FINNISH FOOD AUTHORITY
Ruokavirasto • Livsmedelsverket

Publications
2/2024

Food Safety in Finland 2022

Finnish Food Authority publications 2/2024

Food Safety in Finland 2022

FINNISH FOOD AUTHORITY
Ruokavirasto • Livsmedelsverket

Kannen kuva: Rodeo

Description

Publisher	Finnish Food Authority
Authors	Finnish Food Authority
Title of publication	Food Safety in Finland 2022
Series and publication number	Finnish Food Authority publications 2/2024
Publications date	January 2024
ISBN PDF	978-952-358-060-2
ISSN PDF	2669-8307
Pages	95
Language	Finnish
Keywords	Food safety, food control, food products
Publisher	Finnish Food Authority
Layout	Finnish Food Authority
Distributed by	Online version: foodauthority.fi

Abstract

This report presents the 2022 results of regulatory control related to food safety, official controls and monitoring programmes on food and feed, as well as research and risk assessments. The report also assesses, based on the results, the status of food safety and future needs for regulatory activities in Finland. The report extends the annual report referred to in the EU Control Regulation (EU) No. 2017/625 on official controls with respect to food safety as the annual report describes the results of the control in the various sectors of the food supply chain as a whole.

The results of official controls and research from 2022 indicate that official control works well and the level of food safety is good. The inspection volumes in food control returned to the level before the COVID-19 epidemic. However, the number of food establishments in official registers decreased somewhat. This may be due to the introduction of the annual basic charge according to the Food Act as a result of which the registers were brought up to date. The number of published Oiva reports continued to grow being 11% higher than the previous year. The number of food-borne epidemics was slightly higher than the previous year but a lower number of patients than the previous year was recorded. It was also worth noting that the increase in the number of food recalls slowed down. The export controls required by the exporting countries continued in accordance with the respective programmes.

Kuvailulehti

Julkaisija	Ruokavirasto
Tekijät	Ruokavirasto
Julkaisun nimi	Elintarviketurvallisuus Suomessa 2022
Julkaisusarjan nimi ja numero	Ruokaviraston julkaisuja 2/2023
Julkaisuaika	Tammikuu 2024
ISBN PDF	978-952-358-060-2
ISSN PDF	2669-8307
Sivuja	95
Kieli	Suomi
Asiasanat	Elintarviketurvallisuus, elintarvikevalvonta, elintarvikkeet
Kustantaja	Ruokavirasto
Taitto	Ruokavirasto
Julkaisun jakaja	Sähköinen versio: ruokavirasto.fi

Tiivistelmä

Tässä raportissa kerrotaan elintarviketurvallisuuteen liittyvän viranomaisvalvonnan, elintarvikkeiden ja rehujen virallisten valvonta- ja seurantaohjelmien, tutkimusten ja riskinarviointien tuloksista vuodelta 2022 sekä arvioidaan niiden perusteella Suomen elintarviketurvallisuustilannetta ja viranomaistoiminnan tulevaisuuden tarpeita. Raportti syventää elintarviketurvallisuuden osalta EU:n valvonta-asetuksen (EU) No 2017/625 edellyttämää vuosiraporttia, jossa kuvataan valvonnan tulokset koko elintarvikeketjun eri sektoreilla.

Viranomaisvalvonnan ja -tutkimusten tulokset vuodelta 2022 kertovat, että valvonta toimii ja elintarviketurvallisuuden taso on hyvä. Elintarvikevalvonnan tarkastusmäärät palasivat COVID-19-epidemiaa edeltävälle tasolle. Viranomaisrekistereissä olevien elintarvikehuoneistojen määrä kuitenkin laski jonkin verran. Tämä voi johtua elintarvikelain mukaisen perusmaksun käyttöönotosta, minkä seurauksena rekistereitä saatettiin ajan tasalle. Julkaistujen Oiva-raporttien määrä jatkoi edelleen kasvua ollen 11 % suurempi kuin edeltävänä vuonna. Elintarvikevälitteisten epidemioiden määrä oli edellistä vuotta hieman korkeampi, mutta sairastuneiden määrät olivat edeltävää vuotta matalammat. Huomioitavaa oli myös, että elintarvikkeiden takaisinvetojen määrän kasvu taittui. Vientimaiden edellyttämiä vientivalvontoja jatkettiin ohjelmien mukaisesti.

Beskrivning

Utgivare	Livsmedelsverket
Författare	Livsmedelsverket
Publikationens titel	Livsmedelssäkerheten i Finland 2022
Publikationsseriens namn och nummer	Livsmedelsverkets publikationer 2/2024
Utgivningsdatum	Januari 2024
ISBN PDF	978-952-358-060-2
ISSN PDF	2669-8307
Sidantal	95
Språk	Finska
Nyckelord	Livsmedelssäkerhet, livsmedelstillsyn, livsmedel
Förläggare	Livsmedelsverket
Layout	Livsmedelsverket
Distribution	Elektronisk version: livsmedelsverket.fi

Referat

I denna rapport berättas om resultaten av myndighetstillsynen som hänför sig till livsmedelssäkerheten, de officiella tillsyns- och uppföljningsprogrammen gällande livsmedel och foder och undersökningar och riskvärderingar år 2022 och utgående från dem utvärderas livsmedelssäkerhetsläget och de framtida behoven inom myndighetsverksamheten i Finland. Rapporten fördjupar den årliga rapport som EU:s kontrollförordning (EU) nr 2017/625 förutsätter för livsmedelssäkerhetens del. I rapporten beskrivs resultaten av kontrollen i olika sektorer av livsmedelskedjan som helhet.

Resultaten av myndighetstillsynen och -undersökningarna 2022 visar att tillsynen fungerar och livsmedelssäkerhetsnivån är god. Livsmedelstillsynens inspektionsvolymer återgick till nivån före covid-19-epidemin. Antalet livsmedelslokaler i officiella register minskade dock något. Det kan bero på införandet av grundavgiften enligt livsmedelslagen, vilket ledde till att registren har uppdaterats. Antalet publicerade Oiva-rapporter fortsatte att växa och var 11 % högre än föregående år. Antalet livsmedelsburna epidemier var något högre än föregående år, men antalet insjuknade var lägre än föregående år. Det var också värt att notera att ökningen av antalet återkallelser av livsmedel avtog. De exportkontroller som krävdes av exportländerna fortsatte i enlighet med programmen.

Contents

Introduction

This report describes the results of official control related to food safety, official controls and monitoring programmes on food and feed, as well as research and risk assessments in 2022. Based on the results, the report also assesses the status of food safety and future needs for the authorities' activities in Finland. The report extends the annual report referred to in the Official Controls Regulation (EU) No 2017/625 with respect to food safety; the annual report describes the results of control in the different sectors of the food chain as a whole. The results for 2015–2020 were published in similar Food Safety in Finland reports. In addition, the previous years' results can be found on the Finnish Food Authority's website (https://www.ruokavirasto.fi/en/ and https://www.ruokavirasto.fi/en/themes/zoonoosis-centre/).

By carrying out their own check controls, food business operators fulfil their duty to ensure the safety of their products, provide sufficient and correct information regarding their products, and comply with the requirements in their operations. The results of operators' own check controls are not included in this report.

The figures describing control data in this report basically reflect the situation at the time the report was prepared. The data in registers may change, which is why the same data for previous periods may vary from year to year, for example, in figures and tables that describe trends.

Summary

The results of official controls and investigations conducted by the authorities in 2022 show that control is effective, and the level of food safety is high.

The export controls required by export countries were continued under the relevant programmes. South Korea opened its market to Finnish poultry meat. The increase in food recalls stopped in 2022.

The number of inspections returned to the pre-pandemic level. The number of food establishments in official registers decreased slightly. This may be the result of the introduction of the basic fee in accordance with the Food Act in 2022. Discontinued companies were deregistered.

In 2022, more than 20,500 Oiva reports were published, showing an increase of 11% from the previous year. Of all inspections, 85% continued to produce excellent (A) and good (B) results (Figure 1).

There were 55 foodborne outbreaks. While the number was higher than in the previous year, the outbreaks were not very extensive, and the number of people infected was smaller. Preparations were made for the new legislation and investigation obligations by analysing PFAS compounds in advance. The high concentrations of PFAS compounds detected and the analyses conducted helped provide advice and instructions in the sector regarding challenges in the use of fish feed.

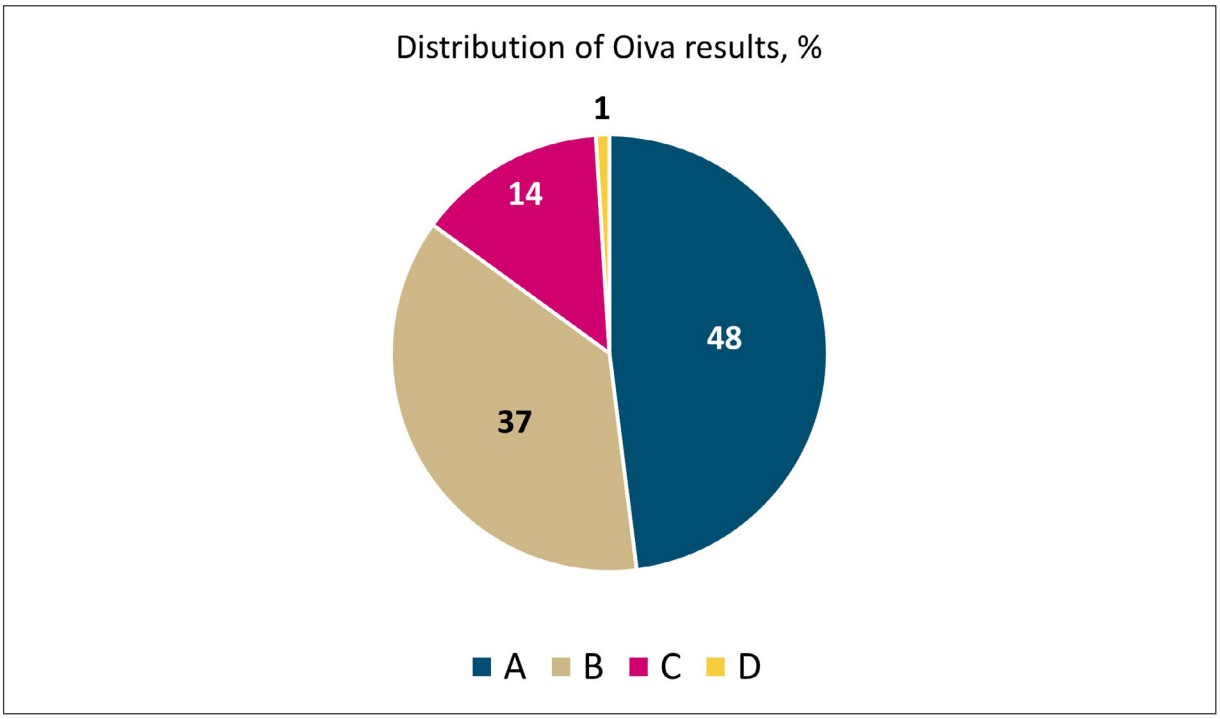


Figure 1. *Distribution of Oiva results in 2022.*

1 SYSTEM OF AUTHORITIES RESPONSIBLE FOR FOOD SAFETY

Table 1 presents the personnel resources allocated to official control tasks for food safety in 2018–2022.

Table 1. *Food feed and organic production control personnel in annual work units (AWU). The Finnish Food Authority started operating on 1 January 2019. and the personnel worked for the Finnish Food Safety Authority (Evira) until 31 December 2018.*

Authority	2018	2019	2020	2021	2022
Finnish Food Authority	338	357	357	372	376
Regional Centres for Economic Development, Transport and the Environment	26	28.3	30.8	30.3	28.3
Regional State Administrative Agencies	19	9.6*	12.7	13.3	13.6
Municipalities (estimate)	270	285	284	280	293.6
Finnish Customs	30	32	32	32	32
National Supervisory Authority for Welfare and Health	1.3	1.5	1.7	1.8	1.9
Finnish Defence Forces	2	1.6	1.6	1.4	1.4
Åland (estimate)	5.4	5.4	5.4	5.4	5.4
Others. including authorised inspectors (the share of organic control is imputed)	14.8	26.2	36.9**	38.1**	42.1**
Total	707	747	759	771	794.3

* the calculation basis has changed
** including hygiene passport examiners

In total. approximately 794 AWUs were allocated to food. feed and organic production control. There were 62 municipal food control units. The figures do not include reindeer meat inspections conducted by municipal veterinarians under the Regional State Administrative Agency for Lapland or the working hours of fee-based meat inspection veterinarians working for the Finnish Food Authority. In addition. the figures do not include the contribution of personnel in local laboratories who examine official samples.

2 GENERAL INFORMATION ON FOOD SAFETY

2.1 Food sector companies

Figure 2 presents the number of food product and food contact material companies registered in the authorities' systems in Finland by sector in 2022.

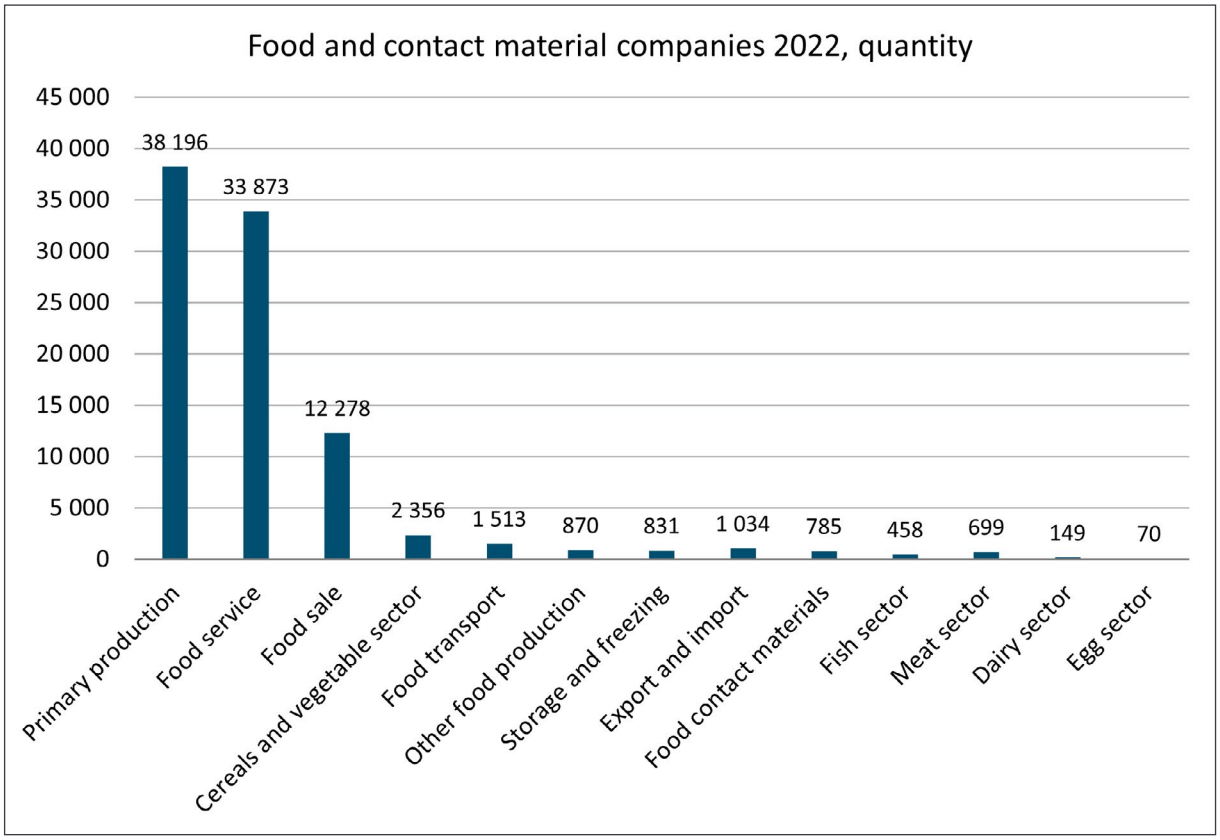


Figure 2. *Number of food product and food contact material companies registered in the authorities' systems in 2022.*

2.2 Oiva food control results

In Finland, systematic food control is carried out under the Oiva system, and Oiva reports also provide consumers with information about the results of food control in companies.
The results of systematic food control inspections (Oiva inspection results) are published in the form of Oiva reports, which are public. The results of inspections conducted in retail shops and food service establishments have been published since 2013, and those conducted in the food industry since the beginning of 2016.

A smiley face shown in the report indicates the inspection result. Several different requirements are assessed during an inspection, each of which is given a separate assessment result: A (Excellent), B (Good), C (To be corrected), or D (Poor). The overall result of the inspection is determined based on the poorest result. In addition, the report shows the results of two

previous inspections. A general description of the findings made during the inspection is presented at the end of the report.

Table 2. *Oiva control visits in 2022.*

Activity category	Registered control sites, qty	Inspected sites, qty	Inspected sites, %	Inspections following the plan, incl. follow-up inspections, qty	Oiva A %	Oiva B %	Oiva C %	Oiva D %	Distribution of inspectionsby activity category, %
Food transport	1 129	118	10.45	125	82	11	6	1	0.6
Food sale	11 794	3 473	29.45	4 081	51	35	14	1	19.9
Food service	30 739	11 442	37.22	13 544	46	39	14	1	65.9
Food storage and freezing	745	211	28.32	266	60	29	10	1	1.3
Other food production	850	265	31.18	328	53	30	15	1	1.6
Fish sector	344	264	76.74	588	44	38	17	1	2.9
Meat sector	317	232	73.19	747	40	46	12	2	3.6
Dairy sector	110	91	82.73	222	61	30	8	1	1.1
Egg sector	66	51	77.27	71	75	24	0	1	0.3
Export and import	989	230	23.26	298	38	33	25	5	1.5
Cereals and vegetable sector	2 252	710	31.53	830	50	37	12	1	4.0
Low-risk activity	300	51	17	55	55	29	16	1	0.3
Total	46 766	16 356	34.97	20 544	48	37	14	1	

Including follow-up inspections, a total of 20,544 Oiva control visits were conducted in food sector companies, around 6% more than in the previous year.

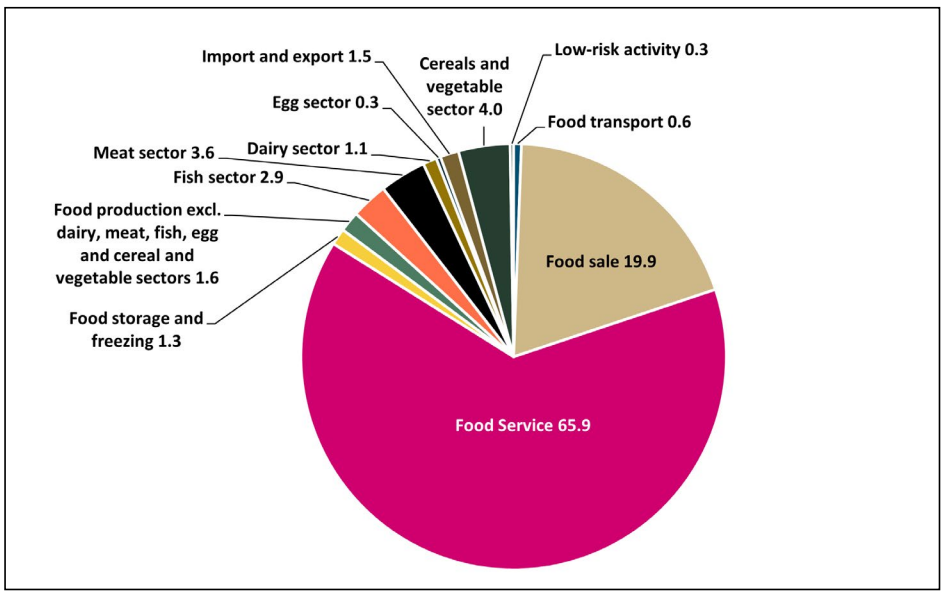


Figure 3. *Percentage of inspections (%) by company type in 2022.*

Figure 3 presents the distribution of inspections by activity category. Service establishments account for more than 60% of all Oiva inspections.

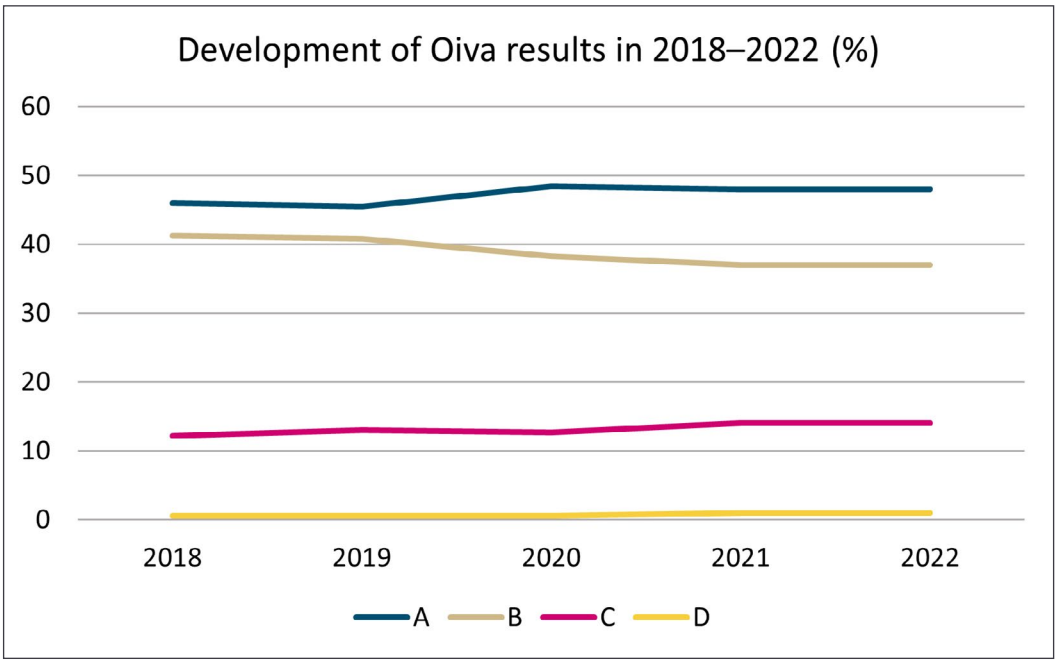


Figure 4. *Development of Oiva results in 2018–2022.*

The results of Oiva inspections only underwent minor changes from 2018 to 2022, and excellent and good results are a significant majority (Figure 4). In 2022, they accounted for 85% of all results.

In this report, the assessments and results of Oiva inspections are indicated by the grade (A, B, C or D).

2.3 Hygiene proficiency

People who work in the food sector and handle unpackaged, readily perishable foods require a hygiene passport.

Hygiene passport examiners approved by the Finnish Food Authority numbered roughly 1,450. They have conducted a total of 241,335 hygiene passport tests across Finland since 2002. By the end of 2022, hygiene passport examiners had issued 1,414,563 hygiene passports. In 2022, considerably more hygiene passports were issued than in 2021. Table 3 presents the number of hygiene passport tests and issued hygiene passports during the last five years.

Table 3*. Hygiene passport tests held, and hygiene passports issued in 2018–2022.*

Year	Hygiene passport tests (qty)	Hygiene passports (qty)
2022	9 945	59 423
2021	9 334	50 029
2020	8 309	45 909
2019	10 493	57 094
2018	11 061	59 248
Total	49 142	271 703

On average, 11% of the audits of hygiene passport examiners have resulted in the cancellation of the examiner's rights (Table 4). For several years, the most common errors and shortcomings that led to the issue of notices have been related to the following issues: verifying the identity of the persons to be tested; the grounds for issuing a hygiene passport; archiving the documents based on which the hygiene passports have been issued; handing over the examiner's obligations to third parties; and the organisation of special situation tests.

Table 4. *Audits of hygiene passport examiners conducted by the Finnish Food Authority and audit results in 2018–2022.*

Year	Examiners audited (qty)	Notices (qty)	Cancellation of examiners' rights (qty)	Requests for police investigation (qty)
2022	29	25	2	1
2021	20	18	2	0
2020	7	6	1	0
2019	21	21	0	2
2018	17	16	1	0
Total	94	86	6	3

Table 5 presents Oiva results related to the verification of hygiene proficiency. While the majority of food premises was given an A rating, a small part received B or C, which means there were minor shortcomings in ensuring employees' hygiene proficiency and recordkeeping, or employees' hygiene proficiency was not ensured at all. D ratings were given for six registered food premises. The Oiva results of approved food establishments improved, and those of registered food premises remained at the same level as the 2021 Oiva results. Examined by sector, Oiva results improved in food transport and production (excluding milk/meat/fish/egg/cereal-vegetable production), and in the fish and meat sectors. In the cereal and vegetable sector, Oiva results weakened significantly. D ratings were issued in food service and sales, and in the cereal and vegetable sector. Examined as a whole, the overall Oiva rating distribution in hygiene proficiency in 2018–2022 remained unchanged over the years. Registered food premises had better results than approved food establishments. The coverage of Oiva inspections related to hygiene proficiency has increased during the last three years. The number of inspected sites was 5,290 in 2020, whereas it was 8,492 in 2022.

