbiological standards.

Small-scale processors and farmhouse dairy processors

These businesses undergo one routine audit per year (system supervision) in relation to approval in the context of the package of hygiene measures. The audit covers the following aspects: general, documentation, HACCP, quality of raw materials, hygiene and design of processing areas and facilities, cleaning and disinfection, water, pests/vermin, cross-contamination, personal hygiene, heat treatment, storage, refrigeration/freezing, packaging and labelling, transport, sampling and testing. Regular audits in accordance with the above are also carried out in businesses in this category that are not subject to approval, because they primarily supply consumers directly.

Supervision with regard to the assessments listed above is also carried out for compliance in relation to animal by-products, with an assessment of the extent to which businesses correctly handle the identification, storage and sale of such products.
Some farmhouse dairy processors apply the farmhouse dairy production hygiene code to their production process; these businesses are assessed with regard to whether they comply with that code.
In addition to the above assessments relating to the package of hygiene measures, random inspections are also conducted for compliance with this package.
Of small-scale processors and farmhouse dairy processors, 20.1% were not fully in compliance with the statutory requirements relating to the package of hygiene measures. With regard to animal by-product compliance, 1% of businesses were not fully in compliance with the statutory provisions.
In addition to assessments, microbiological sampling is used to check whether dairy products meet the standards in the package of hygiene measures. The frequency of testing and the parameters for the tests depend on the product type and the risk assessment for the business type.
In 2018, 8.1% of batches tested at dairy businesses did not meet the applicable statutory microbiological standards. Areas of concern include deviations from the process hygiene criteria standards for coagulase-positive Staphylococci (particularly in raw-milk products) and Enterobacteriaceae in various product types.

Producers of foods for particular nutritional uses
In a European context, foods for particular nutritional uses are regulated by the national implementation of the European directive on foodstuffs intended for particular nutritional uses. In line with the categories defined in this directive, the COKZ monitors Dutch producers of infant formulae, dietary foods for special medical purposes, processed cereal-based foods and baby foods for infants and young children.
In 2018, there were 15 businesses in the Netherlands producing one or more of the above categories of foods and supervised by the COKZ. This supervision focuses on the provisions of the package of hygiene measures (see 'Industrial processors'), composition and the provisions of the other Commodities Act regulations. Supervision of claims for these types of products is not part of the scope of the COKZ's supervision; this is performed by the NVWA (as part of the 'Special food and drink' domain).
Supervision with regard to the assessments listed above is also carried out for compliance in relation to animal by-products, with an assessment of the extent to which businesses correctly handle the identification, storage and sale of such products.
Each year, producers of foods for particular nutritional uses are subject to one routine audit (system supervision) in relation to approval of the business.
In 2018, 13% of producers of foods for particular nutritional uses were found not to be fully in compliance with the statutory provisions with regard to the package of hygiene measures. This percentage is significantly lower than it was in 2017, when 54% of businesses was not in compliance with statutory provisions. The likely cause of this is that a large number of 'new' businesses began producing products in this category in 2017.
With regard to animal by-product compliance, it was found that 1% of businesses were non-compliant in 2018.
In addition to assessments, microbiological sampling is used to check whether dairy products meet the standards in the package of hygiene measures. The frequency of testing and the parameters for the tests depend on the product type and the risk assessment for the business type. In addition to microbiological testing, composition testing is also performed.
In 2018, 14.0% of the batches tested did not meet the applicable statutory microbiological standards and 1.5% did not meet the composition standards.

Control and processing of milk from businesses with suspected cases of animal diseases
Milk from dairy farms with suspected cases of tuberculosis or brucellosis must be heat treated under the supervision of the competent authority. In 2018, the COKZ performed 25 audits of dairy product processors. The purpose of these audits was to check that the milk concerned was processed correctly at the processing location. Where appropriate, the processing of milk relating to multiple individual reports of suspicions was checked during 2 inspections. A written warning was issued in relation to 1 inspection, as the milk had been processed into raw milk cheese. Other inspections showed that the milk in question had been processed correctly in all cases (meaning heat treatment was performed).

During administrative controls on farm milk, an assessment takes place of whether the milk from the farm concerned was actually processed at the indicated processing location. In 2018, 47 administrative assessments were conducted. In these controls, it was observed that the milk was in fact processed at the indicated processing locations.

Projects in 2018

Investigation of Shigatoxin-producing E. coli (STEC)
Raw-milk and/or surface-ripened cheese samples were taken from nine producers and four cutters to be tested for STEC. A total of 56 samples were taken (37 samples of surface-ripened cheese and 19 samples of soft or raw-milk cheese). STEC was found in 2 batches.

Investigation into the sale of raw milk for direct supply to consumers
In 2018, an inventory survey was carried out into the sale of raw milk of various animal species, designed for direct supply to consumers. This survey also involved taking samples for an examination of the microbiological quality of the milk.
The relevant inspection focused specifically on the following issues:

- Assessment of whether the compulsory notice of 'RAW MILK, PLEASE BOIL BEFORE CONSUMPTION' was present on or in the immediate environment of milk tanks/points of sale in relation to the sale of raw milk (obligation only applicable to cow's milk).
- Assessment of the storage temperature of the raw milk and whether there was compliance with the requirement in relation to the storage temperature of raw cow's milk.
- Assessment of whether the raw cow's milk had been offered in the manner prescribed by the Food Hygiene (Commodities Act) Decree (WHL); at the business of the farmer and in a receptacle that would not be suitable to be delivered to private individuals alongside the content (i.e. not prepackaged).

A total of 100 inspections were conducted, of which 97 took place at producers of cow's milk and 3 at producers of goat's milk.

The microbiological examination showed that 36% of the samples taken did not comply with standards. A warning was drawn up for 1 or more infringements in 58% of the inspections in respect of the key points listed above.

Reports and incidents in 2018

Reports are received through a variety of channels. They may come from the RASFF, or through a GFL report from the business itself; reports are also received from other competent authorities, or directly from consumers. In 2018, the COKZ handled a total of 75 cases based on reports and indicators received through one of the foregoing channels.
A total of 65 cases related to the product deviations, of which 40 were microbiological in nature (including 19x *Listeria monocytogenes*, 5x *salmonella* and 4x STEC); the remaining deviations related to a range of issues (physical or chemical contaminants, but also qualitative deviations and labelling aspects). The non-product-related reports related to the effects of fire, duty of recognition, refusal to cooperate, etc.
Official sampling by the COKZ itself can also result in a case being taken on. In 2018, a total of 22 cases were handled in response to official sampling in the context of the EU package of hygiene measures.

Impact measurement

The report for this component is incorporated into the sections on dairy farms, dairy businesses, small-scale and farmhouse dairy processors and producers of foods for particular nutritional uses in the paragraphs above.

Actions taken to improve official controls

The report for this component is incorporated into the sections on dairy farms, dairy businesses, small-scale and farmhouse dairy processors and producers of foods for particular nutritional uses in the paragraphs above.

The alignment of the COKZ's intervention policy with that of the NVWA continued to take shape in 2018 and has resulted in a specific dairy and eggs intervention policy. Assessment lists have been adjusted accordingly, which has resulted in findings being reported more clearly and data summaries becoming clearer and more reliable.
In 2018, the COKZ made a risk-based classification of the businesses operating in the dairy supply chain and adapted the inspection plans for 2019 accordingly.

Actions taken to improve compliance by businesses

In 2018, work began with an enforcement strategy cycle for the target group of farmhouse dairy makers and small-scale dairy makers who produce non-pasteurised products. This was a result of the recommendations of the integrated risk analysis of the dairy supply chain (IRA) that the NVWA published in the summer of 2017. This process was continued in 2019.

Conclusions

In 2017, the NVWA published the integrated risk analysis of the dairy supply chain. It showed that 96% of milk was industrially processed through pasteurisation or comparable means, killing any pathogenic microorganisms. In addition, the risk analysis showed that the risks associated with food safety in the dairy sector chiefly occurred in raw milk and raw milk products. The production of raw-milk products primarily takes place in the business category of small-scale processors and farmhouse dairy makers.
Although the percentage of businesses that fall under the category of factory dairy makers (industrial processing) that do not fully comply with certain aspects of the statutory requirements can be said to be high, the risks to consumers may ultimately be less serious than expected. The percentage of businesses falling under the category of small-scale processors and farmhouse dairy makers that do not fully comply with aspects of the law can be said to be high, and we are currently also seeing an increase in the popularity of high-risk raw-milk products. In 2018, this led to the Netherlands Controlling Authority for Milk and Milk Products (COKZ) increasing the focus of its supervision efforts on the sale of raw milk to consumers and on the production of raw milk products. This will be enhanced in 2019. In addition, 2019 will also see the start of a process that aims to identify and map out the target group of farmhouse dairy producers and small-scale producers in greater depth using the enforcement management cycle, in order to formulate a new enforcement mix aimed at increasing compliance in the field of hygienic practices (from milking to the production of raw milk products) within this target group.

The percentage of microbiological abnormalities of dairy samples and the number of notifications (RASFF and GFLR) that relate to microbiological issues remains consistently high (ranging from approximately 8% to 36%), primarily for raw milk and raw milk products of small-scale producers and farmhouse dairy producers and requires the special attention of both the COKZ and the relevant businesses.

3.11.2 Eggs and egg products

Controlling authorities:
NCAE regarding the package of hygiene measures and animal by-products (ABP)

List of the main EU legislation under which supervision was carried out in 2018

EU Legislation	
Commission Regulation (EC) No 178/2002	General Food Law Regulation
Commission Regulation (EC) No 852/2004	Food hygiene
Commission Regulation (EC) No 853/2004	Hygiene during production of products of animal origin
Council Regulation (EC) No 2073/2005	Microbiological criteria for foodstuffs
Council Regulation (EC) No 1069/2009	Animal by-products
Council Regulation (EC) No 142/2011	Animal by-products
Regulation (EC) No 1169/2011 of the European Parliament and of the Council	The provision of food information to consumers
Council Regulation (EC) No 1333/2008	Food additives
Council Regulation (EC) No 1881/2006	Maximum levels for contaminants in foodstuffs
Council Regulation (EC) No 2160/2003	Control of Salmonella

Relevant national legislation:

Commodities Act:
- Food Hygiene (Commodities Act) Decree (Warenwetbesluit hygiëne van levensmiddelen)
- Preparation and Handling of Food (Commodities Act) Decree (Warenwetbesluit bereiding en behandeling van levensmiddelen)
- Food Hygiene (Commodities Act) Decree (Warenwetbesluit hygiëne van levensmiddelen)
- Food Information (Commodities Act) Decree (Warenwetbesluit informatie levensmiddelen)

Animals Act (Wet dieren)
- Animal Products Decree
- Regulation on Animal Products

Size of the control file in 2018

type of business	**number**
Primary phase: - egg-laying poultry farms	 863
Secondary phase: - collectors - packing stations - egg product producers - egg product traders	 11 120 20 15
Total primary and secondary	**1,029**

Supervision in the context of the package of hygiene measures (HP) and ABPs, results in 2018

type of business	number
Assessments:	
• egg-laying poultry farms (inspections and re-inspections)	318
• collectors (inspections and re-inspections)	9
• packing stations (audits, re-audits, inspections and re-inspections)	228
• egg product producers (audits, re-audits, inspections and re-inspections)	70
• egg product traders (audits and inspections)	17
• processed case files as a result of notifications and indicators (including following individual sampling)	17
• audits and inspections as a result of salmonella infection at laying hen poultry farms (including re-audits/inspections)	34
• audits and inspections as a result of the fipronil incident	27
• audits and inspections as a result of avian influenza (HPAI)	23
• inspections as a result of withdrawals/suspensions of registrations/approvals	8
Samples/analyses from egg product producers – microbiology	
• number of batches tested	113
• number of analyses	565
• number of batches breaching the standard (in %)	1 (0.9%)
Samples/analyses from laying poultry farms – contaminants (dioxins, dioxin-like polychlorinated biphenyls (PCBs) and other PCBs)	
• number of batches tested	56
• number of analyses (n=56 screening + n=33 confirmation)	56
• number of batches breaching the standard (in %)	4 (7.0%)
Measures pursuant to the intervention policy:	
• warnings	45
- relating to the package of hygiene measures	42
- relating to animal by-products	3
• administrative fines	11
- relating to the package of hygiene measures	6
- relating to animal by-products	5
• official reports	0

Explanatory notes to the results for the dairy industry

Primary phase

Egg-laying poultry farms

The general principle behind the supervision of egg-laying poultry farms is that businesses with an assurance system are assessed once every three years, and businesses without an assurance system are assessed annually. These assessments are unannounced. Based on this principle, 364 assessments were scheduled in 2018. The number of assessments actually performed ended up being around 313, all of which were unannounced.

The discrepancy between the number of inspections that should have been performed and the number that actually were performed is due to:

- avian flu (HPAI) in the Netherlands, which resulted in no assessments being carried out in Q1 and Q2, because of the visitor regulations in place;
- 17 egg-laying poultry farms that ceased their activities in 2018.

Assessments focus on hygienic aspects, administration, accommodation, drinking water and cross-contamination, and random samples were taken to test for other dioxins in eggs (see below). At egg-laying poultry farms, supervision by the NCAE of the use of veterinary medicinal products focuses solely on the use of veterinary medicinal products that could lead to residue formation in the eggs.

Supervision with regard to the assessments listed above is also carried out for compliance in relation to animal by-products, with an assessment of the extent to which businesses correctly handle the identification, storage and sale of such products.

In 2018, 1% of inspected egg-laying poultry farms were not fully in compliance with the requirements of the package of hygiene measures. The deficiencies detected were mostly related to inadequate hygiene in the processing areas (egg packing room), and in particular the presence of old egg residues.

Warnings were issued at 2 businesses in relation to animal by-products. This related to uncovered ABP containers and the disposal of ABP in the industrial waste not taking place correctly.

Since 2014, random testing has been performed for the presence of dioxins, dioxin-like PCBs and indicator PCBs in the eggs of free-range chickens.

In 2018, eggs from 35 businesses were tested. At 1 business, a breach of the standard with regard to the sum of dioxins, dioxin-like PCBs and indicator PCBs was found. An additional investigation was carried out to discover the cause of this contamination. This revealed that the most likely cause was contamination of the open-air run. The NCAE instructed the business to implement corrective measures, including keeping the hens indoors.

The business also carried out remediation work in the open-air run. Soil sampling showed that these measures were effective.

In addition to the sampling referred to above, random sampling (n=15) also took place from eggs from foreign free-range chickens.

On top of that, additional samples were also taken in response to a GFL notification from a customer. This took place at 2 egg-laying poultry farmers at which re-sampling was carried out on 3 occasions.

Secondary phase

Collectors

Inspections of collectors are conducted annually and are unannounced. These inspections focus on hazard identification and risk assessment, food safety, traceability, general hygiene rules, specific requirements relating to design and environment, transport, waste, personal hygiene, packaging, training, suppliers and specific requirements relating to eggs. The handling of animal by-products is also assessed.
In 2018, 9 inspections of collectors were conducted. No deficiencies were observed during these assessments, either in relation to the package of hygiene measures or in relation to ABPs.

Packing stations

Packing stations are subject to one routine announced inspection per year, as well as one unannounced inspection. Additional inspections may also be conducted on the basis of a risk analysis.
In 2018, fewer assessments were performed than planned, since some packing stations are also egg-laying poultry farms. For a significant part of 2018, no assessments could be performed at these businesses due to bird flu.
Almost all packing stations operate according to the 'Hygiene code for egg packing stations, collectors and wholesalers'. This hygiene code has been approved by the Ministry of Health, Welfare and Sport. Packing stations are assessed by means of an audit into their implementation of this hygiene code. Unannounced inspections are also carried out. The following components are assessed: design and maintenance of processing areas and equipment, hygiene, cleaning and disinfection, water quality, HACCP including documentation, quality of raw materials, pest control, cross-contamination risk, personal hygiene, training and instruction of staff, cold chain, packing, transport, sampling and testing. The correct handling of animal by-products is also assessed.
In 2018, 4.0% of packing stations were not fully in compliance with the applicable statutory requirements with regard to the package of hygiene measures. No deficiencies were observed in relation to animal by-products.

Egg product producers

Egg product producers are subject to one routine announced inspection per year, as well as one unannounced inspection. The following components are assessed: design and maintenance of processing areas and equipment, hygiene, cleaning and disinfection, water quality, HACCP including documentation, quality of eggs and other raw materials, pest control, cross-contamination risk, personal hygiene, training and instruction of staff, cold chain, packing, transport, sampling and testing, and correct handling of animal by-products.
In 2018, 18 routine announced and 19 unannounced assessments were performed.
In 10 assessments of 9 different egg product producers, 1 or more deficiencies in relation to the package of hygiene measures were detected. This resulted in 8 written warnings and 1 report of findings.
One written warning and one report of findings were also issued in relation to the package of hygiene measures, to an egg product producer during an assessment in response to a report. Please see the Reports and incidents section.

This means that 45.0% of egg product producers were, in some cases repeatedly, not fully in compliance with the statutory provisions with regard to the package of hygiene measures.
With regard to animal by-product compliance, 5.0% of businesses were not fully in compliance with the statutory provisions.

In addition to the above assessments, assessments were performed in 2018 (n=16) in the context of supervision compliance with Commodities Act regulations (food labelling) in relation to the correct indication of the farming method upon delivery of egg products by egg product producers. If the farming method was indicated on or near the end product, it was checked whether the eggs used had actually originated from a farm using the method in question. This was checked in relation to a number of batches during such controls. No deficiencies were found.

In addition to assessments, microbiological sampling is used to check whether egg products meet the standards in the package of hygiene measures. The frequency of testing and the parameters for the tests depend on the product type and the risk assessment for the business type. In 2018, a total of 103 batches were tested for Enterobacteriaceae and Salmonella, and 10 batches were tested for *Listeria monocytogenes*. Contamination with Salmonella was detected in one batch of whole egg product, which led to a notification to the RASFF system. The business involved was informed and was instructed to take appropriate measures.

Egg product traders
A total of 17 assessments of egg product traders were performed, 16 announced and 1 unannounced. No deficiencies were observed during these assessments, either in relation to the package of hygiene measures or in relation to ABPs.

Reports and incidents in 2018

General
Reports are received through a variety of channels. They may come from the RASFF, or through a GFL report from the business itself; reports are also received from other competent authorities and/or directly from consumers.
In 2018, 15 cases of reports were submitted through 1 of the channels mentioned above and were taken up.
Official sampling by the NCAE itself can also result in a case being taken on. In 2018, a total of 2 cases were handled (1x *salmonella* and 1x dioxin) in response to official sampling in the context of the EU package of hygiene measures.

Fipronil incident - eggs
In 2018, 27 assessments were carried out in the context of the fipronil incident. These assessments were conducted at the following links in the supply chain: packing stations (12), egg products producers (8), collectors (4) and wholesalers (3). Supervision focused on the failure on the part of various businesses to submit notifications and the correct disposal of eggs contaminated with fipronil.

Bird flu (HPAI)
In Q1 of 2018, businesses in the Netherlands were infected with bird flu (HPAI).
The NCAE carried out cleaning and disinfection controls on trays and similar equipment at designated businesses receiving eggs from 'protection and surveillance zones' (P&S zones). In total, 23 assessments were performed in 2018. No deficiencies were detected during these assessments.

Salmonella infections at egg-laying poultry farms in the Netherlands
The NVWA will notify the NCAE in the event of any detected *salmonella* infection. The NCAE will then conduct controls at the relevant egg-laying poultry farms to verify whether the eggs have been marked in the correct manner and whether the eggs have been given the correct destination (direct disposal to the egg processing industry).
In addition, verification will take place at the relevant egg product producers on whether the eggs were actually broken at that business. In total, the NCAE took up 14 notifications in 2018.

In both Q1 and Q2 of 2018, visitor regulations relating to avian flu were in place. During these periods, the NCAE did not conduct any visits to poultry farms, and verification of the correct channelling of eggs was performed exclusively by egg product producers. A written warning was issued at an egg product producer on 1 occasion in regard to the hygienic processing of the salmonella eggs.

In total, 4 written warnings were issued in 2018 at the egg-laying poultry farms due to incorrect marking of eggs and/or an inability to prove that the eggs were delivered directly to the egg product producer.

Impact measurement

The report for this component is incorporated into the sections on 'Egg-laying poultry farms', 'Collectors', 'Packing stations', 'Egg product producers' and 'Egg product traders' in the sections above.

Actions taken to improve official controls

In 2018, further work was done on performing assessments in a uniform manner and on drafting a specific dairy and eggs intervention policy.

This took place in response to the recommendations from the 'Advice on the risks in the egg supply chain' published by the NVWA in the spring of 2018. In 2019, supervision of the egg laying poultry sector will take place in a more risk-based manner.

Actions taken to improve compliance by businesses

Following the fipronil incident, a working group was set up at the initiative of the Ministry of Agriculture, Nature and Food Quality, which has been asked to make recommendations aimed at improving self-regulation within the egg supply chain. The NCAE took part in this working group. In May 2018, the report drafted by this working group, containing 22 recommendations of which several have already been developed, was presented to the Minister. In addition, cooperation with the industry organisation and the regulatory authority was strengthened.

Conclusions

The results of supervision in 2018 show a slight decrease in the number of shortcomings compared to 2017.
The Netherlands Controlling Authority for Eggs (NCAE) exercises its supervision in line with NVWA intervention policy. Several incidents in this sector, however, including the fipronil incident, show that the sector is somewhat unaware of the applicable legislation and of its own responsibilities. In the aforementioned cases, appropriate measures were taken and penalties were imposed.

3.12 Food services industry and artisanal production

Controlling authority or authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 178/2002	General Food Law Regulation
Commission Regulation (EC) No 852/2004	Food hygiene

National legislation
Commodities Act

Size of the control file in 2018

type of business	**number**
Hotels, restaurants and cafés	± 60,000
Retail (supermarket and similar)	± 21,000
Artisanal (butcher, baker, greengrocer, poulterer, market trader)	± 25,500
Institutions (including crèches)	± 10,000

Supervision of 'Food services Industry and Artisanal Production', results in 2018

inspections	**number**
Hotels, restaurants and cafés	16,597
Artisanal	5,244
Institutions	320
Retail	1,924
Other	1,465
Total inspections, of which	**25,550**
• chargeable re-inspections	9,365
• digital re-inspections	3,719
Sample target values (microbiological)	4,764
inspection measures	**number**
Hotels, restaurants and cafés	6,008
fine/official report	2,588
written warning	3,420
Artisanal	1,537
fine/official report	543
written warning	994
Institutions	46
fine/official report	3
written warning	43
Retail	523
fine/official report	249
written warning	274
Other	400
fine/official report	111
written warning	289
Total inspection measures	**8,514**
Temporary shutdown of activities	
intention to close	167
closures	83
shutdown of processes	72
seizure	0
judicially imposed penalty	6

Explanatory notes to the results for 'Food services Industry and Artisanal Production'
In 2018, more than 25,000 inspections and re-inspections were conducted at food service businesses, artisanal businesses, institutions and retail outlets. The total number of inspections and re-inspections in 2017 was over 29,000. This is a decrease in respect of 2017, and is the result of a number of factors, including the implementation of a new inspection registration system. During the inspections and re-inspections, a total of 8,514 measures were imposed. Of these, 41% were fines and 66% were written warnings. The fine percentage is higher than in 2016 and 2017 (2016: 25%, 2017: 34% This is the result of an adjustment to the intervention policy at the start of 2017, due to which reports of findings are more likely to be drawn up.

More stringent supervision
In 2018, as in previous years, the more stringent supervision method was applied in this area of supervision. A total of 586 businesses were subjected to enhanced supervision in 2018. In relation to the number of inspections carried out, this is comparable to 2017. Over 3/4 of businesses subjected to enhanced supervision are businesses in the food service industry.

Chain approach
The chain approach is characterised by the use of random samples to determine the level of compliance across the chain (one business with multiple locations). This method has been adopted for well-known national chains (also known as 'formulas') of supermarkets, bakeries, caterers, petrol stations, hotels and restaurants. The control file for chain businesses consists of around 15,000 outlets that form part of a chain.

Based on random sampling, the NVWA has divided the businesses into:
- 'green' chains, where more than 90 percent of locations comply with food safety requirements;
- 'yellow' chains, where fewer than 90 percent of locations comply with food safety requirements.

Green chains are eligible for less frequent supervision, in which the focus is placed on systems control at the head office and the business's own control data. For chains in the yellow category, a random sample of outlets are inspected for enforcement purposes.

This efficient and effective method was continued in 2018. The table below presents an overview of the random inspections performed and the measures imposed by chain type.

sector	number of chain businesses	number of enforcement inspections	number of measures
Bakeries	7	62	4
Catering	10	0	0
Hotels, restaurants and cafés	53	133	36
Butchers	1	0	0
Supermarkets	22	97	21
Petrol stations	6	0	0
Total	**99**	**292**	**61**

At the end of 2017, there were 98 chains in total, of which 8 were categorised as yellow and 90 as green. For 16 chains, a random sample was taken for enforcement purposes in 2018, which involved the execution of 292 inspections. At the end of 2018, there were 10 yellow and 89 green chains. The annual results by chain are published on the NVWA website. In addition, for some chains, there are individual outlets with such poor compliance that they have been placed under more stringent supervision. In 2018, 17 businesses were subject to enhanced supervision, of which 12 were supermarkets, 4 were food service businesses and 1 was a bakery.

Projects in 2018

Enforcement strategy
A multi-year development of the use of special and/or specific instruments for each target group with an emphasis on influencing behaviour was continued in 2018.

- The combination of instruments for Chinese food service entrepreneurs, which was qualitatively evaluated in 2016 and was subsequently adapted in 2017, after which the adapted combination of instruments (including instructional videos and an alternative intervention) was implemented in 306 businesses in 2017/2018. An impact measurement will be carried out in 2019, which will allow an assessment to take place of the impact of the various instruments.
- The combination of instruments that was developed for hospitals, aimed at the temperature of baby food in the catering department, was developed in collaboration with a number of hospitals, the Nutrition Centre and the Dutch Hospital Association. This toolbox will be made available to the hospitals by the Nutrition Centre in 2019.

Publication
The NVWA is taking steps to improve the transparency of its supervision. The HAP domain has made an important contribution to this goal in the form of publication of control results for the food service industry. In addition to the cafés and the municipalities of Utrecht and The Hague, the inspection results for the food service industry in Amsterdam and Rotterdam were added in 2018. In addition, as part of the chain approach, results of controls at the chain level have also been published.

Preparations for the publication of the inspection results for all food service businesses in the Netherlands, on the basis of the Public Health Act, are currently underway.

Actions taken to improve compliance by businesses

Private-body inspection systems (POCs)
The NVWA makes use of private-body inspection systems in its supervision. Nine such systems are currently approved. At the end of 2018, 2,631 businesses took part in a POC system, which means that the POC carries out the controls and the NVWA carries out reduced supervision at the relevant businesses. There was a slight increase in participating businesses (15%) compared to 2017 (2,283). In 2018, 2 monitoring audits, 1 acceptance audit, 2 samples and 1 assessment of POC inspection reports were carried out.
In the years to come, the objective will be to professionalise, harmonise and intensify cooperation with private-body control systems.
In addition, there have been voluntary cooperation agreements (covenants) in place with 4 chain businesses for a number of years. The NVWA conducts no direct supervision at the outlets of these businesses, which number 2,000 in total.

Hygiene codes
In the Netherlands, HACCP obligations are encapsulated in hygiene codes for the different sectors. Individual businesses can use these codes to comply with their statutory obligations. The codes describe the applicable work processes for safe production and safe handling of food. The codes are reviewed periodically. Evaluations are currently underway and are expected to continue through 2019 and into 2020.

Conclusions

- In 2018, more than 25,000 inspections and re-inspections were conducted at food service businesses, artisanal businesses, institutions and retail outlets. In total, 8,514 measures were taken during these inspections.
- As a result of a more stringent intervention policy, the penalty rate showed a further increase in 2018 compared to 2016 and 2017 (from 25% in 2016 to 34% in 2017 and up to 41% in 2018).
- Over 3/4 of companies that fell under enhanced supervision were food service businesses.
- The 9th private-body inspection system was accepted in 2018.
- The supervision of the NVWA within this domain will be pursued by means of a broad range of instruments in the years to come with the aim of increasing compliance. Supervision will largely take place on the basis of risk. In addition, it remains essential that compliance should be supervised by means of compliance measurements.

3.13 Food labelling and compliance with additives legislation

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 1169/2011	the provision of food information to consumers
Regulation (EC) No 1333/2008 of the European Parliament and of the Council	food additives
Commission Regulation (EC) No 231/2012	laying down specifications for food additives

Food labelling

The NVWA did not carry out a specific supervision project for the labelling of foodstuffs in 2018. Nevertheless, the NVWA does carry out enforcement efforts in relation to infringements detected in another context, such as in inspections on the use of food additives (please see below). In addition, the NVWA followed up on reports on misleading or erroneous labelling. In respect of previous years, 2018 showed an increase in the number of reports received in the context of the General Food Law Regulation, regarding the switching of labels or packaging, resulting in the incorrect allergens being listed on the list of ingredients. The NVWA will assess whether or not the business is taking the correct measures, including whether the business should warn consumers. If so, the NVWA will also publish this warning on its website. In addition to these types of reports concerning unadvertised allergens, the NVWA also receives reports regarding incorrect labelling of pre-packaged foods. These notifications originate from other Member States. These products will be sold in the relevant Member State, but will be produced or imported by a Dutch company/business. The NVWA will notify the relevant Dutch company or business of the incorrect labelling and will instruct the business to take measures to resolve the infringement. There was a larger number of these types of reports in 2018 than in previous years.

Additives

In 2018, the NVWA conducted supervision efforts at businesses/companies trading in additives. These may be businesses that manufacture additives themselves, businesses that mix additives with other additives or with foodstuffs, or businesses that only buy and sell additives and mixes of additives.

The NVWA conducted 27 inspections at these types of businesses. A total of 53 samples of additives or mixtures of additives available for distribution on the market were taken at these 27 businesses and were assessed for compliance with the compulsory labelling requirements. The requirements for the labelling of such additives (or mixtures thereof) are set out in Article 21 and 22 of Regulation (EC) No 1333/2008.

It was determined that the labelling did not comply in the case of 17 of the 53 additives (or mixtures). In total, 27 infringements were identified in 17 of these products. In most cases, the compulsory notice of 'for use in foodstuffs' was not provided. On 3 occasions, the voluntary information was also deemed to be incorrect.

In total, the NVWA carried out enforcement actions by means of a written warning at 14 of the 27 businesses, relating to 24 of the 53 products.
Furthermore, the NVWA has investigated whether the companies traded in the additive sulphite and to which companies it was supplied. This investigation showed that sulphite was supplied to meat processing companies, primarily butchers. In 2019, this information will be used to carry out targeted supervisory activities among buyers of sulphite in order to monitor the illegal use of sulphite in meat preparations.

Web dossier

During the supervision of labelling and additives in the recent past, the NVWA found that there was a discrepancy in terms of the way the legislation was interpreted between the private sector and the NVWA. For that reason, in 2018 the NVWA began compiling the web dossier on food labelling and a web dossier on food additives. These web dossiers clarify the legislation and the various positions and views of the NVWA.
It is expected that both web dossiers will be published on the NVWA website in 2019.

3.14 Contaminants, residues and genetically modified organisms (GMOs) in food

Controlling authority or authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 1881/2006	Maximum levels for certain contaminants in foodstuffs
Council Regulation (EC) No 396/2005	Maximum residue levels of pesticides
Commission Regulation (EC) No 669/2009	Increased level of official controls on imports of certain feed and food of non-animal origin
Commission Implementing Regulation (EC) No 884/2014	Special conditions governing the import of certain feed and food from certain third countries due to contamination risk by aflatoxins
Commission Implementing Regulation (EC) No 885/2014	Specific conditions governing the import of certain feed and food from certain third countries due to excessive pesticide residues
Commission Regulation (EC) No 2017/2158	Establishing mitigation measures and benchmark levels for the reduction of the presence of acrylamide in food
Commission Regulation (EC) No 2073/2005	Microbiological criteria for foodstuffs, including histamine
Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed;	
Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC	Authorised GMOs in animal feed and foodstuffs
Council Regulation (EC) No 1333/2008	food additives, including Sudan dyes
2013/287/EU: Commission Implementing Decision of 12 November 2013 on the monitoring and reporting of antimicrobial resistance in zoonotic and commensal bacteria	Emergency measures regarding unauthorised genetically modified rice in rice products originating from China
Commission Recommendation 2012/154/EU	Monitoring of the presence of ergot alkaloids in feed and food
Commission Recommendation 2013/165/EU	Presence of T-2 and HT-2 toxin in cereals and cereal products
Commission Recommendation 2014/661/EU	Monitoring of the presence of 2- and 3-monochloropropane-1,2-diol (2- and 3-MCPD), 2- and 3-MCPD fatty acid esters and glycidyl fatty acid esters
Commission Recommendation 2015/682/EU	Monitoring of the presence of perchlorate in food
Commission Recommendation 2017/84/EU	Monitoring of mineral oil hydrocarbons in food and in materials and articles intended to come into contact with food
Commission Recommendation 2018/464/EU	Supervision of metals and iodine in seaweed, halophytes and products based on seaweed

National legislation

- Commodities Act
- Preparation and Handling of Food (Commodities Act) Decree (Warenwetbesluit bereiding en behandeling van levensmiddelen)
- Contaminants in food (Commodities Act) regulation (Warenwetregeling Verontreinigingen in levensmiddelen)
- Pesticide residues (Commodities Act) regulation (Warenwetregeling Residuen van bestrijdingsmiddelen)

Size of the control file in 2018

type of business	number
Importers, wholesalers, manufacturers, supermarket chains, retail stores	

Contaminants, Residues and GMOs in food, results in 2018

results of NVWA samples 2018	number
Pesticide residues	2,966
• on the basis of the National Control Plan	2,658
- representative for the market	1,576
- on the basis of a risk profile	1,082
• on the basis of Commission Regulation (EC) No 669/2009	308
Non-compliant samples on the basis of pesticide residues	
• on the basis of the National Control Plan	206
- representative for the market	78
- on the basis of a risk profile	128
• on the basis of Commission Regulation (EC) No 669/2009	41
Mycotoxins	
• on the basis of the National Control Plan	1,613
- representative for the market	732
- on the basis of a risk profile	881
• on the basis of Commission Regulation (EC) No 669/2009 and Commission Implementing Regulation (EC) No 884/2014	1,263
Non-compliant samples on the basis of mycotoxins:	118
• on the basis of the National Control Plan	42
- representative for the market	14
- on the basis of a risk profile	28
• on the basis of Commission Regulation (EC) No 669/2009 and Commission Implementing Regulation (EC) No 884/2014	76
Environmental and process contaminants, plant toxins and other (total number of samples, including monitoring)	1,313
• on the basis of the National Control Plan	1,313
- PAHs	79
- 3-MCPD	159
- Acrylamide (reference level)	291
- Heavy metals in food	298
- Biocides, chlorates and perchlorates	152
- Mineral oils *	200
- Cyanide	41
• Other:	
- Histamine (process criteria)	20
- Sudan dyes (additive)	51
- Verification of authenticity	22
non-compliant samples of environmental and process contaminants, plant toxins and other (for which MLs, MRL, process criteria or reference values apply):	**number of samples for which ML, MRL, process criteria or reference values apply/ number of deviations**
• PAHs	71/9
• 3-MCPD	17/0
• Acrylamide (reference level)	265/15
• Heavy metals in food	272/3
• Chlorate in processed cereal-based foods and baby foods for infants and young children, infant formula and follow-on formula	82/8
• Cyanide	15/15
Other:	
• Histamine (process criteria)	20/0
• Sudan dyes (additive)	51/8 22/0
• Verification of authenticity	
GMOs	**307**

results of NVWA samples 2018	number
• on the basis of the National Control Plan	256
- regular sampling	234
- with GMO-free label or organic	12
- controls on unauthorised GMOs	51
- papayas	10
- Chinese rice products (Commission Implementing Decision 2013/287/EU)	41
• non-compliant samples on the basis of GMOs	
- Regular sampling	7
- with GMO-free label or organic	0
- controls on unauthorised GMOs	
- papayas	0
- Chinese rice products (Commission Implementing Decision 2013/287/EU)	3

**No corresponding maximum limits or reference levels have as yet been established*

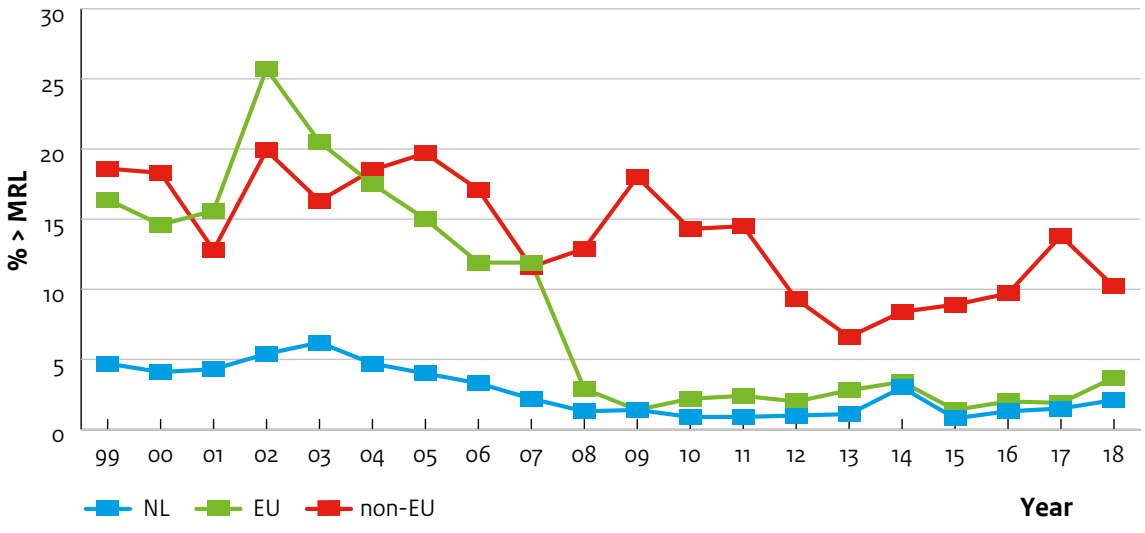
Reference to specific reports
Report of Pesticide Residues Monitoring Results of the Netherlands for 2018.

Breaches of maximum (residue) limits were reported to the Rapid Alert for Food and Feed system, where steps are taken to ensure the relevant products are prevented from being distributed on the market or that they are taken out of circulation. For pesticide residues, this only occurs in relation to potential breaches of the acute reference dose (ARfD). Results for samples taken under Commission Regulation (EC) 669/2009 and Commission Implementing Regulation (EU) 884/2014 were reported to the European Commission each quarter in accordance with the applicable rules. The analysis results were submitted to the Quality Programme for Agricultural Products (KAP) database and the EFSA (European Food Safety Authority) database as a whole.

For more information, please see the results for the supervision of Pesticide residues, mycotoxins, environmental and process contaminants, plant toxins and GMOs in food.

Pesticide residues
Testing for pesticide residues has revealed that the percentage of irregularities for crops grown in the EU is still low. Nevertheless, the percentage of violations in products from outside of Europe has remained relatively high, but seems to have decreased slightly in 2018, following an increase in recent years (Figure 1).

Figure 1. Percentage of MRL violations not including 669/2009 import control.



This decrease cannot be attributed to a specific product/origin combination. The results of the national control programme show that:

- More than 2,900 samples were found to contain approximately 7,050 residues of 194 different pesticides. The number of different substances found in 2018 was comparable to the number found in 2017. The EU has determined which agents must, at a minimum, be included in any national control programme (Commission Implementing Regulation (EU) No 2017/660). In addition to the mandatory list of substances to be included, there is also a list of substances that the EU recommends be included. In 2018, 91% of the various residues that were found were on the mandatory list, and 5% were on the recommended list. The results for substances on the recommended list and the rest of the national additions can be used to supplement the EU programme where necessary;
- Many samples of fruit and vegetables from Asia did not comply with the maximum residue limits (MRLs). In addition, a significant proportion of products from Suriname (33%), Turkey (22%), Colombia (19%) and Kenya (not Commission Regulation (EC) No 669/2009, 17%) did not comply with the MRL. Table 1 and 2 provide an overview of the product/country combinations with the highest percentage of samples that did not comply with the MRL. Pitayas, goji berries and grape leaves are the particularly striking cases. Grape leaves are often harvested in grape cultivation, without crop protection measures also taking account that the leaves can also be consumed and must also meet the requirements of the MRL.
- The import of these products is therefore subject to more stringent controls at the border. However, this does not change the fact that imports still occur, and that imported products enter the Netherlands via other EU countries. The Netherlands reported the high percentage of irregularities in relation to goji berries and grape leaves to the European Commission (this had previously occurred for pitayas). The Commission has taken measures to ensure that these products are placed under the strict control regimes of Commission Regulation (EC) No 669/2009 and Commission Implementing Regulation (EC) No 885/2014.
- In 2018, the Netherlands submitted 8 reports to the Rapid Alert System for Food and Feed (RASFF) on the basis of NVWA inspections and a further 12 reports on the basis of reports from businesses under the General Food Law Regulation (GFLR notifications). In 2018, there was no single particular product, country of origin and pesticide combination that stood out in the RASFF reports.

Table 1. Important products analysed in the national control plan with high non-compliance percentages, with country of origin.

product	pesticides	%>MRL	country of origin
Pitayas/Cactus fruit	Carbendazim, azoxystrobin	68.4	Thailand
Grape leaves	Many	64.7	Turkey
Goji berries	Propargite, acetamiprid, carbosulfan	50.0	China
Ginger root	Clothianidin	24.0	China
Sopropo	Various	18.5	Suriname
Chilli peppers	Chlorfenapyr, chlorpyrifos	16.8	Various

Table 2. Major products with high non-compliance percentages found after import controls within the context of Regulation (EC) No 669/2009.

product	pesticides	%>MRL	country of origin
Chinese long beans	Chlorpyrifos, chlorfenapyr	32.0	Dominican Republic
Snow peas, sugar snaps	Metalaxyl, acephate, carbendazim, trifloxystrobin	15.4	Kenya
Pitayas	Carbendazim, azoxystrobin, iprodione	11.3	Vietnam
Tea	Acetamiprid	10.3	China

Mycotoxins

As the severity of fungal attacks may vary in each harvesting season and by country of origin, the enforcement of EU regulations governing mycotoxins must be a key area of focus each year. Sampling of relevant products has been tailored accordingly. In addition to risk-based controls on imports from third countries and at production businesses, attention was also devoted to products from other EU Member States, since risky products can enter the Netherlands by this route as well. A multi-method analysis is used to analyse mycotoxins, which allows multiple mycotoxins to be measured at the same time. Samples taken under the national plan are analysed for around 40 different mycotoxins. In recent years, the focus of the scheduling of sampling has been on importers even more than was previously the case,

and this past year was no different. Nevertheless, an additional control method was implemented in 2018. Company data was confiscated from a number of importers and analysed for the presence of irregularities: the findings are currently still being investigated by the Public Prosecution Service.

Table 3. Samples analysed and percentage of samples breaching the maximum limit(s) (MLs, under Regulation (EC) No 1881/2006).

product	national plan	%>ML	imports	%>ML
Grain (and grain products including cake)	301	0	36	0
Dried fruit (including subtropical fruit)	280	2.5	135	4.4
Nuts and seeds (nut and seed products)	579	4.7	1,254	4.9
Wine, beer and fruit juice	65	0	0	0
Baby foods	97	0	0	0
Herbs and spices	178	4.5	62	8.1
Coffee and tea (including liquorice and Dutch liquorice)	113	0	1	0
Final total	**1,613**		**1,488**	

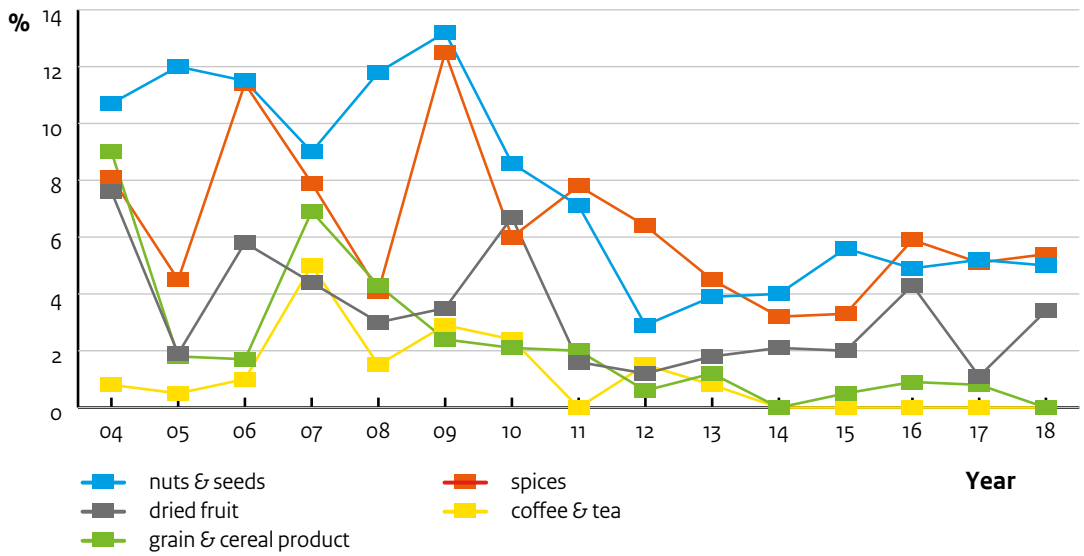
Additional comments for specific product groups:

Nuts and seeds

The percentage of irregularities of this product group continues to fluctuate around the 5% mark, although it was less in 2014 and 2015 (Figure 2). For that reason, an approximately similar number of samples were taken at import controls in 2018, resulting in the emphasis on import controls remaining the same. Sampling that is required under Commission Regulation (EC) No 669/2009 and Commission Implementing Regulation (EC) No 885/2014 constitutes the bulk of import controls. If the event that these regulations are amended, the relevant product/country combinations that have been excluded from the regulation will be transferred to the national plan in order to monitor whether the lower control frequency is sufficient.

The principal share of these imports related to consignments of peanuts from Argentina, the United States and China. Imports from countries such as Brazil, Egypt, India, Bolivia, the Gambia and Sudan are far smaller in quantity. Notably, the Gambia only export peanuts designated for bird feed purposes, for which a maximum limit of 20 µg/kg is in place for aflatoxin B1. Nevertheless, 19 of the 35 consignments offered for import were rejected due to aflatoxin B1 levels ranging from 26 to 430 µg/kg. In addition to aflatoxins, ochratoxin A was also regularly detected in nuts. The intervention policy for ochratoxin A prescribes a maximum limit of 10 µg/kg based on the Preparation and Handling of Food (Commodities Act) Decree. Consignments of peanuts from Egypt with levels of 25 µg/kg and from India containing 140 µg/kg were refused on import for that reason. Ochratoxin A is more frequent in pistachio nuts, having been measured at quantities of 3-460 µg/kg in 14 consignments from the United States and in 3 consignments from Turkey with levels of 1.1-45 µg/kg. The consignments that did not meet statutory requirements were not permitted to be distributed on the Dutch market. The Turkish consignment in which levels of ochratoxin A were found to the amount of 45 µg/kg was also found to have levels of 280 µg/kg of aflatoxin B1. At present, the issue of ochratoxin A in nuts is a subject being discussed in Brussels and draft limits have been proposed that are of a similar magnitude.

Figure 2. Deviation percentages of samples in the various product groups since 2004



Herbs and spices
The percentage of irregularities in this product group continues to fluctuate around the 5% mark. A striking detail in this regard is that each of the relevant cases relates to ground, meaning homogeneous, products. This also applies to nutmeg this year. Previously, nutmeg was imported as whole nuts, but it is increasingly being offered as ground nuts at import. Nevertheless, controls measured levels of 14 and 62 µg/kg of aflatoxin B1 and 47 and 230 µg/kg of ochratoxin A in consignments of ground nutmeg. The other breaches were found in chili powder and paprika powder. Aflatoxin and ochratoxin A may also occur in ground ginger, but in those instances, the levels were well below the maximum limits. Given these findings, it makes sense that nutmeg should continue to be regulated under Commission Regulation (EC) No 669/2009.