Table 5. *Oiva results for the verification of hygiene proficiency.*

Food premises	Number of inspected sites	Number of inspections	A %	B %	C %	D %	Guidance and instruction (qty)	Notices (qty)	Coercive measures (qty)
Approved	210	226	91	4	5	0	10	10	0
Registered	8 282	8 784	93	5	2	0	451	171	2
Total	8 492	9 010	93	5	2	0	416	181	2

2.4 Quality and accountability systems

No applications by individual operators for the national quality system for pork (named Sikava) were submitted to the Finnish Food Authority in 2022. Consequently, the total number of operators, each of whom operates one or more Quality Assurance approved sites, remained at ten. Sikava's national quality management system covers roughly 99% of pigs bred in Finland, as well as pork of Finnish origin (Quality Assurance term). In practice, there is no more room for expansion.

2.5 Guidelines for good practices

Two new guidelines for good practices were submitted for evaluation in 2022: "Omavalvonnan ja hyvän käytännön ohje pienelle kala-alan laitokselle" (Guidelines for self-monitoring and good practices for small-scale fish establishments) and "Rannikkokalastuksen hyvän käytännön ohjeet" (Guidelines for good practices in coastal fishery). Nine guidelines for good practices have been evaluated in the food sector, and one in the feed sector.

2.6 RASFF

In 2022, Finland reported 82 cases of non-compliance related to foods or food contact materials detected in Finland, in which a defect having or potentially having a harmful impact on human health had been discovered, to the EU's Rapid Alert System for Food and Feed (RASFF). This is 36 notifications fewer than in the previous year. The decrease in the number of notifications resulted from the EU's Bamboozling control project for food contact materials conducted a year earlier, when 30 notifications were submitted regarding food contact materials.

Of the notifications, 77 (94%) concerned food products, and five (6%) food contact materials. The number of notifications submitted regarding food products also decreased by five from the previous year. In addition, 11 feed batches were reported to the RASFF, in each case because of Salmonella.

There were two reasons for the RASFF notifications submitted in Finland. First, 30 notifications were submitted due to pesticide residues. Non-compliant pesticide residues were especially discovered in tea and rice (seven batches of each). They were followed by microbiological defects, mainly Salmonella, which was detected in 11 product batches, mostly in poultry meat.

Of the notifications submitted in Finland, 63% were based on border and market surveillance conducted by Finnish Customs. Local food control findings accounted for 13% of all RASFF notifications, similarly to notifications submitted based on operators' own control. Notifications submitted as a result of findings made by consumers and customers made up 10%. The percentage remained similar from the previous year.

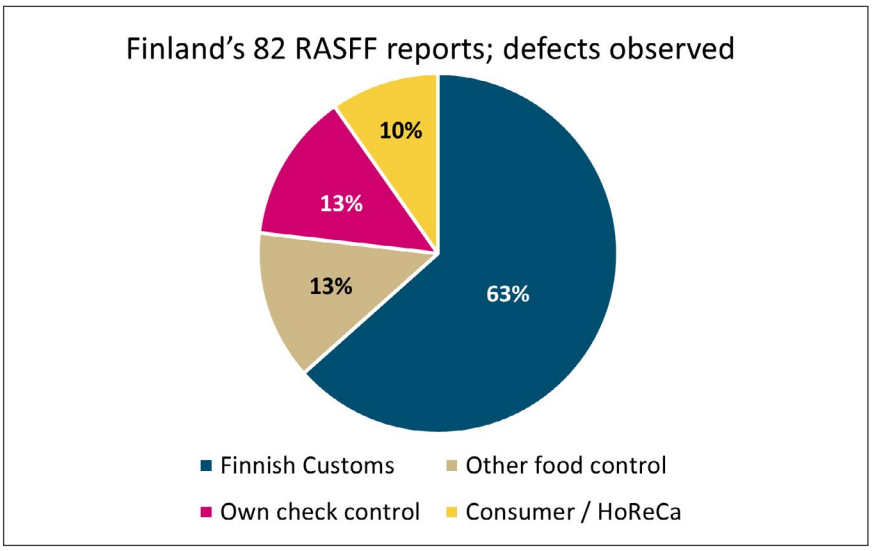


Figure 5. *Notifications submitted by Finland to the RASFF system in 2022.*

In 2022, a total of 192 cases concerning food products or food contact materials was reported to the RASFF, in which the products in question had been supplied to Finland. In these situations, the products are subjected to food control measures by the food control authorities in the consignee's municipality in Finland. In addition to the level of the health risk posed by the reported food, the measures to be taken depend on whether the product has been made available to consumers, and whether it is likely that households still have the product in their possession. In general, RASFF notifications lead to product recalls in Finland, which happened in 102 cases in 2022. The figures mentioned above are very close to the previous year.

2.7 Administrative Assistance and Cooperation (AAC) system between EU Member States

In 2022, Finland filed 22 reports to the European Commission's system for Administrative Assistance (AAC-AA) . The corresponding figure in the previous year was eight. The reports concerned food products imported into Finland that had been found to be non-compliant in the exporting country. However, these reports did not cross the RASFF threshold. The reports concerned product ingredients, missing packaging labels or documents, and non-compliant marketing. In addition to the food product reports, Finland filed one AAC report on a feed product.

Through the AAC-AA system, Finland responded to 35 reports on food products and contact materials. The number increased by 14 from the previous year. In most of the reports received, a Member State enquired about other Member States' practices in matters concerning food control. Strictly speaking, such questions are not consistent with the AAC system's purpose, as they do not concern a particular product transferred from one country to another or processed in another country and any related non-compliance. In the interest of reciprocity, however, efforts are also made to respond to them. In addition to the food product reports, Finland responded to four AAC report on feed products.

Finland was provided with information about several cases of suspected fraud in other Member States and two cases related to fishing products requiring further measures through the AAC-FF system for crime in the food chain. Finland submitted one request for assistance in a case concerning fishing products.

2.8 Prevention of crime in the food chain

Temporary resources were added to the planning and agri-food crime prevention team of the Finnish Food Authority's Food Chain Division from the action plan for combating the shadow economy and economic crime. These additional resources helped further develop the mechanisms for forming a national overview of crime in the food chain and to extend cooperation in the control network for food crime prevention. The action plan project of the Finnish Food Authority and Finnish Customs continued to develop cooperation in controlling cross-border freight traffic. As a result of training provided for the supervisory authorities and cooperation in the control network, the Finnish Food Authority detected more cases of food crime than in the previous year: 74 (in 2021: 57). Approximately half of all suspected criminal cases led to an investigation request made to the pre-trial investigation authority: 37 (in 2021: 28).

The percentage of multisectoral cases continued to increase. The food chain control authorities identified different forms of illegal activities better than before, which led to a diversification of

suspected offences and investigation requests and increased cooperation with the Finnish Tax Administration and the occupational safety and health authorities.

The Finnish Food authority was informed of eight court decisions, one of which was a ruling by the Court of Appeal. The illegal slaughter of sheep was an excellent example of a multisectoral case and of the effectiveness of advanced cooperation in pre-trial investigations: two butchers were sentenced to long imprisonment (one to imprisonment of two years and three months, and the other to imprisonment of one year). They were sentenced to imprisonment for a health offence, an aggravated animal welfare offence, an environmental offence, a registration offence and tax fraud, and to forfeit almost EUR 70,000 in criminal proceeds. In addition, seven sheep farmers were given sentences of different magnitudes (ranging from one year of imprisonment to a ten-day fine) for aiding and abetting health offences, environmental pollution, aiding and abetting an aggravated animal welfare offence, causing a risk of spreading an animal disease, and breach of the Act on the Animal Identification System. Two sheep farmers were ordered to forfeit criminal proceeds of more than EUR 1,000 and less than EUR 2,000.

In a criminal case related to the revocation of a small-scale slaughterhouse's approval in 2020, the small-scale slaughterhouse's operator was sentenced to long conditional imprisonment (eight months and 15 days) in 2022 for a health offence, an animal welfare offence and breach of the act on animal by-products. In a hygiene passport case, a person was sentenced to conditional imprisonment of ten months and to forfeit EUR 25,000 in criminal proceeds.

2.9 Recalls

The increase in food recalls stopped in 2022. The number of cases categorised as recalls was 288, down by 18 from the previous year. The figures for different years are not fully comparable due to minor variations in registration methods. However, they give a valuable insight into long-term trends (Figure 6).

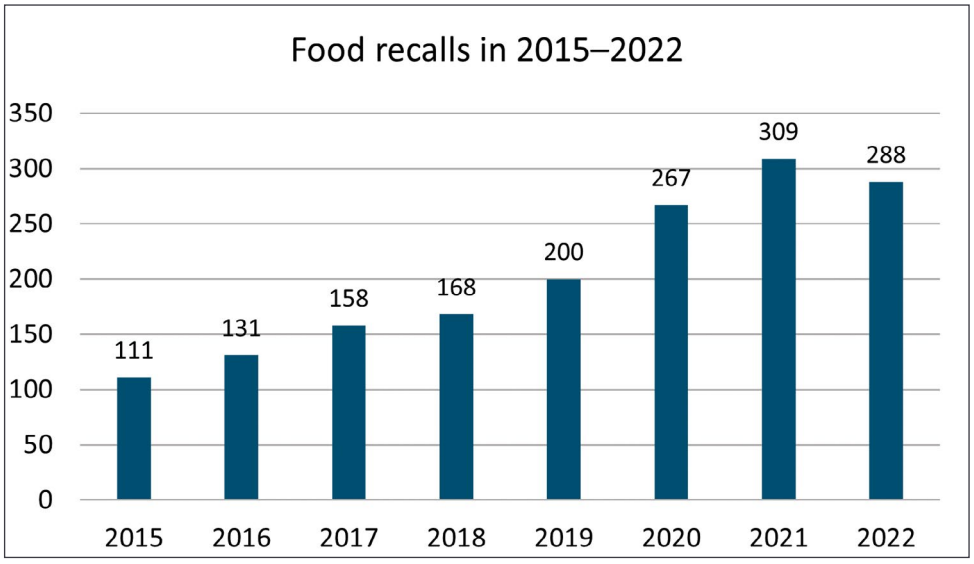


Figure 6. *Food recalls in 2015–2022.*

The statistics include recalls not only from consumers but also from the warehouses of importers, wholesalers and retailers. In the latter cases, the products have not yet been available to consumers, and have therefore not presented any health risk to them.

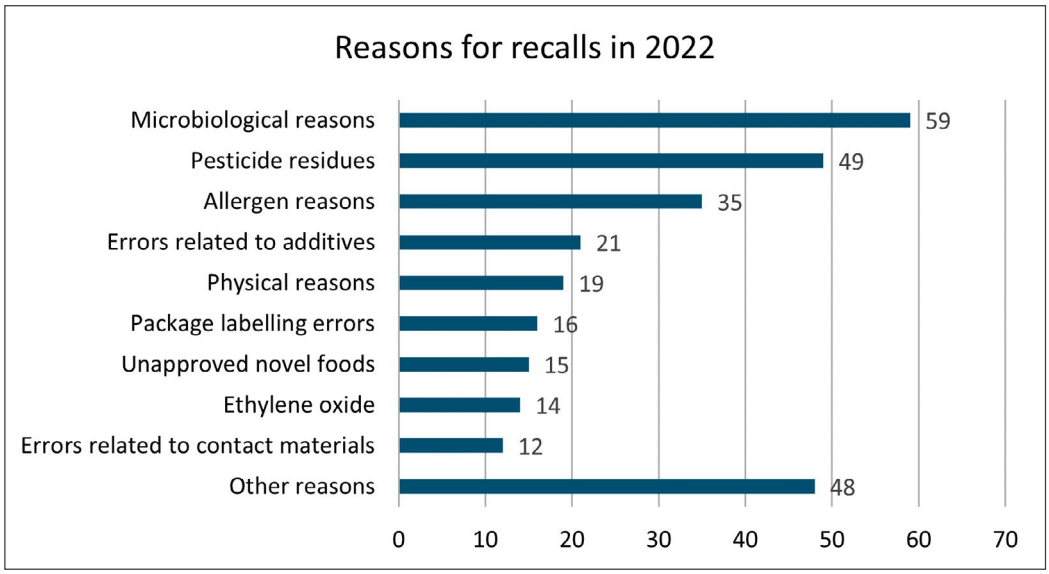


Figure 7. *Reasons for recalls in 2022.*

Recalls have been classified based on their causes (Figure 7). The year under review was especially characterised by two features: the decrease in ethylene oxide cases from the previous year's 72 to 14, and increased recalls in the three largest groups of causes, i.e. microbiological issues, residues of pesticides, and allergens.

Various microbiological issues (Salmonella, listeria and other bacteria and moulds) were the most common conventional reasons for recalls, accounting for 59 (20%) cases, ten more than in the previous year. Salmonella was the reason for recalls in 18 cases. It was detected in a wide variety of foods, including meat and fish preparations, fresh herbs, spices, etc.

The number of recalls due to residues of pesticides in crop production increased significantly from the previous year. In 49 cases, fruit, vegetables or other foods of plant origin had to be recalled for this reason. This showed an increase of 48% from the previous year. No specific pesticide or food can be pointed to in this group. The cases consisted of up to 19 different residues in more than 20 different foods. In many cases, the threshold values were exceeded by such small amounts that the products did not cause any acute risk to consumers. It was therefore sufficient to withdraw the batch in question from the market and destroy it to minimise the cumulative risk presented to consumers. Not a single case involved the incorrect use of pesticides in domestic production.

More recalls than before also resulted from allergens, 35 in total (12% of all recalls). This showed an increase of six cases from the previous year. Defects involving allergens were caused by such reasons as contamination during production, labelling errors, or a product being packed in an incorrect package. The most common causes of recalls were sulphate, gluten and milk protein.

General information on recalls in 2022

The examination of the manufacturing or production country of the foods and food contact materials subject to recalls indicate the following: 32% of the products came from another European country, while 48% were of a non-EU origin. The remaining 20% of cases involved foods produced in Finland.

The number of recalls that were processed due to reports made to the EU RASFF system was 108 (38%). The next most common channels through which a need to recall a product came to light were import and market control carried out by Finnish Customs and operators' own check controls. Trends in the sources of identifying needs for recalls are presented in Figure 8.

The specific reason for the increase in the total number of recalls in the three largest groups is unknown, but this is an indication of high-quality and effective food control, the continuously improving control checks by operators, and – at least for Finland – the active role of consumers in fostering food safety.

In 2022, municipal food control authorities carried out 3,512 inspections related to recalls. This number can be considered reasonable at the very least. An A rating was issued in 95%, and a B rating in 4%, of the inspections. The most common shortcomings recorded by the control authorities included missing documentation of the recall measures taken and insufficient preparations for the measures required during recall situations. The ability of the food control authorities to respond rapidly in urgent recall situations was commendable at all levels.

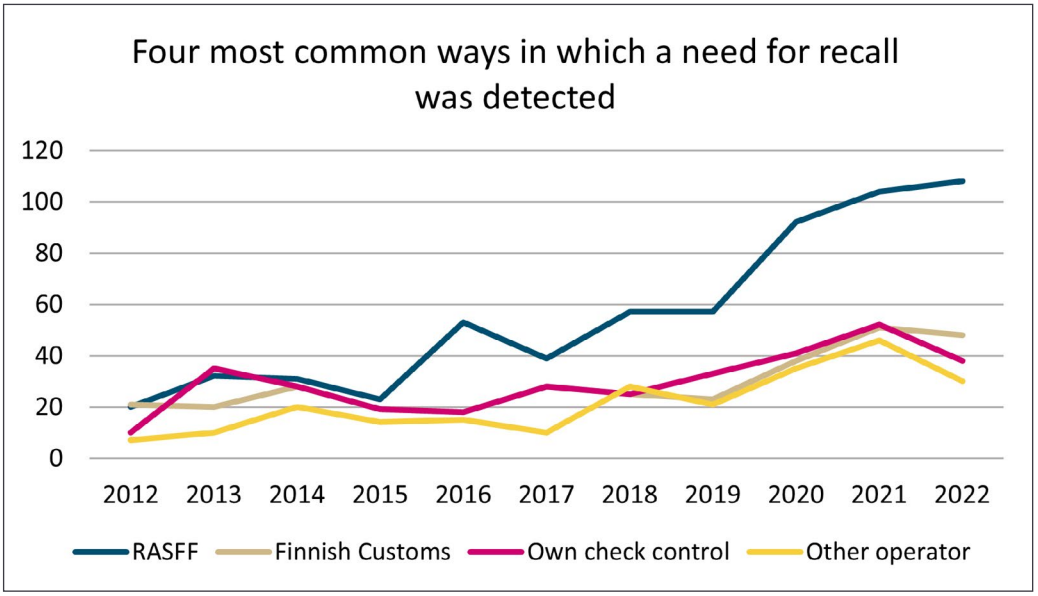


Figure 8. *Four most common ways in which the need to recall a product was detected in 2022.*

2.10 Foodborne and domestic waterborne outbreaks

The municipalities' outbreak investigation teams referred to in Government Decree 1365/2011 are responsible for examining foodborne and domestic waterborne outbreaks in their areas. The Finnish Institute for Health and Welfare (THL) and the Finnish Food Authority jointly coordinate the investigation of foodborne outbreaks that have a large geographical scope or are challenging for another reason. In these cases, the investigations are carried out with municipal outbreak investigation teams. The municipal outbreak investigation teams filed 87 reports of suspected cases to the food poisoning outbreak register system (RYMY) on outbreaks that occurred in 2022.

The municipal outbreak investigation teams and the Finnish Food Authority submitted a total of 105 reports on their outbreak investigations to the RYMY system. Some of the investigation reports were related to more than one report of suspected cases. Separate investigation reports were sent from different municipalities for certain large-scale outbreaks, while each

outbreak was categorised as a single case. Investigation reports were submitted for all reports of suspected cases except for one. In addition, the Finnish Food Authority, THL and the outbreak investigation teams produced investigation reports which were not preceded by a report of a suspected case. Based on the investigation reports, 55 outbreaks were classified as foodborne or domestic waterborne outbreaks. The remaining 45 outbreaks were found to have been caused by something else (for example, human-to-human outbreaks or ones related to swimming water), or only one person was affected, and the case was therefore not classified as an outbreak (Figures 9 and 10).

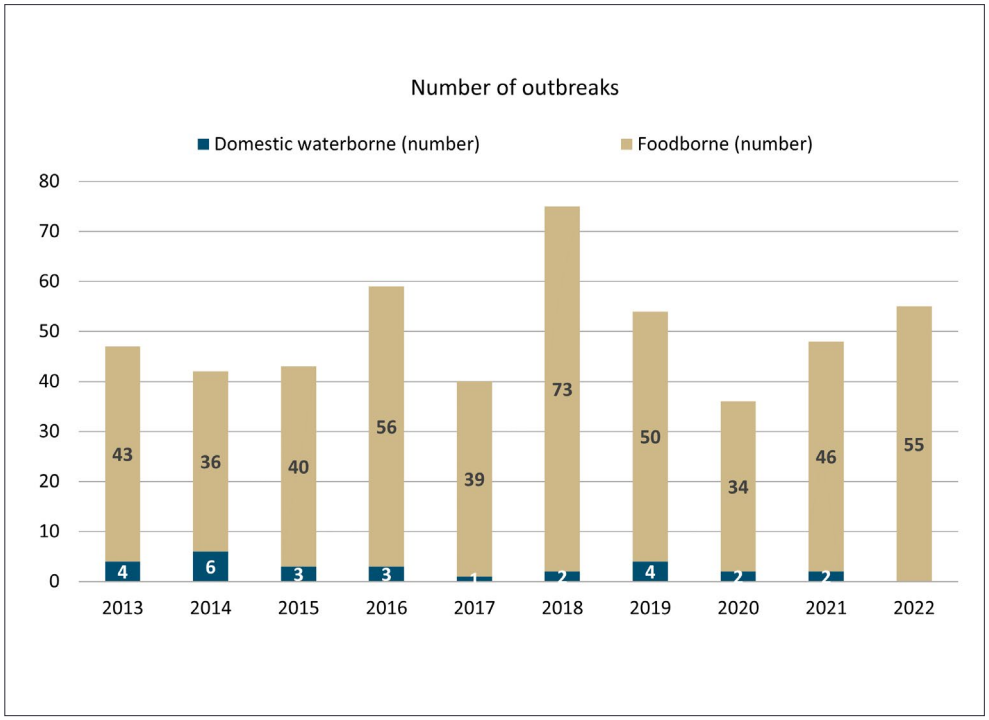


Figure 9. *Number of foodborne and domestic waterborne outbreaks in 2013–2022.*

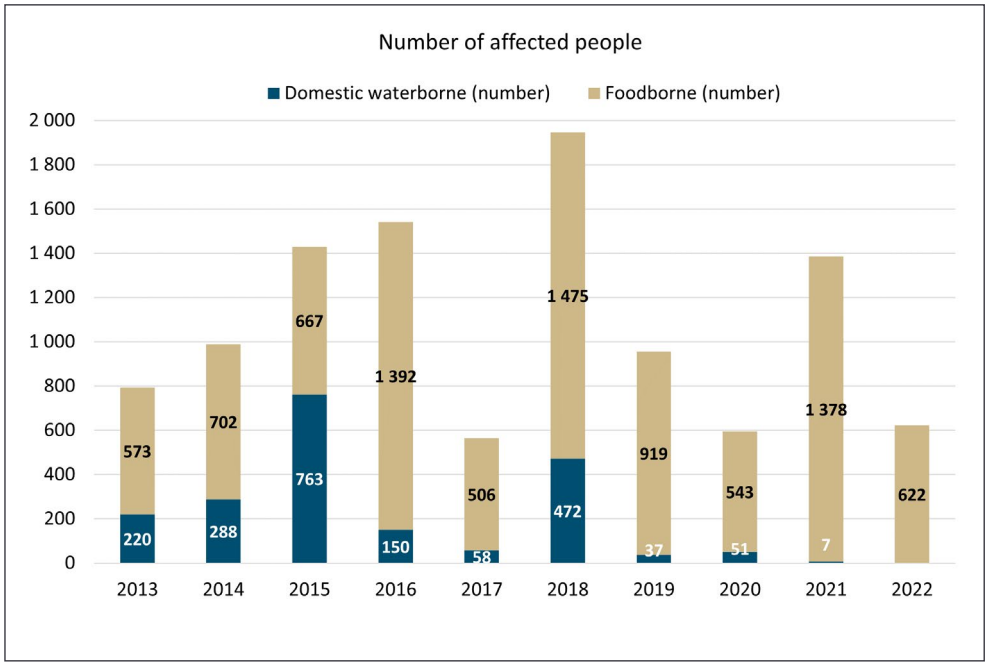


Figure 10. *Number of people affected by foodborne and domestic waterborne outbreaks in 2013–2022.*

The number of foodborne outbreaks (55 outbreaks, 622 people infected) was higher in 2022 than in 2021. No domestic waterborne outbreaks were reported. The number of outbreaks and the people who fall ill shows significant variation from one year to the next. An outbreak is classified as large if more than 100 people have fallen ill, medium if it affects 11 to 100 people, and small if 2 to 10 people are infected.

No large outbreaks were reported in 2022, while the number of medium outbreaks was 15. The largest foodborne outbreak was caused by Salmonella, infecting nearly 100 people. The causative food was a cooked chicken preparation, as an identical strain was isolated and detected in patient samples. The cooked chicken preparation was one of the ingredients in various ready-to-eat products (e.g. chicken baguettes). The next largest outbreak was caused by norovirus, with fresh salad acting as the causative food. In this case, more than 70 people were infected in service housing. All the other outbreaks infected fewer than 40 people combined. A total of 40 small outbreaks was reported, showing a significant increase from previous years.

In outbreaks caused by toxin-producing bacteria (*Bacillus cereus*, *Clostridium perfringens*, *Staphylococcus aureus* and an unidentified toxin producer). The outbreaks caused by toxin-producing bacteria (*Bacillus cereus*, *Clostridium perfringens*, *Staphylococcus aureus* and an unidentified toxin producer) were affected by the various errors related to temperatures and/or storage times during the storage, cooling and heating of foods (Table 6).

Table 6. *Food and domestic waterborne outbreaks in Finland in 2022 by cause, number of people affected and number of outbreaks classified by size.*

Cause	Number of outbreaks		Number of affected people		Number of outbreaks classified by size		
2022	N = 55	%	N = 622	%	2–10 N = 40	11–100 N = 15	> 100 N = 0
Foodborne							
Bacillus cereus	2	4	20	3	1	1	0
Clostridium perfringens	1	2	8	1	1	0	0
EHEC	1	2	10	2	1	0	0
Campylobacter	3	5	20	3	2	1	0
Listeria monocytogenes	3	5	26	4	2	1	0
Salmonella	3	5	109	18	2	1	0
Staphylococcus aureus	1	2	2	0	1	0	0
Unknown toxin producer *	5	9	16	3	5	0	0
Yersinia enterocolitica	3	5	31	5	2	1	0
Hepatitis E virus	1	2	4	1	1	0	0
Norovirus	16	29	248	40	10	6	0
Biogenic amine	1	2	2	0	1	0	0
Cryptosporidium parvum	1	2	35	6	0	1	0
Unknown	14	25	91	15	11	3	0
Total	55	100	622	100	40	15	0
%					73	27	0
Domestic waterborne							
-	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
%					0	0	0

* The toxin producer has been concluded to be the cause based on the symptoms and the incubation period of the disease, although the cause could not be confirmed by laboratory tests.

In 2022, norovirus was the most common individual pathogen identified to cause outbreaks (16 outbreaks, 248 people infected). Regrettably often, an infected kitchen employee was identified as a factor behind foodborne norovirus outbreaks (in at least 12 outbreaks). When classifying virus outbreaks, determining whether the infection occurred through person-to-person contact, food or surfaces is difficult (Figure 11). In a quarter of all outbreaks, the cause was not identified, even if the investigation otherwise hinted at a food poisoning outbreak.

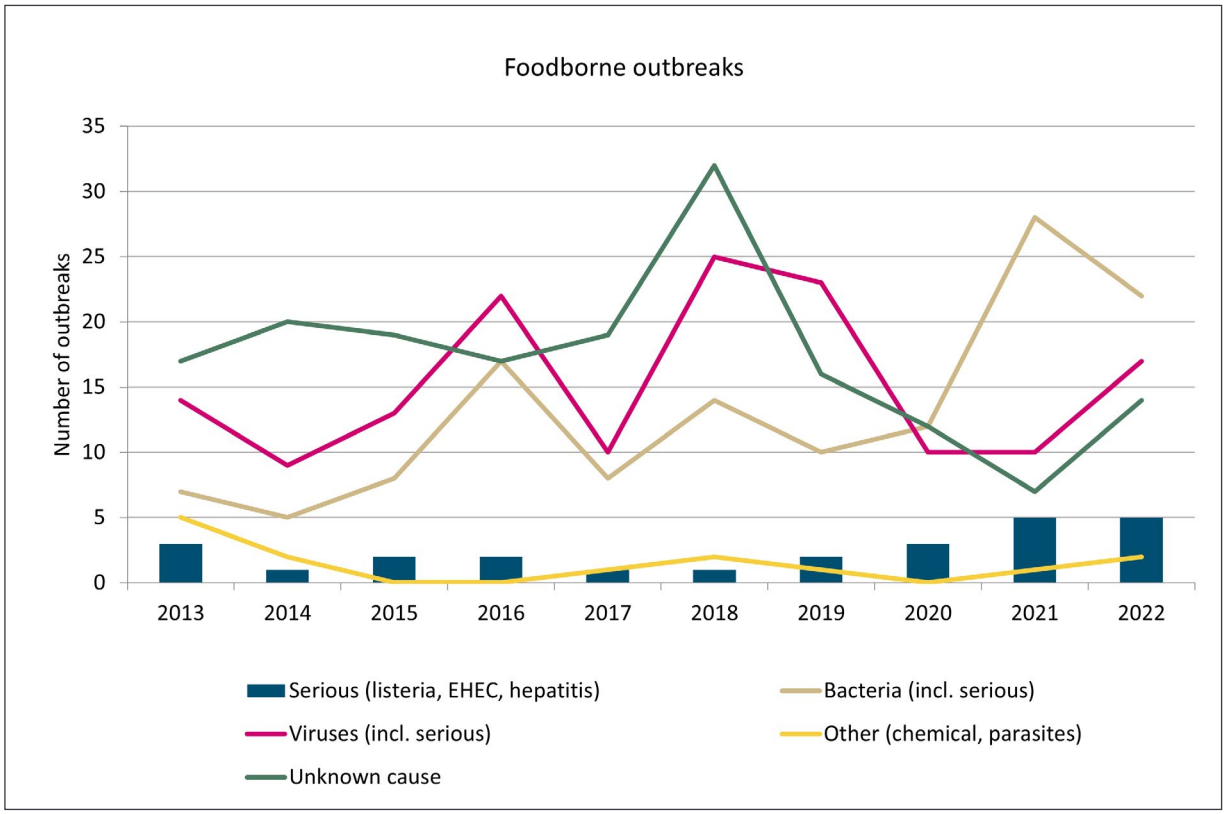


Figure 11. *Foodborne outbreaks categorised according to pathogens and severity in 2013–2022. In a severe outbreak, those affected were diagnosed with listeria, EHEC or hepatitis.*

3 IMPORT OF FOOD PRODUCTS AND CONTACT MATERIALS

3.1 Veterinary border control

A total of 830 batches of food derived from animals was imported directly into Finland from outside the EU (in 2021: 666), of which ten (1.2%; in 2021: 0, 0.0%) received a written notice, and 26 (3.1%; in 2021: 8, 1.4%) were rejected. Reasons for rejections included a missing certificate (13), unapproved establishment (9) and other reasons (4). Most of the imported animal-derived foods were fish products. For more information about the results of veterinary border control, see the relevant sectoral report.

3.2 Fulfilment of special guarantees for Salmonella in internal market imports

Following legislative amendments, internal market control of animal-derived foodstuffs (formerly known as inspections of first point of entry) has been included in the systematic food control carried out by municipalities since 1 January 2020. Issues previously included in the first point of entry inspections, including own checks, traceability and own check studies, have been added to Oiva assessment guidelines. The control data referred to above are included in the sectoral aggregates of the previous sections. This section focuses on compliance with assessment guideline 12.6, 'Special guarantees for Salmonella'. The special guarantees for Salmonella are based on Regulation (EC) No 1688/2005.

The fulfilment of the special guarantees for Salmonella in internal market imports of animal-derived food products was checked in municipalities in conjunction with 109 inspections in 2022 (Figure 12). Of these, 30 were follow-up inspections. The increase in the number of inspections from 2021 resulted from the increased number of follow-up inspections in registered food premises. In 2022, the coverage of inspections relative to the inspected sites was roughly 60%.

The fulfilment of the guarantees was assessed as follows in importers' own checks: A 67%, B 12%, C 18%, and D 3%. No C or D ratings were issued for approved food establishments in 2022. In registered food premises, the percentage of C and D ratings was approximately 30% (Figures 13 and 14). Coercive measures were taken in all three cases involving a D rating.

The authorities took 16 samples of products subject to the special guarantees for Salmonella, of which two were Salmonella positive.

In checks, deficiencies were discovered in the compliance of Salmonella examination certificates with requirements and the sufficiency of Salmonella examinations carried out in the country of origin.

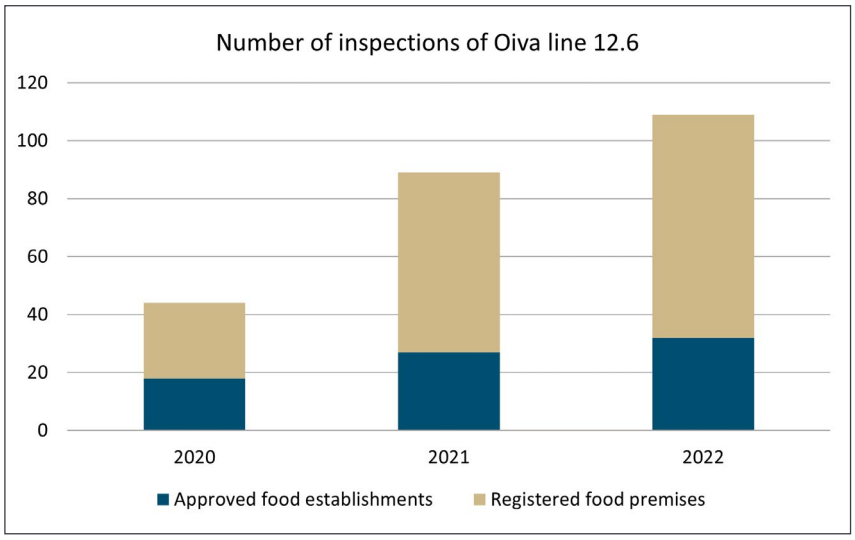


Figure 12. *Number of Oiva inspections for the special guarantees for Salmonella in 2020–2022.*

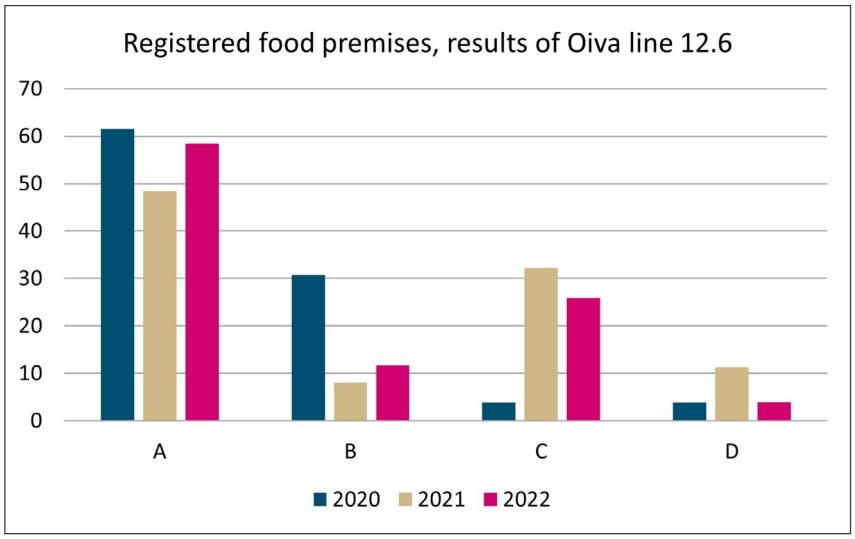


Figure 13. *Distribution of Oiva ratings for the special guarantees for Salmonella in registered food premises in 2020–2022.*

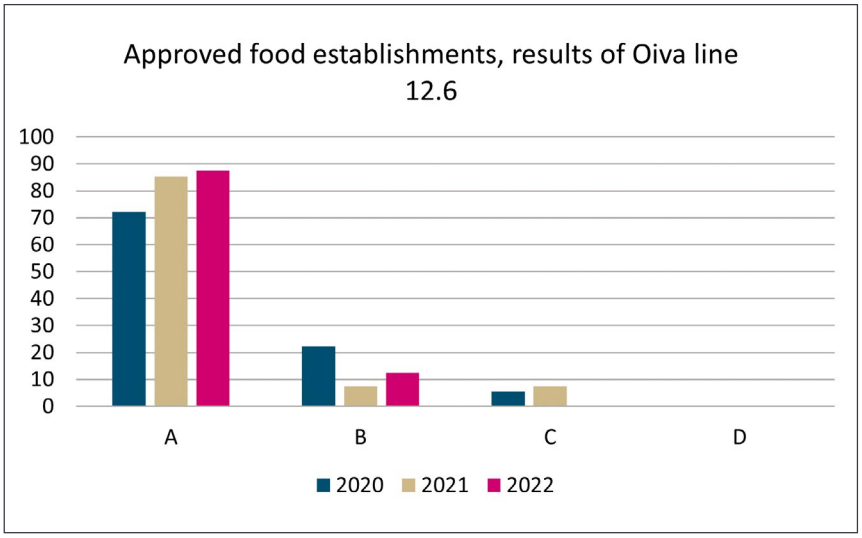


Figure 14. *Distribution of Oiva ratings for the special guarantees for Salmonella in approved food establishments in 2020–2022.*

3.3 Imports of other than animal-derived food products and food contact materials

Control of foods and food contact materials

The planned control of other than animal-derived food products and food contact materials by Finnish Customs was succesfully implemented, as roughly 91% of the control samples registered in the plan were executed (Table 7). During the year, a total of 3,040 foods and food contact materials was tested. Of these, 1,153 product batches were imported directly from outside the EU, while the remaining batches were imported through European single market routes.

Not all quantitative goals could be achieved in analysis activities. During the year, no new control needs arose based on national or international findings. Approximately 11% of all food control samples were found to be non-compliant, and smaller defects were found in every fifth product. The most common reasons for the rejection of foods included incorrect labelling, non-compliant use of plant protection products, and food improvers. The most common findings related to food contact materials involved the transfer of substances harmful to health, including heavy metals, melamine or formaldehyde. Shortcomings in compliance documents were also discovered in a large number of cases.

Control of organic products

Finnish Customs monitored 293 organic food products. A total of 57 product batches were examined during customs declarations and 236 product batches in imports from the European single market, mainly for residues of plant protection products, irradiation, and genetic modification. Non-alcoholic organic wines were also analysed for additives, the use of which is restricted under the legislation on organic products. In addition, the compliance of all organic food products with food legislation was investigated. Two batches of organic feed were also examined and found to be compliant with organic production regulations.

Requirements for the sale of fruit and vegetables

The control of special requirements for fruit and vegetables targeted a total of 322 batches. In addition, 816 batches were inspected based on general requirements.

Table 7. *Foods examined by Finnish Customs in 2022.*

Product group	Microbiological contamination (qty)	Other contamination (qty)	Composition (qty)	Package labelling (qty)	Other (qty)	Rejections (qty)	Total number of samples	Rejections (%)
Cereals and cereal products	0	14	0	5	0	18	145	12
Cereal dough-based preparations	0	0	3	7	0	10	154	6
Vegetables and vegetable products	2	5	16	8	0	27	506	5
Leguminous seeds and products	0	4	3	6	0	13	66	20
Fruit and fruit products	0	12	6	0	0	18	552	3
Nuts and nut products	2	0	0	0	0	2	99	2
Oilseeds and oil fruit	0	2	0	4	0	6	80	8
Starch roots and tubers	0	0	0	1	0	1	22	5
Herbs, spices and similar	2	10	0	0	2	15	191	8
Fruit and vegetable juices, beverages, spreads and equivalent	0	3	10	9	0	21	73	29
Fish and fish products	0	0	0	1	0	1	28	4
Imitation meat and dairy products	0	0	7	8	1	14	58	24
Hot beverages (coffee, cocoa and herbal drinks)	0	1	0	1	0	2	13	15
Water, water-based soft drinks and similar	0	1	11	15	0	22	76	29
Raw materials for hot and infused beverages	0	14	7	3	0	18	146	12
Alcoholic beverages	0	0	0	4	0	4	28	14
Sweets and chocolate	0	0	5	12	0	13	68	19
Food products for growing children	0	0	0	1	0	1	51	2
Foods for persons who follow special diets (incl. food supplements)	3	5	32	42	4	58	120	48
Composite dishes	1	1	3	16	0	20	127	16
Spice preparations and sauces	1	2	5	6	0	13	98	13
Cleaned isolated ingredients	0	0	4	3	0	6	46	13
Food contact materials	0	0	17	0	14	30	293	10
Total number of samples	11	74	129	152	21	333	3 040	10

4 EXPORT OF FOOD AND FEED

The value of food exports increased significantly in 2022, from EUR 1.8 billion in 2021 to EUR 2.3 billion. A particular increase was seen in exports to other EU countries. Of non-EU countries, exports increased to China, South Korea and Japan in particular.

4.1 Export control systems

Additional requirements for exports to China resulting from the Covid-19 pandemic continued to apply until the end of 2022.

The Finnish Food Authority audited eight establishments approved for exports to China (two infant formula establishments, one dairy establishment, two pork establishment, one fish establishment, and two storage establishments) and held four training events related to exports to China for companies and/or the authorities controlling them.

From 1 January 2022, all companies manufacturing and partly also storing food destined for China are required to register with the China Imported Food Enterprise Registration (CIFER) system. A Finnish Food Authority reference is required for registering high-risk product categories. There are 14 high-risk categories. In 2022, Chinese Customs listed several establishments of Finnish companies in the CIFER system. Continuing exports requires that information be supplemented and corrected, and that an extension to the export approval be applied for in the CIFER system.

The Finnish Food Authority eventually obtained authorisation from the Chinese State Administration for Market Regulation (SAMR) to start a process in which the Finnish Food Authority could audit infant formula recipes on behalf of the SAMR and help the recipes be approved (for sales) in China.

The General Administration of Customs China (GACC) conducted a remote audit regarding the maintenance of pork exports in January 2022. During the audit, compliance with Covid-19 requirements was also investigated. The audit was passed and resulted in no export restrictions. Municipal control authorities and the Finnish Food Authority's meat inspection veterinarians continued to carry out Oiva inspections regarding China.

The Finnish Food Authority lightened the export control system of the Eurasian Economic Union due to Russia's invasion of Ukraine. Lighter control was deployed in April 2022 regarding local control and the central authority, and e-training was provided instead of on-site training. In the future, inspections will be targeted at establishments that export products actively to the member countries of the Eurasian Economic Union and have valid approval in such countries. The Finnish Food Authority audited three establishments in the Eurasian Economic Union in 2022 and clarified the import and export sanctions and transit conditions imposed by the EU and Russia.

The Finnish Food Authority audited establishments that exported pork to the USA and their control by the authorities in accordance with the 2022 audit plan. Exports of pork by all establishments approved for US exports may continue as usual.

4.2 Prioritised market access initiatives

The opening of new export markets prioritised by the industry for food chain products was promoted to seek growth in exports. In 2022, market access to South Korea was achieved for Finnish eggs and egg products, as well as poultry meat. In addition, Japan granted market access for beef and beef products. To obtain market access, the Finnish Food Authority coordinated several audits by the South Korean and Japanese authorities and prepared extensive reports on control by the Finnish authorities and the disease and food safety situation in Finland.

In 2022, the Finnish Food Authority coordinated the following audits related to market access projects conducted by third-country authorities in Finland:

- South Korea: shell eggs and egg products
- Japan: beef and beef products (remote audit)
- Vietnam: pork, poultry meat and sows

To enable the exports of food chain products, the Finnish Food Authority responded to the export questionnaires required by the destination countries. The following market access reports were submitted for assessment to the authorities in the destination countries in 2022:

- South Africa: pork and poultry meat (revision)
- South Korea: poultry meat products
- China: processed animal protein and fat
- Taiwan: pork (additional report)

In addition, efforts to advance several other market access projects continued, including in South Korea (ice cream, butter, infant formula), the Philippines (pork and poultry meat), Indonesia (dairy products), and China (BSE status, fish feed, poultry meat and malt). These projects are being handled by an authority in the destination country, or the process for obtaining an export licence has not been completed for another reason.

4.3 Maintenance of export rights and other export promotion activities

Official Finnish or EU export certificates

In 2022, six new veterinary health certificates were adopted regarding Finland and destination countries:

- South Korea: eggs
- South Korea: egg products
- South Korea: poultry meat
- South Korea: hatching eggs and chicks
- Japan: beef and beef products
- Japan: boar semen

The certificates were prepared in the eCert system.

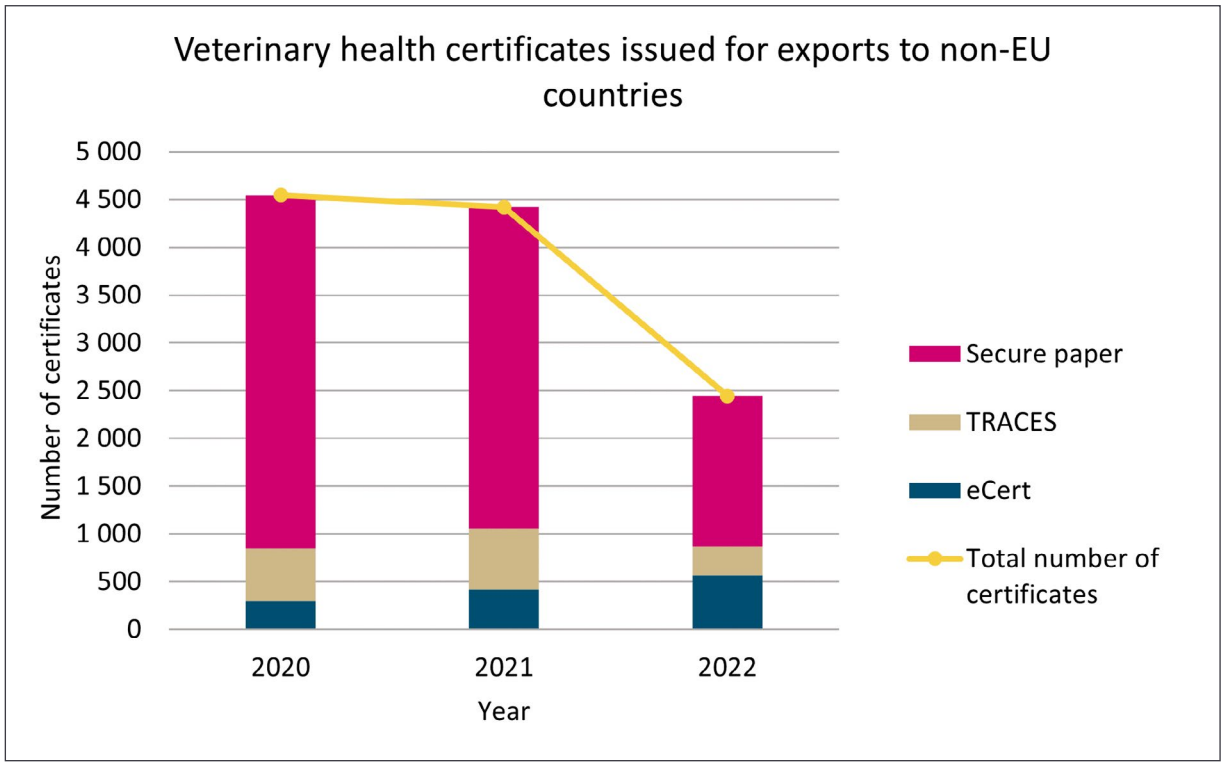


Figure 15. *Official veterinary health certificates issued for exports to non-EU countries in 2020–2022.*

The Finnish Food Authority's eCert system for electronic veterinary health certificates was developed further, and more new certificates were adopted and issued in 2022. In 2022, fewer veterinary health certificates printed on secure paper based on an agreement between Finland/EU and destination countries were issued than in previous years (Figure 15). This can especially be explained by the decrease in exports to the Eurasian Economic Union and pork exports to China. The decrease in the number of certificates issued in TRACES, the European Commission's electronic certificate system, also resulted from decreases in Russian exports.

To prepare for the threat of severe animal diseases and to ensure the continuation of exports in the disease situation, regionalisation negotiations with destination countries continued. In 2022, the negotiations between the European Commission and the South Korean authorities regarding the regionalisation conditions of African swine fever (ASF) and highly pathogenic avian influenza (HPAI) were completed. Finland and other EU countries submitted several regionalisation reports to South Korea in 2021 and 2022. In addition, Finland agreed bilaterally on ASF regionalisation conditions with Singapore and continued negotiations on avian influenza regionalisation in exports to Singapore. The Finnish Food Authority submitted a revised avian influenza regionalisation report to Singapore. The regionalisation conditions guarantee the exports of pork and poultry meat in a disease situation from those Finnish regions in which no disease has been detected.

In 2022, the Finnish Food Authority hosted an audit conducted by the South Korean authorities to maintain the exports of dairy products and pork. The audit produced positive results, and exports to South Korea can continue. South Korea conducts maintenance audits targeted at export establishments roughly every three years.

5 DOMESTIC FOOD PRODUCTION

5.1 Meat inspection

The volume of meat approved in meat inspections decreased slightly for red meat and increased slightly for poultry meat (red meat: 263 million kg in 2021 and 255 million kg in 2022; poultry meat: 145 million kg in 2021 and 146 million kg in 2022). In addition, 3,039 wild game animals, 572 farmed game animals and 53,158 reindeer were inspected. In addition to reindeer, some elk, bears, farmed game animals, sheep and goats were inspected at reindeer slaughterhouses (Tables 8–10).