Dried fruit (including subtropical fruit)
The rise of the percentage of irregularities in this product group is a result of the popularity of and focus on superfoods, which relates to the analysis of dried mulberries in this category. As in all dried fruit, mulberries may contain quantities of aflatoxin B1 and ochratoxin A that may exceed the limits, for which appropriate measures are taken. Where superfoods were initially handled as a separate project, these products have by now been incorporated into the regular plans and scheduling. As a result of the application of the multimethod for the analysis of these samples, far more mycotoxins were found than aflatoxin B1 and ochratoxin A alone. Concentrations of tenuazonic acid of 100 to 61,000 µg/kg were measured in a quarter of the samples. This mycotoxin is part of the group of Alternaria toxins, for which the adoption of maximum limits is still being debated by the European Commission.

Baby foods
During the annual survey, the samples of processed cereal-based foods and baby foods for infants and toddlers were analysed according to the more stringent requirements for aflatoxins and ochratoxin A applicable to that product group. In addition, the samples were analysed for the plant toxins atropine and scopolamine. Limits for these types of tropane alkaloids have been included in EU regulations since 2016. No breaches of the maximum limits were detected in any of the samples.

Cereals, wine, beer, fruit juice coffee, tea, liquorice and Dutch liquorice
In these products, the number of samples was largely determined by the monitoring of the market as it was to be carried out under the national plan. Breaches of the limits are rare occurrences in this regard, resulting in an absence of more extensive sampling.

Environmental and process contaminants, plant toxins and other
Contaminants are chemical substances that have not been deliberately added to food, but which may nonetheless be present in food accidentally. In addition to substances produced by fungi (mycotoxins, see separate overview), contaminants include substances that occur naturally in plants (plant toxins), substances that enter food from the environment (environmental contaminants) or during the production process (process contaminants). Sampling for these contaminants is done by importers, production businesses, wholesalers and retail chain distribution centres. The samples were analysed for various substances at the NVWA laboratory and by the RIKILT in a number of cases. Commission Regulation (EC) 1881/2006 includes maximum limits (MLs) for these substances for various product groups.

Additional comments for specific product groups and results
Polycyclic aromatic hydrocarbons (PAHs)
PAHs occur as a result of incomplete combustion and are carcinogenic. PAHs can be found in dried herbs or in oils and in smoked products, such as smoked fish. In 2018, the principle focus was on analysis of the following product groups: palm and coconut oil, herb preparations/food supplements and dried herbs/spices.

In total, 51 samples of vegetable oil were analysed for PAHs. An average level of 1.4 µg/kg of benzo(a)pyrene (BaP) was measured, and a maximum level of 5.4 µg/kg. The ML was breached in 6 of the 29 samples of palm oil, both in terms of BaP (max. 5.4 µg/kg) and (sum) PAHs (maximum of 19.7 µg/kg). A breach of the ML was also measured in 3 of the 22 samples of coconut oil, both for BaP (maximum of 5.2 µg/kg) and (sum) PAHs (maximum of 28.7 µg/kg). Furthermore, an average of between 2 µg/kg and up to 8.2 µg/kg of BaP was measured in 12 herb preparations/food supplements. An average of 30 µg/kg of BaP and up to 118 µg/kg was found in 16 samples of dried paprika powder (of which half was smoked paprika powder). There are no maximum limits for PAHs in smoked paprika powder. No breaches of the ML were measured in 8 samples of paprika powder to which the ML did apply.

3-MCPD

3-monochloropropane-1,2-diol (3-MCPD) is a by-product that can be produced in the preparation of soy sauce and hydrolysed vegetable proteins. 3-MCPD and 3-MCPD esters are also produced unintentionally during the refining process for vegetable oils and fats. These substances are carcinogenic in rats and are suspected to be carcinogenic in humans. The European Commission has issued a recommendation (2014/661/EU: Commission Recommendation of 10 September 2014 on the monitoring of the presence of 2 and 3-monochloropropane-1,2-diol (2 and 3-MCPD), 2- and 3-MCPD fatty acid esters and glycidyl fatty acid esters in food) concerning monitoring for the presence of 2 and 3-MCPD, 2 and 3-MCPD fatty acid esters and glycidyl fatty acid esters. Maximum levels have been laid down for a number of products in Commission Regulation (EC) No 1881/2006 with regard to 3-MCPD and glycidyl fatty acid esters.

In this context, 159 samples were analysed in 2018, of which 33 samples relating to crisps, 17 soy sauces and 3 soup flavourings/stock, vegetable oils (29 palm and 22 coconut oils) and various types of baby foods (25 cereal-based baby foods and 30 infant formulae and follow-on formulae). Of the 33 samples of crisps, 16 samples showed 3-MCPD, averaging around 177 µg/kg, with a maximum of 320 µg/kg. The 55 samples of baby food and the 20 samples of soy sauces/stock were found to have very low quantities of 3-MCPD. Low quantities of 3-MCPD were measured in most of the samples of vegetable oil, but values of 290 and 40 µg/kg of MCPD were measured in 2 samples of coconut oil.

Acrylamide

Acrylamide is produced by heating starchy foods containing reducing sugars and the amino acid asparagine. Acrylamide is carcinogenic in mice and rats and is suspected to be carcinogenic in humans. A new regulation has been in force since April 2018, requiring food business operators to take risk mitigation measures in relation to the formation of acrylamide in food (Commission Regulation (EU) No 2017/2158). This regulation does not include MLs but rather includes reference levels. These reference levels, similar to the MLs for the other contaminants, were established on the basis of the ALARA principle (As Low As Reasonably Achievable). If these reference levels are breached, the NVWA will visit the business to ascertain whether the risk of acrylamide formation is included in the food safety plan and whether the risk is being adequately controlled. The following product groups were analysed in this context: 25 samples of infant and follow-on formulae, cereal-based baby food (12 samples of porridge and 19 samples of baby biscuits), 31 samples of breakfast cereals, various baked goods (including 30 samples of cake and 20 samples of 'kruidnoten'), 19 samples of bread, 33 samples of crackers, 19 samples of toast and 83 samples of crisps (of which 57 samples of potato crisps and 26 samples of vegetable crisps). Of all the products that were analysed for acrylamide, the relevant reference level was found to have been breached in 15 samples: 2 samples of cake (541 and 591 µg/kg), 3 samples of 'kruidnoten' (366, 443 and 1441 µg/kg), 5 samples of crackers (680-1502 µg/kg) and 5 samples of potato crisps (896-1141 µg/kg). In addition, 7 samples of vegetable crisps were also shown to contain high levels of acrylamide (1033-2235 µg/kg). Although there are no relevant reference limits, action was taken following comparison with the reference value for potato crisps (750 µg/kg).

Heavy metals

Heavy metals are present in the environment (e.g. in the soil) and as such may be present in foodstuffs. Children in particular run the risk of ingesting more than the tolerable daily intake of a metal. Regulation (EC) No 1881/2006 sets out the maximum limits for lead, cadmium, mercury, tin and inorganic arsenic.

In 2018, the following product groups were analysed for the presence of heavy metals: 21 samples of swordfish, 5 samples of tuna, 44 samples of rice and rice products (of which 20 samples of rice, 15 of rice crackers and 9 samples of cereal-based baby food, primarily using rice flour), 25 samples of infant and follow-on formula, 30 samples of cereal-based baby food (porridge and biscuits), 28 baby meals in jars, 46 different vegetables and fresh herbs, seaweed/sushi, 18 different cereals and pastas (wheat (flour), oats, rye, couscous), 22 samples of honey and 6 vitamin pills/herb preparations. Mercury levels (2.6 mg/kg) above the ML were found in 1 sample of swordfish (of the 21 samples analysed). Levels of lead above the ML were measured in 2 samples of baby biscuits (0.068 and 0.073 mg/mg).

Furthermore, in the context of the Commission Recommendation (EU) 2018/464, 27 samples of seaweed and 26 samples of sushi were analysed in relation to the monitoring of metals and iodine in seaweed and products on the basis of seaweed. Seaweed and algae may absorb these (trace) elements from the sea in which they grow, resulting in levels that may vary significantly. Iodine and arsenic levels in particular may be relatively high. On average, between 294 mg/kg and 2800 mg/kg of iodine was measured in seaweed. Arsenic levels between <0.12-92 mg/kg (total arsenic) were measured in seaweed. In sushi (ready-made products), iodine levels were on average between 0.385 mg/kg and 1.0 mg/kg. Arsenic levels in sushi were between 0.036-0.56 mg/kg (total arsenic).

Biocides, chlorates and perchlorates
Benzalkonium chloride (BAC) and didecyldimethylammonium chloride (DDAC) belong to the group of quaternary ammonium compounds (quats). Both substances are used as biocides. Their use can lead to detectable residues in food.

Chlorates are a banned plant protection product in the EU. Chlorate still enters food through other sources (drinking water, washing vegetables using chlorinated water, use of biocides in the factory). The NVWA has established temporary intervention values for chlorate in fruit and vegetables at a national level and has published these values on its website. This includes that the MRLs for infant and follow-on formulae and baby foods will remain in force as set out in Commission Directives 2006/125/EC and 2006/141/EC. Perchlorates occur naturally in the environment (in nitrate and potassium deposits) and can be formed in the atmosphere and enter the soil and groundwater through precipitation. As such, they may occasionally enter foodstuffs. No MLs have been established for perchlorate, but there are so-called reference values for intra-EU traffic. In 2018, the following products were analysed for the above-mentioned biocides, chlorates and perchlorates: 22 samples of infant and follow-on formulae, 30 samples of cereal-based baby foods (porridge and biscuits), 30 samples of baby meals in jars and 70 samples of vegetables, dried and fresh herbs. As a result of chlorate levels above the MRL (0.056-0.3 mg/kg), identified in 8 samples of baby foods in jars, a written warning was drawn up and the producers were contacted.

Cyanide
High levels of dangerous plant toxins (cyanogenic glycosides) may be naturally present in unprocessed bitter apricot kernels and bitter almonds. After processing, for example in cakes or almond paste, these levels will be much lower and will no longer pose a danger to the consumption of the finished product. These substances are also found in linseed or cassava, but in those cases the levels are significantly lower. These plant toxins are hazardous because they are converted into cyanide (hydrocyanic acid) in the body, which may have a fatal impact on people's health. Due to the natural presence of high levels, and the corresponding risks, a maximum limit of 20 mg/kg has been established in Commission Regulation (EU) No 2017/1237 for this substance (expressed in hydrogen cyanide levels) in unprocessed whole, ground, milled, cracked, chopped apricot kernels placed on the market for the final consumer.

At the end of December 2017, a Dutch consumer became seriously ill after eating raw/whole apricot kernels. Following this incident, 15 samples of apricot kernels were analysed, showing hydrogen cyanide levels of 43.3-2980 mg/kg. Four low values (43.3-503 mg/kg with an average of 237 mg/kg) appeared to be sweet apricot kernels. In bitter apricot kernels, the levels were much higher, lying between 2361-2980 mg/kg, with an average of 2738 mg/kg. In response to these results, large-scale recall steps were carried out and public warnings were issued. This resulted in raw/whole apricot kernels no longer being sold to consumers through regular retail channels thereafter.

As a result of these high levels of hydrogen cyanide in bitter apricot kernels, samples of sweet and bitter almonds were taken for monitoring purposes. Although there is no corresponding ML, this allowed the NVWA to get an impression of the levels of hydrogen cyanide in these products. Analysis revealed that in 26 samples of almonds, there were hydrogen cyanide levels of an average of 41 mg/kg and maximum levels of 2451 mg/kg. Very high levels were found in 5 of these almond samples, situated between 1785-2451 mg/kg, with an average level of 2089 mg/kg. In addition, a number of biscuits into which apricot kernels ('bitterkoekje' almond biscuits) or almonds had been processed were examined, with levels measured between 1.2 and 75.2 mg/kg. Following these results, a number of large-scale industrial bakeries were visited that processed milled apricot kernels into their products, with inspections taking place regarding the mitigation of the cyanide risk in the food safety plan. In each of these cases, the HACCP plans were found to be in order. The NVWA will be carrying out a follow-up investigation in 2019, which will also involve other high-risk foods analysed for hydrogen cyanide.

Mineral oils
Mineral oil (mineral oil hydrocarbons, MOHs) is a by-product of the petroleum industry of which specific fractions, namely MOSH: mineral oil saturated hydrocarbons and MOAH: mineral oil aromatic hydrocarbons, may be harmful. According to the EFSA, the effects on human health can vary significantly. Some MOAH can be carcinogenic and MOSH may accumulate in human tissue and have negative effects on the liver. These substances can enter foods in various ways: as a result of environmental contamination, during the production process (via lubricants) or via the packaging materials (such as (recycled) paper or cardboard, due to the printing inks potentially containing MOHs).

In January 2017, the European Commission published a recommendation for the monitoring of mineral oils in foodstuffs and packaging materials that come into contact with foodstuffs. Methods for the analysis of MOHs in certain foods (RIKILT) and in cardboard packaging (NVWA) were subsequently developed. MOH levels (classified into MOSH and MOAH) were determined in 200 samples of 4 product groups (dry pasta, rice, cereal-based baby foods and breakfast cereals): both in foods and the packaging. Measurements were carried out immediately after sampling and once again after a 6-month period/end of shelf life. This allows us to gain insight into the potential migration of MOH from packaging materials into the food. This project will be continued in 2019 and 2020 and will see the MOH levels in 8 other product groups being determined.

Other

Sudan dyes

The 'Sudan dyes' group, of which 'Sudan red' is the most well-known, cannot be added to food, because they are potentially genotoxic and carcinogenic (Regulation (EU) No 1333/2008). In 2018, 32 samples of vegetable oil (palm oil) and 19 samples of herbs (paprika powder) were analysed for these substances. Sudan dyes were found in 8 samples of palm oil. The measured values were between < LOD-4510 µg/kg, with an average of 211 µg/kg.

Histamine

Histamine can be found in spoiled fish. In high doses, the substance may cause health problems after consumption. Commission Regulation (EC) No 2073/2005 sets out a process criterion of 100 mg/kg of histamine in fish. In 2018, 20 samples of tuna (fresh, frozen or canned) were tested for histamine; no samples were found to have exceeded the process criteria.

Authenticity

Following indications that chili pepper may be mixed with starch, some 22 samples were analysed, which yielded no notable findings.

3.15 Veterinary medicinal products

Controlling authorities: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Commission Regulation (EC) No 37/2010	MRLs for residues of veterinary medicinal products
Regulation (EC) No 470/2009 of the European Parliament and of the Council	Veterinary medicinal product residues
Council Directive 96/22/EC	Prohibition on the use of growth promoters
Council Directive 96/23/EC	Monitoring of residues in live animals and products of animal origin

National legislation

- Animals Act (Wet dieren)
- Veterinary Medicinal Products Decree (Besluit diergeneesmiddelen)
- Veterinary Medicines Regulation (Regeling diergeneesmiddelen)
- Animal Disease Specialists Decree (Besluit diergeneeskundigen)
- Animal Disease Specialists Regulation (Regeling diergeneeskundigen)
- Animal Keepers Decree
- Regulation on Animal Keepers

Size of control file

type of business	**number as at 01/04/2018***
Laying hens	680
Calves	1,580
Pigs	4,140
Chickens kept for meat production	540
Cattle	23,810
Sheep	5,540
Goats	550
Chickens kept for meat production parent stock	250
Flightless birds**	3
Ducks	50
Geese**	11
Fur animals	140
Turkeys	30

** CBS the Netherlands The Hague/Heerlen*

*** Data from the Combined Return, 10 animals or more*

Results 2018

	number of inspections	**number of measures**
FCI reports	154	114
Veterinary medicinal products – National Residues Plan reports	37	24
Other reports	100	38
Self-assessment	41	14
Total	332	190

	number of analyses	**number of measures**
Veterinary medicinal products – National Residues Plan	35,665	13

In 2018, a total of some 35,665 analyses were carried out on products of animal origin in the context of the National Residues Plan. The results of 56 of these analyses (0.16%) were non-compliant.

Group A substances (as set out in the Annex to Directive 96/23/EC)
In the testing performed on group A substances (17,107 analyses), 23 samples were found to be non-compliant, i.e. 0.13% of analyses on group A substances. The substances detected were: thiouracil (15), ß-nortestosterone (2), α-boldenone (3), α-nortestosterone (2), furaltadon (1).

Group B substances (as set out in the Annex to Directive 96/23/EC)
In the testing performed on group B substances (15,936 analyses), 33 samples were found to be non-compliant, i.e. 0.21% of the analyses. The non-compliant samples were distributed as follows among groups B1, B2 and B3:

- In the testing performed on group B1 (antibiotics), 10 samples of the 7,727 analysed were found to be non-compliant, i.e. 0.13% of the antibiotics analyses. The substances found include doxycycline (4), gentamycin (1), oxytetracycline (1), ampicillin (1), amoxycillin (1), ciprofloxacin, enrofloxacin, flumequine (1), TMPS (1).

- In the testing performed on group B2 (other veterinary medicinal products), 9 samples of the 6,298 analysed were found to be non-compliant, i.e. 0.14% of the analyses of other veterinary medicinal products. The substances found were dexamethasone (1), salicylic acid (4), diclofenac (1), paracetamol (1), toltrazuril (1), levamisole (1).

- In the testing performed on group B3 (contaminants), 14 samples of the 1,911 analysed were found to be non-compliant, i.e. 0.73 % of the contaminants analyses. The substances found were cadmium (12; cattle kidney) and mercury (2; wild duck).

Special findings
The naturally-occurring hormones thiouracil (from brassicas) and ß-nortestosterone produced many positive results, which on further investigation often did not lead to enforcement measures.
Due to the absence of a standard for lead in game, samples in which lead was found were reported as positive, but the samples were found to be in compliance unlike in previous years.
The analysis of the use of painkillers has been added to the National Residues Plan in products of animal origin as of 2018.

Self-assessment
The self-assessment obligation with regard to the use of veterinary medicinal products and prohibited substances is statutory. This obligation applies to farmers raising farm animals. Livestock farmers comply with this obligation by participating in a self-assessment programme as part of a quality system. Those who do not participate in a sector self-assessment programme must demonstrate to the NVWA how they are complying with the statutory self-assessment obligation. Inspections were conducted at poultry and veal calf farmers that were not affiliated with a quality assurance system (181 total). Initially, enforcement communications were carried out, as part of which all farmers were sent a letter. Thereafter, 41 poultry businesses were inspected, which had not affiliated themselves with a quality system after having received the letter. This enforcement action resulted in an increase in the number of businesses affiliated with the poultry quality system of 100%. A similar result was achieved for veal calf farmers.

Trade
NVWA enforcement in relation to imports, production and trade is conducted on the basis of risk, through collaboration with other regulatory authorities and competent authorities from other Member States. Issues requiring attention include product conformity, undesirable trade via import and identifying suspect consignments during import.

Actions taken to improve official controls

Clarification of working instructions in collaboration with other domains, such as animal welfare and animal health.
The NVWA has started a dialogue with the livestock sectors and the Royal Dutch Society for Veterinary Medicine (KNMvD) about how compliance can collectively be improved and how enforcement communication could play a role in this.

Enforcement through administrative law, veterinary disciplinary law and criminal law will continue to be optimised. In addition to risk-based investigations, the NVWA continues to focus on random testing and on increasing compliance through enforcement communication.
Innovative developments in the supervision of antibiotic use are also being introduced:

- by developing an integrated enforcement approach in relation to animal health and animal welfare;
- by supporting risk-based controls with targeted analyses based on relevant data;
- by performing measurements on animals using on-site quick tests;
- by adopting best practices from sister organisations in the Netherlands and abroad.

Actions taken to improve compliance by businesses

The NVWA holds regular discussions with professional groups/sectors in which it shares its inspection results, amongst other things. The NVWA has also intensified its enforcement communication and hopes to use target group analyses to foster a better understanding among the various target groups. Through risk-based inspections, the NVWA hopes to visit those businesses where the risk is greatest.

Conclusions

In 2018, various inspections were carried out based on notifications and projects.

The parties that were inspected included farmers, private smallholders, veterinarians and permit holders. The abnormalities that were found were diverse and related to a number of issues, including issues in the area of prescription, delivery, availability and the application of veterinary medicinal products, administrative requirements and veterinary practices.

Moving forward, the NVWA will continue its efforts to tackle the risks in the field of production, distribution, accurate prescription and the application of veterinary medicines from an animal health, animal welfare, public health and environmental perspective.

3.16 Microbiology (pathogens, food-borne infections and zoonoses)

Controlling authority or authorities: NVWA (antimicrobial resistance in collaboration with Wageningen Bioveterinary Research (WBVR); source tracing in collaboration with the National Institute for Public Health and the Environment (RIVM))

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Council Directive 2003/99/EC	Zoonoses and zoonotic agents
Regulation (EC) No. 178/2002 of the European Parliament and of the Council	General Food Law Regulation (GLFR)
Regulation (EC) No 854/2004 of the European Parliament and of the Council	Products of animal origin
Commission Regulation (EC) No 2073/2005	Microbiological criteria for foodstuffs
2013/652/EU: Commission Implementing Decision of 12 November 2013 on the monitoring and reporting of antimicrobial resistance in zoonotic and commensal bacteria	Monitoring and reporting of antimicrobial resistance in zoonotic and commensal bacteria

National legislation

Preparation and Handling of Food (Commodities Act) Decree (Warenwetbesluit bereiding en behandeling van levensmiddelen)

Supervision of 'Microbiology', results in 2018

supervision of microbiology	**number of samples**
1. Monitoring of pathogens, primary phase (farm/slaughterhouse; animal): including farm animals, sampling for AMR WBVR	1,579
2. Monitoring and surveillance of pathogens, secondary phase (import, industry, wholesale): Projects in the red meat, poultry meat, fish and clam, vegetable and compound foods supply chains.	1,138
3. Monitoring and surveillance of pathogens in retail phase: Projects in the red meat, poultry meat, fish and clam, vegetable and compound foods supply chains.	5,897
4. Complaints and reports, source tracing (bacteriology, virology)	187
Total samples	**8,801**

Isolates*	
5. Antibiotics resistance (susceptibility of pathogens, indicators from products)	756
6. Active surveillance of ESBL isolates – WBVR/RIVM	150
Total isolates	**906**

** These are not separate samples; they are tests for bacterial isolates taken from routine sample testing*

Reference to specific reports

- EU zoonosis reports in 2017
- NETHMAP-MARAN-reports 2018 (AMR 2017)
- Reports of food-borne infections and food poisoning in 2017.
- Surveillance of zoonoses in the dairy goat and dairy sheep farming sector in 2016 (RIVM)
- Surveillance of zoonoses in the dairy goat and dairy sheep farming sector in 2016 (TvD)

Explanatory notes to the results for 'Microbiology' supervision

The Microbiology domain (pathogens, food-borne infections and food-borne zoonoses) uses the laws and regulations listed above to supervise the prevention of pathogenic micro-organisms in food and antimicrobial resistance. The main tool for this is projects where samples are taken from the entire food chain, from primary production businesses to the retail. The selection of the products to be sampled, their location in the supply chain and the pathogens to be analysed

is determined based on: integrated supply chain analyses, ministerial policy priorities, results from previous projects, scientific insights, complaints and reports.

In addition, this domain is responsible for assessing microbiology-related complaints and reports from consumers, producers and competent authorities in other countries and EU Member States and from source investigations arising from disease notifications.

Where any statutory criteria are breached, implementation of the legally required measures is ensured, such as recall from distribution of a harmful consignment and warnings for consumers where necessary, in accordance with the regular intervention policy.

Selection of projects in 2018

1. Monitoring of pathogens, primary phase (farm/slaughterhouse)
Since 2013, work has been ongoing on a master plan for periodic surveillance of farm animals within the context of Council Directive 2003/99/EC. This plan can be used to track trends in the prevalence of zoonotic agents in populations of farm animals. The results are submitted to the EFSA in the annual EU zoonosis report. In addition, possible relationships can be identified between different types of zoonotic agents carried by farm animals and people living or working on livestock farms. This is a repeating cycle in which a different animal supply chain is studied each year.
In 2018, 2 articles were published in the Dutch Journal of Veterinary Medicine (Tijdschrift voor Dierengeneeskunde, TvD) containing the microbiological results of sampling from porkers in 2014, from laying poultry in 2015 and from dairy goats and sheep.
The results of the sampling in 2017 in bovine animals for meat production will be reported in 2019.
A sampling operation involving some 1,400 samples to be taken at roughly 200 poultry meat businesses was scheduled for 2018 – these samples would be analysed for the presence of Staphylococcus aureus (MRSA), campylobacter, *Listeria monocytogenes*, STEC and E. coli ESBL. Due to delays in the schedule, the project was only able to begin midway 2018, with sampling operations continuing into 2019. As such, these samples are not included in the result tables above, but will be reported in the MANCP of 2019.
The competent authority has an obligation under Regulation (EC) No 854/2004 to verify Salmonella results as sampled by pig slaughterhouses. In this context, the NVWA took 440 samples at pig slaughterhouses and an additional 273, 42 and 100 samples at poultry, calf and cattle slaughterhouses respectively.
In 2018, the NVWA took 277 samples at poultry slaughterhouses that were analysed for campylobacter.