The most common reasons for pigs being rejected continued to be pleuritis and pericarditis (28.0% and 9.0% for slaughter pigs respectively). The most common reasons for cattle being rejected were contusions and sores (10.9%) and lung infections (2.9%). For poultry, the most common reasons for rejections were skin changes, ascites and slaughter errors. The most common reason for rejecting reindeer was changes caused by parasites.

Table 8. *Meat inspection data for livestock and reindeer: slaughterhouses, low-capacity slaughterhouses and reindeer slaughterhouses.*

	Cattle	Slaughter pigs	Sows	Sheep	Goats	Horses	Reindeer	Total
Number of animals brought to slaughterhouses	256 774	1 835 893	34 678	55 403	910	865	53 158	2 237 681
Number of animals dead or put down before ante mortem inspection	288	686	97	22	2	0	9	1 104
Number of animals rejected while alive	70	44	10	10	0	32	1	167
Number of partly rejected carcasses	28 008	182 353	7 702	79	6	2	25 026	243 176
Number of rejected whole carcasses	2 017	9 904	993	123	1	19	88	13 145
Number of animals approved in meat inspections	254 399	1 825 259	33 578	55 248	907	814	53 060	2 223 265

Table 9. *Meat inspection data for poultry: poultry slaughterhouses and low-capacity poultry slaughterhouses.*

	Broilers	Broiler breeders	Turkeys	Chickens	Ducks	Geese	Mallards	Total
Number of animals brought to slaughterhouses	82 605 120	579 526	934 778	772	2 934	4 096	10 224	84 137 450
% of animals died spontaneously	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
% of animals rejected while alive	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
% of partly rejected carcasses	3.8	4.3	8.1	2.3	1.6	0.0	0.0	3.9
% of rejected whole carcasses	2.6	23.2	3.9	3.4	3.0	0.3	0.0	2.8

Table 10. *Meat inspection data for farmed game and lagomorphs (rabbits): slaughterhouses, low-capacity slaughterhouses and reindeer slaughterhouses.*

	Cervids	Ostriches and emus	Lagomorphs	Wild boar	Others
Inspected	165	23	203	170	11
Completely rejected	0	0	0	0	0
Partially rejected	0	0	0	0	0

Table 11. *Meat inspections of wild game: game-handling establishments and reindeer slaughterhouses.*

	Elk	Other cervids	Bears	Wild boar	Others
Inspected	142	2 736	16	0	145
Completely rejected	2	45	0	0	2
Partially rejected	23	720	0	0	40

Outside the reindeer husbandry area, a small number of reindeer is slaughtered in slaughterhouses approved for farmed game and classified as farmed game.

Most hunted game meat is left uninspected and used in the hunters' households. A small quantity of uninspected wild game is sold directly to consumers or delivered for retail without being inspected. No information is available about the volume of uninspected game and game meat sold. In 2022, 37,051 elk, 135 bears (of which 61 were in the reindeer husbandry area) and 1,066 wild boars were hunted, according to the Finnish Wildlife Agency. Meat inspections were carried out for 142 elk (0.4% of those shot by hunters) and 16 bears (12%). In addition, 2,736 other cervids were inspected in game-handling establishments.

5.2 Control of slaughterhouses and establishments connected to them

At the end of 2022, there were 15 slaughterhouses, 43 low-capacity slaughterhouses and seven game-handling establishments approved by the Finnish Food Authority. They included five poultry slaughterhouses and four low-capacity slaughterhouses for poultry.

In 2022, no new slaughterhouses, low-capacity slaughterhouses or game-handling establishments were approved. One low-capacity slaughterhouse reported a temporary suspension in operations, and three game-handling establishments were discontinued. The approval of one low-capacity slaughterhouse was revoked.

In 2022, the Regional State Administrative Agency for Lapland organised control activities at 19 reindeer slaughterhouses. The number of reindeer slaughterhouses has not changed in several years.

During the inspections of slaughterhouses, low-capacity slaughterhouses, game-handling establishments and establishments connected to them, an A or B rating was issued to roughly 87% (85% in 2021), and a C or D rating to approximately 14% (16% in 2020). A notice of corrective action was issued as a result of 32 inspections, while two led to the use of coercive measures (Table 13).

During the inspections of reindeer slaughterhouses and establishments connected to them, an A or B rating was issued to roughly 93% (82% in 2021), and a C or D rating to approximately 7%

(17% in 2020). In 2022, the Regional State Administrative Agency did not use coercive measures in the control of reindeer slaughterhouses and establishments connected to them (Table 13).

As in previous years, the largest number of inspections at slaughterhouses, low-capacity slaughterhouses, game-handling establishments and establishments connected to them focused on the cleanliness of facilities, surfaces and equipment (121 inspections). The cleanliness of facilities, surfaces and equipment was one of the focus areas of food safety control. Relatively, the greatest number of shortcomings was discovered in facility and equipment maintenance (70 inspections), food production hygiene (97), information provided about food products (21), and food production studies (83). In these areas, the proportions of shortcomings (C and D ratings) were 12%, 11%, 11% and 10% respectively (Table 14). Based on the results, control should increasingly be targeted at the areas mentioned above.

A relatively large number of shortcomings (C and D ratings) was also discovered in food production hygiene (97 inspections), information provided about food products (21) and food production studies (83). In these areas, the proportions of shortcomings (C and D ratings) were 11%, 11% and 10% respectively (Table 14). Based on the results, control should increasingly be targeted at the areas mentioned above.

The number of inspections targeting allergens and substances causing intolerances, as well as the composition of food, was significantly smaller than the number of other inspections (Table 14). The number of inspections focusing on these issues was also small in previous years. While the inspections only brought up a few shortcomings (C or D rating), more control should be targeted at these issues.

Table 12. *Number of inspections at slaughterhouses, low-capacity slaughterhouses and game-handling establishments and establishments connected to them controlled by the Finnish Food Authority and at reindeer slaughterhouses and establishments connected to them controlled by the Regional State Administrative Agency for Lapland in 2022.*

	Total samples (qty)	Inspected activities (qty)	Inspected activities (%)	Planned inspection visits (qty)	Inspections not included in the plan (qty)
Slaughterhouses, low-capacity slaughterhouses and game handling establishments and establishments connected to them	267	134	51	211	1
Reindeer slaughterhouses and establishments connected to them	37	25	68	28	1

Table 13. *Control results for slaughterhouses, low-capacity slaughterhouses and game-handling establishments, and establishments connected to them controlled by the Finnish Food Authority and at reindeer slaughterhouses and establishments connected to them controlled by the Regional State Administrative Agency for Lapland in 2022.*

	Inspections following the plan, incl. follow-up inspections (qty)	A %	B %	C %	D %	Inspections that led to a notice or the use of coercive measures
Slaughterhouses, low-capacity slaughterhouses and game handling establishments and establishments connected to them	212	37	50	11	3	34 (32+2)
Reindeer slaughterhouses and establishments connected to them	28	50	43	7	0	2 (2+0)

Table 14. *C and D ratings given for compliance with requirements at slaughterhouses, low-capacity slaughterhouses, game-handling establishments and establishments connected to them controlled by the Finnish Food Authority (number and %) in 2022.*

Issue	Number of inspections	C %	D %
Compliance with approval requirements	63	3	4
Maintenance of facilities and equipment	70	11	1
Cleanliness of facilities, surfaces and equipment	121	5	0
Activities and training of personnel	102	4	1
Food production hygiene	97	8	3
Temperature management of food products	79	3	0
Food production-related special requirements	65	2	2
Reception of animals and animal-related data	64	1	0
Substances that cause allergic reactions and intolerances	3	0	0
Food composition	7	0	0
Information provided on food products	21	11	0
Packaging and food contact materials	19	0	0
Food and by-product deliveries	34	6	0
Traceability and recalls	53	2	1
Food production studies	83	7	3
Display of the Oiva report	30	0	3

5.3 Approved food establishments controlled by municipalities

See Figure 16 for the distribution of Oiva ratings issued for and the number of coercive measures taken in approved food establishments in 2019–2022.

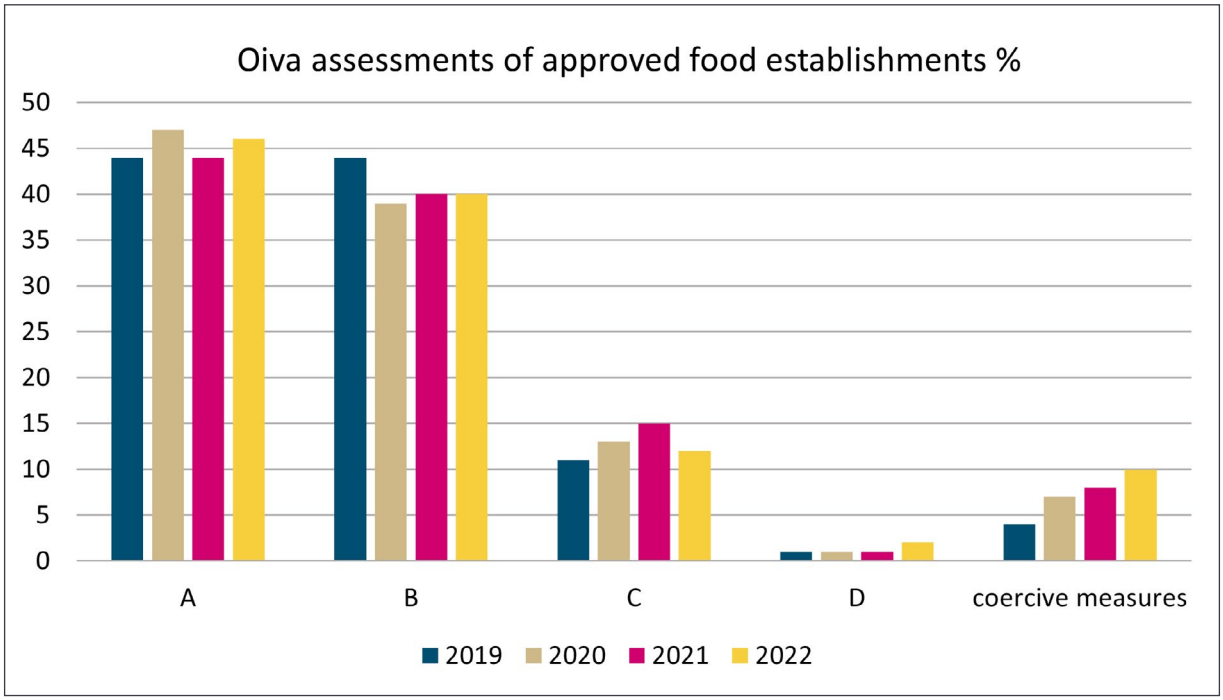


Figure 16. *Oiva ratings of approved food establishments in 2019–2022.*

See Figure 17 for the number of approved food establishments by sector in 2018–2022.

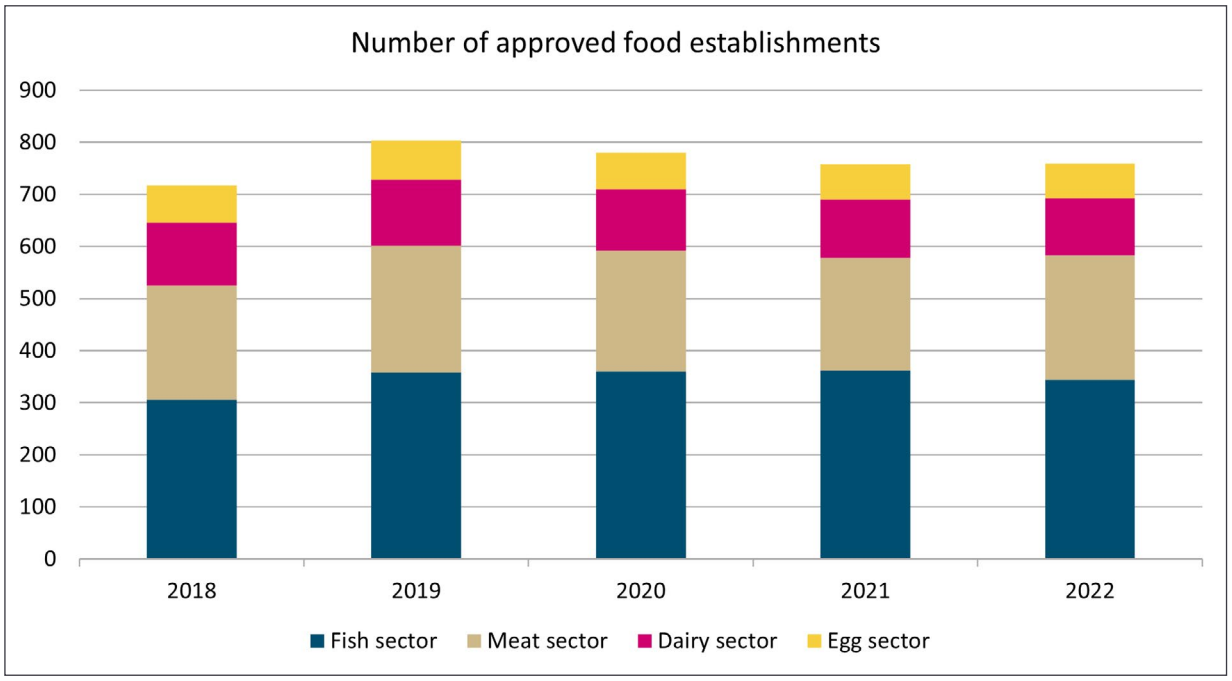


Figure 17. *Number of approved food establishments in 2018–2022.*

The total number of approved food establishments producing animal-derived food products (fish, meat, dairy and egg sector establishments) remained at the previous year's level. The number of inspections increased slightly, being at the pre-pandemic level in 2022.

Table 15. *Number of approved food establishments and inspections carried out in them in 2022.*

Approved food establishment	Total number of sites	Inspected (qty)	Inspected (%)	Approval inspections (qty)	Inspections not included in the plan (qty)	Follow-up inspections (qty)	Total
Fish sector	344	269	78.2	16	53	40	634
Meat sector	239	171	71.5	27	11	24	535
Dairy sector	108	94	87.0	4	40	5	258
Egg sector	66	51	77.3	1	6	1	77

A total of 581 inspections following the control plan was conducted at approved food establishments in the fish sector. The total number of inspections is 20% more than in the previous year, even though the number of approved food establishments in the fish sector decreased slightly (5%) (Table 16). In the fish sector, the number of approved food establishments that were inspected increased by 11 percentage points from the previous year. Fish sector food establishments that discontinued their operations in 2022 and 2023 have been removed from the list of approved food establishments, which partly explains the increased percentage of inspected sites. A fifth of approved food establishments in the fish sector have still remained uninspected which is, however, a significantly smaller proportion than in previous years. The percentage of inspections outside the scope of the control plan (9%) remained at the previous year's level. The number of follow-up inspections was 35% higher than in 2021, and they accounted for 7% of all inspections within the scope of the control plan. The number of follow-up inspections has increased in recent years at approved food establishments in the fish sector.

A total of 524 inspections following the control plan was conducted at approved food establishments in the meat sector. Inspections were carried out at 72% of approved food establishments in the meat sector, down by three percentage points from the previous year. Inspections outside the scope of the control plan accounted for roughly 2% of all inspections. Fewer follow-up inspections were conducted than in the previous year.

At approved food establishments in the dairy sector, 218 inspections following the control plan were carried out, which means that 87% of such establishments were inspected. Compared to previous years, the number of actual inspections increased. Inspections outside the scope of the control plan accounted for 16% of the total number. Slightly fewer follow-up inspection visits were conducted than in the previous year.

At approved food establishments in the egg sector, 71 inspections following the control plan were carried out, which means that 77% of such establishments were inspected. Compared to previous years, the number of actual inspections has increased. Around 8% of the inspections were not included in the control plan. The number of follow-up inspection visits remained low.

The recommended frequency of inspections at all approved food establishments is 1–12 times a year, depending on the type and scope of operations.

Table 16. *Ratings and sanctions issued to approved food establishments on individual inspections in 2022.*

Approved food establishment	Planned inspections (qty)	A %	B %	C %	D %	Inspections that led to a notice (qty)	Inspections in which coercive measures were used
Fish sector	581	44	38	17	1	114	2
Meat sector	524	41	44	13	2.0	89	3
Dairy sector	220	61	30	8	1	21	2
Egg sector	71	75	24	0	1	2	1

A total of 1,396 planned inspections was carried out at approved food establishments in the fish, meat, dairy and egg sectors, which was 8% more than in 2021. An A or B rating was issued in 86% of the inspections, and a C or D rating in 14%. Coercive measures were taken rarely, as in previous years: less than 1% of all inspections led to the use of coercive measures.

Of the inspections of approved food establishments in the fish sector, 82% resulted in an A or B rating. Notices for correction action were issued in 20% of the inspections. These figures have not changed significantly from the previous years.

Inspections carried out at approved food establishments in the meat sector led to the issue of an A or B rating to 85% of the inspected establishments, showing an increase of four percentage points from the previous year. Notices for corrective action were issued following 17% of the inspections, with the figure remaining close to the previous year's level.

Of the inspections of approved food establishments in the dairy sector, 91% of establishments received an A or B rating. Notices for corrective action were issued following 10 % of the inspections. The figures were roughly the same as in previous years.

Of the inspections of approved food establishments in the egg sector, 98% received an A or B rating, showing a slight increase from previous years. Notices for corrective action were issued following 3% of the inspections, which is slightly less than in the previous year.

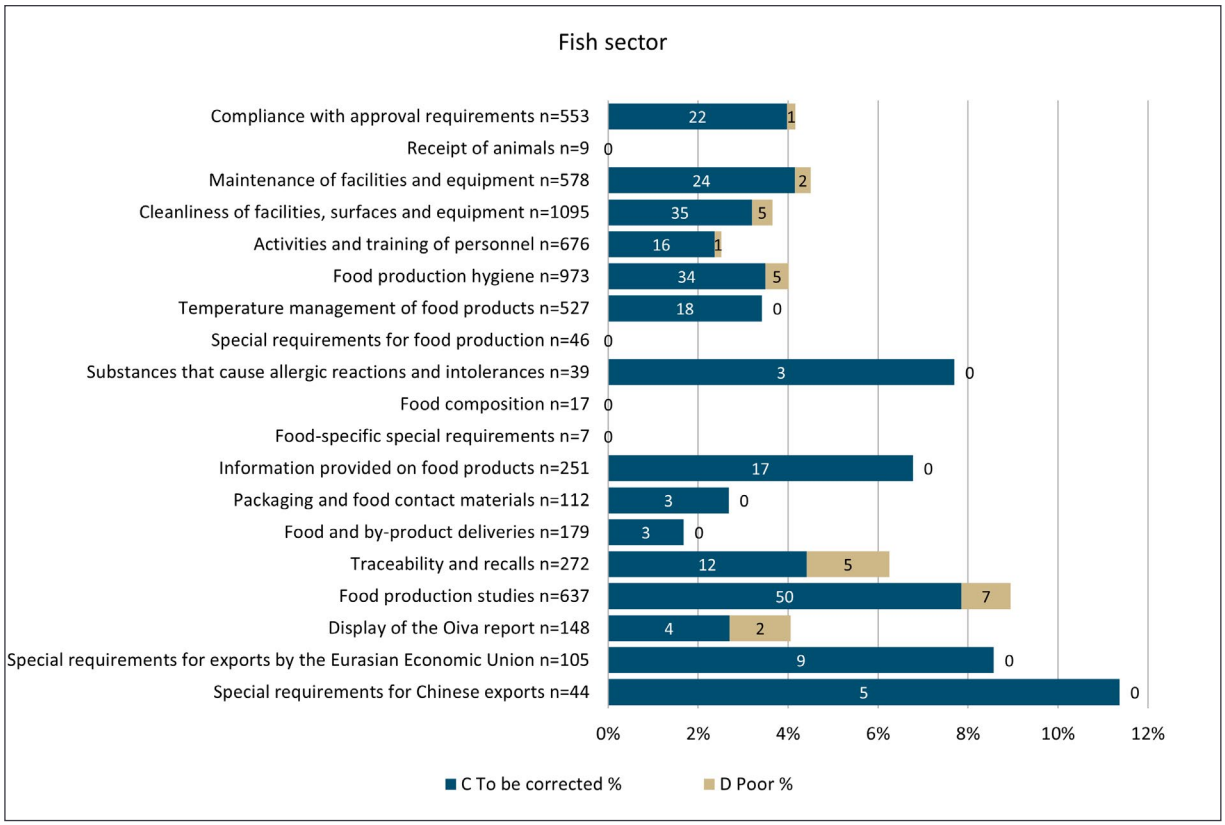


Figure 18. *C and D ratings given during inspections concerning compliance with various requirements for approved food establishments in the fish sector (number and %) in 2022; n = total number of Oiva inspections for the requirement in question.*

As in the previous year, the greatest number of inspections at approved food establishments in the fish sector focused on hygiene-related issues: the cleanliness of facilities, surfaces and equipment, food production hygiene, and activities and training of personnel. Food production studies, the maintenance of facilities and equipment, and compliance with approval requirements were also key parts of the inspections. Special requirements for food production, food composition, and substances causing allergies and intolerances were controlled least often, as in previous years. The receipt of animals was not included in the statistics in earlier years, as the Oiva inspection line has not previously been registered as inspected. At approved food establishments in the fish sector, the receipt of animals includes the management of data delivered with live fishing products at gutting plants, for example (Figure 18). Fewer shortcomings were discovered in information provided about food products in accordance with the special legislation on fishing products than in general mandatory food information. Recipe control is carried out to a small extent.

In relative terms, the greatest number of shortcomings (C or D rating) was detected in compliance with special export requirements (Eurasia 9% and China 11%), food production studies (9%), the management of substances causing allergies and intolerances (8%), information provided on food products (7%), and traceability and recalls (6%). The percentage of C and D ratings had increased in substances causing allergies and intolerances, traceability and recalls, and special export requirements. Most D ratings were issued for food production studies as in the previous year.

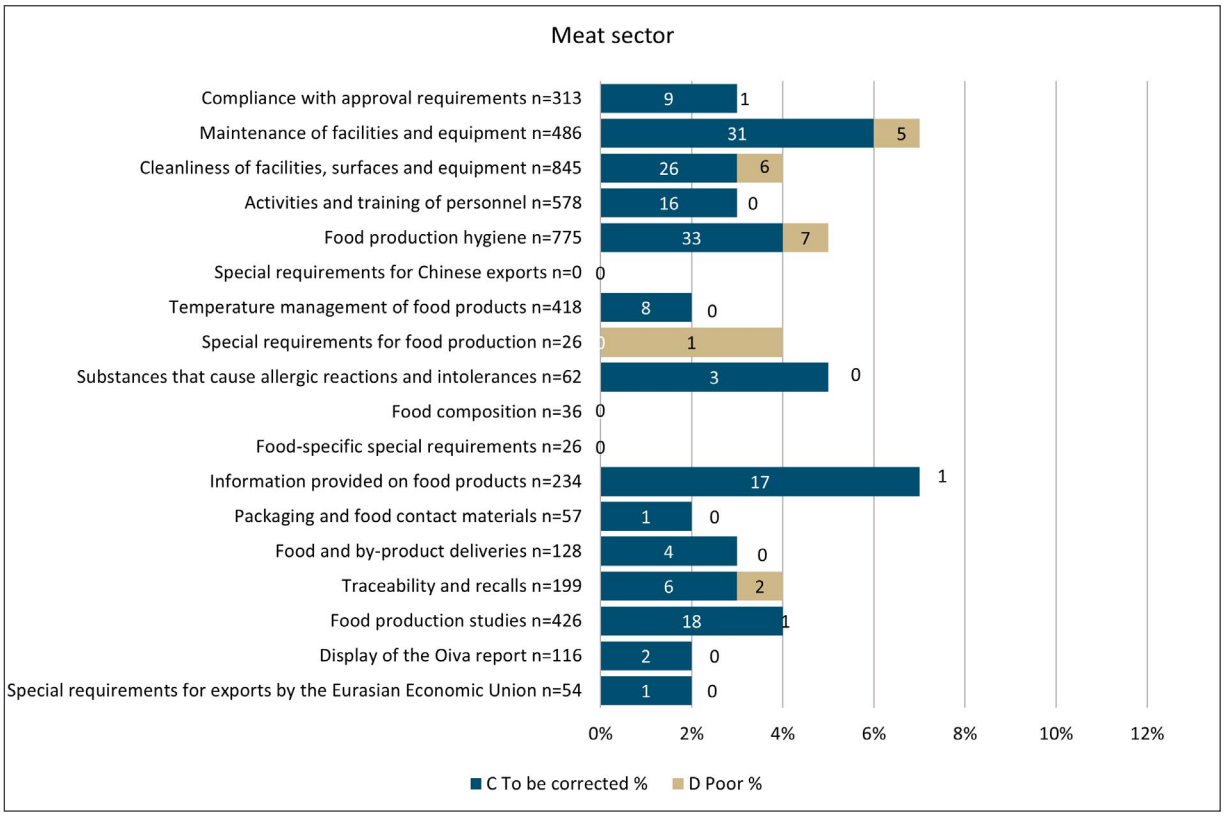


Figure 19. *C and D ratings given during inspections concerning compliance with various requirements in the meat sector (number and %) in 2022; n = total number of Oiva ins.ections for the requirement in question.*

In terms of numbers, most inspections at approved food establishments in the meat sector were related to the cleanliness of facilities, surfaces and equipment, food production hygiene, activities and training of personnel, the maintenance of facilities and equipment, food production studies, and the management of food temperatures. Substances causing allergies and intolerances, packaging and food contact materials, food composition, and food-specific requirements were rarely inspected.