2. Monitoring and surveillance of pathogens, secondary phase (import, industry, wholesale)
In 2018, roughly 60% fewer samples were taken/analysed compared to 2017, primarily due to reduced sampling and analysis capacity.
In the secondary phase, the Microbiology domain takes risk-based samples from a wide range of food supply chains. With regard to pathogens, products of animal origin, and meat in particular, are the most susceptible products. As in 2017, under the heading of 'exotic meat', samples were taken in 2018 from the meat of animals that are not farmed for meat consumption, or at least not on a large scale, such as kangaroos, ostriches and crocodiles. Both *salmonella* and *Listeria monocytogenes* and STEC were found on roughly 10% of the batches. In respect of fresh poultry meat, it is particularly striking that *Listeria monocytogenes* is found in 1 in 3 batches. The prevalence of campylobacter is yet again high in poultry meat preparations and fresh poultry meat, at 60% and 81% respectively.
In addition to meat, it should be highlighted that 4 of the 16 batches of imported dried herbs and spices that were tested were found to be infected with salmonella. STEC and the Hepatitis A virus have been found occasionally in fresh herbs originating from Africa/the Middle East, Asia or Southeastern Europe.

3. Monitoring and surveillance of pathogens in retail phase:
In 2018, risk-based sampling was also carried out in the retail phase, with sampling taking place using a wide range of products. Salmonella was found in 2.9-3.0% of the samples taken from poultry meat and to a lesser extent was found in fresh pork (1.3%), mussels (1.4%) and minced meat/meat preparations (1.0%). It was also found very occasionally in other types of meat, but not in fish or products of plant origin.
Listeria monocytogenes is found much more frequently in fresh poultry meat, fresh beef, meat preparations intended for raw consumption and fish products (16.7%, 9.0%, 5.7% and 4.2% of samples respectively), but only very occasionally in level exceeding the standard of 100 colony-forming units (cfu) per gram. In relation to the presence of *Listeria*

monocytogenes, there should be substantiation that the level remains below 100 cfu per gram until the end of the shelf life. This still requires a lot of attention from many producers and remains a key priority for the NVWA.
STEC is found in the meat of small ruminants relatively often (15.6% of samples) (with samples mostly taken from lamb and to a lesser extent from goats and adult sheep meat). This is not unusual, given the high prevalence of STEC in live sheep and goats (please see below 1). STEC is found less frequently in minced meat/meat preparations, fresh veal, fresh beef and meat preparations intended for raw consumption (6.8%, 6.1%, 2.3% and 1.6% of samples taken respectively). Another significant matter is the presence of campylobacter in small ruminants (2.1%), fresh poultry meat (36.3%) and poultry meat preparations (27.6%). With regard to poultry meat, additional warnings are issued to consumers regarding the necessity of sufficient heating and cross-contamination issues, by way of compulsory statutory information on the label. This clearly does not seem to be an unnecessary luxury.

4. Complaints and reports, source tracing (bacteriology, virology)
Food can cause people to fall ill. If 2 or more people fall ill at the same time after having eaten the same food, this is referred to as an outbreak of a food-borne infection. In 2017 - not 2018, given that the MANCP annual report is published to report disease notifications - more food-borne outbreaks were reported than in 2015 and 2016. In 2017, a total number of 666 outbreaks relating to 2,995 sick people were reported, compared to 594 outbreaks involving 2,731 ill people in 2016 and 406 outbreaks involving 1,850 sick people in 2015. It is unclear as to whether the number of outbreaks is actually on the increase or whether an increasing number of outbreaks is being reported. As in previous years, norovirus remains the main cause of recorded food-related outbreaks, followed by the *salmonella* and campylobacter bacteria.
The figures come from the NVWA and the Municipal Health Services (Gemeentelijke Gezondheids Diensten, GGDs). Both organisations record and investigate food-borne infections and food poisoning to prevent more outbreaks and sick people. To this end, they attempt to ascertain the sources of infection and the nature of the pathogens from within their own field. The NVWA examines the food for pathogens and the origin and site at which the food is prepared or sold. The GGD focuses on individuals who have been exposed to infected food and tries to deduce the possible sources from them.
The reports of both bodies are aggregated and are analysed by the RIVM as a whole. This integrated approach provides insights into the causes of food-borne outbreaks in the Netherlands, the extent to which they occur and any potential changes in that regard over the years. The figures cited, however, are an underestimation of the actual number of food-borne outbreaks and the number of people falling ill. This is because not everyone who is ill will visit their GP or will notify the NVWA. Nor is it always clear that the contaminated or infected food is the cause of disease. (Registration of foodborne disease outbreaks in the Netherlands, 2017)
In addition to the reports of illness described above, a total of 3,168 reports of (potentially) unsafe food were made to the NVWA in 2018 and were processed within the Microbiology domain (in 2017, this number was 2,634). Microbiology follows up on and assesses any potentially unsafe foods with a microbiological or physical cause (such as the presence of glass, metal or plastic). These reports may be made by consumers, food business operators or fellow food safety or other authorities within the EU. If tracing is performed, all businesses involved are required to make a report. Multiple reports can be combined into a smaller number of case files to this end, so that the combined reports for a single instance of contamination can be processed together. In 2018, reports for the Microbiology domain were combined into 829 case files (826 in 2017).

5. Antibiotics resistance (pathogen susceptibility, indicators from products) and

6. Active surveillance of ESBL isolates
Within the context of European Commission Implementing Decision 2013/652/EU, the NVWA, together with the WBVR and the RIVM, has for some years been monitoring various isolates for antibiotics resistance.
The decrease in the number of analysed isolates compared to last year (906 in 2018; 1467 in 2017) can be accounted for by a corresponding decrease in sampling under the projects mentioned in the above.
ESBL producing E. coli was primarily found in poultry meat (45.0% of fresh poultry meat in processing; 14.1% from sampling in the retail phase). In other types of meat (or fish) it is found at most in 3.4% of samples.
Methicillin-resistant Staphylococcus aureus (MRSA) also has its highest prevalence in (fresh) poultry meat (22.0%) and is found in pork or beef to a lesser extent (5.9% and 2.1% respectively).
Sensitivities to antibiotics, including (indicator) organisms such as salmonella, Campylobacter, E. coli and enterococci have been outlined in the Monitoring of Antimicrobial Resistance and antibiotic usage in Animals in the Netherlands (MARAN) report, of which the WBVR is the author.

Incidents

If necessary, a complaint, notification and/or source detection following illness can be escalated into an 'incident'. This is considered in instances where it is expected that the case may require more attention and/or capacity within the normal regulatory supervision framework. In the event of an incident, a multidisciplinary incident team is assembled, supported by the NVWA Incident & Crisis Management team (ICM). This team will meet regularly and make the necessary capacity available and allocate it as required. It will maintain short lines of communication with the senior management of the NVWA and relevant policy departments of the ministries in question.
In 2018, there were two such incidents that related to the domain of Microbiology:

- During the summer of 2018, it was found that various batches of frozen vegetables from a factory in Hungary had potentially been contaminated with the Listeria monocytogenes pathogen, resulting in various cases of illness in several European Member States (no known cases in the Netherlands). At the direction of the Hungarian food safety authority, supervision efforts were undertaken aimed at tracing the food, where necessary including the recall of nearly 1.3 million kilos of frozen vegetables that had ended up in the Netherlands. Some 15,000 companies were screened in the process, with 25 reports of findings (fines) being drawn up as a result of non-compliance with the duty of notification – in 8 cases, a penalty payment was imposed to ensure that the relevant companies took timely action.
- At the end of 2018, source detection and tracing efforts showed that at least 19 consumers most likely fell ill as a result of the consumption of products from pigs' carcasses that had become infected with Salmonella Goldcoast from a slaughterhouse in the Netherlands. Following changes to the production process (please see Ch3.7 Meat supply chain) the number of related ill people decreased and the supervision exercised by the NVWA focused on tracing and, where necessary, withdrawing the derived products from the market in cases where a risk to consumers could not be excluded.

Impact measurement

Before the restructuring of the NVWA, which took place in 2017, impact measurement was seen as irrelevant to the Microbiology domain, as it does not manage a specific target group where targeted activities can be used to encourage compliance. Following the restructuring of the NVWA, the Microbiology domain has taken charge of inspections to a greater extent in respect of the implementation of Regulation (EC) No. 2073/2005 concerning microbiological criteria, particularly in respect of Listeria Monocytogenes.
The number of reports of unsafe batches of food that are made by the businesses themselves is an indicator of businesses' awareness of microbiological and other risks across the entire food supply chain. These reports, which are required under the General Food Law Regulation, GFLR (Regulation (EC) No. 178/2002), are being submitted more and more often. Throughout 2018, the number of reports showed an increase compared to the previous year. This was also the case for 2017. Microbiology accounted for roughly 20%. The number of case files, however, only increased slightly (829 compared to 826). Nor has the NVWA's sampling programme shown any signs that there has been an increase in the actual number of unsafe batches of food in 2018.

Actions taken to improve official controls

European legislation relating to microbiological risks is complex (particularly with regard to *Listeria monocytogenes*, due to the double standard included in Regulation (EC) No 2073/2005, and the studies to establish a shelf life), and it sometimes allows Member States considerable leeway in their interpretation (such as in cases where no standards exist, or where there is flexibility for small businesses). During 2018, the Microbiology domain ran several sessions of in-service training for groups of inspectors in the Consumer and Safety Division, in which attention was explicitly devoted to standardisation of supervision under the legislation around *Listeria monocytogenes*.

Actions taken to improve compliance by businesses

In 2018, as in 2017, the NVWA devoted considerable attention to shelf life studies by following up on sampling with regard to *Listeria monocytogenes*. In spite of an improvement in the quality of these studies, the NVWA intends to actively express its views with regard to the studies, outlined in Info Sheet 85, throughout 2019, as well as conduct targeted inspections by following a sector-based approach.

Conclusions

The increase in GFLR notifications (roughly 20%) submitted by food companies, the results of the NVWA's monitoring programmes and the source investigations in relation to outbreaks of food poisoning show that microbiological risks continue to require and deserve the attention of food companies themselves and of the regulatory authority. Risk-based supervision shows that targeted monitoring of specific foods (exotic meats, herbs/spices, smoked fish) leads to targeted inspections of compliance and control of microbiological hazards, which may provide businesses and consumers with an action perspective.

The reduced availability in 2018 of both sampling and analysis capacity for the monitoring and surveillance of pathogens in imports, industry and wholesale distribution is partly the result of the additional efforts relating to the implementation of 'Inspect' (sampling) and the knock-on effects of the fipronil incident (analysis). It is crucial that the available capacity should be managed more effectively in 2019.

In recent years, both in the Netherlands and across the EU, the realisation of the commitment obligation on defining the minimum number of isolates for a number of specific pathogens in the antibiotic resistance sampling plan has been a problem. The decrease in the number of isolates analysed in 2018 compared to 2017, 906 compared to 1467 respectively, can be accounted for as a result of a similar decrease in the number of samples taken. In the meantime, the NVWA has initiated a number of targeted steps aimed at improving this based on the results of a recent European Commission - Health and Food Audits and Analysis mission.

3.17 Nutrition and health, special foods and drinks

Controlling authority: NVWA

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Council Directive 96/8/EC	Foods intended for use in energy-restricted diets for weight reduction
Council Directive 1999/21/EC	Dietary foods for special medical purposes
Council Directive 2001/83/EC	Establishing a Community code relating to medicinal products for human use Medicines Act (Gmw)
Council Directive 2002/46/EC	Concerning the approximation of the laws of the Member States relating to food supplements
Council Directive 2006/125/EC	Processed cereal-based foods and baby foods for infants and young children
Council Directive 2006/141/EC	Infant formulae and follow-on formulae2
Regulation (EC) No 258/97 of the European Parliament and of the Council	Novel foods and novel food ingredients
Regulation (EC) No 1881/2006 of the European Parliament and of the Council	Setting maximum levels for certain contaminants in foodstuffs
Commission Regulation (EC) No 1924/2006	Nutrition and health claims made on foods
Regulation (EC) No 1925/2006 of the European Parliament and of the Council	Addition of vitamins and minerals and of certain other substances to foods
Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004	Provision of food information to consumers
Commission Regulation (EC) No 609/2013	Food intended for infants and young children, food for special medical purposes, and total diet replacement for weight control
Commission Delegated Regulation (EU) 2016/127	supplementing Regulation (EU) No 609/2013 regarding the specific compositional and information requirements for infant formula and follow-on formula and regarding requirements on information relating to infant and young child feeding
Commission Delegated Regulation (EU) 2016/128 of 25 September 2015 supplementing Regulation (EU) No 609/2013 of the European Parliament and of the Council as regards the specific compositional and information requirements for infant formula and follow-on formula and as regards requirements on information relating to infant and young child feeding	Supplementing Regulation (EU) No 609/2013 as regards the specific compositional and information requirements for food for special medical purposes
Commission Delegated Regulation (EU) 2017/1798	Supplementing Regulation (EU) No 609/2013 of the European Parliament and of the Council as regards the specific compositional and information requirements for total diet replacement for weight control

Specific national legislation is also applicable, the most important of which are the Commodities Act and the Herbal Preparations (Commodities Act) Decree (Warenwetbesluit Kruidenpreparaten), the Addition of Micronutrients to Foodstuffs (Commodities Act) Decree (Warenwetbesluit Toevoeging micro-voedingsstoffen aan levensmiddelen) and the Exemption of vitamin preparations (Commodities Act) Regulations (Warenwetregeling Vrijstelling vitaminepreparaten). This domain also has many interfaces with the legislation and regulations governing food in general, such as the Food Information (Commodities Act) Decree, the Contamination in Foodstuffs (Commodities Act) Decree (Warenwetregeling Verontreinigingen in levensmiddelen), Regulation (EC) No 852/2004 on the hygiene of foodstuffs and Regulation (EC) No 178/2002 establishing the general principles and requirements of food law.

This domain is characterised by the fact that many products do not have a legal status that is clear in advance. Certain products could be classified simultaneously as a medical aid, a medicinal product or a food supplement.

Categories of businesses covered by the 'Special foods and drinks' domain in 2018

Importers
Label holders
Producers
Online shops

Categories of foods covered by the 'Special foods and drinks' domain in 2018

Herbal preparations
Foods bearing claims
Novel foods
Fortified foods
Vitamin preparations
Food for specific target groups
Food supplements

Special foods and drinks domain, results in 2018

special foods and drinks	**number**
Inspections/Checklists completed at businesses	1,176
Samples	162
Measures (inspections and samples): warnings administrative fines official report	299 192 105 2

Inspections at businesses
This relates to the 1,176 inspection checklists completed on unique visit dates at 504 different special food and drink businesses. This includes 200 notifications submitted by consumers and businesses or following a GFLR or RASFF notification and 190 inspections in the context of remote certification. The numbers also include data from the System Inspection project involving producers, label holders and importers and Claims made on breakfast cereals. Inspections at businesses are focused on the following:

- labelling, nutrition and health claims and the use of broad medical claims;
- advertising of infant formulae;
- novel foods;
- prohibited herbs/spices.

Specific label controls
Specific label controls are focused on the following:

- nutrition and health claims and the use of medical claims;
- other labelling requirements.

Reports made by consumers, businesses, etc.
In 2018, inspections were carried out at 190 unique businesses in response to 1 or more reports made by consumers or businesses or following a GFLR or RASFF notification.
The NVWA received 118 reports via the Rapid Alert System for Food and Feed (RASFF) and so-called 'GFLR notifications' from businesses.
At 83 businesses, 1 or more irregularities were found. In other words, in 44% of the cases, the report was well founded (measures were justified). In 2017, this percentage was 42%.

Advertising of infant formulae
Advertising of infant formulae is an infringement of the Infant Formulae (Commodities Act) Regulation 2007, which is based on European Directive 2006/141/EC. In 2018, 3 reports were recorded in relation to advertising of infant formulae. Of these, only two reports were found to relate to an actual breach of the legal prescriptions.

Samples (European legislation)
A total of 87 herbal preparations and food supplements were sampled for benzo(a)pyrene (B(a)p) analysis and a total of 4 PAHs, and 75 herbal preparations and food supplements were sampled for analysis of heavy metals. Of the 87 total herbal preparations and food supplements sampled, 7 contained an amount of B(a)p or a total of 4 PAHs that exceeded the statutory maximum level.
Of the 75 herbal preparations and food supplements that were sampled to be analysed for cadmium, mercury and lead, 1 sample contained more lead than permitted by law.

Measures
Sometimes, infringements of one piece of legislation can be combined with infringements of other pieces of legislation in a single measure. It is also possible for multiple infringements to be merged into a single report of findings. In 2018, one or more measures were imposed on 191 individual businesses on the basis of a single inspection. This means that 1 or more infringements were identified in 38% of the 504 businesses visited. 107 out of 291 measures (=37%) were taken in response to irregularities found on a website.
These measures related to 97 administrative fines and 197 written warnings with 316 different deviating findings. Out of the total of 265 measures, 9 measures were imposed in relation to samples (2 with heavy metals and 7 with B(a)p or a high total of 4 PAHs). The other 256 measures were imposed following inspections.
Most infringements related to a failure to comply with the conditions of Regulation (EC) No 1924/2006 ('Regulation on Claims') (38%), followed by the Medical Preparations Act (21%). The figures are shown in the table below.

legislation	violations%
Regulation (EC) No 1924/2006 of the European Parliament and of the Council	38
Medicines Act (Gmw)	21
Commission Regulation (EC) No 852/2004	18
Commission Regulation (EC) No 1169/2011	12
Commission Regulation (EC) No 178/2002	4
Commission Regulation (EC) No 258/97	3
Other	4
Total	**100**

Project on food safety system inspections of importers, label holders and producers of special food and drink products
In 2018, 134 special food and drink businesses were inspected in the context of food safety system inspections. Special food and drink inspectors inspect importers, label holders and producers that sell special food and drink products. They conduct product-related inspections in combination with food safety system inspections. A food safety system inspection is an inspection that looks at the extent to which a business is ensuring the safety of food in the food supply chain with regard to the hazards associated with raw materials[2]. In this investigation, 140 infringements were detected at 70 businesses (= 52%). In 2017, this was 48% of the 178 businesses that were visited, with a total of 137 infringements. Most of the infringements related to a failure to comply with the HACCP conditions in Article 5 of Regulation (EC) No 852/2004, followed by the Nutrition and Health Claims Regulation.

Nutrition and health claims for cereal-based breakfast products project
In 2014, the NVWA inspected the correct use of nutrition and health claims on labels containing at least 1 claim and the corresponding websites of 122 different cereal-based breakfast products. The products related to 26 different (house) brands of 22 companies. Analysis showed that 48% of the products with a claim that were assessed fully complied with the requirements of the Health Claims Regulation. At business level, 6 of the 22 businesses/companies assessed (=27%) fully complied with the Health Claims Regulation.

[2] www.nvwa.nl: Information Sheet 64: Ensuring food safety in the food supply chain with regard to the dangers associated with raw materials

In 2018, an investigation was carried out similar to the one in 2014. Between May-October 2018, the NVWA analysed 149 different cereal-based breakfast products with at least one claim, from 39 different (house) brands from 34 responsible businesses, on the requirements of the Health Claims Regulation. Whenever a claim was found on the label, like in 2014, the corresponding website of the producer was assessed.
103 products (= 69%) complied with the requirements of the Nutrition and Health Claims Regulation. In 2018, 15 out of the 34 businesses that were assessed fully complied with the Nutrition and Health Claims Regulation regarding the breakfast products they sold and distributed as well as regarding the corresponding website (= 44%).

Compliance investigation in 2018 comparison with 2014
In 2014, compliance rose from 48% to virtually 100% following the NVWA's intervention. Over time, however, compliance decreased again, back down to 69% during the investigation of the NVWA in 2018.
At the level of the individual companies, it was found that compliance had risen from 27% of companies in 2014 to 44% of companies in 2018. This means that roughly half of all companies that sold and supplied breakfast products in 2018 and which were assessed did not meet the requirements of the Nutrition and Health Claims Regulation.
In 2018, a larger number of websites contained irregularities/deviations than in 2014. In addition, the use of Article 10.1 claims, a claim that is not accompanied by an authorised health claim, increased from 1 to 7 compared to the investigation carried out in 2014. In almost all cases, this related to a high in fibre claim linked to saturation, which is not permitted.

3.18 Plant health

Controlling authorities: NVWA, KCB, NAK, Naktuinbouw and BKD.

List of the main legislation in force in 2018

EU Legislation

- Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community
- Council Directive 2007/33/EC on the control of potato cyst nematodes
- Commission Directive 2006/63/EC and Council Directive 98/57/EC on the control of Ralstonia solanacearum (Smith) Yabuuchi et al
- Commission Directive 2006/56/EC and Council Directive 93/85/EC on the control of potato ring rot
- Council Directive 68/464/EEC on the control of potato wart disease

National legislation

- Plant Diseases Act (Plantenziektenwet)

Size of the control file in 2018

type of business	number in 2016	number in 2017	number in 2018
Arable agriculture	10,821	10,685	10,842
Ornamental horticulture – flower bulbs	1,622	1,654	1,628
Ornamental horticulture – floristry	3,035	2,807	2,636
Ornamental horticulture – tree nurseries	3,680	3,508	3,265
Vegetables	4,185	4,164	4,049
Fruit	2,701	2,789	2,773

Agricultural sector inspections in 2018

- Within the area of arable agriculture, the most noticeable activity is the ongoing effort to combat a number of soil organisms related to potato cultivation. These organisms include quarantine pests such as the potato cyst nematode (PCN), as well as *Meloidogyne chitwoodi*, *Meloidogyne fallax*, potato brown rot, ring rot and potato wart disease.

inspections in arable farming	number of inspections			rejections due to quarantine pests		
year	2016	2017	2018	2016	2017	2018
Import	1,178	1,721	1,915	0	0	0*[1]
Potato wart disease	80	341	140	0	0	1
National seed potato crop	21,695	17,957	Unknown	45	57	*
Export inspections*[2]	17,625	18,954	17,875	22	0	*

** exact figures unavailable at the time of publication of this report*

[1] *2 interceptions from internal traffic.*

[2] *Exports to third countries.*

The key phytosanitary findings for the arable agriculture sector in 2018 were as follows:

- In 2018, there were 2 interceptions of *Meloidogyne chitwoodi* from internal traffic of consignments of potatoes for human consumption.
- In 2018, 12 new fields were found to be infected with *Meloidogyne chitwoodi* and/or Meloidogyne fallax outside of the previously demarcated areas. Demarcation subsequently took place. Growers cultivating seed potatoes in the designated zones must allow their harvests to be tested for the presence of the nematodes *M. chitwoodi* and *M. fallax*.
- No ring rot was detected in the Netherlands in 2018. This suggests good compliance with the measures designed to combat ring rot in the Netherlands.

- There was 1 discovery of potato wart disease in the context of the inspections for the release of parcels previously declared infected.
- In 2018, there were 5 instances of potato brown rot (Ralstonia solanacearum). The outbreak in 1 clonally related consignment of seed potatoes (confirmed in March 2018) has now been eradicated. The outbreak of brown rot in 2017 has also been eradicated. Tracing for the other outbreaks (confirmed in September, October, November and December 2018) is ongoing.

Inspections in the fruit and vegetable sector in 2018

The fruit and vegetables sector covers the development of new varieties, global seed production and distribution, plant propagation and the cultivation of fruit and vegetables, outdoors or in greenhouses. Within this sector, plants and seeds are imported from various parts of the world, with distribution taking place throughout Europe and exports going out to places around the world.