The highest relative share of shortcomings (C or D ratings) at approved food establishments in the meat sector was found in the areas of information provided about food products (7%) and the maintenance of facilities and equipment (7%). The results indicate that there is a need for a sharper focus on controlling chemical food safety, including food composition and information provided about food products, at approved food establishments in the meat sector (Figure 19). Fewer shortcomings were discovered in information provided about food products in accordance with the special legislation on meat than in general mandatory food information. Recipe control is carried out to a small extent.

Table 17. *C and D ratings given for compliance with requirements for dairy sector establishments in 2022.*

Issue	Number of inspections	C %	D %
Food composition	31	0	0
Special requirements for Chinese exports	171	2	0
Food and by-product deliveries	71	1	0
Special requirements for exports by the Eurasian Economic Union	104	1	0
Food production related special requirements	3	0	0
Activities and training of personnel	273	2	0
Maintenance of facilities and equipment	230	3	0
Compliance with approval requirements	210	2	0
Traceability and recalls	106	0	0
Food production hygiene	366	1	0
Information provided on food products	136	8	0
Cleanliness of facilities, surfaces and equipment	417	1	0
Food production studies	295	1	2
Temperature management of food products	179	4	0
Substances that cause allergic reactions and intolerances	18	0	0
Packaging and food contact materials	50	0	0
Display of the Oiva report	64	0	0
Requirements for sale	9	0	0

In 2022, control of approved food establishments in the dairy sector focused on the cleanliness of facilities, surfaces and equipment, food production hygiene, and food production studies. The activities and training of personnel and the maintenance of facilities and equipment were inspected frequently. Only a few inspections focused on packaging and food contact materials, food composition, and substances that cause allergies and intolerances. Special requirements for food production and requirements for sale were inspected the least (Table 17). Recipe control is also rare in the dairy sector.

In relative terms, the largest number of shortcomings at approved food establishments in the dairy sector was discovered in information provided about food products (8% of C ratings) and the management of food temperatures (4% of C ratings), which should therefore be controlled more intensively in the future. In the inspections conducted at food establishments in the dairy sector, only a few D ratings and some C ratings were issued (Table 17). Relatively more notices related to information about nutritional values were issued in the dairy sector than in the other sectors.

Table 18. *C and D ratings given for compliance with egg sector requirements in 2022.*

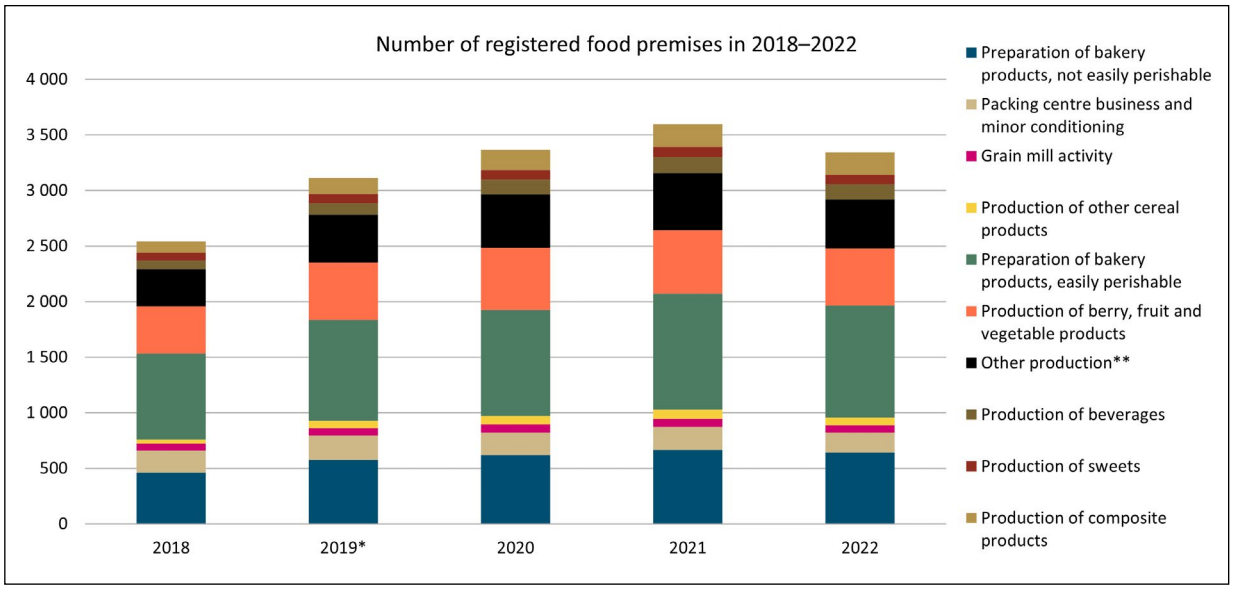
Issue	Number of inspections	C %	D %
Food composition	0	0	0
Reception of animals and animal-related data	6	0	0
Food-specific special requirements	3	0	0
Food and by-product deliveries	62	0	0
Special requirements for exports by the Eurasian Economic Union	6	0	0
Food production related special requirements	5	0	0
Activities and training of personnel	72	0	0
Maintenance of facilities and equipment	83	0	1
Compliance with approval requirements	120	0	0
Traceability and recalls	57	0	0
Food production hygiene	163	1	0
Information provided on food products	41	0	0
Cleanliness of facilities, surfaces and equipment	160	0	0
Food production studies	42	0	0
Temperature management of food products	19	0	0
Substances that cause allergic reactions and intolerances	2	0	0
Packaging and food contact materials	17	0	0
Display of the Oiva report	20	0	0
Requirements for sale	106	2	0

In 2022, control of approved food establishments in the egg sector focused on food production hygiene, the cleanliness of facilities, surfaces and equipment, compliance with approval requirements, and requirements for sale. These issues were inspected to a larger extent than in 2021. The receipt of animals and information about animals, special requirements for Eurasian Economic Union exports, special requirements for food production, food-specific special requirements, and substances that cause allergies and intolerances were inspected least. These were also the least inspected issues in 2021. No inspections covered food composition.

Relatively few shortcomings were discovered at approved food establishments in the egg sector. Only a few C and D ratings were issued, with C ratings focusing on requirements for sale (Table 18). No C or D ratings were issued for information provided about food products, unlike in the inspections conducted in 2021.

5.4 Other food establishments

For the number of registered food premises subject to food control where food products are produced or packed, see Figure 20.



*Changes in the data collection system may affect the figures. **Other production, including dietary supplements, foods for specific groups, coffee roasting.

Figure 20. *Number of registered food premises in 2018–2022.*

Table 19. *Sites that produce food, inspections and sanctions in 2022.*

Food premises	Total number of sites	Inspected (qty)	Inspected (%)	Inspections included in the control plan, incl. follow-up inspections	Inspections not included in the control plan	Inspections that led to a notice	Inspections that led to the use of coercive measures
Cereals and vegetable sector	2 256	728	32.3	827	36	101	11
Grain mill activity	65	18	27.7	19	2	2	0
Production of perishable bakery products	1009	341	33.8	392	18	53	6
Production of non-perishable bakery products	643	219	34.1	246	10	36	1
Production of other cereal products	69	17	24.6	18	0	1	1
Production of berry, fruit and vegetable products	512	155	30.3	175	5	15	3
Packing centre business and minor conditioning	179	26	14.5	25	2	3	0
Food production, excl. dairy, meat, fish, egg, and cereal and vegetable sectors	851	271	31.8	320	24	49	3
Production of composite products	202	94	46.5	132	5	27	2
Production of sweets	87	31	35.6	31	8	3	0
Production of beverages	135	39	28.9	40	8	3	0
Other production*	441	109	24.7	119	3	16	1

*Other production, including dietary supplements, foods for specific groups, coffee roasting

A third (32.3%) of food establishments in the cereal and vegetable sector were inspected following the control plan in 2022. The proportion of inspected sites increased slightly from the previous year. Relatively, the largest number of inspections in the cereal and vegetable sector focused on the production of bakery products, while 34% of production sites for readily perishable and non-readily perishable bakery products were inspected.

Of all inspections in the cereal and vegetable sector, roughly 14% led to notices for corrective action (101 inspections) or the use of administrative coercive measures (11). More administrative coercive measures were used than in the previous year.

Inspections of sites engaged in the **production of other foods** (other than dairy, meat, fish, eggs, cereals and vegetables) include the production of composite products, sweets and beverages, as well as other production, including dietary supplements and foods for specific groups. Of these, roughly a third were inspected following the control plan in 2022 (31.8%).

Regarding the inspections of food production sites inspected, roughly 16% led to notices for corrective action (49 inspections) or administrative coercive measures (3). The largest number of notices for corrective action and coercive measures was used in the production of composite products and other production.

Table 20. *Results of food production inspections in 2022.*

	Planned inspection visits	Distribution of ratings given to food premises for compliance with requirements during planned inspections				Need for follow-up inspections	Actual follow-up inspections	Distribution of ratings given to food premises for compliance with requirements during follow-up inspections			
	Qty	A %	B %	C %	D %	Qty	Qty	A %	B %	C %	D %
Cereals and vegetable sector	827	50	37	11	1	106	84	32	42	15	11
Grain mill activity	19	58	32	11	0	2	5	40	20	40	-
Production of perishable bakery products	392	47	38	12	2	56	41	37	41	7	15
Production of non-perishable bakery products	246	48	38	13	1	34	29	28	45	24	3
Production of other cereal products	18	72	17	11	0	2	0	-	-	-	-
Production of berry, fruit and vegetable products	175	51	40	8	1	16	10	20	50	10	20
Packing centre business and minor conditioning	25	72	20	8	0	2	2	50	-	50	-
Food production, excl. dairy, meat, fish, egg, and cereal and vegetable sectors	320	53	31	14	1	49	37	41	27	30	3
Production of composite products	132	42	37	19	2	28	21	29	29	38	5
Production of sweets	31	68	26	6	0	2	1	-	-	100	-
Production of beverages	40	65	28	8	0	3	3	100	-	-	-
Other production*	119	60	27	13	1	16	13	54	31	15	-

* Other production, including dietary supplements, foods for specific groups, coffee roasting

In 2022, a total of 827 Oiva inspections was conducted at sites engaged in the **cereal and vegetable sector**. An A or B rating was issued in roughly 87%, and a C or D rating in 12% of the inspections (Table 20). Follow-up visits accounted for 79% of the requirement for follow-up inspections.

In 2022, a total of 320 Oiva inspections was conducted at sites engaged in **other food production** (other than the dairy, meat, fish, egg or cereal-vegetable sector). An A or B rating was issued in roughly 84%, and a C or D rating in 15% of the inspections (Table 20). Follow-up visits accounted for 76% of the requirement for follow-up inspections.

The inspection results were fairly similar to those in previous years. However, the realisation of follow-up visits was better than in 2021.

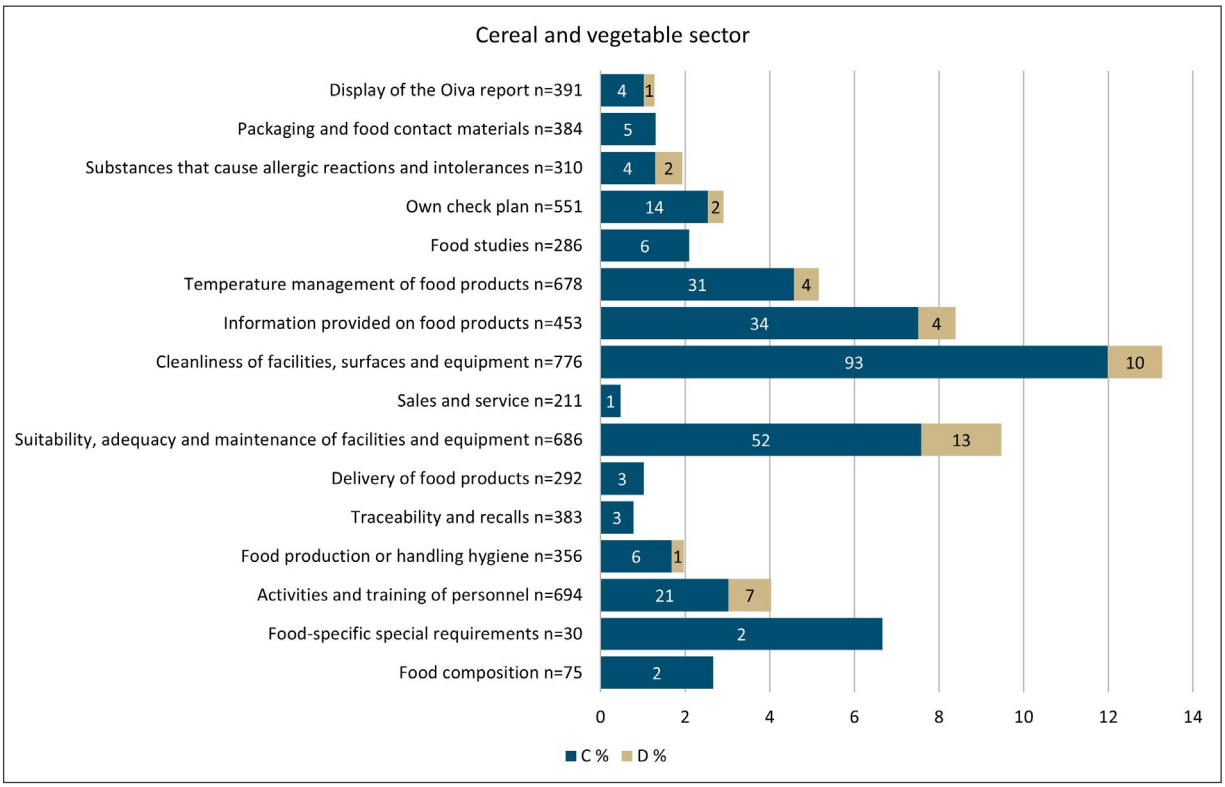


Figure 21. *C and D ratings given for compliance with requirements set for vegetable and cereal sector establishments (number and %); n = number of inspections for the requirement in question.*

The results of the inspections carried out indicate mainly good compliance with the legislation in the cereal and vegetable sector, as C or D ratings were issued for fewer than 5% of the inspected lines. In relative terms, most shortcomings were discovered in the cleanliness of facilities, surfaces and equipment (93 C ratings accounting for 12.0%, 10 D ratings accounting for 1.3%) and information provided about food products (34 C ratings accounting for 7.5%, 4 D ratings accounting for 0.9%) (Figure 21).

Table 21. *C and D ratings given for compliance with requirements set for composite products, sweets, beverages and other production (e.g. dietary supplements, foods for specific groups, coffee roasting) (%) and number of inspections for the requirement in question.*

Issue	Number of inspections	C %	D %
Food composition	42	7	0
Food-specific special requirements	42	8	0
Activities and training of personnel	237	1	0
Food production or handling hygiene	155	3	1
Traceability and recalls	168	2	2
Delivery of food products	107	2	0
Suitability, adequacy and maintenance of facilities and equipment	245	2	1
Sales and service	57	5	0
Cleanliness of facilities, surfaces and equipment	262	2	0
Information provided on food products	192	10	0
Temperature management of food products	219	4	0
Food studies	141	5	1
Own check plan	223	7	0
Substances that cause allergic reactions and intolerances	93	1	0
Packaging and food contact materials	129	2	0
Display of the Oiva report	136	2	1

In the production of composite products, sweets and beverages and in other production, the inspections indicate that facilities, equipment, conditions and the activities of the personnel are at a good level. In relative terms, most shortcomings were discovered in information provided about food products (C ratings 10%), food-specific special requirements (C ratings 8%) and the establishment's own check plan and food composition (each with C ratings 7%) (Table 21).

5.5 Organic production

Control of organic production was carried out in accordance with the control plan. All annual inspections set out in the control plan were successfully carried out, and all samples were taken as required by the legislation on organic production. In 2022, the Finnish Food Authority revised its guidelines for all operators regarding the application of the new legislation, while listening to stakeholders.

More than 98% of operators registered in the control system complied with production-related terms and conditions. The targeted impact was therefore achieved, and Finnish consumers can trust the accuracy of organic labelling.

Fraud prevention, which was selected as a common priority in the control of organic production for a three-year period, was continued by assessing organic operators' recordkeeping, considering the organic production plan and compliance with it, as well as the clarity of records. The control results indicate a need to further stress the importance of recordkeeping and entries to organic operators to verify the trustworthiness of organic labelling.

Table 22. *Indicators for impact in organic production.*

Percentage of operators issued with marketing bans	2020	2021	2022
Plant production	0.6	0.4	0.4
Livestock production	1.5	1.6	1.5
Feed manufacturing and import	5.0 (2 qty)	0	2.4 (1 qty)
Food manufacturing and import	0.5	0.5	0.8
Production and sale of alcoholic beverages	-	0.5	0

Market control of organic products

Market control of organic products takes place every three years in retail stores in conjunction with Oiva inspections. In 2022, municipal food inspectors conducted 253 Oiva inspections focusing on the labelling and authenticity of organic products. By controlling the authenticity of organic products in retail outlets, it is essential to ensure that consumers are not misled, and that the products sold in retail stores are controlled organic products.

Table 23. *Results of market control inspections for organic products in 2020–2022.*

Inspections	2020	2021	2022
Total number of inspections	295	200	253

Shortcomings (B and C ratings) were discovered in 9% of all market control inspections for organic products. As in previous years, the most common reason for deviations was the placement of organic products too close to conventional products. In addition, products that were not in compliance with the requirements set out in organic production regulations were discovered in a few inspections. These products or their marketing were found to mislead consumers. In all cases, inspectors guided activities to correspond to the requirements of the organic production regulations. After this, the products or their marketing met the requirements.

Table 24. *Results of market control inspections in 2020–2022.*

Results on a scale	Corrective measure	2021	2021	2022
A. All conditions met	No action	90.5	93	91
B. Small defect	Guidance and advice	8.8	6	7
C. Misleading activities	Request to correct defects within a deadline	0.7	1	2
D. Seriously misleading activities	Coercive measures or prohibitions, defects must be corrected immediately	0	0	0

A report on organic production control in 2022 is available on the Finnish Food Authority's website.

5.6 Alcoholic beverages

The National Supervisory Authority for Welfare and Health (Valvira) supervises operators based on the legislation on alcohol, food and organic production. In 2022, Valvira supervised a total of 540 operators (Table 25), 203 of which were producers of alcoholic beverages, and 339 were wholesalers. The control system of organic production covered 122 operators. In 2022, activities, inspections in particular, were still affected by the Covid-19 pandemic and the renewal of the alcohol trade register started by Valvira in 2019. Control of organic production was prioritised.

Table 25. *Alcoholic beverage production and wholesale control sites, inspections and sanctions in 2022.*

Year	Registered sites (qty)	Inspected sites (qty)	Inspected sites, %	Planned inspections (qty)	Actual number of planned inspections	Plan implementation rate (%)	Inspections not included in the plan (qty)	Total number of inspections	Number of notices issued	Administrative coercive measures (qty)
2022	540	77	14	100	77	77	0	77	27	2
2021	530	72	14	105	71	68	1	72	30	3
2020	529	78	15	150	78	52	0	78	8	1
2019	516	109	21	135	106	79	3	109	16	6
2018	482	102	21	135	112	83	3	112	14	14

Control under the Food Act

Control of alcoholic beverages prioritises inspections of producers. The fulfilment rate of the inspection plan was 77% in 2022. The coverage of inspections was roughly 30% for producers and 5% for wholesalers. As a rule, the shortcomings discovered during the inspections were related to operators' own check plans, inadequate recordkeeping and the incorrect labelling of products. The shortcomings were similar to those in previous years, and no serious defects were detected.

While 79 samples were taken, the fulfilment rate of the sampling plan was 66%, increasing significantly from the previous year. In seven samples, deviations were discovered concerning alcohol content (2), incorrect sealing of the packaging (1) and labelling (6). Shortcomings in the labelling inspected included problems related to alcohol content, while problems in mandatory labelling concerned Finnish and Swedish translations of allergens and the producer's address.

Control under the Act on Organic Production

Physical inspections were carried out regarding producers within the organic system (24), whereas the inspections of wholesalers (47) were carried out as hybrids or remotely. During these inspections, operators were given notices regarding missing or expired documents or shortcomings in recordkeeping or organic labelling. In the case of wholesalers, notices were typically related to missing or expired documents.

No marketing bans were issued for organic products in 2022. During the year, samples were taken from 12 organic alcoholic beverages. No pesticide residues were found in the products, and their sulphur dioxide (SO^2) concentrations were below the maximum values permitted under organic legislation.

5.7 Food contact materials

Control of food contact material manufacturers, importers and wholesalers

In 2022, the total number of registered control sites in the food contact material sector was 653. Contact material sites have been divided into three risk categories (R1, R2 and R3). The inspection intervals (0.33, 0.5 and 1 inspections per year) under the control plan are determined based on the risk category. Risk category R3 involves the highest risks, and such sites require more inspections under the control plan than others. This goal was not achieved in the whole of Finland, as inspections were targeted fairly evenly at sites included in different risk categories.

See Table 26 for the distribution of food contact material activities by activity type and the targeting of inspections under the control plan by risk category.

Table 26. *Food contact material sites and their activity types, as well as inspections conducted under the control plan by risk category.*

Activity type	Total number of inspected sites	Number of inspections by risk category		
		R1	R2	R3
Manufacturers	300	0	27	35
Importers	239	22	8	5
Wholesalers	252	19	11	2
Total	790	42	46	42

A total of 141 inspections was conducted. See Table 27 for the number of inspected sites and the inspection results. As the targeted coverage of inspections is 33%, the goal was not achieved, but the coverage improved from the previous year. Inspections were mostly targeted at food contact material manufacturers (70), followed by importers (45).

Table 27. *Planned inspections of food contact material sites in 2019–2022 and the distribution of ratings issued.*

Year	Inspected sites (qty)	Inspected sites (%)	A %	B %	C %	D %
2022	135	20.7	74.7	20.9	4.2	0.2
2021	101	16.5	67.3	23.1	9.2	0.4
2020	109	22.6	61	28	11	0
2019	110	29	67.1	23.8	8.8	0.4

Contact material operators are required to have a quality management system (own checks) compliant with EU Regulation 2023/2006. The implementation of the system is assessed in seven different areas during inspections. Ratings from A to D are issued during the assessment: A means that the content and implementation of an operator's own checks are at a good level and meet the legal requirements; B means that there are minor shortcomings in an operator's own checks; C means that there are moderate shortcomings that need to be fixed during a specific time; and D means that an operator has no own checks in place, or their content and implementation are poor and require immediate correction. The distribution of the ratings has remained relatively unchanged during the last three years. See Table 28 for the distribution of C and D ratings.

Table 28. *Reasons for C and D ratings at contact material sites.*

Issue	C	D
General information on the quality management system	5	0
Composition management	1	0
Studies	1	0
Conformity documents	3	0
Package labelling	1	0
Traceability	0	1
Processing methods/processes	1	0

Guidance and advice were provided at 69 inspected sites. Notices were issued at 12 inspected sites, which marked a significant decrease from the previous year (21). The largest number of notices was issued for importers (7). The situation involving coercive measures was the same as in previous years, meaning no coercive measures had to be used. Figure 22 presents the reasons for notices issued to contact material sites.

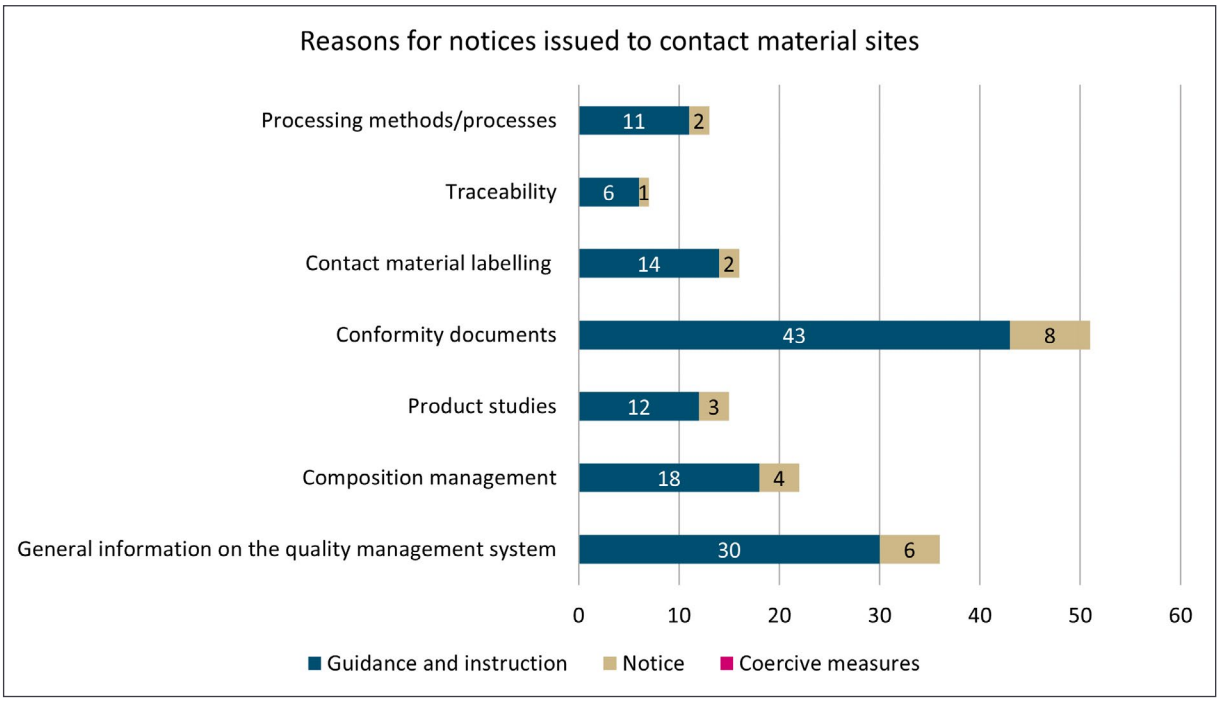


Figure 22. *Reasons for notices issued to contact material sites.*

Most C ratings were issued when the operator had none of its own checks, or they were inadequate, and when there were defects in the content of compliance reports.

The Bamboozling anti-fraud project launched by the European Commission in 2021 continued until the spring of 2022. Finnish Customs and municipal control authorities participated in the project alongside the Finnish Food Authority. The project aimed to discover plastic contact materials containing bamboo powder sold in online shops. The project was reported in the spring of 2022, and its results were published at the same time as the Commission's project report in the autumn of 2022.

Control of contact material use in food establishments

The safe use and compliance of contact materials in food establishments were inspected 6,587 times. The compliance of contact materials must be controlled once every three years at almost all food establishments, as food is always in contact with some material or accessory. Of the Oiva inspections carried out at food establishments, 27.5% covered contact material safety. This figure increased slightly from previous years (26.6% in 2020; and 24.7% in 2019).

Table 29 presents the number of contact material inspections carried out at food establishments and the distribution of Oiva ratings issued between 2019 and 2022. The number of A and B ratings remained high, being 99% in 2022.

Table 29. *Contact material inspections at food establishments in 2019–2022 and the distribution of ratings given.*

Year	Number of inspected sites	A %	B %	C %	D %
2022	6 219	91	7	1	0
2021	5 472	93	6	1	0
2020	4 627	93	6	1	0
2019	5 574	91	8	1	0

The number of notices related to contact materials at food establishments increased from previous years. In 2022, 101 notices for contact materials were issued. The corresponding figure was 70 in 2021, 52 in 2020 and 61 in 2019.

Shortcomings in several basic issues were discovered during the inspections, and extensive advice was given in inspection reports. C ratings were issued for the following reasons, among others:

- No compliance documents or other proof of the suitability for contact with food were presented, documents were more than three years old, or documents did not present sufficient information to verify compliance with requirements;
- Contact materials were used contrary to instructions for use;
- Old packaging was reused in the storage of foods;
- Foods were kept for extended periods in opened cans;
- Waste bags and plastic bags purchased at shop checkouts were used in direct contact with foods;
- Containers unsuitable for microwave cooking were used for heating in a microwave; steel containers had been covered with aluminium foil.

See Table 30 for the distribution of contact material inspections in the activity categories of different food establishments and the distribution of ratings.

Table 30. *Distribution of contact material inspections in the activity categories of different food establishments in 2022, the distribution of ratings and the number of notices.*

Activity category	Number of control sites	Inspected sites	% of all Oiva inspections	Total inspections	A %	B %	C %	D %	Number of notices issued
Transport	1 125	118	13 (11)	13	100	0	0	0	0
Sales	11 704	3 473	976 (28)	1 016	95	4	1	0	11
Service	30 764	11 442	4 624 (40)	4 840	92	6	2	0	76
Storage, freezing	744	211	33 (16)	34	87	13	0	0	0
Other production (excl. meat, fish, milk, eggs)	850	265	125 (47)	129	82	16	2	0	3
Fish	344	264	95 (36)	112	76	21	3	0	4
Meat	318	232	78 (34)	92	77	22	1	0	5
Milk	108	91	34 (37)	50	76	24	0	0	0
Egg	66	51	16 (31)	17	100	0	0	0	0
Export and import	999	230	16 (7)	17	100	0	0	0	0
Cereal and vegetable	2 256	710	376 (53)	385	92	7	1	0	5

5.8 Food transport

Table 31. *Food transport control sites, inspections and sanctions.*

Transport	Total number	Inspected sites (qty)	Inspected sites (%)	Planned inspections, incl. follow-up inspections (qty)	Inspections not included in the plan (qty)	Inspections that led to a notice (qty)	Inspections in which coercive measures were used (qty)
Total food transport	1 127	122	10.8	130	9	7	1
Transport	633	46	7.2	47	5	1	0
Cooled transport	504	76	15.1	83	3	4	1
Warm transport	106	8	7.6	8	0	0	0
Frozen transport	235	37	15.7	40	1	2	1

Table 31 shows that the coverage of food transport control remains low. The small number of inspections is partly due to the difficulty of accessing the transport fleet. The consignee typically sets high requirements for transport temperatures, and in this respect, the standard of acceptance practices and operators' own checks was found to be high. Key areas checked during inspections have included the operator's own check plans and their adequacy, the cleanliness and general suitability of facilities for transport operations, and the activities of the personnel. Attention was also paid to conditions during transport, depending on the type of transport in question.

Table 32. *Inspection-specific results for food transport.*

Transport	Planned inspections, incl. follow-up inspections (qty)	A %	B %	C %	D %
Food transport	130	82.4	11.1	5.6	0.8
Transport	47	91.5	6.4	2.1	0
Cooled transport	83	77.9	15.6	5.3	1.3
Warm transport	8	100	0	0	0
Frozen transport	40	84.2	7.9	5.3	2.6

Table 33. *C and D ratings given for compliance with food transport requirements (%).*

Issue	Number of inspections	C %	D %
Food composition	0	0	0
Food-specific special requirements	0	0	0
Activities and training of personnel	253	0	0
Food production or handling hygiene	12	0	0
Traceability and recalls	63	1.6	0
Delivery of food products	168	3.3	0.6
Suitability, adequacy and maintenance of facilities and equipment	292	1	0
Sales and service	0	0	0
Cleanliness of facilities, surfaces and equipment	245	0	0
Information provided on food products	6	0	16.7
Temperature management of food products	26	0	0
Food studies	2	0	0
Own check plan	108	1.9	0
Substances that cause allergic reactions and intolerances	0	0	0
Packaging and food contact materials	9	0	0
Display of the Oiva report	32	0	0

Inspections of the international transport of perishable food products and special feet used for such transport

A total of 52 inspections of ATP classified means of transport was carried out by control units. A total of 28 control sites was inspected. The number of ATP vehicle inspections was the same as in 2021. During the inspections, seven notices were issued, mostly due to missing ATP certifications or the damaged structure of the load area. As ATP vehicles are both certified and monitored as part of the certification system, it would not make sense to target food control more extensively at supervising the technical properties of the vehicles.

5.9 Wholesale and storage of food

Table 34. *Controlled sites, inspections and sanctions in the wholesale and storage sectors in 2022.*

Food premises	Total number	Inspected sites (qty)	Inspected sites (%)	Inspections following the plan, incl. follow-up inspections (qty)	Unplanned inspections (qty)	Inspections that led to a notice (qty)	Inspections in which coercive measures were used (qty)
Food wholesale	616	138	22.4	145	16	30	5
Food storage and freezing	745	219	29.4	263	151	34	0
Storage of animal-derived foods	112	76	67.9	115	126	15	0
Storage of other foods	578	140	24.2	141	23	19	0
Freezing of food products	62	17	27.4	27	2	8	0
Packing of food products	70	11	15.7	11	0	0	0

Compared to the 2021 report, the number of both wholesale and storage and freezing sites decreased slightly (Table 34).

Inspections covered 22.4% of wholesale sites. The number of inspections remained at the previous year's level, with 90% of all inspections being conducted under the control plan. Notices were issued as a result of 30 inspections, and coercive measures were taken during five inspections.

Inspections covered 29.4% of control sites in the storage and freezing of food products. Of these inspections, 63.5% were within the scope of the control plan, while 36.5% fell outside its scope. Inspections outside the scope of the control plan typically concerned the loading of export batches. Based on the inspections, 34 notices were issued.

Table 35. *Inspection-specific results of food product wholesale and storage in 2022.*

Food premises	Planned inspections, incl. follow-up inspections (qty)	A %	B %	C %	D %
Food wholesale	145	43	36	18	3
Food storage and freezing total	261	60	29	10	1
Storage of animal-derived foods	114	56	33	9	2
Storage of other foods	140	66	22	11	1
Freezing of food products	27	37	30	30	4
Packing of food products	11	64	36	0	0

Of **wholesale sites**, 79% received an A or B rating, 18% a C rating, and 3% a D rating. Of the sites involving the **storage and freezing of foods**, 89% received an A or B rating, 10% a C rating, and 1% a D rating.

While the results are fairly similar to those in 2021, the number of A ratings decreased, and that of B ratings increased, in nearly all activity categories. The number of inspections at both wholesale sites and sites involving the storage and freezing of foods increased from the previous year.

Table 36. *C and D ratings given for compliance with requirements for the wholesale of food products (%); n = number of inspections for the requirement in question.*

Issue	Number of inspections	C %	D %
Food composition	23	0	0
Food-specific special requirements	36	8.3	0
Activities and training of personnel	127	0	0
Food production or handling hygiene	13	0	0
Traceability and recalls	161	1.2	0
Delivery of food products	76	0	0
Suitability, adequacy and maintenance of facilities and equipment	212	3.3	1.4
Sales and service	45	0	0
Cleanliness of facilities, surfaces and equipment	258	3.1	0.8
Information provided on food products	176	13.6	2.3
Temperature management of food products	155	3.2	0
Food studies	18	0	0
Own check plan	101	5.9	0
Substances that cause allergic reactions and intolerances	7	0	0
Packaging and food contact materials	24	0	0
Display of the Oiva report	55	0	0

In proportion to the number of inspections focusing on wholesale trade in foods, the largest number of shortcomings (C or D rating) was discovered in information provided about food products, compliance with food-specific special requirements, and operators' own checks (Table 36).

Table 37. *C and D ratings (%) given to registered sites involved in the storage and freezing of foods for compliance with set requirements and the number of inspections for the requirement in question.*

Issue	Number of inspections	C %	D %
Food composition	2	0	0
Food-specific special requirements	8	12.5	0
Activities and training of personnel	235	0.9	0
Food production or handling hygiene	17	5.9	0
Traceability and recalls	159	0	0.6
Delivery of food products	94	0	0
Suitability, adequacy and maintenance of facilities and equipment	309	1.9	0
Sales and service	9	0	11.1
Cleanliness of facilities, surfaces and equipment	410	2.2	0
Information provided on food products	52	9.7	0
Temperature management of food products	173	1.7	0.6
Food studies	21	4.8	0
Own check plan	106	2.8	0
Substances that cause allergic reactions and intolerances	15	0	0
Packaging and food contact materials	23	0	0
Display of the Oiva report	40	0	0

Table 38. *C and D ratings (%) given to approved sites involved in the storage and freezing of foods for compliance with set and the number of inspections for the requirement in question.*

Issue	Number of inspections	C %	D %
Food composition	4	2	1
Food-specific special requirements	5	0	0
Activities and training of personnel	126	1	0
Food production hygiene	187	3	3
Traceability and recalls	113	0	0
Food and by-product deliveries	94	0	0
Maintenance of facilities and equipment	138	4	0
Cleanliness of facilities, surfaces and equipment	275	1	0
Information provided on food products	25	12	6
Temperature management of food products	125	1	0
Food studies	41	6	0
Substances that cause allergic reactions and intolerances	7	0	0
Packaging and food contact materials	8	0	0
Display of the Oiva report	39	0	0
Compliance with approval requirements	114	3	3
Food production related special requirements	3	25	0

At sites involved in the **storage and freezing of foods**, issues related to maintenance, cleanliness, temperature management and operators' own checks were inspected most often.

5.10 Food retail sales

Table 39. *Food retail control sites, inspections and sanctions, all inspections in 2022.*

Food premises	Total number	Inspected sites (qty)	Inspected sites (%)	Inspections included in control plan, incl. follow-up inspections (qty)	Inspections not included in the plan (qty)	Inspections that led to a notice (qty)	Inspections in which coercive measures were used (qty)
Food retail trade	11 161	3 453	31	3 865	355	584	11

There were 11,161 retail sites, of which one in three was inspected. Compared to 2021, the number of sites fell by roughly 6.5% (11,941 sites in 2021). Approximately, 2.7% fewer inspections were conducted in retail in 2022 than in 2021, totalling 4,220 inspections, and administrative coercive measures were taken in 11 (roughly 0.3%) of them.

Table 40. *Inspection-specific Oiva results for food retail in 2018–2022.*

Food retail trade	Planned inspections, incl. follow-up inspections (qty)	A %	B %	C %	D %
2022	3 851	51	35	14	1
2021	3 807	52	33	13	1
2020	3 448	53	34	11	1
2019	3 553	48	38	13	1
2018	3 868	47	39	13	1

Both the number of inspections conducted at retail sites and the results of the inspections were roughly the same as in the previous year. As a rule, activities were in compliance with requirements, or only minor shortcomings were discovered. The best possible ratings of A and B were given in 86% of the inspections, while 15% resulted in the lowest ratings of C or D.

Table 41. *Distribution of the results of inspections included in the control plan for food retail sale and food service and later follow-up inspections by item in 2022.*

	Planned inspections	Distribution of ratings given to food activity for compliance with requirements during planned inspections				Need for follow-up inspections	Actual follow-up inspections	Distribution of ratings given to food activity for compliance with requirements during follow-up inspections			
Food activity	Qty	A %	B %	C %	D %	Qty	Qty	A %	B %	C %	D %
Retail trade	3 467	91	7	2	0.04	451	389	65	21	10	3
Service	11 798	88	9	3	0.03	1 547	1 501	67	23	9	1

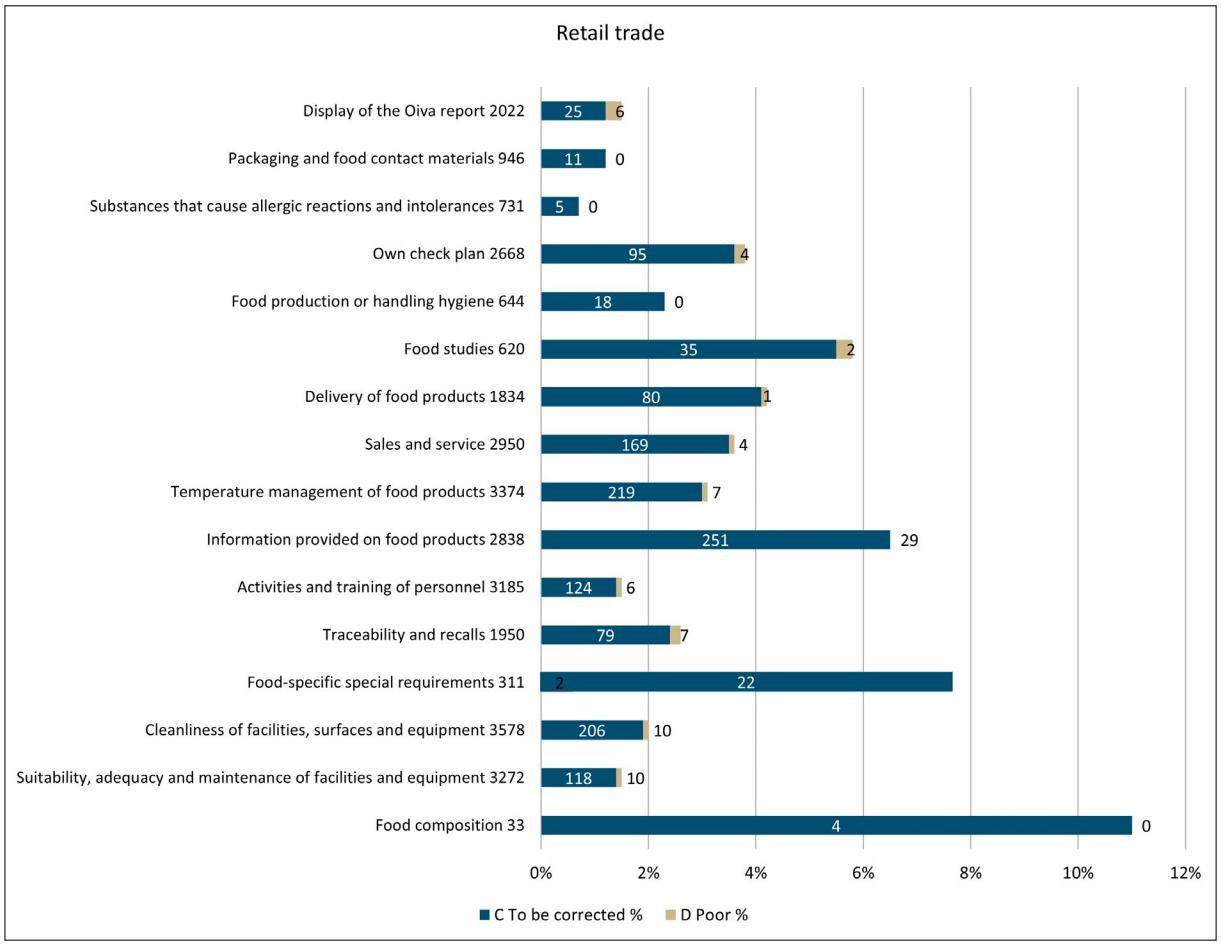


Figure 23. *C and D ratings given for compliance with the set requirements for the retail sale of food (number and %); n = number of inspections for the requirement in question in 2022.*

The results for different issues were mainly good: As or Bs accounted on average for 98% of all ratings (Table 41). As in the previous year, the fewest high ratings were issued for food composition (89%), information provided about food products (93.5%), and food-specific special requirements (93.5%). However, food composition was only inspected 33 times, as it is rarely relevant to retail sales.

The largest number of shortcomings in retail sale of foods (C or D ratings) was related to the same issues: food composition; information provided about food products; and food-related specific requirements (Figure 23).

Table 42. *Control sites, inspections and sanctions for low-risk activities involving food in 2022.*

Food activity	Total number	Inspected sites (qty)	Inspected sites (%)	Inspections included in control plan, incl. follow-up inspections (qty)	Inspections not included in the plan (qty)	Inspections that led to a notice (qty)	Inspections in which coercive measures were used (qty)
Low-risk activity	299	54	18	56	7	9	0

Table 43. *Inspection-specific results for low-risk activities involving food products in 2022.*

Food activity	Planned inspections, incl. follow-up inspections (qty)	A %	B %	C %	D %
Low-risk activity	55	55	29	16	0

Low-risk activities are those referred to in sections 32 to 34 of the Ministry of Agriculture and Forestry Decree 318/2021 on Food Hygiene. In 2022, 18% of such operators engaging in meat handling were inspected. Most of the inspections were conducted following the plan (Table 43). As a rule, low-risk activities were compliant with the requirements.

5.11 Food service

See Figure 24 for the number of food service establishments.

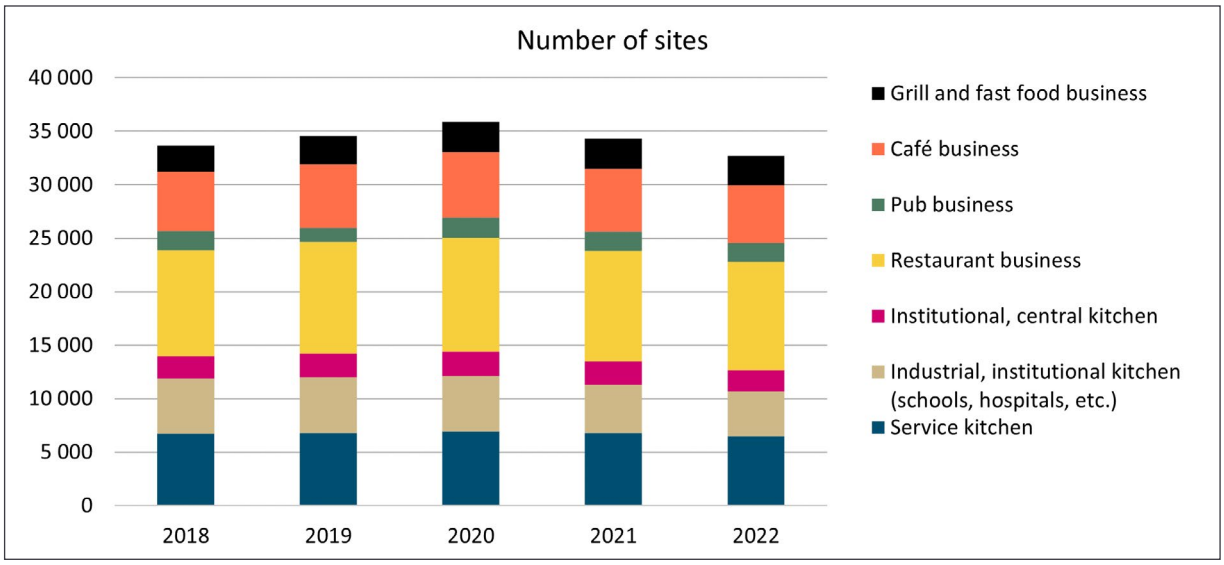


Figure 24. *Number of food service establishments in 2018–2022.*

There was a total of 33,140 food service establishments in 2022 (Figure 24). The figure also includes catering services, which were separated from institutional kitchens into a separate activity in 2022. Control information about catering services is missing from the tables and figures because the change took place during the year, and the information is therefore not comparable with other service activity categories.

Table 44. *Food service control sites, inspections and sanctions in 2022.*

Food activity	Total number	Inspected sites (qty)	Inspected sites (%)	Inspections included in control plan, incl. follow-up inspections (qty)	Inspections not included in the plan (qty)	Inspections that led to a notice (qty)	Inspections in which coercive measures were used (qty)
Food service total	30 771	11 696	38	13 372	790	2 096	31
Grill and fast-food business	2 736	947	35	1 059	100	172	2
Café business	5 404	1 507	28	1 595	86	199	5
Pub business	1 774	123	7	108	29	11	0
Restaurant business	10 139	4 896	48	5 821	451	1 337	24
Institutional kitchen business							
central kitchen	1 992	1 015	51	1 222	41	136	0
institutional kitchen	4 171	1 551	37	1 615	37	110	0
Service kitchen business	6 482	1 910	29	2 045	45	148	0

The largest proportion of food service establishments consists of restaurants and service kitchens (Figure 24 and Table 44).

In relative terms, the largest number of inspections was targeted at restaurants and institutional (central) kitchens, while the smallest number focused on pubs, cafés and service kitchens. The number of inspections conducted at food service establishments totalled 14,162. Inspections outside the scope of the control plan (5.6% of all inspections) were generally related to complaints made by consumers, including suspected food poisoning and other suspicions. In addition, if two inspectors work together on an inspection, it may be recorded as an inspection not included in the control plan for one of them. The results demonstrate that food service establishments were usually well managed (especially institutional and service kitchens), as the inspections led to few notices and coercive measures. Coercive measures were targeted at restaurants, cafés, and two grill and fast-food businesses (Table 44).