Inspections in the fruit and vegetable sector		**Number of inspections**		**Rejections due to quarantine pests**		
year	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**
Import	84,500	73,705	86,907	151	176	273
National survey	3,816	4,231	429	62	86	*
Plant passport	3,664	3,819	3,595	88	34	29
Export **	54,039	43,568	Unknown	1,266	1,103	*

** Exact figures unavailable at the time of publication of this report*

*** Exports to third countries*

The key phytosanitary findings for the fruit and vegetable sector in 2018 were as follows:

- In 2018, the number of interceptions of quarantine pests during import inspections in the fruit and vegetable sector increased to a total of 273 intercepted consignments. Multiple interceptions took place within a number of consignments (multiple quarantine pests and/or multiple infected products), adding up to a total of 288 interceptions.
- Most interceptions took place regarding the plant genera Solanum (n=50), Ocimum (n=48), Capsicum (n=38), Citrus (n=35) and Mangifera (n=30).
- The highest number of interceptions related to the quarantine pests *Bemisia tabaci* (n=80), Thrips palmi (n=33), Bactrocera sp. (n=27), Spodoptera frugiperda (n=26) and Thaumatotibia leucotreta (n=20). Bemsia tabaci were found most often in non-regulated products, namely on herbs from the Ocimum genus.
- The countries with the highest number of intercepted consignments were Surinam (n= 64), Israel and Malaysia (n=30) and Kenya and Mexico (n=15).
- In 2018, no quarantine pests were detected in the fruit and vegetable sector under the Phyto monitoring programme, with the exception of a number of cases of Tomato chlorosis virus in the tomato cultivation sector.

Inspections in the floristry sector in 2018

The floristry sector covers a wide range of products for ornamental horticulture, including propagation material, end products and products at all stages in between. The highly internationalised production chains have close connections between the different links in the chain.

inspections in the floristry sector		**number of inspections**		**rejections due to quarantine pests**		
year	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**
Floristry imports	80,100	80,545	73,667	183	108	216
Floristry, national survey	600	1,247	263	1	10	*
Floristry, plant passport	10,433	10,309	13,818	15	8	8
Floristry exports **	38,250	38,999	47,850	7,234	*	*

** Exact figures unavailable at the time of publication of this report*

*** Exports to third countries*

The key phytosanitary findings for the floristry sector in 2018 were as follows:

- The number of quarantine pests intercepted at import inspections doubled from 108 to 216 intercepted consignments. This consisted of 164 intercepted consignments of finished products (cut flowers) and 52 intercepted consignments of plants intended for planting. Multiple interceptions took place within a number of consignments (multiple quarantine pests and/or multiple infected products), adding up to a total of 225 interceptions.
- Most interceptions took place regarding the plant genera Rosa (n=107), Vallisneria (n=17), Gypsophila (n=12), Eustoma (n=8) and Dianthus (n=7).
- The highest number of interceptions related to the quarantine pests Thaumatotibia leucotreta (n=96), *Bemisia tabaci* (n=32), Lyriomyza sp. (n=33), Spodoptera sp. (n=27) and Hirschmanniella sp. (n=18). Without the 96 interceptions that took place regarding Thaumatotibia leucotreta on cutting roses (a combination that was first regulated in 2018), the number of interceptions would have remained roughly the same as in 2017.
- Countries with the highest number of intercepted consignments included Kenya (n=50), Tanzania (n=44), Malaysia and Zimbabwe (n=24) and Ecuador (n=9).
- There was one discovery of Viteus vitifoliae on grape plants in pots intended for sale to private customers (confirmed in August 2018) – this outbreak has since been eradicated.
- Tobacco ringspot virus was found in Phlox paniculata (confirmed in February 2018), Iris germanica and Hemerocallis sp. (confirmed in August 2018). At present, the necessary tracing is ongoing to ensure the eradication of these outbreaks. Given that the vector of this virus, Xiphinema americanum sensu lato, does not occur in the Netherlands, there is no risk of horizontal transmission.
- Tomato ringspot virus was found in 1 consignment of Iris germanica (confirmed in August 2018). At present, the necessary tracing is ongoing to ensure the eradication of this outbreak. Given that the vector of this virus, Xiphinema americanum sensu lato, does not occur in the Netherlands, there is no risk of horizontal transmission.
- Within the Phyto monitoring programme, the quarantine pest Radopholus similis was found in the palm survey in 2018.
- The quarantine-worthy spider mite Tetranychus mexicanus was found in plants of Beaucarnea recurvata (confirmed October 2018), after which eradication measures were put in place.

Inspections of flower bulbs in 2018

Outdoor cultivation of flower bulbs involves cultivation in open ground, which entails specific risks relating to soil-borne organisms. Other organisms, such as viruses, are also a threat to the cultivation and global sale of flower bulbs.

inspections of flower bulb	number of inspections			rejections due to quarantine pests		
year	2016	2017	2018	2016	2017	2018
Flower bulb imports	481	581	586	0	0	1
Flower bulbs, plant passport	45,195	44,926	30,947	116	81	61
Flower bulb exports **	7,862	8,244	8,225	297	264	212*

** Relates to rejections due to the presence of organisms/pests*

*** Exports to third countries*

The key phytosanitary findings for the flower bulb sector in 2018 were as follows:

- Ditylenchus dipsaci was found on tulip bulbs on 1 occasion at import.
- Of the inspected export consignments, numbering over 8,000, 2.6% was rejected due to the presence of a harmful organism.

Inspections of tree nurseries and green spaces in 2018

The tree nursery sector is closely connected with woods, gardens, public plantings and parks in what are referred to as 'green spaces'. Infections in green spaces can have serious consequences for tree nurseries and vice versa. Organisms are able travel on untreated packaging wood, and these may subsequently impact green spaces and tree nurseries – for that reason, the figures on wood packaging have been included in this section.

inspections of flower bulbs in 2018	number of inspections			rejections due to quarantine pests		
year	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**
Tree nurseries, national survey	205	100	110	0	0	0
Tree nurseries, plant passport	9,559	9,431	9,423	38	48	69
Wood packaging materials inspection programme	1,946	2,846	1,596	22	6	2
Green spaces, national surveys	661	771	849	2*	0*	0*

** These figures do not include the discoveries of Erwinia amylovora in buzzer zones outside nurseries (n=132, n=104 and n=142 from 2016 to 2018).*

The key phytosanitary findings for tree nurseries and green spaces in 2018 were as follows:
- Apriona sp. was found in packaging wood from China on 2 occasions during import inspections of packing wood.
- In 2018, no quarantine pests were detected in green spaces in the context of the phyto monitoring programme.
- However, several regulated organisms were detected during tree nursery inspections in the context of the phyto monitoring programme. These were organisms that are known to be present in the Netherlands and Europe and are only regulated for certain plant species, such as fire blight (*Erwinia amylovora*).

Conclusions

The number of notifications from the Netherlands to third countries due to a discovery of a quarantine organism has increased quite significantly, with 501 intercepted consignments in 2018, up from 358 consignments in 2017. The main cause is the regulation of Thaumatotibia leucotreta as a quarantine organism as of 1 January 2018. This organism is mainly found in cut roses from Africa, but may also be found on fruits from Capsicum sp. and Citrus sp. fruits from Africa.

The key changes concerning the status of the pest in 2018 are related to the outbreaks of the Tomato ringspot virus and Tetranychus mexicanus (both 'Transient, under eradication') and Potato spindle tuber viroid organisms, which are currently considered 'Present, in ornamentals' due to the scrapping of measures for ornamental plants.

Sources consulted
- Europhyt interceptions, Europhyt Outbreaks
- Statistics Netherlands
- Annual reports of NAK, Naktuinbouw, BKD, KCB
- NVWA – IBP import data, Phyto monitoring, Pest status register (06 31)

3.19 Plant protection

Controlling authority: NVWA, the Dutch Water Authorities

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Regulation (EC) No 1107/2009	Placing of plant protection products on the market
Directive 2009/128/EU	Sustainable use of pesticides
Regulation (EC) No 1185/2009	Statistics on pesticides
Directive 2006/42/EC amended by Directive 2009/127/EC)	Machines for the application of pesticides
Regulation (EC) No 396/2005 of the European Parliament and of the Council	Residue levels of plant protection product

National legislation

- Plant Protection Products and Biocides Act (Wgb)
- Plant Protection Products and Biocides Decree (Besluit gewasbescherming en biociden)
- Regulation on Plant Protection Agents and Biocides (Regeling gewasbescherming en biociden)
- (Environmental Management) Activities Decree (Activiteitenbesluit Milieubeheer)

Size of the control file in 2018

type of business	**number (approx.)**	**hectares (approx.)**
Approval holders	150	N/A
Importers of plant protection products	40	N/A
Trade (products for professional use)	217[1]	N/A
Users of plant protection products:		
ornamental crops grown in greenhouses[2]	2,060	3,880
Field-scale vegetable production	8,220	86,610
outdoor trees and perennial cultivation	2,810[3]	16,880
arable agriculture	12,840	455,440
outdoor field-scale fruit cultivation	2,670	20,440
flower bulbs	1,630	27,560
vegetables grown in greenhouses	1,180	4,990
outdoor cultivation of ornamental crops	1,040	3,370

[1] *Source: CDG** list. 183 CDG branches and 34 VKL*** branches*

[2] *Encompasses tree nurseries and tree and perennial cultivation in greenhouses*

[3] *Also encompasses vegetable growers at arable agriculture businesses*

** CBS = Centraal bureau voor de statistiek (Statistics Netherlands)*

*** CDG = Certification for the distribution of plant protection products (Certificatie distributie in gewasbeschermingsmiddelen)*

**** VKL = Food Quality Contract Work (Voedselkwaliteit loonwerk)*

Target groups

In relation to controls on trade and on the use of plant protection products, the risks for each target group under the Plant Protection Products and Biocides Act are regularly reviewed. The various target groups are monitored periodically and, where necessary, controls are intensified or other activities are undertaken to improve compliance.
The target groups were classified as follows in 2018:

high risk	**medium risk**	**low risk**
Ornamental crops grown in greenhouses	Tree nurseries	Arable agriculture
Trade (professional)	Outdoor cultivation of ornamental crops	Field-scale vegetable production
Imports	Fruit cultivation	Approval holders
Plant protection outside of the agricultural sector	Vegetables grown in greenhouses	
Flower bulb cultivation		

This table lists the most important target groups. Where the NVWA carries out controls on the use of plant protection products only as part of a broader inspection or on the basis of reports and personal observations, such as in relation to livestock farming and private use, these target groups are not included.
The classification is based on cultivation. As a result, there are other focus areas, such as cultivation in groundwater protection areas, which are not specifically mentioned here.

The 'trade in products for professional use' and 'imports' product groups deserve further explanation. These target groups are classified as high risk.
Trade: due to its position in the chain, it has an effect on the compliance level for all target groups. After all, correct use of a product depends on the provision of the correct information and resources to the users.

Imports: given the number of illegal imports observed and the knock-on effects of illegal agents in the rest of the chain, this target group has been classified as high risk.

Plant protection outside of the agricultural sector: given that the inspections of 2017 and 2018 identified a large number of infringements within this target group, it has been classified as a high-risk group.

Flower bulb cultivation: the compliance measurement of 2018 shows that compliance in the flower bulb sector has improved significantly, with a compliance rate of 89%. As a result, this target group may be transferred from high to medium risk for 2019.

Cultivation in areas with large amounts of surface water or in water extraction or groundwater protection areas constitutes a high environmental risk. This has contributed to the prioritisation of this target group. This target group is also assigned a higher priority when the risks are greater due to more intensive plant protection and an increased probability of the identification of non-compliance, such as for ornamental crops grown in greenhouses.

Controls
The NVWA uses two forms of controls when supervising users of plant protection products:
- Application controls: these are controls in the field at the moment when plant protection products are applied (execution of spraying). These controls primarily focus on the (exclusive) use of plant protection products authorised in the Netherlands and on compliance with the statutory usage requirements relating to emission mitigation measures that apply in the vicinity of surface water and/or for the protection of non-target organisms. Furthermore, they are used to assess compliance with cross-contamination reduction measures that are included in the (Environmental Management) Activities Decree and apply both to parcels adjacent to surface water and parcels not adjacent to surface water.
- Establishment controls ensure that growers only use authorised products and use them in accordance with the legal requirements. In addition to a thorough inspection of businesses and their records, inspectors may also take samples for laboratory testing for residues of unauthorised products. This enables the NVWA to determine whether growers have used unauthorised plant protection products and whether they have complied with the instructions on the label. The spraying records are also inspected, including the presence of a certificate of professional competence.

For controls on both open-air and protected crops, the NVWA works with other bodies, in particular the Dutch Water Authorities. In 2011, a covenant for joint supervision of the import of plant protection products was signed with Dutch Customs.

Supervision of 'Plant protection', results in 2018

results in 2018	number of business controls	administrative and criminal law settlements	warnings
Approval holders	13	1	1
Importers	118	5	0
Trade	50	11	9
Users of plant protection products:			
• ornamental crops grown in greenhouses	2	0	1
• field-scale vegetable cultivation	4	1	1
• arable agriculture	13	2	2
• field-scale fruit cultivation	4	1	1
• flower bulbs	275	24	29
• plant protection outside of the agricultural sector	73	25	13
• vegetables grown in greenhouses	123	20	17
• other (test exemptions/contract workers/ private individuals/livestock farmers)	13	1	1
• outdoor tree nurseries, cultivation of perennials and ornamental crops	28	1	3
Total users of plant protection products	**535**	**75**	**68**
Application inspections	132	34	10
Reports/complaints/incidents	56	11	2
Total results in 2018	**894**	**136**	**90**

A total of 438 samples were taken and tested during controls in 2018.

The results in the above table are not representative of the Dutch situation, because, in addition to monitoring, the NVWA also carried out targeted controls based on inadequate compliance, reports and other signs. In other words, the NVWA primarily inspects businesses where a higher probability of infringements is already expected. Furthermore, the table above is also based on the inspections initiated in 2018 that were completed before 15-3-2019. This means that inspections initiated before 2018 that were completed in 2018 (151 inspections) have not been counted. The same applies for inspections that were begun in 2018 but were not completed before or on 15-3-2019 (roughly 30 inspections). As such, based on the figures above, no statement can be made regarding compliance. The figures referred to in the explanatory notes to the results may differ from the figures shown above due to use of different reference periods.

Re-inspections
In more than 135 inspections, an aspect that had previously been found to be unacceptable was found to be acceptable after a re-inspection.

Cross-compliance
In 2018, the NVWA carried out 484 cross-compliance controls, which determined whether good plant protection practices and instructions for use had been followed.

Hygiene Regulation
The compliance measurement for vegetables grown in greenhouses included inspections carried out at 93 businesses regarding the hygiene requirements for primary plant production.

In 2018, the NVWA carried out a total of around 1,000 controls specifically relating to the use of plant protection products and around 500 controls in which the use of such products was considered in a wider context.

Dutch Water Authorities
Alongside the NVWA, the water authorities supervise the use of plant protection products near surface water. In 2018, based on their supervision, the water authorities submitted 64 reports of findings to the NVWA for further administrative processing. The results from the water authorities are not included in the above table.

Explanatory notes to the results for 'Plant protection'

Approval holders
In order to comply with the European obligations in Regulation (EC) No. 1107/2009 on selling and distributing plant protection products (pesticides), the NVWA made a risk-based selection of plant protection product case files for 13 approval holders and carried out inspections. This involved the analysis of 52 samples taken from 19 different products (from a number of products with multiple badges/charges) regarding the quality requirements and comparison of the authorisation decision of these products with the text on the label. The analyses of the sampled products did not reveal any irregularities. Due to a lack of specifications or analysis methods, not all physical and chemical parameters and additives could be checked for accuracy. Testing was performed to fill in these gaps as much as possible. This is a common problem encountered in many EU countries. Various irregularities were identified at 4 approval holders during controls on label texts. In the case of 3 approval holders, this related to minor omissions where an approval following correction was sufficient after remedial measures were carried out. On one occasion, a warning was issued due to multiple major omissions.

Findings from business inspections at users (growers) of plant protection products revealed that 1 approval holder had sold and distributed a plant protection product with the labels of another EU country on the packaging. A report of findings was drawn up for this infringement.

Import
In 2018, in collaboration with Dutch Customs, the NVWA inspected 10 postal parcels and 66 containers being imported from third countries that potentially contained plant protection products. A report of findings or an official report was drawn up on 4 occasions. Each of these cases related to consignments of illegal plant protection products from China. Of these 4 consignments, banned products were imported via postal parcels on 3 occasions, with multiple consignments of counterfeit products having been imported by sea freight (containers) on 1 occasion. There were 45 notifications of parallel imports of plant protection products. An inspection was carried out for 42 of these notifications regarding the requirements for parallel imports and regarding the sale and distribution of plant protection products. Imperfections were identified for 5 import consignments. In 1 case, this related to serious omissions, i.e. non-compliance with the labelling requirements on the packaging following re-labelling, and a corresponding report of findings was drawn up. The remaining 4 cases related to minor omissions that were handled with approval following correction after remedial measures were put in place.

Trade
In 2018, 50 inspections were carried out at businesses selling professional plant protection products to end users in the context of the wholesalers project. These inspections were carried out based on a selection in response to reports or findings from other inspections within the plant protection domain. A total of 7 official reports were drawn up for the supply of a plant protection product to users in violation of the statutory usage guidelines for that particular product. These cases involved supply of products for which a purification obligation was required, with which the users did not comply. In addition, fine reports were drawn up during 3 inspections regarding the sale of banned products. Furthermore, infringements were identified during 10 inspections regarding the stocking of products (authorisation or W code), the supply of professional products to customers without a plant protection qualification certificate, the supply of products with the correct W code, the administrative obligations and/or advertising plant protection products. With regard to these infringements, written warnings were issued during 9 inspections and a report of findings was drawn up for 1 inspection.

Since 1 January 2010, all businesses supplying professional users of plant protection products must be affiliated with the Foundation for Certification for the Distribution of Plant Protection Products (CDG). This requirement means that the CDG monitors compliance with the regulations among this target group. The requirements of the certification scheme were clarified in 2018 and amended where necessary.

Cultivation
The Plant Protection domain encompasses various target groups (see the Target Groups table). Once every four years, a compliance measurement is performed for each target group. In 2018, compliance measurements were conducted for flower bulbs and greenhouse vegetable cultivation. The compliance rate was 89% in the flower bulb industry. This is a considerable improvement compared with the compliance rate in 2014 (55%). The improvement was achieved through a joint commitment of the sector and the NVWA. The sector has ensured solutions to difficulties regarding application options and has carried out an extensive communications campaign with the NVWA on the requirements and the importance of compliance with regulations. In addition, it was announced in 2017 that the NVWA would be conducting strict controls within the flower bulb sector in 2018. Most infringements (in 9% of the controls) related to the use of plant protection products in contravention of the regulations and the use of products banned for use in cultivation in particular. The disinfection of flower bulbs is also a key area of focus within this sector. In 2018, 5 fine report were issued for the use of formaldehyde, which indicates that formaldehyde is still being used in the flower bulb sector. Given that detection of the use of formaldehyde during inspections has mostly taken place with businesses being caught in the act, actual use may be significantly higher than identified during the inspections. The supply of formaldehyde from trade to the sector and a letter sent to the trade journal for the flower bulb sector, which advocated use of formaldehyde, goes to strengthening this suspicion. On the other hand, work is ongoing within the sector regarding the development of alternatives. Exemptions were issued in 2018 for one of these alternatives, i.e. chlorine generated in situ. The application of chlorine (generated in situ) has been observed on a number of occasions during various inspections.

In the greenhouse vegetable cultivation sector, the compliance rate was 84%. In previous years, the level of compliance within this target group was higher – over 90%. Similar to those in the flower bulb sector, most infringements (in 12% of controls) related to the use of plant protection products in contravention of the regulations and the use of products banned for use in cultivation in particular.

In 2018, the 2017 compliance measurement for the outdoor cultivation of ornamental crops (tree nurseries, perennials and floristry) was completed. This compliance measurement involved 381 inspections at businesses and 15 application inspections. The compliance rate for the outdoor cultivation of ornamental crops for 2017 was 82%, which is similar to the compliance rate of 85% of previous compliance measurements within this sector. Without taking into account the resolution of infringements, it appears that 24% of ornamental crop growing businesses use unauthorised plant protection products. Inspections have also shown that outdoor flower cultivation businesses (34% of businesses) make use of unauthorised products more often than businesses such as tree nurseries or in the cultivation of perennials (20% of businesses). This chiefly relates to the use of products that are as a whole banned for use in the relevant area of cultivation or are only authorised for use in the covered cultivation of an ornamental crop. Furthermore, the conditions of application of the products' usage guidelines, such as the maximum number of applications and maximum dosage/amounts, are not respected. There is, however, good compliance with restrictions on products for the protection of surface water and bees.

Plant protection outside of the agricultural sector
In response to the ban on the use of plant protection products outside of the agricultural sector by professional users, the NVWA implemented an inspection programme. This programme involved 73 inspections, which led to 25 administrative and criminal law settlements. 48 of these inspections were conducted at random. Based on the number of fine reports, the level of compliance is 83%. A large number of infringements, however, were dismissed with less serious repercussions due to the minor and/or incidental nature of the infringements. In 74% of the infringements, it was noted that the relevant parties were insufficiently informed of the ban and/or the restriction conditions of particular products. In 2017, inspections primarily took place at businesses with hard surfaces, and in that year, the same was indicated for 77% of cases. A large number of gardening companies, landscape contractors and municipalities were also visited in 2018. In 2018, it also became clear that, in addition to businesses with hard surfaces, gardening companies and landscape contractors were likewise insufficiently informed of the ban.

Inspections affecting all target groups

Application inspections

In 2018, 132 inspections were carried out during the application of plant protection products. One or more infringements were identified during 47 inspections, which led to a total of 34 reports of findings, of which 70% related to non-compliance with cross-contamination mitigation measures that are required under the (Environmental Management) Activities Decree and/or the statutory guidelines of the plant protection products used. Furthermore, reports of findings were drawn up for the use of banned plant protection products, the absence of a plant protection qualification certificate, or contravention of the ban on the professional use of plant protection products outside the agriculture sector. Around 60% of these inspections were conducted among the fruit and flower bulb cultivation and arable agriculture target groups.

Plant protection monitor

A total of 398 inspections were conducted on the presence of the plant protection monitor. Non-compliances were found in 38 cases (10%). The monitor was absent in almost all of these cases. This is an improvement in respect of last year, where 20% of the inspections were non-compliant.

Certification of spraying equipment

In the application inspections, the inspectors also looked at whether the spraying equipment was certified. The equipment was found to be uncertified in eight cases.

Reports

In 2018, the NVWA received 191 notifications via the NVWA notification system containing the subject/description 'plant protection products' or 'pesticides'. These reports can be divided into the following categories.

category	number of notifications
Neighbours/careless use	70
Bee mortality	9
Import	43
Use	49
Trade	20

Of the 191 notifications, 108 notifications did not lead to an inspection. The reasons for not launching an inspection may relate to lack of sufficient information, insufficient reasons for a violation and/or the responsibility for the notification not lying within the remit of plant protection enforcement. Notifications regarding imports have already been covered in the chapter on imports.

No clear distinction can be made between the categories of careless use and neighbours. Of the 70 reports from neighbours, 45 were related to health complaints or concerns about the effects of the spraying on their health. Of these, 8 notifications were investigated, with 2 written warnings being issued. Cases of physical health complaints or concerns were referred to the GGD (Municipal Health Service). The remaining 25 reports related to careless use, of which 12 were investigated and which did not lead to any infringements being identified. In the case of 9 out of the 25 notifications, potential damage was also reported as a result of the applications.

In 2018, the NVWA received 9 reports on the topic of bee mortality. In the case of 7 notifications, it investigated whether the bee mortality was connected to any potentially incorrect use of plant protection products. Investigation of these 7 notifications failed to prove that bee mortality was due to the use of plant protection products, but was attributed to other (suspected) causes. The 2 notifications that were not investigated merely related to a small number of dead bees or bumblebees and there was no direct link to plant protection products whatsoever.