An Oiva rating of A or B was given to 85% of food service establishments, while 15% received a C or D rating (Table 45). Not many D ratings were given. In an itemised examination of food service establishments, we observed that pubs and institutional and service kitchens have obtained better Oiva results than other operator types.

Table 45. *Inspection-specific Oiva results of food service establishments in 2022.*

Food premises	Planned inspections, incl. follow-up inspections (qty)	A %	B %	C %	D %
Food service total	13 372	46	39	14	1
Grill and fast-food business	1 059	45	41	14	1
Café business	1 595	51	38	11	1
Pub business	108	61	28	11	0
Restaurant business	5 821	35	43	21	1
Institutional kitchen business					
central kitchen	1 222	54	36	10	0
institutional kitchen	1 615	61	33	6	0
Service kitchen business	2 045	60	33	7	0

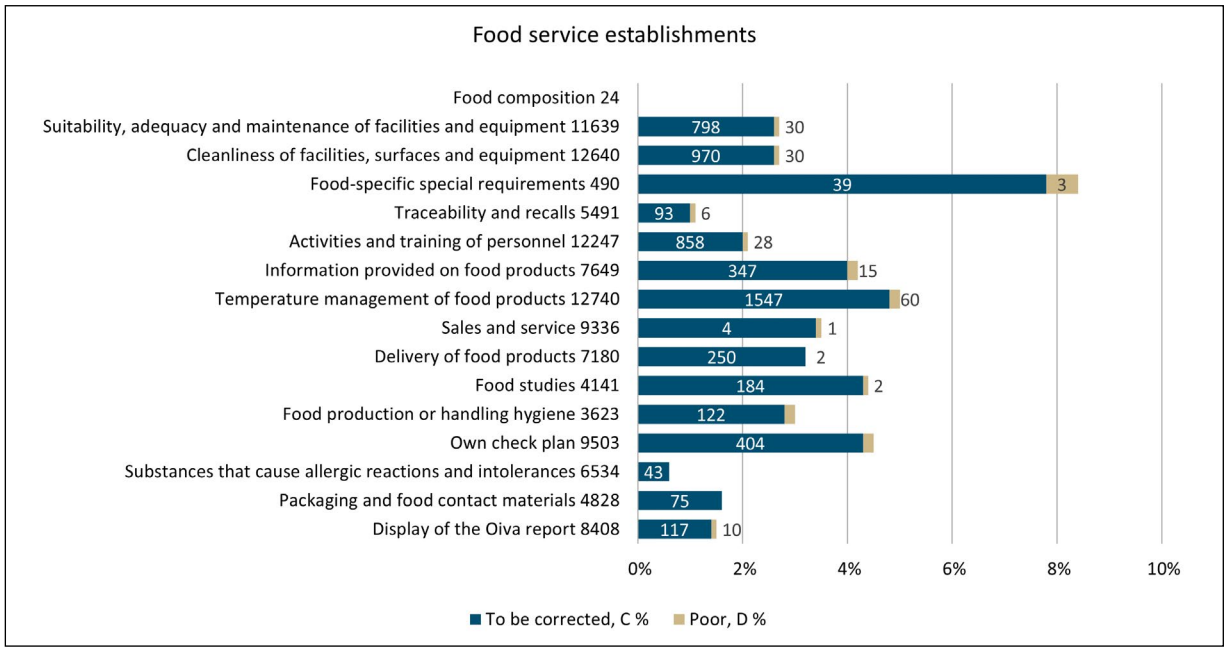


Figure 25. *C and D ratings given for compliance with requirements for food service establishments (number and %).*

As a rule, activities at food service establishments were compliant with the requirements, or only minor shortcomings were observed, as more than 95% of the results for different issues were excellent or good (Figure 25).

Quantitatively, the largest number of shortcomings (C or D rating) discovered at food service establishments was related to the temperature management of food products, the cleanliness of facilities, surfaces and equipment, and the activities and training of personnel.

Temperature management of food products refers to temperatures during the storage of food products. Temperature management during serving is inspected as part of the item focusing on food sales and service.

Food control by the Finnish Defence Forces

In 2022, food control by the Finnish Defence Forces was fulfilled as planned. As a rule, the sites not inspected were low-risk food premises. According to the Finnish Food Authority's guidance, food control focused on temperature control in 2022. The average rating given in this area was excellent (A). In food control following the control plan, some shortcomings were discovered in the sufficiency of operators' own checks and their implementation. The shortcomings were not considered to endanger food safety. Operators were guided by requesting them to correct the shortcomings discovered.

Only minor shortcomings were found at the control sites in food control following the control plan. The shortcomings were considered to reduce food safety (C), not endanger it (D).

6 SALE OF FOOD PRODUCTS

6.1 Products with registered names

The EU scheme for the protection of names refers to protected designations of origin (PDO), protected geographical indications (PGI) and traditional specialities guaranteed (TSG). The number of inspections carried out for the production, sale and marketing of food products with registered names was 506, which is 101 more than in the previous year. Figure 26 presents the number of inspections by activity category in 2018–2022.

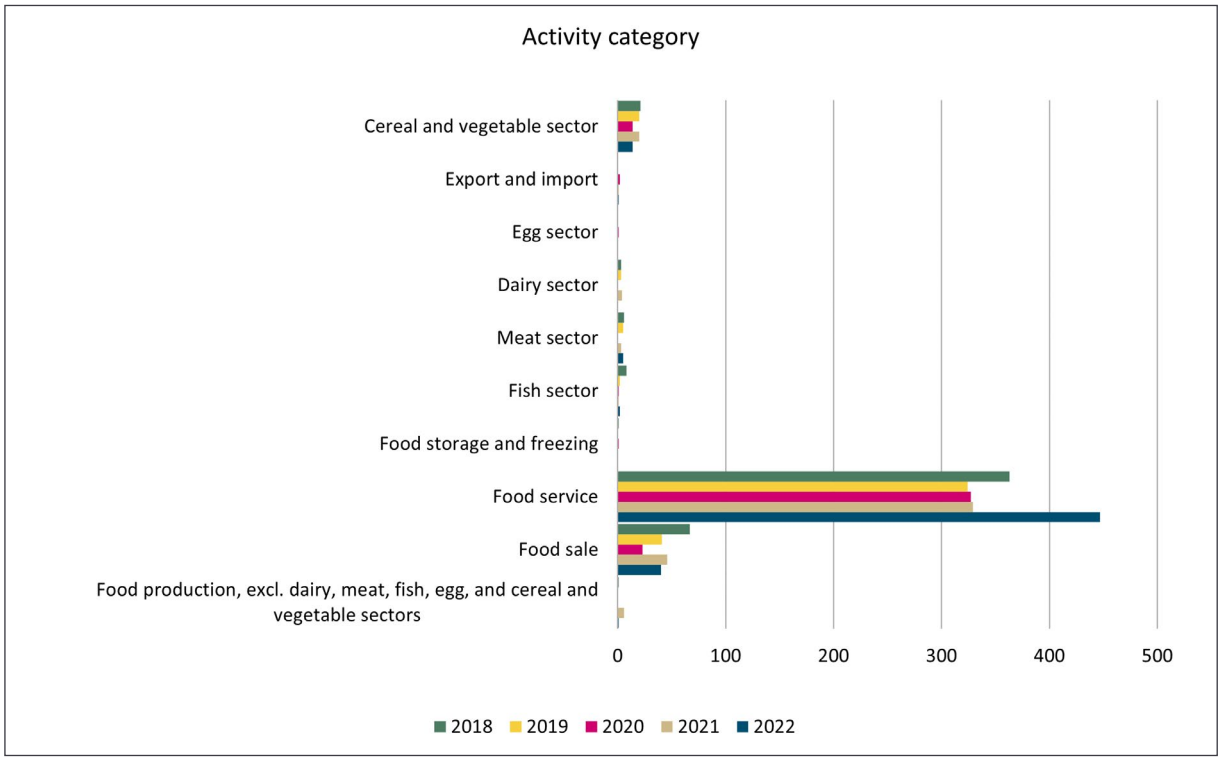


Figure 26. *Distribution of inspections focusing on products with registered names in different activity categories in 2018–2022.*

Food service establishments accounted for the largest number of inspections by far (88%; institutional kitchens, restaurants, cafés, grill and fast-food businesses). Food sales accounted for 8% of the inspections, and sites producing baked goods, including Karelian pies, for 3%. Of all inspected sites, 74% received an A rating, 19% a B rating, and 7% a C rating. The distribution of inspections and Oiva ratings in 2018–2022 is presented in Figure 27.

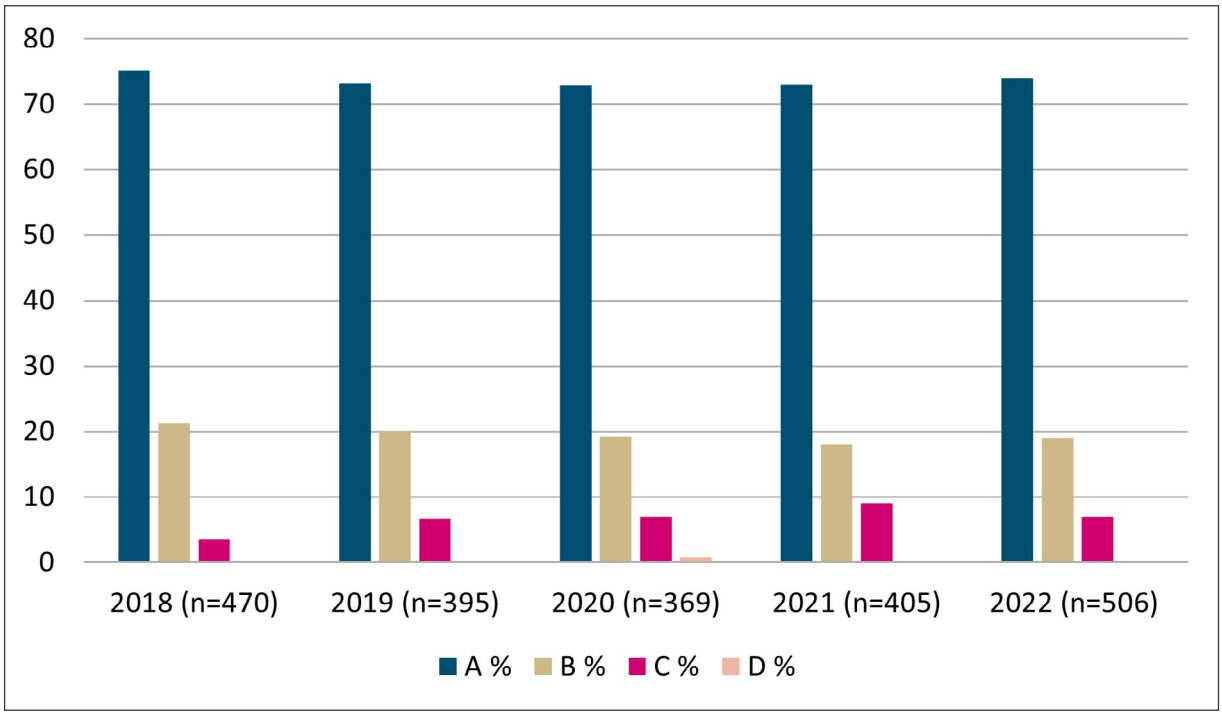


Figure 27. *Distribution of inspections of food products with registered names and Oiva ratings in 2018–2022.*

Valvira carried out one inspection on a producer of products with registered names (sahti) in connection with an inspection included in the plan. In addition, Valvira inspected an operator before starting the production of the "Suomalainen marjalikööri" (Finnish berry liquor) product.

6.2 Requirements for the sale of fruit and vegetables

The requirements for the sale of fruit and vegetables, are quality and labelling requirements that have been set out for fresh fruit, berries and vegetables marketed in and imported into the EU. Commission implementing regulation 543/2011 presents detailed special requirements for sale regarding ten product groups (special requirement products) and general requirements for sale regarding all other fruit and vegetable products to which the sale requirements apply (general requirement products). The quality and labelling of special requirement products are inspected during compliance inspections.

The requirements for the sale of fruit and vegetables were inspected in 16 product batches at the four packing plants inspected. A total of 25 inspection visits to fruit and vegetable wholesale operators was conducted, and there was a total of 181 inspected batches. The number of batches inspected at vegetable wholesale outlets and packing plants returned to the pre-pandemic level (Figure 28).

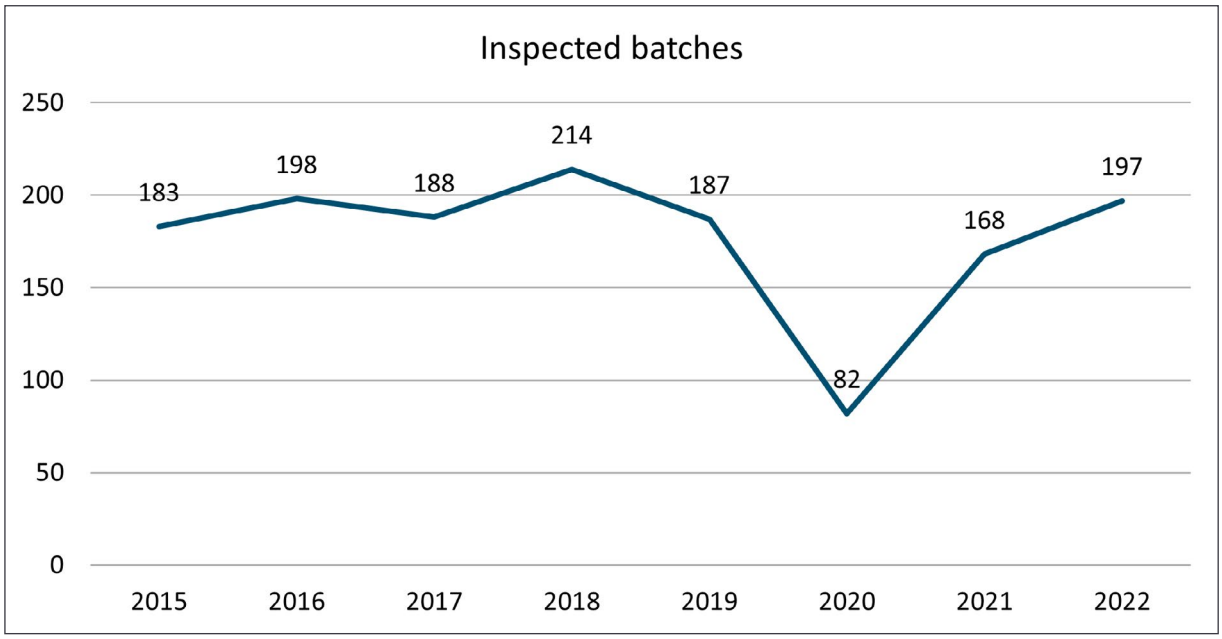


Figure 28. *Number of batches subjected to compliance checks at fruit and vegetable wholesalers and packing plants in 2015–2022.*

The largest number of compliance inspections targeted tomatoes, apples, lettuce, peppers and citrus fruit, whereas the largest number of non-compliant batches among the inspected products comprised peppers, tomatoes, pears, clementines and grapes. The largest number of inspections focused on fruit and vegetables cultivated in Finland. They were followed by fruit and vegetable batches declared as originating in Spain, the Netherlands, Italy and Morocco. The largest number of non-compliant batches came from the Netherlands, Spain, Finland and Morocco. The most important reason for non-compliance was surface defects (three batches), followed by spoilage (three batches) and labelling errors (three batches).

Finnish Customs carried out compliance inspections for fruit and vegetables, both for imported batches and those sold in internal EU trade. In addition to products subject to special requirements, the inspections also focused on the fulfilment of general quality requirements. The control of special requirements for fruit and vegetables targeted 322 batches in total. In addition, 816 batches were inspected on the basis of general requirements. A total of five batches was rejected based on physical inspections. The reasons for the rejections were rot, mould and surface defects.

6.3 Requirements for the sale of eggs

Farms producing eggs

All new poultry farms producing free-range and barn eggs are inspected, and potentially also poultry farms in which changes have been made since the most recent inspection. In 2022, 24 inspections were conducted (Table 46). Of these inspections, 21 consisted of measuring new barn egg farms, while three were conducted on free-range egg farms to approve the site as a barn egg production farm or free-range egg farm before it started operating.

Table 46. *Inspection visits to egg production farms.*

Inspected site	Number of inspections					Total number of barn egg farms in the Finnish Food Authority's register				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Barn egg farms	6	4	13	22	21	124	127	131	144	152
Free range egg farms	3	0	2	2	3	11	11	12	14	14

The inspections of production farms are approval inspections, in which egg farms are approved for the barn egg or free-range egg production systems pursuant to the legislation. The number of inspections conducted in 2022 remained at the 2021 level. More inspections were conducted in 2021 and 2022 than in 2018–2020. During 2022, many egg producers converted from enriched cage production to barn eggs. The reason for this is that the central trade organisations have announced their intention to cease selling eggs produced in enriched cage systems from 2024. Most of the inspected new farms were multi-tiered systems.

Egg packing centres

In 2022, there were 66 egg packing centres in Finland, and the requirements for sale were assessed in them during 106 inspections. Of these inspections, 34 concerned the quality and weight grading of eggs, 38 the stamping and labelling of eggs, and 34 the recordkeeping of eggs at egg packing centres.

An A rating was given in 93.4% (99) of the inspections conducted at egg packing centres for compliance with the requirements for sale, while 4.7% (5) of the inspections resulted in a B rating, and 1.9% (2) in a C rating. No D ratings were given.

At egg packing centres, 100% of inspections that investigated compliance with the requirements for quality and weight grading of eggs, as well as the stamping and labelling of eggs, resulted in an A or B rating. For inspections targeted at recordkeeping at egg packing centres, 94.1% resulted in an A or B rating, and 5.9% in a C rating (Table 47). Two inspections at egg packing centres at which compliance with requirements for the sale of eggs was inspected resulted in a C rating. No D ratings were given.

An A or B rating was given during the majority (98%) of the inspections of sale requirements at egg packing centres conducted in 2022 regarding the quality and weight grading of eggs, the stamping and labelling of eggs, and egg-related recordkeeping at egg packing centres.

Six inspections related to compliance with the requirements for the sale of eggs carried out at egg packing centres led to sanctions. Guidance and advice were provided in those six cases. No notices or coercive measures were required.

Guidance and advice were provided for egg stamping. Notices were given because stamps were unclear, or even illegible in roughly half of all inspected eggs. At most, 20% of all inspected eggs can be illegible.

Shortcomings were discovered in egg-related recordkeeping, resulting in guidance and advice during four inspections. For example, information about production volumes and the percentage of discarded eggs was missing from documents. Furthermore, shortcomings were discovered in the volumes of eggs received at egg packing centres and forwarded from there.

Rather than causing a risk to food safety, non-compliance with the provisions regarding requirements for sale may mislead consumers and hamper the traceability of eggs, for example.

Table 47. *Inspection-specific results of inspections related to compliance with requirements for sale at egg packing centres in 2021.*

Control of compliance with requirements for sale at egg packing centres	Inspections following the plan, incl. follow-up inspections (qty)	A %	B %	C %	D %
Egg quality and weight grading	34	97.1	2.9	0	0
Stamping of eggs and labelling of egg cartons	38	94.7	5.3	0	0
Records kept on eggs by egg packing centres	34	88.2	5.9	5.9	0

6.4 Marketing of food products

In 2017–2019, only 1% of Oiva inspections focused on marketing (Table 48), even though the majority of food sector businesses market their products. Marketing control was selected as one of the national priorities of food control in 2020 and 2021. This significantly increased the number of inspections. In 2022, marketing control was no longer a national priority, as a result, the number of inspections fell to the 2020 level. However, the number of inspections was still ten times higher than before the national priorities were set. The most significant changes in the number of inspections were seen in food service and sales (Figure 29).

Table 48. *Number of sites inspected for marketing of food products, and the share of Oiva inspections that included marketing control in 2017–2022.*

Year	Sites where an Oiva inspection has been carried out	Sites where marketing has been inspected	Share of marketing control in completed Oiva inspections (%)
2017	19 866	178	0.9
2018	20 409	236	1.2
2019	17 418	251	1.4
2020	14 650	1 778	12
2021	15 635	3 309	21
2022	16 355	2 125	13

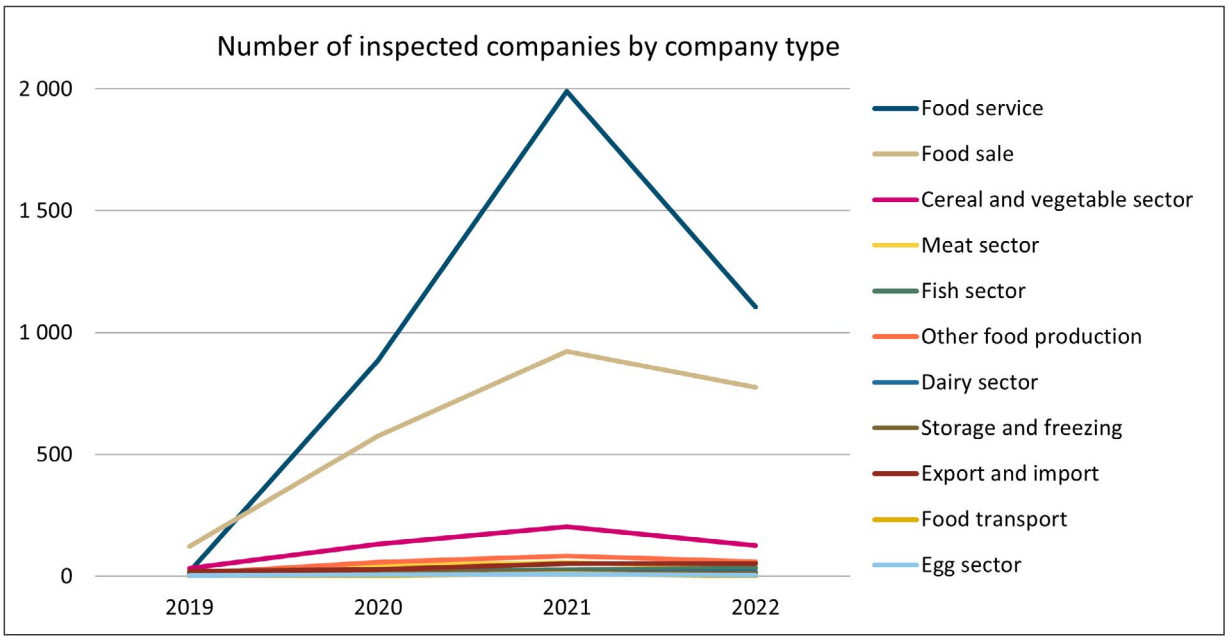


Figure 29. *Changes in the control of food marketing by company type in 2019–2022.*

As an increased number of inspections was carried out in 2020–2022, rather than only focusing on high-risk sites, marketing control was more balanced. This was also seen in the increased proportion of A ratings (Figure 30). The most common shortcomings leading to C and D ratings were the use of medicinal claims and unapproved health claims.