There were 37 notifications in relation to the use of plant protection products, which enquired as to whether actions had taken place in accordance with the law, 6 notifications regarding the possible use of herbicides on the road shoulder, and 6 notifications regarding instances in which use of plant protection products may have resulted in damage to nature or the environment. 11 notifications regarding compliance with legislation were investigated, which led to a total of 2 fine reports and 1 official report being drawn up. A single notification regarding the possible application of herbicides on

the road shoulder was investigated, with 1 fine report being drawn up. 2 notifications relating to potential damage to nature or the environment were investigated to ascertain whether this had occurred as a result of the use of pesticides. In one instance, an official report was drawn up.

Regarding the trade of plant protection products, some 20 notifications were submitted, with 14 notifications relating to internet sales. 4 notifications relating to the trading of plant protection products were investigated, leading to 2 fine reports being drawn up. In the case of 8 notifications relating to internet sales, this related to the sale of plant protection products via Facebook. Enforcement via Facebook in the field of plant protection is currently under development. The NVWA is engaged in talks with Facebook to explore the possibilities.

Investigations were carried out in relation to notifications/complaints/incidents that were not submitted via the NVWA notification system. These investigations led to 2 official reports and 2 fine reports: regarding the importing of a banned plant protection product in 1 case and regarding the banned use of plant protection products in the remaining 3 cases.

OECD/RAS
At the initiative of the Organisation for Economic Co-operation and Development (OECD), the Rapid Alert System (RAS) was set up to track consignments of (suspected) illegal plant protection products from the point where they enter the EU to the place of destination within the Member States. This system has been operational since October 2012. In 2018, the Netherlands submitted two RAS notifications of suspected illegal plant protection products and/or active substances from third countries that had been imported into the Netherlands and were destined for one of the EU Member States. The number of RAS notifications is decreasing each year, which may be the result of a number of causes, such as lack of interest or an alternative method of notification that yields a quicker response and results.

Actions taken to improve compliance

In 2016, the NVWA launched a new approach for the enforcement of plant protection. An extensive communications campaign was conducted in advance of the compliance measurements of 2017 and 2018, and the measurements were carried out for a significantly larger percentage of growers compared to previous compliance measurements. It is expected that this approach and the associated communication will improve the level of compliance.

In 2016, a target group analysis was performed in the flower bulb sector, on the basis of which the NVWA took joint actions with businesses in the sector in 2017 to improve compliance in flower bulb cultivation. The flower bulb sector has developed an action plan, 'Healthy Bulbs, Flourishing Sector', which aims for a reduced and more sustainable use of plant protection products. The 2014 compliance results from the NVWA were a clear stimulus to the sector to develop alternative practices. In 2017, the NVWA carried out a flower bulb communication and action plan in collaboration with the industry's trade association. To determine and encourage compliance, the NVWA conducted a large number of inspections in the bulb cultivation sector in 2018. Please see the positive results under the Cultivation heading.

The 2018 inspections show that, as in previous years, most infringements are committed in the field of the use of products that are banned from use in cultivation. A sufficiently effective package of measures and funds is seen as a crucial prerequisite for improving compliance among growers. In 2018, the NVWA continued to work hard at both a national and international level to identify and improve the accessibility of plant protection products. Its actions included dispensing advice with regard to 'small-scale applications' and determining the agricultural necessity for the granting of exemptions for use.

The 2016 and 2017 inspections showed that the Plant protection monitor was often not or insufficiently updated. In 2017 and 2018, the NVWA explored the possibilities of increasing the practical value of the Plant protection monitor, resulting in a relevant opinion in 2018. This avenue will be pursued in 2019.

The 2017 inspections revealed that there were a large number of problems with the labelling of seeds for sowing. The relevant regulations are unclear and leave a lot of room for interpretation. In 2018, a project was launched by the NVWA in consultation with the sector to examine how this could be organised more effectively.

In recent years, there has been a noticeable increase in the trade and use of green products, including biostimulants and basic substances. There is a significant lack of clarity on the matter and producers have a lot of questions about 'green'

products. In 2018, a project was launched within the NVWA regarding the development of an enforcement approach for 'green' products.

In 2018, the project was kicked off in order to explore whether compliance in the ornamental cultivation sector could be improved through broader cooperation with the various stakeholders, such as growers, retailers and certifying bodies.

Conclusions

Both dispensing technical agricultural advice and carrying out supervision will contribute to the policy-related objectives with regard to plant protection products.

The 2017 and 2018 approach of collaboration with growers' organisations, communication and openness in trade can potentially contribute significantly to improving compliance. This approach will therefore be continued and possibly expanded with alternative instruments.

A significant contribution to compliance came from the NVWA's efforts to create an appropriate and effective package of measures and funds to combat pests and diseases. Efforts are being made nationally and internationally to increase the package of measures and funds. The emphasis is on low-risk funds, solutions for small-scale applications and the promotion of integrated plant protection.

The controls carried out, as well as reports and measurements, show that:
- compliance in fruit cultivation has improved compared with four years ago;
- compliance in greenhouse vegetable cultivation had decreased compared to previous years;
- compliance in outdoor cultivation of ornamental crops has remained the same;
- compliance for plant protection outside of the agricultural sector is low and there were a significant number of reports that parties were insufficiently aware or unaware of the ban of the professional use of plant protection products (pesticides) outside of the agricultural sector;
- there has been a visible improvement in the updating of the Plant protection monitor;
- attention is still required with regard to:
  - the supply of and trade in products not authorised in the Netherlands;
  - use of products that are banned for specific cultivation purposes, but permitted for others;
  - misuse or absence of cross-contamination mitigation measures.

3.20 Organic products

Controlling authority or authorities: Skal (Stichting Skal Biocontrole).

List of the main legislation under which controls were carried out in 2018

EU Legislation	
Council Regulation (EC) No 834/2007, Commission Regulation No 889/2008	Basic legislation, implementation provisions
Commission Regulation (EC) No 1235/2008	Arrangements for imports

National legislation

Section 15 of the Agricultural Quality Decree (Landbouwkwaliteitsbesluit) 2007:
The Stichting Skal is the authority referred to in Article 27(4)(a) of Regulation (EC) No 834/2007 and is charged with:
a. supervision of compliance with the rules laid down in or pursuant to this regulation regarding organic production methods and the production methods designated equivalent by ministerial order;
b. keeping the records, referred to in Article 28 of Regulation (EC) No 834/2007;
c. other implementation action that is required for the proper implementation of the regulation referred to in the introduction.

Results 2018

Every business wishing to produce, process, package, import, trade in or store organic products must be certified by Skal to do so. Skal monitors the entire organic supply chain in the Netherlands.

Size of the control file in 2018

type of business	**number**
Agricultural businesses	2,010
Food manufacturers, importers,	
trading and storage businesses	3,036
Total number of registered businesses	5,046

Supervision of 'Organic Products', results in 2018

supervision of organic production	**number**
Inspections	6,127
Samples	441
Measures: 1,044 serious and 62 critical irregularities	1,106
Number of businesses suspended	2
Number of businesses whose organic certificate was revoked	4

types of inspections	**number**
Permit inspections	716
Expansion as a result of a broader scope	249
Annual inspections	3,991
On-site re-inspections	208
Targeted inspections	963
Total	**6,127**

Reference to specific reports

Annual Report 2018, published on 15 March 2019: https://www.skal.nl/nieuws/jaarverslag-2018-online

Explanatory notes to the results for 'Organic products'
Any Dutch company that wishes to sell and distribute organic products falls under the certification obligations of Skal. Skal subsequently assesses whether the business processes comply with European legislation and regulations.
In 2018, Skal used a range of instruments to assess whether companies are organised in a manner ensuring that the organic products that they sell come from a reliable organic business process. Skal inspectors carried out 6,127 inspections, with certification officers carrying out assessments of 4,646 product registrations and supervision specialists carrying out 963 unannounced inspections and processing 274 reports. All of this goes towards ensuring that consumers are presented with a reliable organic product.
In retrospect, 2018 was a year of growth for Skal. Growth in terms of personnel and professionalism, growth of the organic sector and of the complexity of the work itself.
Unfortunately, 2018 also proved to be a difficult year, given that Skal was unable to inspect all registered companies. This was a risk-based decision on the part of the organisation. In addition, any businesses that were not inspected in 2018, are first on the inspection list in 2019.
In 2018, Skall fully complied with its statutory duty to carry out part of its supervision on the basis of risk (please see Commission Regulation (EC) No 889/2008, Article 65 (2) and (4) and Article 92 (2)).

Projects in 2018

Import
In 2018, 85 unannounced inspections were carried out at importers in the context of risk-based import supervision. The focus of these inspections was the processing of the digital import certificates (CI) in TRACES NT. A total of 48 irregularities involving 85 importers were observed during these inspections.
In addition to these administrative controls, Skal also executed sampling on 97 occasions at import businesses.
The number of non-compliant product decreased compared with 2017 (7% non-compliances in 2018 compared to 15% non-compliances in 2017).
The residues detected related to the herbs, tea, cocoa and cereals product groups.

Targeted inspections at new businesses
Experience shows that newly registered companies do not carry out or implement all of the points discussed at the permit inspection equally well. As of 2016, Skal has begun using an additional inspection, within a year after the permit inspection, at part of the newly registered companies to identify any instances of non-comprehension or non-compliances with elements of standards sooner. In this way, Skal assists these companies in achieving a good level of compliance. The number of companies or businesses without non-compliances in the 1st annual inspection is significantly higher among companies that have had an interim, targeted inspection.

Supermarkets
In 2018, a survey was conducted into consumer products that were available in shops. Products were purchased from (online) supermarkets and their labels were assessed. All of these products were subsequently analysed for residues of pesticide, plant protection products and/or antibiotics. In addition, a number of products was also subject to an authenticity test (test of origin). On the one hand, this was to gain experience with the usefulness of these analytical methods. On the other hand, this also served to explore whether questioning the organic status could be legitimate.
A total of 95 samples were taken in 1 day as part of this investigation. In the assessment of the labels, at least 1 non-compliance was identified in 13% of the labels. A residue of unauthorised substances was found in 2 samples. No antibiotic residues were found in the beef samples and salmon samples. The wine samples complied with the sulphite provision in the Organic Regulations.
The organic/non-organic authenticity test yielded a better match with regular coffee than with organic samples for 3 out of 6 coffee blends. This was reason enough for Skal to initiate tracing and cross-checks for coffee at three businesses. All coffee samples retained organic status.

Guidelines
In 2018, Skal fulfilled its obligations arising from the Guideline of the European Commission. The Guidelines requires that all consignments of certain organic products originating from the Ukraine, Kazakhstan and the Russian Federation be subjected to additional border controls. These border controls consist of sampling for pesticide residue analyses. The largest share of imports originated from Ukraine. In total, 150 samples were taken in 2018. In 0.7% of cases, the organic consignment was downgraded to conventional.

Incidents

During their 6,127 visits to businesses in 2018, inspectors identified a total of 62 critical non-compliances. Almost 3/4 of the critical non-compliances that were identified in 2018 related to a repeated, unresolved serious non-compliance from a previous inspection.
The number of non-compliances identified in 2018 was virtually identical to 2016 and 2017, while the number of certified companies has grown.
In the event of multiple critical non-compliances or recurrence of critical non-compliances, the entire company may be suspended. In 2018, organic certification was revoked for 4 companies.

Actions taken to improve official controls

In 2018, Skal began developing cross-sector plans that set out a multiannual strategy designed to provide risk-based supervision with a more robust and sound approach for each sector.
The cross-sector plan for imports was the first to be realised. Imports of organic products have shown strong growth. In 2017, the import of organic products increased by 30% compared with the previous year – a trend that continued in 2018. Given that the Netherlands is an essential transit port for import products entering the EU, this sector is equally critical to other EU Member States.

The activities that were formulated in the cross-sector plan for imports relate to:
- the supervision of identified risks;
- exploring how effective and efficient supervision can be achieved using digital methods;
- improving cooperation with other actors in the industry;
- encouraging a sense of responsibility among market participants.

Actions taken to improve compliance by the industry

The main objective of the provision of information by Skal is to promote compliance among the certified businesses. Skal has adopted an active, informative approach through active communication. The www.skal.nl website is the key communication channel for both parties exploring the market and already-certified businesses. All relevant and current regulations can be found on this website, broken down by subsector. Certified businesses and other interested parties received a digital newsletter in 2018, as well as a printed newsletter containing announcements of new rules or reminders of existing regulations. In addition to the newsletters, certain segments of the sector were informed via email of legislative amendments relevant to them and were invited to give feedback on the thematic supervision of their specific subsector.

Conclusions for 2018

Based on the inspections conducted by Skal, it can be said that by far most organic companies in the Netherlands are in good compliance with organic regulations. A critical deviation was only identified in less than 1% of the registered companies during the inspections. It is only in relation to a critical deviation that organic status of the product is at stake. The number of certified companies is growing steadily, whereas the number of deviations identified during the inspections in 2018 remained the same as in previous years. This is also a positive sign with regard to compliance with organic regulations.

3.21 Protected geographical designations: protected designations of origin (PDO), protected geographical indications (PGI) and traditional specialities guaranteed (TSG)

Controlling authorities: COKZ, KCB and NVWA

List of the main legislation under which controls were carried out in 2018

EU Directives, Regulations and Decisions	
Commission Regulation (EC) No 1151/2012	Quality schemes for agricultural products and foodstuffs
Commission Delegated Regulation (EU) 664/2014	The establishment of the Union symbols for protected designations of origin, protected geographical indications and traditional specialities guaranteed
Commission Implementing Regulation (EU) No 668/2014	Implementing provisions for Regulation (EU) No 1151/2012

National legislation

- Animals Act (Wet dieren)
- Animal Products Decree
- Regulation on Animal Products

Size of the control file in 2018

Type of business	
Processors and subsequent processors of cheese with protected geographical indication	
• Industrial processors of PDO and/or PGI cheese	17
• Processors of Dutch farmhouse cheese (TSG) and/or Boeren-Leidse met sleutels (PDO)	220
• Subsequent processors of PDO, PGI and/or TSG cheese	74
Total	**311**

Supervision of PDO, PGI and TSG cheese, results in 2018

Results	**Number**
COKZ inspections/certifications of cheese with a protected designation in 2018	
• Industrial processors of PDO and/or PGI cheese	17
• Sub-inspection I (PDO and PGI)	4,978
• Processors of Dutch farmhouse cheese (TSG) and/or Boeren-Leidse met sleutels (PDO)	677
• Subsequent processors of TSG, PDO and/or PGI cheese (including Goat PGI)	185
• Sub-inspections II and III PDO NHG PGI GH / EH and PGI HG	2,026
Samples of cheese with a protected designation Industrial processors of PDO and/or PGI cheese	
• microbiological testing	438
• phosphatase activity	122
• composition analysis	4,978
Processors of Dutch farmhouse cheese (TSG) and/or Boeren-Leidse met sleutels (PDO)	
• composition analysis	512
• phosphatase	195
Subsequent processors of PDO, PGI and/or TSG cheese	
• microbiological analysis	35
• additives (cheese rind treatment)	52
• phosphatase activity	68

Explanatory notes to the results of controls on PDO, PGI and TSG cheese in 2018

General

Under the regulations passed in the context of the Animals Act (the Animal Products Decree and the Regulation on Animal Products), the COKZ is mandated to carry out supervision in relation to the cheese varieties named in these regulations. In the context of this report, this includes the cheese varieties prepared in the Netherlands for which rules have been set in or pursuant to Regulation (EU) No 1151/2012 on quality schemes for agricultural products and foodstuffs, namely:

- Gouda Holland and Edam Holland (both PGI cheeses) and Noord-Hollandse Gouda (PDO)
- (Note: Noord-Hollandse Edammer, Kanterkaas, Kanternagelkaas and Kanterkomijnekaas are not currently being produced);
- Dutch farmhouse cheese (Boerenkaas) (TSG) and Boeren-Leidse met sleutels (PDO);
- Dutch Goat Cheese (Hollandse geitenkaas) (PGI).

The Regulation on Animal Products designates the COKZ as the supervisory authority. The COKZ performs its supervision duties using product-specific control regulations that are drawn up by the COKZ and approved by the Minister.

Industrial processors of PDO and/or PGI cheese

The vast majority of naturally matured Gouda cheese and, increasingly, naturally matured Edam cheese, is marketed under the respective EU-protected geographical indications (PGI) Gouda Holland and Edam Holland. Since 2016, goat cheese has also been produced and traded under the protected designation 'Hollandse geitenkaas' (PGI). In addition, certain Gouda cheese produced in the Province of North Holland is marketed under the EU-protected designation of origin (PDO) 'Noord-Hollandse Gouda'.

In total, there are 17 different industrial processors of PDO and/or PGI cheese:

- 14 producers of Gouda Holland and/or Edam Holland;
- 2 producers of Noord-Hollandse Gouda;
- 4 producers of Dutch Goat Cheese.

The 14 processors of Gouda Holland and/or Edam Holland include 1 business that also produces Noord-Hollandse Gouda. Of these 14 processors, two also produce Dutch Goat Cheese. Finally, there are two processors solely producing Dutch Goat Cheese.

Noord-Hollandse Gouda (PDO)

The product specifications for Noord-Hollandse Gouda were adopted in 1997. There are two initial processors and four subsequent processors of Noord-Hollandse Gouda.

The processors concerned are already subject to supervision by the COKZ in the context of other control programmes for cheese. Based on these programmes, in terms of supervision of the composition and quality of Noord-Hollandse Gouda, the controls that take place in that context are considered to be sufficient. In the 4th quarter, controls were expanded to a frequency that corresponds to the frequencies traditionally laid down in the product specifications via a trial period.

The two initial processors of Noord-Hollandse Gouda were subject to 7 controls on compliance with process requirements in 2018. During two inspections, a deficiency was observed at one of the processors. Some of the cheese produced as Noord-Hollandse Gouda was not sufficiently identifiable as such on the trade document. Agreements were made with the business to resolve this deficiency. In 2019, a requirement will be introduced that each cheese should bear a casein mark indicating the protected name. The records at each processing location were also inspected to check that the dairy raw materials used in making the Noord-Hollandse Gouda came exclusively from North Holland. If non-North Holland milk was received, the procedures to separate the North Holland and non-North Holland milk, and compliance with these procedures, were assessed. During these administrative controls, the mass balance of the incoming milk from North Holland and the resulting Noord-Hollandse Gouda produced from that milk was also verified. These administrative controls were carried out twice at both production locations in 2018.

Gouda Holland and Edam Holland (PGI)

The designations 'Gouda Holland' and 'Edam Holland' have been protected under European law as geographical indications (PGI) since 24 December 2010 at the request of the Dutch Dairy Association (NZO). The basis for this

protection can be found in the product specifications with the same names, which were approved by the European Commission on 2 December 2010.
These specifications include a stipulation that the milk used for Gouda Holland and Edam Holland must be produced in the Netherlands, and that the cheese must mature naturally.

Initial processors of Gouda Holland (PGI) and Edam Holland (PGI)
In 2018, 6 companies with 14 production locations between them were operating as initial processors producing Gouda Holland (PGI) or Edam Holland (PGI). The standard control programme for PGI cheese includes nine control visits per quarter. Every quarter, a maximum of 150 samples are taken to analyse the composition and pasteurisation of the cheese milk. Furthermore, samples are analysed at a specific frequency for microbiological aspects and nitrate, and the brine is analysed.
When samples are taken for composition analysis, the 'first sub-inspection' is performed at the same time. During this 'Sub-inspection I', the following requirements laid down in the product specifications are checked: the cheese mark used, maturing temperature, pH, shape, appearance, rind, the dairy, including consistency, colour and hole formation, the smell and flavour and the designation of the cheese.
All initial processors are also inspected with regard to use of the correct rennet and starter culture and correct use of the PGI cheese mark, among other matters. No deficiencies were detected during these inspections.
The administrative control on the origin of the milk used in the production of the cheese takes place once each year. At each production location, a mass balance is used to compare all farm milk received with the amounts of cheese and PGI cheese produced. If non-Dutch milk is also received, the procedures to separate the Dutch milk and non-Dutch milk, and compliance with these procedures, are assessed. Traceability tests are used to verify that PGI cheese is produced from Dutch milk. The annual check was carried out at all 14 processing locations in 2018. In 2018, during the routine check, extra attention was devoted to the aspect of whether the milk was transported to the factory within 72 hours of milking, as stipulated in the product specifications.
Initial processors of PGI cheese can opt for partial self-inspection. In this case, provided they use a COKZ-approved quality assurance system and once they have obtained permission from the COKZ, they become responsible for taking and analysing (or arranging for analysis of) two-thirds of the samples (100 samples) out of the required number of up to 150 samples that are to be taken for analysis each quarter. The analyses to be carried out by the business include, at a minimum, analysis of the composition and pasteurisation of the cheese milk. If warranted by its own supervision results, the COKZ can withdraw permission for partial self-assessment.
In 2018, the COKZ carried out 100% of the controls at 7 processing locations of the 14 initial processors of Gouda Holland and/or Edam Holland in 1 or more quarters.
Regarding the moisture content of the Gouda Holland and Edam Holland, 6 processors were found to have serious violations so as to warrant flagging for excessively high moisture content in 1 or more quarters. High moisture content was the cause of 106 infringements out of a total of 383 infringements across all businesses. The sanctions handed down by the disciplinary tribunal were in line with the proposals.
Regarding infringements relating to the fat content in the dry matter of the Gouda Holland and Edam Holland, 6 processors were found to have serious violations so as to warrant excessively high fat content to be brought before the disciplinary tribunal in 1 or more quarters. This involved a total of 54 infringements of the total 141 infringements identified. Yet again, the sanctions handed down by the disciplinary tribunal were in line with the proposals.

Subsequent processors of Gouda Holland (PGI) and Edam Holland (PGI)
PGI cheese is inspected at the age of approximately 28 days (sub-inspection II) at the subsequent processors' premises. Sub-inspection II concerns the shape, appearance, rind, dairy, smell/flavour, cheese mark and maturing temperature. Sub-inspection III occurs when the cheese is delivered. In this random sub-inspection, the testing is supplemented by a control on the correct use of the Gouda Holland or Edam Holland designation. It is particularly important that, when the cheese is cut, it can be demonstrated that the cheese used is actually PGI cheese.
Inspections of subsequent processors uncovered two cases in 2018 in which the cheese did not comply with the minimum prescribed maturity period. In two other cases, misleading labelling was discovered. This cheese had matured for a shorter period than was stated on the packaging. These deficiencies, which were observed at four different businesses, were all referred to the disciplinary tribunal.
The deficiencies most frequently identified during sub-inspections II and III were developments of holes in the cheese and an anomalous taste and/or consistency. The relevant cheese was rejected. These incidents were of such a nature that the non-compliances did not even warrant or need to be put before the disciplinary tribunal.

Dutch Goat Cheese (PGI)
There are four producers in the Netherlands engaged in industrial production of the protected cheese variety Dutch Goat Cheese, or 'Hollandse geitenkaas'. Dutch Goat Cheese is a traditional, geographical designation for a semi-hard cheese produced in the Netherlands and matured naturally or in foil. The cheese is prepared in accordance with a centuries-old production process for Gouda cheese. It must be produced entirely from goats' milk obtained from the Dutch white goat or from crossbreeds of this goat with other goat breeds producing typical milk. Furthermore, the milk must originate exclusively from goat farms located in the Netherlands. Dutch Goat Cheese must mature naturally for at least 25 days, allowing a rind to form, or be matured in foil packaging as a rindless cheese to create a product ready for the consumer. The associated product specifications, submitted to the European Commission by the Dutch Goat Milk Association (NGZO), were officially registered by the European Commission in May 2015.
With regard to the fat content of the dry matter, the three infringements identified at one initial processor of Dutch Goats' Cheese were such as to warrant referral to the disciplinary tribunal – the cheese was found to have an excessively low fat content in the dry matter.
The various sub-inspections are also performed in relation to Dutch Goat Cheese. The first sub-inspections are performed on the premises of the producers. The second sub-inspection is performed on the premises of the subsequent processors, and the third at the time of delivery. No irregularities were observed during any of these sub-inspections.

Processors of Dutch farmhouse cheese and/or Boeren-Leidse met sleutels

Dutch farmhouse cheese (TSG)
The product specifications for Dutch farmhouse cheese were adopted in 2007. This cheese is made on the farm from raw milk largely supplied by the farm's own cows.
Supervision of this sub-sector revealed that, in 2018, there were around 215 active Dutch farmhouse cheese producers, but only 49 active subsequent processors of Dutch farmhouse cheese. The latter group is mainly involved in storing Dutch farmhouse cheese for maturing.
The majority of the Dutch farmhouse cheese inspected complied with the relevant requirements. The infringements identified mainly related to the fat content of the dry matter (7) and the moisture content (9). No fine regulations are in force for moisture content infringements. These infringements were dealt with by issuing a warning.
Of the 7 instances of excessive fat content in the dry matter, 1 was referred to the disciplinary tribunal and sanctioned in accordance with the fine proposal. Six of the seven instances related to cheese that was designated as Dutch farmhouse cheese without any further statement of variety, such as 'Gouda', 'Leidse' or 'made from sheep's milk'. The Dutch farmhouse cheese product specifications do not contain a list of specific composition requirements for these varieties of Dutch farmhouse cheese. For the purpose of the statement of the fat content in the dry matter, Dutch farmhouse cheese without a designation of variety is tested against the relevant stipulations in the Dairy (Commodities Act) Decree, and if the fat content limit is exceeded, the standard response is a warning.
Since 2016, extra analyses of phosphatase content have been performed. Since that time, phosphatase levels have been analysed for all initial processors of Dutch farmhouse cheese, and samples have also been taken from subsequent processors of Dutch farmhouse cheese for the same purpose. Of the 257 samples analysed in total, only one was non-compliant. One infringement was charged to the relevant business.

Boeren-Leidse met sleutels (PDO)
The product specifications for 'Boeren-Leidse met sleutels' were adopted in 1997. This variety of cheese is a semi-hard farmhouse cheese produced in the Netherlands in accordance with the special recipe for this variety, in an area precisely defined in the product specifications. Seven initial processors are engaged in the production of Boeren-Leidse met sleutels. Roughly fifteen subsequent processors are engaged in the production of Boeren-Leidse met sleutels.
The majority of the initial processors of Boeren-Leidse met sleutels can be assessed within the testing programme for Dutch farmhouse cheese (TSG); this is because the broad outlines of the programme cover the same testing aspects as the control programme drawn up specifically for Boeren-Leidse met sleutels. The other businesses are tested for compliance with the applicable requirements under the latter programme. Both programmes encompass analyses including the fat content in the dry matter, the moisture content and the raw-milk character of the cheese. There were 3 infringements relating to the fat content in the dry matter in 2018. These infringements were put before the disciplinary tribunal.

Projects in 2018

In 2015, in collaboration with the RIKILT, the COKZ launched a project to test a number of analysis methods to see if it was possible to accurately identify the raw-milk character of Dutch farmhouse cheese with sufficient reliability.
The results of this testing led to the method of analysis of phosphatase in the cheese to be changed from analysis using the phenol method to analysis using the fluorophos test. It is expected that this will lead to more accurate measurement of the extent to which the cheese can be said to have been prepared from raw milk.
In 2018, the research was continued with additional analyses using the so-called fingerprint method, which uses volatile substances to measure the extent to which the preparations has or has not used raw milk. This is a fundamentally different method to that used for measuring phosphatase. The research will be continued in 2019.

Incidents

There were no significant or notable incidents.

Impact measurement

The method of monitoring and the corrective effect of penalties is well equipped to ensure that the preparation of protected cheeses can be adapted in businesses in the event that non-compliances are detected.

Actions taken to improve official controls

The principal item that cannot be tackled conclusively by way of the official controls is the issue of whether or not raw-milk cheeses have actually been produced using raw milk. For that reason, work is ongoing with the research institute RIKILT to improve analysis methods to be able to determine and define the raw-milk character of raw-milk cheeses (farmhouse cheese and Boeren Leidse met sleutels) accurately.

A proposal for the adaptation of the product specifications for farmhouse cheese is currently being prepared and aims for the indication of fat content to be included more explicitly as a requirement, thus allowing actual enforcement to take place on this element in the context of controls on protected names.

Actions taken to improve compliance by businesses

In 2018, the methods of sampling, analysis and control for Noord-Hollandse Gouda cheese were brought into better alignment with the requirements of the product registration dossier through a trial period. As of 1 January 2019, the adapted controls will actually be implemented and the preparation by the relevant processors will be brought into further alignment with the requirements of the product registration dossier/specifications.

Conclusions

The results of the controls show that the protected types of cheese generally meet the requirements in the corresponding product registration dossiers. It is primarily in Gouda Holland and Edam Holland that a number of violations are found. Corrections take place effectively by means of penalties, which take away the economic advantage of the relevant party.

CHAPTER 4
AUDITS

Introduction

This chapter reviews the audits conducted in the context of Regulation (EC) No 882/2004 in 2018. The chapter begins by describing the internal audits conducted by the NVWA, and then moves on to the audits conducted by the NVWA in 2018 of external organisations that perform certain tasks under the responsibility of the NVWA. The internal audits are carried out by the Internal Audit Service (IAD). External audits are conducted by NVWA inspectors.

Internal audits at the NVWA in 2018

Various NVWA laboratory and inspection activities have been accredited by the Dutch Accreditation Council (RvA) on the basis of international quality standards. In addition to the annual audits of these NVWA activities conducted by the RvA, the NVWA also conducted a number of internal audits in 2018. The key conclusion from these audits was that the NVWA's quality system is appropriate and effective, and complies with ISO 17025 or ISO 17020. These internal audits related to the following divisions:

- *Laboratory for Feed and Food Safety*
  The laboratory performs laboratory research on products of animal origin and food; it is accredited by the Dutch Accreditation Council (RvA) and registered under the code L-104.
- *National Reference Centre (NRC)*
  The NRC is the knowledge centre in the division dealing with phytosanitary organisms and diagnostics, vectors and invasive plants. The laboratory's research is RvA accredited and registered under the code L-522.
- *Fish Supervision*
  The Fish – certification teams supervise compliance with the regulations upon landing and export of fishery products. This task is RvA accredited and registered under the code I-134.
- *Border Inspection Posts (BIPs)*
  One of the tasks of the Import Inspection Department is to supervise compliance with the regulations on imports of live animals and products of animal origin at Border Inspection Posts (BIPs). This task is RvA accredited and registered under the code I-134.
- *Warehouses*
  In preparation of the extension of the I-134 accreditation, an internal audit was carried out on the controls at the free veterinary warehouses. These controls relate to the intake, storage and loading of non-EU-worthy veterinary products from third countries. These are products that are intended for third countries, cross-border means of sea transport and drilling rigs.

In 2018, the following internal audit was also conducted pursuant to Regulation (EC) No 882/2004. The key conclusion was:

- *2017 - 114 re-inspections*
  The IAD carried out an audit of the execution of re-inspections. The general conclusion was that the process of re-inspections within the NVWA as a whole is inadequate, resulting in insufficient guarantees that re-inspections will be scheduled, carried out and invoiced within the prescribed period of time. In a number of domains, however, particularly in the food service domain and those that fall directly under the Inspection Department, internal control measures have been put in place to ensure the quality of the process of re-inspections. Management has indicated that it will take up the 4 recommendations.

Audits of external bodies conducted by the NVWA in 2018

Netherlands Controlling Authority for Milk and Milk Products (COKZ) and the Netherlands Controlling Authority for Eggs (NCAE)

In the Netherlands, the COKZ has been designated as the authority for supervision the EU package of hygiene measures in the dairy industry. In addition, the COKZ/NCAE has been designated as the authority for supervising this package in the egg sector in the Netherlands. The NCAE is a department of the COKZ. At the dairy businesses and egg processing businesses supervised by the COKZ/NCAE for compliance with the package of hygiene measures, the COKZ also monitors compliance with other relevant Commodities Act regulations. These include the Commodities Act Regulations on Food Labelling, Infant Formulae, Baby Foods and Foods for Special Medical Purposes. As an exception, supervision of claims under the latter regulation is performed by the NVWA. Furthermore, the COKZ (and thus also the NCAE) has been appointed by the Inspector-General of the NVWA to perform supervision under the regulations concerning animal by-products (Regulation (EC) No 1069/2009 and Commission Regulation (EU) No 142/2011).
The NVWA is also authorised to issue veterinary certificates on behalf of the Minister of Economic Affairs and Climate Policy for milk and dairy products, including infant formulae and follow-on formulae. In issuing these certificates, the NVWA is relying on the supervision performed by the COKZ.

A compliance assurance programme was set up and implemented in 2018 on behalf of the Director of the Tactical Direction & Expertise division of the Enforcement Department. This assurance programme consisted of an audit (investigation and observation department) of the execution of the activities of the COKZ/NCAE listed above.
The objective of the audit was to obtain an understanding of the performance of the supervision activities by assessing the extent to which the COKZ and the NCAE have adhered to the agreements recorded in the dairy and egg work plans for 2018 and in the agreement relating to the issuing of veterinary certificates.

In addition to the general assessment of the implementation of the annual plan, the audit for this period focused on the following issues:
- compliance with the recommendations and directions of the report of the audit activities for 2017;
- implementation and execution of the NVWA intervention policies;
- supervision of the producers of infant formulae;
- supervision of tracing procedures;
- the underlying supervision in relation to the issuing of veterinary certificates.

It was established that the COKZ/NCAE effectively contributed to the implementation of the assessed components of the work plans for 2018, but that nevertheless improvements could still be made in some areas. It was also established that the COKZ had contributed effectively regarding the execution of supervision, as described in the agreement relating to the issuing of veterinary certificates.
The observations revealed that the COKZ and NCAE inspectors were performing their work in accordance with the procedures and had sufficient knowledge and expertise to carry out their supervision tasks.

The report of this audit included 16 recommendations relating to improvements for the COKZ/NCAE. The key recommendations are:
- That clear agreements should be made with the COKZ regarding the implementation deadlines for recommendations and directions.
- That the COKZ should be asked to draft a plan of action for the implementation of the actions undertaken in response to the recommendations in this report. This plan should be realistic, but should also include more ambitious deadlines, independent of the annual cycle of the NVWA assessments. In addition, these deadlines should fall within the newly agreed upon implementation period.
- That the COKZ should be requested to implement component IB02-SPEC39, rule 81 of the intervention policy within a month after receipt. These are: Listeria Monocytogenes food safety criterion: failure to investigate or to investigate adequately whether the food safety criteria are in compliance throughout the entire shelf life.

This last recommendation was highlighted by the principal as a direction (compulsory and to be taken up as soon as possible), given that it is of significant importance to the quality of the supervision and the performance of the responsibilities of the COKZ and the NVWA.

Animal Sector Quality Inspection (KDS)
The Animal Sector Quality Inspection (KDS) is an accredited private organisation, which carries out post-mortem (PM) inspections of red meat on behalf of and under the auspices of the NVWA. For this purpose, the covenant on the organisation of (post-mortem) red meat inspections (Convenant Organisatie roodvleeskeuring post-mortem) was drawn up in the Netherlands along with the associated regulatory arrangements. The NVWA and KDS recorded the Implementation of Article 3 of the aforementioned covenant and the inspection provisions in Regulation (EC) No 854/2004 in the 'VWA-KDS Contract, contract number: 001' and the associated annexes.
The NVWA conducts an audit to assess the KDA quality assurance system as well as the compliance and implementation of the agreements between the NVWA and KDS at least once a year.
In 2018, the principal focus was on slaughterhouses at which the NVWA does not carry out permanent post-mortem (PM) inspection. There was also particular focus on the training of the official assistants (OA).
To this end, KDS employees were interviewed at the KDS offices and documents and reports were reviewed. In addition, the NVWA audit team visited various inspection sites. The inspections at the inspection sites, aimed at the assessment of the actual working methods of the OAs, took place at 8 slaughterhouses at which there was no permanent supervision by the NVWA and at 3 businesses with permanent supervision.

The audit carried out by the NVWA revealed that the KDS uses a clearly structured and clear quality assurance system. During the visits to the inspection sites, the sub-observations frequently showed that the findings often related to those sites at which no permanent supervision of the NVWA was carried out. A key area of improvement is the optimisation of the uniformity in relation to:
- the acceptance of the presentation;
- the handling of businesses needing (significant) improvement and those not participating;
- the reporting of complaints.

The NVWA audit team has advised the KDS:
- that the OA should not accept inadequate inspection conditions and presentations (in accordance with tailored agreements);
- that there should be additional focus on acquiring and maintaining knowledge and skills in relation to identifying animal diseases/zoonoses subject to a duty of notification and the working methods for such cases;
- that the frequency of the quality measurements and inspections (MKK) and/or re-qualifications should be reviewed;
- that a clear, uniform procedure should be provided regarding reports of complaints, including a review procedure (according to the monitoring/verification principle);
- that cooperation with the NVWA should be intensified at locations with non-permanent supervision, e.g. by reviewing the consultation structure at a local and/or site-specific level.

Phytosanitary inspection services (phytosanitary inspections and laboratory diagnoses)
The Ministry of Agriculture, Nature and Food Quality has delegated certain phytosanitary certification inspections to the four phytosanitary inspection services: BKD, KCB, NAK and Naktuinbouw, as part of the Multi-Year Phytosanitary Inspection Agreement (MJO). In addition, the laboratories of the phytosanitary inspection services carry out official phytosanitary analyses for which they have been given powers by the NVWA NRC (= National reference centre). This relates to testing of so-called 'official samples' for specific organisms referred to in Council Directive 2000/29/EC. The NVWA oversees the implementation of the phytosanitary work by these inspection services and carries out regular supervision of the performance of the phytosanitary certification inspections and laboratory work for which they are authorised.
In 2018, supervision of the work of the laboratories was carried out in accordance with the audit plan. Due to the long-term illness of the lead auditor and their replacement, the scheduled audit activities regarding the inspection activities were not carried out. The phytosanitary inspection services are accredited both for the inspection activities and for the laboratory activities or part thereof. The Dutch Accreditation Council (RvA) also conducts annual audits in this regard. The corresponding reports are assessed by the NVWA and are part of the supervision remit exercised by the NVWA on the phytosanitary inspection services.

Flower Bulb Inspection Service (BKD)
As part of its supervision of the BKD, the NVWA accepted and took note of the RvA report on the BKD. During the audit assessment by the RvA in March 2018, it was established that the BKD's quality management system complied with the criteria laid down in NEN-EN-ISO/IEC 17025:2005 and ISO/IEC 17020:2012 and is operational as well as supported by its personnel.
The accredited operations were properly performed by competent staff who used appropriate tools and facilities. There were 2 category B non-compliances that were well within the applicable standard.
The BKD does not carry out laboratory tests on EU quarantine pests. The NRC has authorised the BKD for seven operations on third-country quarantines, six of which are accredited by the Dutch Accreditation Council (RvA) under ISO 17025. The assessment of the RvA report by the NVWA showed that these operations were carried out in accordance with the prescribed requirements.

Quality Control Bureau (KCB)
As part of its supervision of the KCB, the NVWA took note of the RvA report for 2017. The RvA conducted an office inspection on 21 and 23 November 2017. During the inspection, the KCB provided evidence of its general compliance with the requirements set by ISO 17020 for a Type A inspection body. Three Category B irregularities were observed, three relating to the quality management system and one relating to document management of a phytosanitary instruction. The RvA performed observations on 13 and 21 November 2017; no irregularities were noted. The KCB does not have a laboratory.

Netherlands General Inspection Service for agricultural seeds and seed potatoes (NAK)
The NVWA carried out an audit of the laboratory work as part of its remit to supervise the NAK and assessed the report of the RvA. The investigation of the RvA was carried out between September and November 2018. The system was found to be operational and enjoyed the support of the staff. It was established that the management system of the NAK, insofar as could be determined during this assessment, met the criteria of the NEN-EN-ISO/IEC 17025:2017 and the ISO/IEC 17020:2012, provided the irregularities were resolved. The RvA identified 2 category B irregularities, which were eliminated in January 2019.
The NAK is authorised to carry out 28 phytosanitary operations, of which 5 are accredited by the RvA under ISO 17025. On 29 October 2018, the NVWA carried out an audit at the NAK laboratory, during which 1 irregularity was identified in the Remarks category. This irregularity will be followed up on by the NVWA in the 2019 audit. It was concluded that the operation of the NAK quality management system complied with the requirements of Article 8 of the Multi-Year Phytosanitary Inspection Agreement and its quality requirements for diagnostic laboratory testing for plant pathogens.

The Netherlands Inspection Service for Horticulture (Naktuinbouw)
Between May and July 2018, the RvA carried out an audit at Naktuinbouw. This audit established that the Naktuinbouw management system met the criteria of the NEN-EN-ISO/IEC 17025:2017 and the ISO/IEC 17020:2012. 2012. The accredited operations were properly performed by competent staff who used appropriate tools and facilities. The audit revealed 5 category B irregularities. Naktuinbouw implemented corrective measures in a timely manner, thus resolving the irregularities.
The Naktuinbouw laboratory is authorised to carry out 56 operations, of which 7 are accredited by the RvA under ISO 17025. The NVWA conducted an audit of Naktuinbouw in June 2018 at its laboratory in Roelofarendsveen (bacteriology and virology). This audit identified 4 category B deficiencies and 4 deficiencies in the Remarks category. Naktuinbouw responded to these deficiencies within the prescribed time period and the solutions strategies were approved by the audit team.

Resistance testing for potato cyst nematode and potato wart disease
Independent research institutions can make the results of their resistance tests available to the NVWA, to allow the NVWA to produce lists of resistant potato varieties. These test results are used to produce such lists only if it is confirmed that the tests were carried out in accordance with the relevant version of the specified implementation protocols. The NVWA obtains such confirmation by auditing the research institutions. This concerns the resistance of potato varieties to potato cyst nematode disease (a disease caused by the nematodes *Globodera pallida* and *Globodera rostochiensis*) and potato wart disease (a disease caused by the fungus Synchytrium endobioticum). In the Netherlands, there are two laboratories that are authorised to perform official resistance testing for potato cyst nematode disease (the NAK and the HLB) and one (the HLB) that can perform official resistance testing for potato wart disease.

The NVWA monitors both laboratories. The NVWA conducted audits of the laboratories in 2018, while testing was being performed.
At the HLB, 2 irregularities in the Remarks category were identified. The irregularities relate to the documentation and had no direct impact on the implementation of the activities, and it was subsequently concluded that the quality assurance system met the operational requirements.

In 2018, the NAK worked according to the potato cyst nematode disease resistance testing implementation protocol. The NAK holds accreditation under ISO 17025 and its quality management system meets the requirements. No irregularities were identified in this regard.

CHAPTER 5
NVWA INTELLIGENCE AND INVESTIGATION SERVICE (NVWA IOD)

The duties of the Special Investigation Service (Bijzondere opsporingsdienst, BOD) of the Ministry of Agriculture, Nature and Food Quality and the Ministry of Health, Welfare and Sport have been incorporated into the NVWA Intelligence and Investigation Service (NVWA IOD). The NVWA IOD is deployed in the event of serious or systematic infringements of the law within the NVWA's enforcement domains. The NVWA IOD focuses primarily on complex, supply-chain-related, organised and international criminality.

The core tasks of the NVWA IOD are:
- collecting and refining intelligence;
- carrying out analyses to improve insights into the nature and extent of compliance and non-compliance;
- conducting investigations on the basis of a wide range of powers.

In 2018, the subjects tackled in investigations included:
- fraud involving meat or meat products;
- fraud involving the sale of manure;
- fraud involving rejected foods;
- trade in unauthorised plant protection products;
- fraud involving raw materials for animal feed;
- fraud involving EU subsidies for greenhouse horticulture.

Cooperation with other investigation agencies is ensured through the Special Investigative Services Platform and the National Intelligence Agenda. In areas relating to environmental enforcement, the NVWA IOD cooperates intensively with the police and the Intelligence and Investigation Service of the Human Environment and Transport Inspectorate (ILT-IOD). This cooperation is formalised in the Environmental Chamber.

Investigations
In 2018, the NVWA IOD completed a range of investigations and referred them to the National Public Prosecutor's Office for Financial, Economic and Environmental Offences for follow-up. The NVWA IOD also launched multiple large-scale investigations that were not completed before the end of the year.
Food fraud remains an important theme, but other topics, such as fraud in the export (intra-community and third countries) of horses and the use of unauthorised biocides are also significant themes. In addition, in a number of different investigations in 2018, the NVWA IOD targeted 'facilitators', which are organisations that help fraudsters prepare for, carry out or disguise their illegal activities. For example, the IOD launched a major investigation aimed at a consultancy firm suspected of playing a key role in fertilisation fraud and facilitating fraudulent activities with the fertilisation accounts of a large number of livestock holders.

Fraud Expertise Unit
The Fraud Expertise Unit (FEK) is a partnership between the supervisory divisions of the NVWA and the NVWA IOD. Within the FEK, an experienced investigator advises, guides and coaches the NVWA inspectorate on criminal investigations under the Economic Offences Act.

Other responsibilities
In addition to carrying out investigations, the expertise of the NVWA IOD includes gathering and analysing information. To this end, the Intelligence team establishes a detailed picture of other domains/sectors/supply chains, forms of crime, modus operandi, risks, trends and developments, relevant laws and regulations and IOD and NVWA supervision activities.
The IOD also plays a reflective and supervisory role within the NVWA and for the Ministries of Agriculture, Nature and Food Quality and Health, Welfare and Sport. In this role, it performs critical reviews of the course of investigations and makes recommendations relating to its own operations and those of the supervisory division concerned. Any gaps uncovered in the investigation in relation to laws and regulations are referred to the ministries in The Hague.
The partners involved also provide their perspectives.

These insights are shared with the Executive Board and in triangular consultations.
In 2017 and 2018, the IOD contributed to the Food Safety Statement and the NVWA Integrated risk analysis for poultry meat, which were published in the first half of 2018.
The NVWA IOD contributed to the NVWA's integrated risk analyses through its fraud overviews. These documents brought together insights from the scientific risk assessment of the Office for Risk Assessment & Research, fraud insights from the investigation service and information from supervision. This way, entire production chains were examined from a variety of perspectives and areas of expertise. The integrated supply chain analyses are critical to determining the NVWA's commitment and work in the years to come.

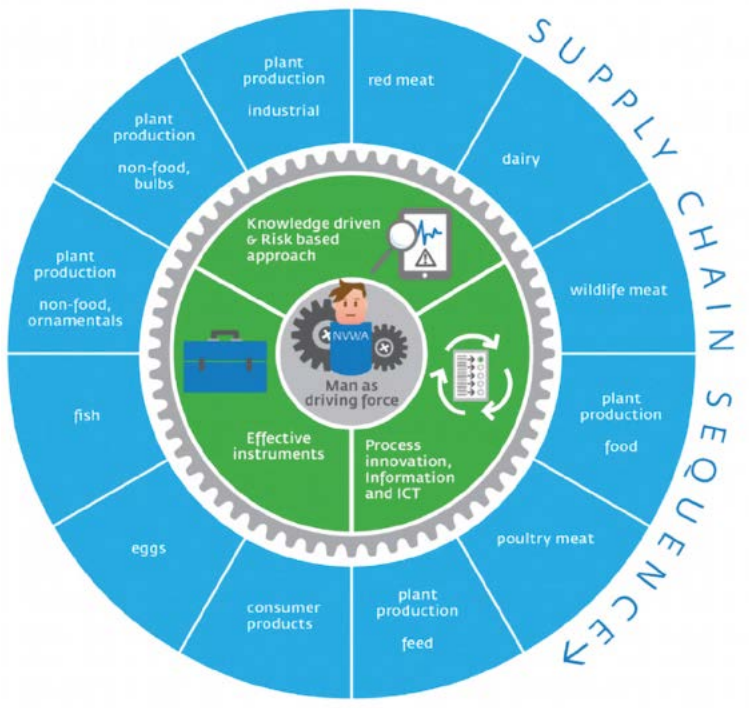
CHAPTER 6
DEVELOPMENTS IN RELEVANT ORGANISATIONS

NVWA reorganisation

Following the reorganisation of 1 July 2017, which set out a more future-proof structure for the NVWA, 2018 is the first full year in which the organisation gained experience within the new structure. The new NVWA structure means a tack in the direction of a domain-oriented organisation, moving from an organisation that is designed to function on the basis of logically recognisable process steps that allow more efficient, more uniform and more effective work to take place, support by improved data management. This should, among other things, increase the NVWA's capacity to innovate and to respond to the demands of a changing society, which includes the ever-increasing globalisation of production chains, the increasing influence of internet trade, and the increasing sensitivity to fraud of production and trade.
The restructuring has also led to a compact senior management structure, which allows the NVWA to be run in a simpler, more straightforward and more agile way, and to be easier to manage. A six-member Executive Board has been set up to run the NVWA, consisting of the Inspector-General, the three directors of the Strategy, Enforcement and Inspection departments, the Chief Financial Officer (CFO), who is also the Finance Director, and the Operational Management Director.
In 2018, the integrated cooperation between the Strategy, Enforcement, Inspection, CFO/Finance and Operational Management, as expected in a major structural change, proved to require further adjustment and detailing in parts. In addition, the implementation of the process-driven method will require additional efforts from the employees.

Integrated supply chain analyses

Ahead of 2020, the NVWA is evolving towards a knowledge-driven and risk-based authority, which intervenes effectively and in a targeted manner in the supply chains based on integrated chain analyses and a robust position of knowledge and information. The integrated supply chain analyses reflect the risks that (may) present themselves in the supply chains and are based on scientific risk assessment, fraud assessment and information from regulatory and supervisory practices. The private sector will be involved in the process, to obtain the most accurate overview of the production chain as can be achieved and, at the same time, to gain insight into the risk management taking place under the supervision of businesses themselves.



The NVWA has identified 12 production chains (please see figure) that will be reviewed from a supply chain perspective with an envisaged frequency of every 4 years. Depending on the production chain, the risks within multiple public interests will be estimated in an integrated manner. They allow supervision practices to be aligned with the developments that the risks undergo within the relevant supply chains. As such, this is not only relevant to the regulatory authority, but to businesses themselves, which, after all, are responsible for risk management, and to policy makers and civic society organisations.

State of Food Safety

The NVWA first published the 'State of Food Safety ' in 2018, which provides an assessment of food safety in the Netherlands from the perspective of the regulatory authority. The periodic publication of the "State ... " on each of the public interests represented by the NVWA is part of the NVWA 2020 improvement programme. Knowledge-driven and risk-based supervision takes centre stage and also means more attention is paid to reflecting on supervisory outcomes. The purpose of the 'State' is not only to pass the supervision findings on to citizens, consumers, businesses, civic organisations, policy-makers and politicians, but also to enable us to focus more closely on potential risks arising from social trends and developments.

The public's involvement in establishing a circular economy is one example of an important social trend that should be taken into account when deciding where to focus supervision. Recycling products and minimising value destruction help to make society more sustainable, but at the same time can introduce new food safety risks. Waste can find its way into the food chain; one well-known example is the migration of mineral oils from packaging made from recycled paper and cardboard.

With regard to the NVWA's work in 2020, the key priorities of this State of Food Safety are: ensuring risk-based supervision of food safety within the entire production chain, actively investigating and tackling existing and new risks in the supply chain, taking decisive action to deal with food fraud and maintaining open and transparent communication with all relevant stakeholders in society.

Brexit

The departure of the EU by the United Kingdom (UK), Brexit, will have an impact in many areas and on a great many organisations, including the NVWA and the relevant agricultural inspection agencies. The free movement of goods will no longer be possible, given that the UK will become a third country. Depending on the results of the negotiations between the EU and the UK regarding the terms of Brexit, the effects on the NVWA and the relevant agricultural inspection services may be more or less drastic. In 2017, the Netherlands kicked off its preparations for Brexit, which were based on the worst-case scenario where there would be no trade agreements in place between the EU and the UK, meaning that international trade would take place according to WTO rules. This will lead to an enormous volume increase in imports and exports to third countries. The UK, after all, is the Netherlands' third biggest trading partner. All consignments from the UK or with the UK as their destination will have to be controlled, inspected or certified by the NVWA – this will be a colossal additional task to undertake.
The detailed elaboration of the scenario above, the impact analysis, estimates that the extra manpower needed by the NVWA to absorb the volume increase in exports to and imports from third countries as a result of Brexit is 143 FTE (full-time equivalent), with 48 FTE for the relevant agricultural inspection services, the Quality Control Bureau (KCB), Naktuinbouw, and the Netherlands Controlling Authority for Milk and Milk Products (COKZ).
In 2018, the NVWA successfully kicked off a recruitment and training campaign for these additional inspectors to the amount of 143 FTE, of which 100 FTE will be veterinarians, given that within the veterinary domain, the desired level of education traditionally is a degree in veterinary medicine. Due to the many uncertainties in the Brexit negotiation process, the campaign took into account a potential adjustment of the number of FTE referred to in the above. In January 2019, the first cohort of 79 newly recruited veterinarians entered training.

New EU regulations

In 2018, the Ministry of Agriculture, Nature and Food Quality, the NVWA and the relevant agricultural inspection agencies took important steps in relation to the further implementation of the Plant Health Regulation and the Official Controls Regulation. These regulations come into force on 14 December 2019 and continued collaboration between the NWVA and the relevant agricultural inspection agencies is crucial to finalising implementation in 2019.

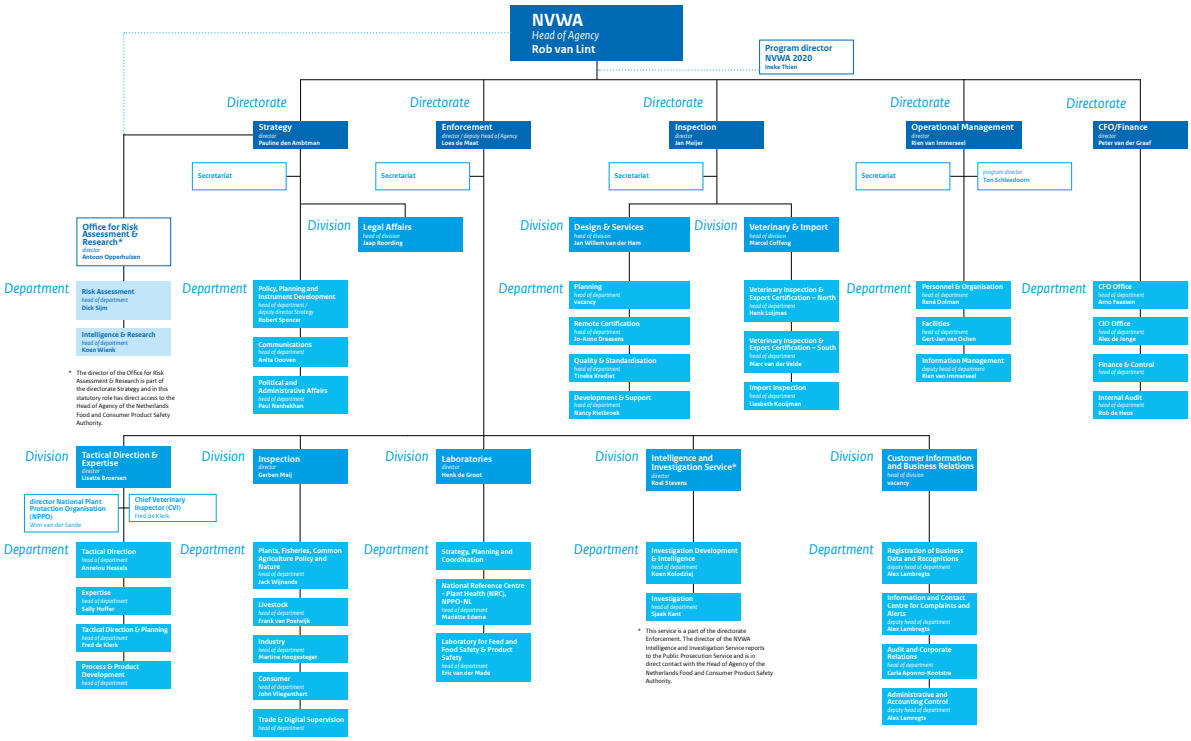
Fipronil – Sorgdrager report

The discovery in 2017 of the use of a chemical against red mite in chickens, which included the banned substance fipronil, led to the publication of the 'Investigation of fipronil in table eggs' report of the Sorgdrager committee on 28 June 2018. The fipronil incident revealed the weaknesses of the legislation and supervision of food safety. The Sorgdrager committee

examined all relevant stakeholders involved in the incident and formulated recommendations both for the private sector, the NVWA and for the government and public authorities. The committee took a favourable view of the way in which the NVWA implemented the intervention policies, but equally highlighted that food safety should be given greater priority, including at the NVWA. The appointment of a 'Chief Food Safety Officer' at the NVWA is being considered.
The report also cites other areas of improvement, such as improvement of the follow-up on indications and reports, closer cooperation between investigation services and regulatory supervision, the expedited introduction of risk-based supervision and effective communication on food safety incidents with other EU countries. This is also in line with the changes that the NVWA has initiated as an organisation. The committee recognises that the NVWA also represents other public interests besides food safety and, for that reason, calls on the government to ensure that the NVWA is properly equipped not only with regard to its responsibilities in the field of food safety, but also for its work in other domains. The report of the Sorgdrager committee partly led to the Food Safety Action Plan, in which the NVWA, the departments and the parties in the supply chain strengthened their commitment to their areas of responsibility, and was adopted at the end of 2018.

Description of the inspection services

The Netherlands Food and Consumer Product Safety Authority (NVWA)
The NVWA, part of the Ministry of Agriculture, Nature and Food Quality, was created from the Plant Protection Service (PD), the General Inspection Service (AID) and the Food and Consumer Product Safety Authority (VWA). Rob van Lint has been the Inspector-General since July 2017. Since the restructuring in July 2017, the structure of the organisation is as follows:



In 2018, the NVWA had a budget of €352 million (€159 million from the Ministry of Agriculture, Nature and Food Quality, €88 million from other ministerial departments (chiefly from the Ministry of Health, Welfare and Sport, € 84 million) and € 101 million from third parties). The organisation had a staff of 2,459 FTEs.
Staff working in the Enforcement and Inspection departments are largely responsible for the results reported in Chapter 3.

Although the product safety domain falls within the Directorate Enforcement, it is not included in this annual report, as it does not fall within the scope of Regulation (EC) No 882/2004. Product Safety has two laboratories in Zwijndrecht and Groningen.

The Office for Risk Assessment & Research (BuRO) is authorised under the Food and Consumer Product Safety Authority Independent Risk Assessment Act (Wet onafhankelijke risicobeoordeling 2006) to provide independent advice to the Minister and to the IG on feed, food and consumer product risks. Since 2015, its operations have been expanded to include animal welfare. BuRO operates in a similar way in the animal health and phytosanitary field. Its advice often relates to situations or actions, as well as products involving risks that could be mitigated by the implementation of measures. BuRO's advice is underpinned by research it has commissioned from knowledge institutions such as the National Institute for Public Health and the Environment (RIVM), RIKILT, Wageningen Bioveterinary Research and universities.
The BuRO has a staff of more than 42 people. An Advisory Board monitors the scientific quality of the advice and of the evidence it is based on. This guarantees the independence and objectivity of its risk assessments and overall advice.
The NVWA publishes its risk assessments and advice. The results of individual risk assessments are not included in this report, as risk assessment does not fall within the scope of Regulation (EC) No 882/2004.

The tasks of the Special Investigation Service (BOD) of the Ministry of Economic Affairs and the Ministry of Health, Welfare and Sport have been incorporated into the NVWA Intelligence and Investigation Service (NVWA IOD). The NVWA IOD is deployed in the event of serious or systematic infringements of the law within any of the NVWA's enforcement domains. The NVWA IOD focuses primarily on complex, supply-chain-related, organised and international criminality. The NVWA Intelligence and Investigation Service has prepared a report of its activities in 2018, which can be found in Chapter 6.

Finally, the NVWA has in-house laboratory resources to analyse samples collected during official controls. The following table shows the laboratories, their staff numbers and their locations.

Laboratory	Number of staff	NRL[1]	Location
1 for food safety	122	RIVM[2] Rikilt[3] NVWA[4]	Wageningen
1 for plant pests and diseases	61	NVWA[5]	Wageningen
2 for product safety: (1 for chemical and microbiological analyses and 1 for physical, mechanical and electrical analyses)	 16 18	NVWA[6]	 Groningen Zwijndrecht

1 *NRL = National Reference Laboratory*

2 *NRL for microbiology (except Campylobacter)*

3 *NRL for heavy metals, marine biotoxins, dioxins, polycyclic aromatic hydrocarbons (PAHs), growth promoters, veterinary medicinal product residues, animal feed and genetically modified organisms*

4 *Pesticides in human food and animal feed*

5 *Plant pests and plant diseases (phytosanitary)*

6 *Food contact materials*

Netherlands Controlling Authority for Milk and Milk Products (COKZ)/Netherlands Controlling Authority for Eggs (NCAE)
The Netherlands Controlling Authority for Milk and Milk Products (COKZ)/Netherlands Controlling Authority for Eggs (NCAE) is the Dutch authority for the control of milk and milk products, as well as for eggs, egg products and poultry meat (trading standards). The control of eggs and poultry meat is carried out by a separate division of the COKZ, namely the Netherlands Controlling Authority for Eggs (NCAE).
The COKZ has been appointed to supervise compliance with the EU hygiene regulations for dairy cows and the dairy industry. Under the Animals Act, the COKZ is also appointed to supervise compliance with the requirements governing exports of infant formulae, the quality of Gouda, Edam and Dutch Mimolette cheese and the protected designation of origin, protected geographical indication and traditional specialities guaranteed certification of a number of specific cheese varieties.
The COKZ/NCAE monitors compliance with the requirements governing the egg trade. These requirements are laid down in Regulation (EC) No 589/2008. In addition, the COKZ/NCAE monitors compliance with the requirements laid down in Regulation (EC) No 543/2008 governing the poultry meat trade. The COKZ/NCAE is the designated regulatory authority for compliance with all EU hygiene regulations by all food business operators in the egg sector.

In 2018, the physical separation was initiated of one of the functional separations implemented in 2007 regarding the public and private sector activities of the COKZ/NCAE and Qlip respectively. This meant that both organisations would each have their own premises, which would result in a range of facilities management issues, hereunto shared by both organisations, having to be disentangled. This separation has entailed a lot of additional work.
A trend has been observed in the dairy sector of a growing number of independent dairy processors (so-called 'zelfzuivelaars'). In 2018, more than 80,000 certificates for export to third countries were issued for the first time - an increase of almost 5% in respect of 2017.
COKZ/NCAE have also made preparations for Brexit in 2018. With regard to dairy and eggs, it is estimated that a minimum of 3 additional FTEs will be needed to effectively manage the impact of Brexit.

GD Animal Health (GD)
With around 500 staff, GD works in the area of the health of farm animals and pets in the interests of animals, animal owners and society. GD performs its work in conjunction with animal owners, veterinary practices, the government and the business community. GD is based in Deventer, operates in the Dutch market and also undertakes international activities. In 2018, GD achieved a turnover of 60 million euros.

It has its own extensive veterinary laboratory for the more than 5 million laboratory tests it performs each year. GD is accredited by the RvA under ISO 17025:2005 for the performance of many laboratory tests, under the registration number L120. It is also accredited (under the registration number R016) in accordance with ISO 17043:2010 for running a large number of proficiency testing schemes (PTS).

GD is also certified under ISO 9001:2008, which means that it works in accordance with a quality management system that meets the requirements of the ISO 9001:2008 standard. For information security, GD is certified under ISO 27001:2013, which means it handles customer data and information in a secure and responsible manner.

GD has a team of veterinarians, specialists and scientists working in the areas of histology, microbiology (bacteriology and virology), molecular biology, immunology, epidemiology, chemistry and toxicology. Its Pathology Team has its own collection service for carcasses and a modern post-mortem room for both mammals and poultry. GD veterinary specialists provide livestock farmers, veterinarians and the government with assistance and advice on the control of infectious diseases and business-specific disorders, as well as on other aspects, such as biosecurity and animal welfare. GD has been commissioned to perform animal health monitoring and practice-oriented research, and has developed a range of voluntary programmes for animal disease prevention and control.

For Animal Health Monitoring in the Netherlands, a joint initiative by the government and the livestock sector, GD gathers and analyses reports and results from the various monitoring instruments: consultations through the 'Veekijker' telephone help desk and business visits, the laboratory, the post-mortem room and data analysis. The results will be processed periodically or, if there is a possible acute risk to animals and/or people, will immediately be reported to the clients. GD has also been commissioned by the government to monitor a number of notifiable animal diseases, such as classical swine fever, avian influenza (AI), brucellosis and leucosis.

To improve food quality and food safety (of milk and meat products, for example), GD has developed a range of voluntary eradication and prevention programmes for livestock farmers to combat infectious animal diseases such as salmonellosis and paratuberculosis in the Netherlands.

Internationally, GD is known as GD Animal Health, and has a good reputation as a contract research organisation for applied research, education and consultancy. GD Academy, an education and training institute, runs training courses on animal health for livestock farmers and their veterinarians and for the pharmaceutical and livestock feed industries. The courses cover both the theory and practice of veterinary diagnostics and laboratory testing.

Skal (Stichting Skal Biocontrole)
As an independent regulatory authority, Skal is committed to ensuring the demonstrable reliability of organic products in the Netherlands. Organic farming and feed are legally-defined terms and the word 'organic' is a legally-protected term. The legislation focuses on the maintenance and justification of consumer confidence in organic products. In the EU, the designation 'organic' may only be used for agricultural products and foodstuffs that demonstrably comply with the applicable statutory requirements, laid down in EU Regulations No. 834/2007 and 889/2008.

'Demonstrably organic' means it is verified and certified by an EU-recognised inspection body. Skal translates the regulations into a workable supervision system for the Netherlands. The European authorities lay down the regulations, the certified organic businesses comply with them and Skal monitors compliance. The number of organic businesses in the Netherlands has risen sharply in recent years. The number of certified organic businesses was 4,833 at the end of December 2018, which is almost 7.7% more than at the end of 2017. Every business wanting to produce, process, package, import, conduct intra-community trade, export or store organic products must be certified by Skal to do so. This includes all businesses in the supply chain, apart from shops that sell packaged products directly to the final consumer and food service businesses that serve Dutch citizens consuming food out of doors. In 2018, Skal developed a cross-sector plan for web shops in 2018. In addition to an analysis of this sector, Skal has set out priorities and drawn up a plan of activities for the next 4 years.

All costs of Skal's supervision are funded by contributions from the registered businesses. Skal's mission is: to perform efficient and effective supervision of compliance with the organic regulations and thus to contribute to confidence in the organic sector.

If an organic business places pre-packaged consumer products on the market, use of the European certification label is mandatory. When it issues this label, Skal makes the reliability of organic products visible for both customers and consumers. The organic certification label may only be used by certified businesses and only on certified organic products.

In the Netherlands, Skal was appointed by the Minister of Agriculture, Nature and Food Quality in Section 15 of the Agricultural Quality Decree 2007 as the control authority as defined by EU Regulation No. 834/2007. Skal is tasked with supervision compliance with the rules concerning organic production methods.
The European regulation allows Member States to choose the structure of their monitoring regime. The Netherlands has opted for a straightforward structure: one control authority that is responsible for all statutory control tasks within organic production.
Skal is an independent governing body subject to private law and performs a number of statutory duties. This means that Skal can sometimes give further interpretation to the regulations.

The Netherlands Inspection Service for Horticulture (Naktuinbouw)
The Netherlands Inspection Service for Horticulture is better known as Naktuinbouw. Naktuinbouw promotes and monitors the quality of products, processes and supply chains in the horticulture industry. It focuses on propagating material at both the national and international level. Naktuinbouw is an independent governing body, subject to supervision by the Ministry of Agriculture, Nature and Food Quality. Naktuinbouw's mandatory inspection system has adopted the requirements of the European directives governing propagating material for floricultural, arboricultural and vegetable crops. These directives have been implemented in the Netherlands in the form of the Seeds and Planting Materials Act (ZPW). Naktuinbouw operates impartially and autonomously. Public duties relating to basic inspections assigned to other national or international quality and/or inspection services are not performed or are only performed on a collaboration basis. Naktuinbouw is the sole organisation in the Netherlands competent to assess varieties of vegetable, arable and ornamental plant crops in terms of their distinctness, uniformity and stability (DUS testing) for registration and/or plant breeders' rights.
Naktuinbouw operates voluntary quality certification systems. These complement the statutory certifications or extend beyond the legal guidelines. They include quality assessments of propagating material and examinations of varietal identity and varietal purity. The majority of the service's clients are individual producers and groups of producers of propagating material. In addition, Naktuinbouw focuses on promoting quality and certain specialist areas. This concerns businesses from the entire horticulture supply chain, including outside of the Netherlands.

Flower Bulb Inspection Service (BKD)
The Ministry of Agriculture, Nature and Food Quality has given the BKD authority over quality certifications of all flower bulb crops in the Netherlands, other than Freesia and Nerine, which have been entrusted to Naktuinbouw. In addition, BKD conducts phytosanitary inspections and performs other tasks on behalf of the NVWA. The BKD inspects flower bulbs for both quality defects and quarantine pathogens. The BKD also carries out quality certifications, import inspections, inspections for exports to third countries and laboratory testing. The BKD's testing system has adopted the requirements of the European quality and phytosanitary directives governing propagating material for flower bulbs. These directives have been given shape in the Netherlands in the form of the Agricultural Quality Act (LKW), which in turn is implemented through the BKD Inspection Regulations and Implementation Guidelines. The BKD also applies the requirements stipulated by countries outside of Europe for flower bulbs originating from the Netherlands. This takes the form of inspections and tests, which are performed on behalf of growers and traders after coordination with the NVWA.

Quality Control Bureau (KCB)
The Quality Control Bureau (KCB) is an independent administrative agency subject to supervision by the Ministry of Agriculture, Nature and Food Quality. The KCB exclusively performs public functions.
At the end of 2018, the KCB employed 144 employees. The KCB's control and inspection work is carried out from the offices in the various districts. The KCB is a foundation; it has a board with members who are appointed by sector organisations in the fruit and vegetable sector, the ornamental horticulture sector and the Dutch Food Retail Association (CBL). The Minister of Agriculture, Nature and Food Quality approves the appointment of the Board Chair. The KCB's most important duty is to inspect consignments and shipments of fresh fruit and vegetables, cut flowers and potted plants. The KCB also monitors the quality of fresh fruit and vegetables that are imported into, exported from and traded within the Netherlands. In addition to this, the KCB inspects businesses in the context of export programmes for specific destinations. The government has appointed the KCB to conduct these inspections. Examples of these business inspections include 'monitoring exports to Japan for Medfly', 'monitoring the export of tomatoes to the USA' and 'monitoring the export of pears to China'.
At the start of September 2018, the NVWA transferred part of its diagnostic responsibilities to the KCB. In this instance, the responsibilities relate to the final diagnosis of eggs and larvae of the cotton bollworm (Helicoverpa armigera) and the False Codling Moth (Thaumatotibia leucotreta) in the import of roses from Tanzania, Kenya, Ethiopia, Uganda, Rwanda, Zambia and Zimbabwe. The level of knowledge required for these harmful organisms is so high as to compel the NVWA to request that the KCB take over part of these responsibilities.
Phytosanitary export inspections of plant products and the issuing of phytosanitary export certificates for exports to third countries are carried out by NVWA officers. As an independent organisation, the Dutch Accreditation Council (RvA) has accredited the KCB to conduct these inspections.
In addition to Brexit preparations, a key development for the KCB in 2018 was the preparations for the entry into force of the Plant Health Regulation and the Official Controls Regulation on 14 December 2019.

The Netherlands General Inspection Service for agricultural seeds and seed potatoes (NAK)
The NAK is the Netherlands General Inspection Service for agricultural seeds and seed potatoes. The NAK performs this statutory task on behalf of and under the supervision of the Minister of Agriculture, Nature and Food Quality. The service carries out phytosanitary controls under the responsibility of the NVWA. Specialist inspectors conduct field and batch testing that contributes to the high quality of Dutch export products. After certification by the inspector, the grower can order the NAK certificate that must be affixed to the packaging of potatoes and seeds. Potatoes and seeds cannot be traded without a NAK certificate, so businesses depend on the NAK to certify their seed potatoes and seeds. The NAK certificate represents independence, quality and expertise, which is recognised by foreign buyers. The NAK also conducts additional phytosanitary batch inspections for export to third countries. To support certification, the NAK has modern laboratories where large-scale virus and bacteria testing of seed potatoes is carried out using molecular testing techniques (PCR) and nematode testing of soil samples. Seeds are tested for moisture, purity, germination, health and cleanliness. The laboratory also has a diagnostics laboratory.
In addition to its head office in Emmeloord, the NAK has a Testing and Control business in Tollebeek where various trial field tests and controls are performed on agricultural crops (variety/type comparison, certification control).