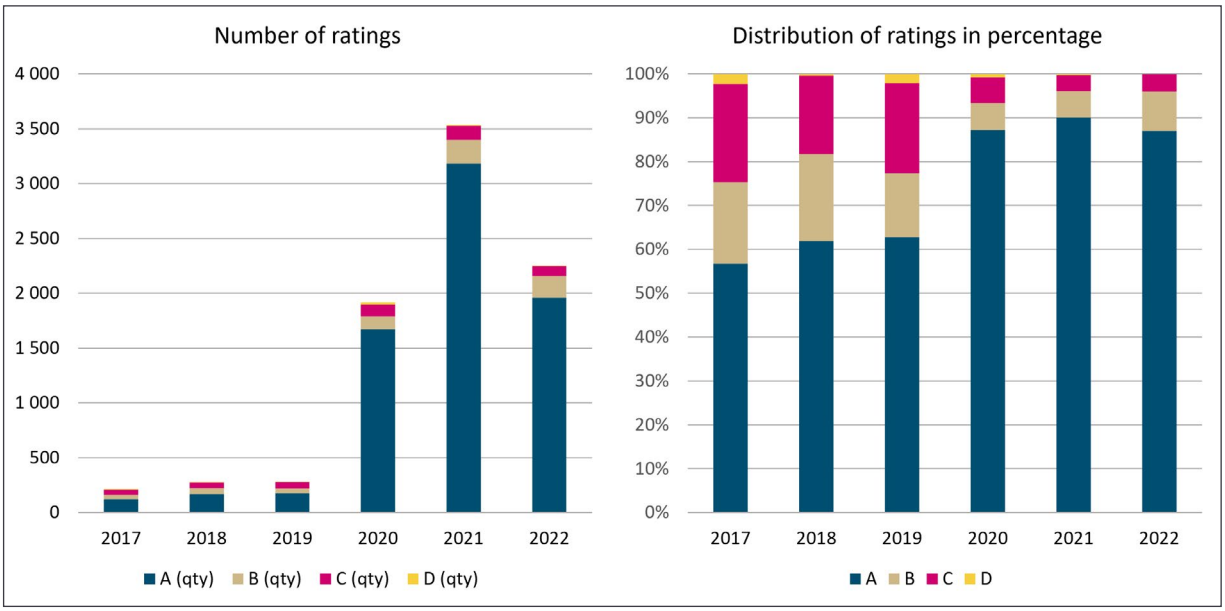


Figure 30. *Number of ratings given in the control of food marketing and their distribution (%) in 2017–2022.*

6.5 Compliance of olive oils with requirements

Each Member State must ensure that the labelling of olive oils is correct and accurate and in particular, that the trade description (category of oil) corresponds to the content of the package. Four different brands of extra virgin olive oil were inspected for conformity with olive oil requirements as part of the Finnish Food Authority's control. Samples were taken from retail stores in different retail chains. Based on both chemical laboratory analyses and organoleptic

evaluation, all four extra virgin olive oils were of the quality indicated on the label, or extra virgin olive oil. The labelling of the inspected extra virgin olive oils was in order, both regarding the requirements of the olive oil regulations and general labelling regulations. Figure 31 presents the number of samples examined annually in Finland in 2018–2022 and the observed non-compliances.

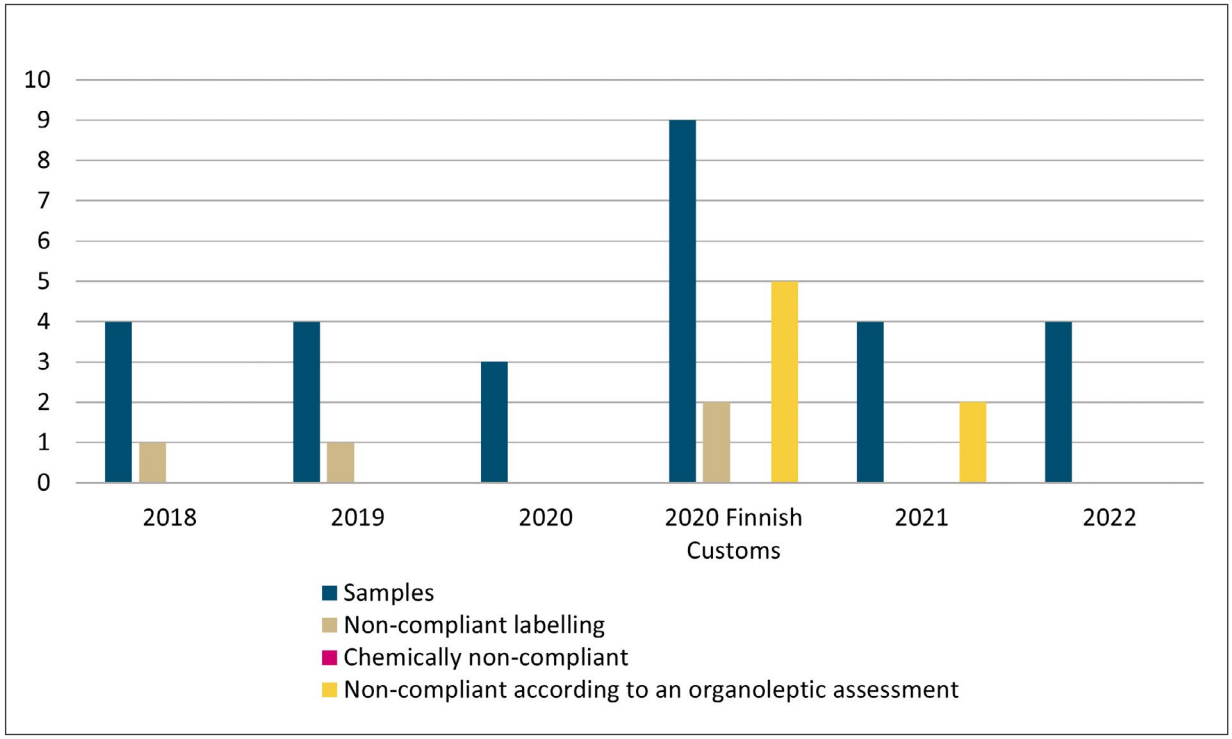


Figure 31. *Compliance of olive oils in Finland 2018–2022. Number of samples taken each year and detected non-compliances. Data on the Finnish Customs project in 2020 have been reported separately.*

7 MICROBIOLOGICAL MONITORING PROGRAMMES

7.1 Salmonella in food products

The goal of the national Salmonella control programme is to monitor the Salmonella situation in animals and animal-derived foods, and to keep the occurrence of Salmonella low in Finland. The scope of the national Salmonella control programme covers cattle, pigs and poultry, as well as their meat and eggs.

The national Salmonella control programme has been included in slaughterhouses', low-capacity slaughterhouses' and meat cutting establishments' own check control programmes. Establishments' own salmonella-related checks were inspected at 41 sites, covering a third of all sites. The number of inspections was in the same range as in previous years. During these inspections, 92% of operators were given an A or B rating, 6% a C rating, and 2% a D rating. Minor shortcomings (B) in operators' own checks were discovered at six sites. More serious problems (C or D) in sampling were detected at four sites. A follow-up inspection was conducted at two sites in 2022, and the situation was found to have improved from C to A or B.

In 2022, samples for the national Salmonella control programme were taken at pig and cattle slaughterhouses based on the total numbers specified in the sampling plan for individual slaughterhouses prepared by the Finnish Food Authority. Last year's deviation in the ratio of targeted and randomised samples had been corrected, and the targeted number of samples was achieved in all sample types, except for the targeted collection of lymph node samples from sows and boars. Samples were taken at low-capacity slaughterhouses, broiler, turkey and chicken slaughterhouses, cutting plants and establishments producing minced meat and meat preparations in compliance with the legislation and the Finnish Food Authority's instructions based on production volumes. See Tables 49 to 52 for the numbers and results of the samples examined.

The national Salmonella control programme has been successful, and the Salmonella status of Finnish meat has remained good. Salmonella bacteria were identified in at most 0.44% of the samples collected at slaughterhouses and meat sector establishments. The average occurrence is well below the national 0.5% target.

Table 49. *Samples taken at pig and cattle slaughterhouses and low-capacity slaughterhouses following the Salmonella control programme in 2022.*

Sample type	Regulation requirement	Actual number of samples	Number of positive samples	Percentage of positive samples
Lymph node samples – random				
Slaughter pig	780	900	4	0.44
Sow and boar	780	948	2	0.21
Cattle	780	1 018	0	0.00
Lymph node samples – targeted				
Slaughter pig	1 320	1 513	3	0.20
Sow and boar	1 320	1 307	0	0.00
Cattle	1 320	1 333	4	0.30
Carcass swab samples				
Pig	2 100	2 329	1	0.04
Cattle	2 100	2 291	0	0.00

Table 50. *Neck skin samples taken from carcasses at broiler, turkey and chicken slaughterhouses in 2022.*

Animal	Number of samples	Number of positive samples	Percentage of positive samples
Broiler	1 300	0	0.0
Turkey	266	0	0.0
Chicken	0	0	0.0

Table 51. *Meat samples from cutting plants in 2022.*

Animal	Number of samples	Number of positive samples	Percentage of positive samples
Finnish meat			
Slaughter pig	1 290	0	0.0
Sow and boar	190	0	0.0
Cattle	1 151	0	0.0
Broiler	5	0	0.0
Turkey	66	0	0.0
Chicken	0	0	0.0
Duck	1	0	0.0
Goose	2	0	0.0
Guinea fowl	0	0	0.0
Imported meat			
Slaughter pig	40	0	0.0
Sow and boar	0	0	0.0
Cattle	67	0	0.0
Broiler	0	0	0.0
Turkey	0	0	0.0
Chicken	0	0	0.0
Duck	0	0	0.0
Goose	0	0	0.0
Guinea fowl	0	0	0.0

Table 52. *Sampling at establishments that produce minced poultry meat and poultry meat preparations in 2022.*

Finnish meat	Number of samples	Number of positive samples	Percentage of positive samples
Broiler	751	0	0.0
Turkey	122	0	0.0
Chicken	0	0	0.0

Compliance with the sampling requirements of the control programme regarding samples from live animals is reported in the "Eläinten terveyden valvonta" (Animal health control) report.

7.2 Salmonella in feed

Pursuant to Finnish legislation, no Salmonella bacteria may be present in feed. Both official controls and operators' own check controls are in place to monitor the presence of Salmonella in feed. The Finnish Food Authority takes samples of feed produced in Finland and imported high-risk feeds and supervises operators to ensure that their own check controls are carried out. In addition, samples of animal by-products used as pet foods are taken as part of market control. If necessary, feed samples are also taken on animal farms to identify the source of Salmonella infections diagnosed on livestock farms, or when there is reason to suspect that a farm has received feed contaminated with Salmonella. Feed sector operators have a statutory duty to carry out their own check controls for Salmonella that focus on the production and import of feed, as well as production facilities, storage and transport.

A total of 2,715 Salmonella analyses of feeds and feed environment samples was conducted as part of official control in 2022. Of the Salmonella analyses associated with imports, manufacture and market control, 1,827 targeted feed materials, 551 mixed feeds, and 12 feed additives. In the control of primary production, a total of 33 feed and feed environment samples was additionally collected on farms with Salmonella infections for Salmonella analyses. Ten feed environment samples were taken in an inspection of transport vehicles. Salmonella occurring in feed materials was mainly analysed in samples taken in imports. Salmonella analyses of mixed feeds and feed additives were mainly carried out using samples taken as part of domestic production and market control. Salmonella analyses of feed materials accounted for 79% of all Salmonella analyses (81% in 2021, 90% in 2020, 92% in 2019, and 94% in 2018).

A total of 23 feed batches was found to be positive for Salmonella, either in official controls or in an operator's own checks in connection with imports in 2022 (including both EU internal market trade and imports from third countries) (2021: 22; 2020: 20; 2019: 24; 2018: 29; 2017: 16; 2016: 18; 2015: 5). As in previous years, the number of contaminated batches was quite large. In the spring of 2022, more cereals than normal were imported for use as feed due to the small harvest levels in the summer, and Salmonella was discovered not only in ground rapeseeds and soybeans but also in cereal batches. Operators applied for a treatment permission for the contaminated import batches from the Finnish Food Authority and analysed the batches as part of their quality assurance after treatment. The batches were approved for use after they had been found to be uncontaminated. In total, batches positive for Salmonella accounted for 59.5 million kg of feed materials (2021: 36 million kg; 2020: 36 million kg; 2019: 61 million kg; 2018: 58 million kg; 2017: 37 million kg).

Salmonella was detected in four market control samples, three of which concerned a treated animal by-product, i.e. treats/chew toys intended for dogs, and one sample concerned nuts sold for wild birds. The marketing of these batches was banned, and the batches were withdrawn from the market. More Salmonella was discovered in the market control samples than in the previous year.

In domestic feed production, no Salmonella was detected in feed batches intended for livestock held for food production or for pets.

No Salmonella was detected in feed samples taken on farms due to Salmonella infections discovered in livestock. Furthermore, no Salmonella was detected in feed environment samples taken from transport vehicles. Salmonella was detected in one batch of a mixed feed for fur animals containing animal-based feeds. Its producer was required to verify the treatment process in all phases and production situations.

Feed control report 2022 (pdf)

7.3 Campylobacter control in broilers

The goal of the Campylobacter control programme is to reduce the occurrence of *Campylobacter jejuni* and *Campylobacter coli* bacteria in Finnish broiler meat and provide information about the occurrence of Campylobacter in the food chain. The occurrence of Campylobacter in Finnish broilers has been monitored systematically since 2004 as part of slaughterhouses' own check controls. In accordance with the national Campylobacter control programme, all broiler slaughter batches are tested for Campylobacter in the period from the beginning of June until the end of October. In the other months, the Finnish Food Authority provides guidelines for testing targets for each poultry slaughterhouse, which is based on a calculation that takes into account the occurrence of Campylobacter in Finland in the intervening months.

Laboratories report the number of tests to the Finnish Food Authority. The achievement of the targets set in the programme is evaluated based on the numbers of tests carried out at laboratories.

The national Campylobacter control programme has been integrated into broiler slaughterhouses' own check control programmes. In 2022, four poultry slaughterhouses' own Campylobacter checks were inspected. During these inspections, 83% of operators were given an A or B rating, and 17% a C rating. Shortcomings in the number of samples were discovered at one site (C).

Table 53 presents the number of samples and results under the Campylobacter control programme at broiler slaughterhouses in 2022. Based on test results in 2022, the occurrence of Campylobacter in broilers has remained low. It has returned to the former level following the previous year's peak. Figure 32 represents the percentage of Campylobacter positive slaughter batches in all slaughter batches inspected in 2016–2022.

Table 53. *Number of broiler slaughterhouses' own Campylobacter samples and slaughterhouse prevalence of Campylobacter in 2022.*

Year	Period	Tested slaughter batches, target (qty)	Tested slaughter batches, actual (qty)	Number of positive slaughter batches	Percentage of positive slaughter batches
2022	1 January – 31 May, and 1 November – 31 December	331	373	1	0.3
	1 June – 30 October	All	1 663	70	4.2
	Entire year	-	2 036	71	3.5

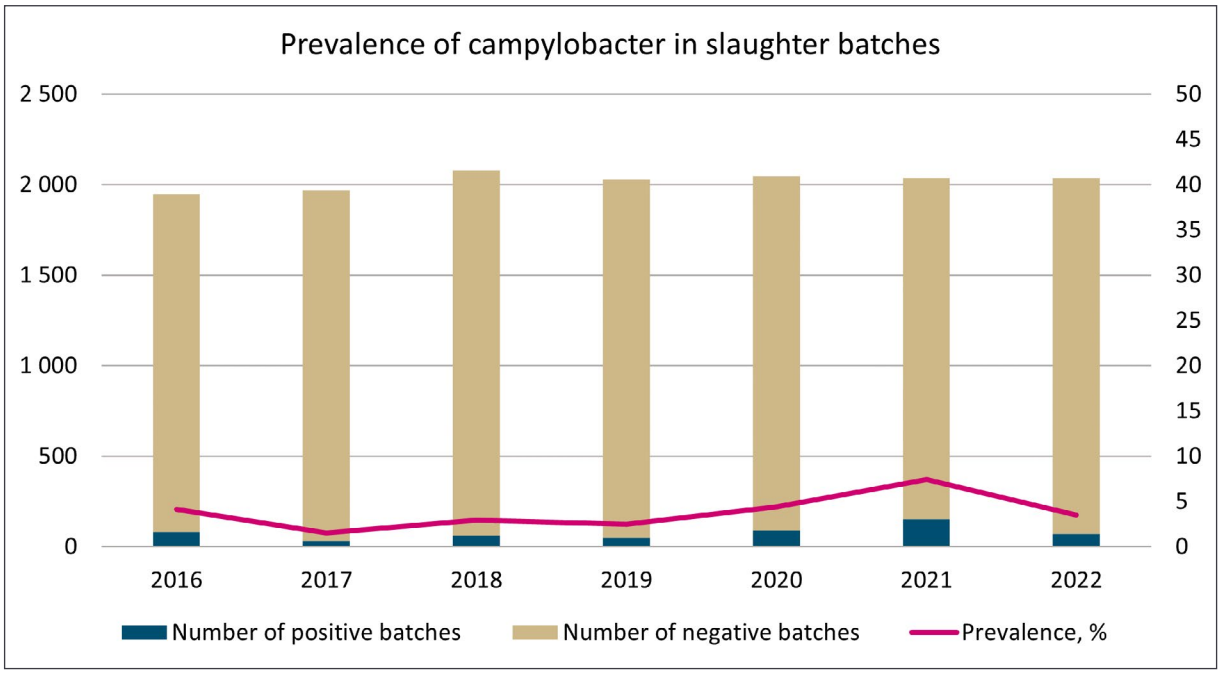


Figure 32. *Campylobacter occurrence in broiler slaughter batches in 2016–2022.*

In addition to the national Campylobacter control programme, from the beginning of 2018, broiler slaughterhouses have tested broiler carcasses for Campylobacter in compliance with the test requirements set for all the EU Member States. The proportion of samples in which the limit value of 1,000 cfu/g set for Campylobacter was exceeded during the monitoring period was less than 0.2%.

Table 54. *Campylobacter in carcass samples from broiler slaughterhouses in 2018–2022.*

Year	Number of samples tested	Number of samples exceeding the limit value	% of samples exceeding the limit value
2018	580	1	0.17
2019	645	0	0.00
2020	595	1	0.17
2021	585	1	0.17
2022	585	0	0.00

7.4 STEC control in cattle

The goal of the Shiga-toxin-producing Escherichia coli (STEC) programme is to monitor and reduce the occurrence of STEC bacteria in Finnish slaughter cattle and beef, and provide information about the occurrence of STEC bacteria in the food chain. Planned tests of the STEC monitoring programme are included in cattle slaughterhouses' own check control programmes. The slaughterhouse-specific number of annual samples is determined in the sampling plan drawn up by the Finnish Food Authority. In addition, low-capacity slaughterhouses, in which the yearly number of cattle slaughtered exceeds 100, carry out their own STEC checks. Cattle slaughterhouses' and low-capacity slaughterhouses' own STEC checks were inspected at four (a fifth) cattle slaughterhouses within the scope of the control programme in 2022. Cattle slaughterhouses' and low-capacity slaughterhouses' own STEC checks were found to be compliant (A or B rating) in 92% of all inspections. At one site, no STEC samples were taken (D).

At cattle slaughterhouses, the STEC monitoring programme was carried out as planned. STEC sampling at low-capacity slaughterhouses was not implemented fully as required by the monitoring programme. In 2022, 521 STEC surface swab samples were taken, of which 77 were confirmed as positive. STEC positive surface swab samples accounted for 14.8% of all samples. The number of positive samples remained at the previous year's level, at below 15%.

7.5 Recognition of controlled housing conditions for pigs and Trichinella tests

The official recognition of controlled housing conditions for pigs allows for a reduction in the number of Trichinella tests in conjunction with pig meat inspection. Pigs bred in officially recognised controlled housing conditions are protected from Trichinella infections throughout their lives, which means they do not need to be examined after slaughtering. Pigs bred in establishments officially recognised as having controlled housing conditions are exempt from Trichinella tests by an order of the Finnish Food Safety Authority.

The Finnish Food Authority (Finnish Food Safety Authority Evira until 31 December 2018) recognises controlled housing conditions of pigs upon application. The recognition can cover a single holding or a group of holdings ("compartment"). In 2022, one pig holding in Finland was recognised by the Finnish Food Authority as having controlled housing conditions. In practice, this means that around 600 slaughtered pigs were exempt from Trichinella tests in 2022.

7.6 Antimicrobial resistance monitoring programme

Antibiotic resistance in the food chain is monitored annually within the framework of the FINRES-Vet monitoring programme. This programme was launched at the beginning of 2021, and it is based on Commission Implementing Decision (EU) 2020/1729 and nationally selected control sites. EU monitoring was carried out as planned in 2022, and this was the first time the monitoring programme covered fresh turkey meat in retail.

The zoonotic bacteria included in the programme are Salmonella and Campylobacters. In 2022, antimicrobial susceptibility was studied as part of the Salmonella control programme with Salmonella strains isolated from cattle, pigs and poultry. The sensitivity of Campylobacter was examined from *C. jejuni* strains isolated from slaughtered broilers. The occurrence of *E. coli* bacteria that produce ESBL, AmpC and carbapenemases was monitored in slaughtered broilers and in fresh broiler and turkey meat in retail stores.

Whereas little resistance has been found each year in Salmonella strains isolated from domestic farmed animals, multi-resistant strains have been more numerous in recent years. According to preliminary results, resistance was only discovered in two Salmonella strains in 2022.

Resistance to fluoroquinolones in Campylobacters isolated from farmed animals has increased since the 2010s, even though the share of resistant strains of Campylobacters isolated from broilers in particular has varied significantly from year to year. According to preliminary results, only one resistant *C. jejuni* strain was discovered in broilers in 2022.

The occurrence of ESBL/AmpC *E. coli* in broilers has decreased in recent years compared to the monitoring years of 2016 and 2018, when it was roughly 13–14%. The occurrence was 0.3% in 2020 and preliminary results show that it was 1.3% in 2022. This decrease results from the lower occurrence of the AmpC phenotype. AmpC strains were discovered in roughly 11% of all samples

in 2016 and 2018, while no strains were detected in 2020 or 2022. The occurrence of ESBL/AmpC *E. coli* bacteria in broiler meat has decreased significantly since 2016, with preliminary results indicating that it was 1.7% in 2022. No such bacteria were detected in turkey meat in 2022.

The resistance of *E. coli* indicator bacteria in broilers has been monitored every two years since 2014. In 2022, resistance to tetracycline, nalidixic acid, ciprofloxacin, sulfamethoxazole, trimethoprim, ampicillin and gentamicin was detected. Based on preliminary results, 4% of all strains were multi-resistant, and 80% were completely susceptible. The situation remained relatively stable compared to previous monitoring years.

8 CHEMICAL FOOD SAFETY

8.1 Prohibited substances, medicine residues and contaminants in animal-derived food products

The national contaminant control programme for live animals and animal-derived foods has been implemented annually as required under both national and EU legislation (Article 150 of Regulation (EU) 2017/625 of the European Parliament and of the Council and Annexes to Council Directive 96/23/EC). The goal is to ensure that prohibited substances are not used in livestock production, and that food products do not contain residues of approved veterinary medicinal products at levels that exceed the maximum residue limits determined in the applicable legislation. The incidence rates and levels of contaminants (including heavy metals, pesticides and mycotoxins) from the environment in food products are also monitored under this programme.

In 2022, the contaminant control programme was fulfilled almost as planned, despite the Covid-19 situation. Tests were conducted using 4,076 samples, and roughly 50,000 results were obtained. The use of multi-residue methods was further expanded in analytics. Table 55 presents the number of samples based on production figures by animal species or food product and the distribution of tests between different groups of substances and the number of non-compliant samples in 2022. No samples taken from wild game (elk) were tested. Some samples were tested for more than one category of substances. Samples are reported as non-compliant if they contain residues of approved veterinary medicinal products or other substances in levels that exceed the maximum residue limits or action limits, or if it can be demonstrated that animals have been medicated in violation of regulations or given prohibited substances. An official investigation is always conducted when non-compliances are observed or suspected.

Table 55. *Number of samples tested in the contaminant control programme for animal-derived food products categorised by animal species or food products for tests in different substance categories and the number of non-compliant samples in 2022.*

Animal category or animal-derived food product	Prohibited substances	Approved veterinary medicinal products	Contaminants	Total samples	Non-compliant samples (qty) and detected residues
Bovines	712	389	148	1 130	
Pigs	574	798	169	1 387	
Poultry	375	338	29	602	
Sheep	17	30	9	44	
Horses	34	31	7	59	
Elk	0	0	0	0	
Farmed game	16	76	39	113	4 liver/cadmium
Milk	237	327	99	327	9 kidney/cadmium
Fish	84	66	27	137	Aflatoxin M1
Egg	142	201	49	201	
Honey	76	76	44	76	

In addition to the results shown in Table 55, small concentrations of some growth promoters not permitted for farmed animals or their metabolites may also occur naturally. In addition, residues of approved medicinal products or small concentrations of other foreign substances falling below the limit values can also be detected in samples.

Small concentrations of testosterone beta, nandrolone alpha and boldenone alpha were detected in bovine urine samples. Thiouracil was discovered in one urine sample taken from cattle. This may occur when animal feed has contained cruciferous plants. Nandrolone beta was detected in one sample taken from pigs, and both testosterone beta and oestradiol alpha and beta were found in one urine sample taken from a horse. A low concentration of oestradiol beta was detected in one broiler blood sample. The increased sensitivity of analytical techniques facilitates the detection of low, naturally occurring hormone concentrations without this being an indication of non-regulatory use of substances. No use of prohibited substances was detected.

No residues of permitted medicinal products were detected under the control programme in 2022. In contrast, a low concentration of coccidiostat residues was detected in eggs (monensin) and broiler muscle (narasin).

As previously, a large share of liver and kidney samples taken from reindeer that were categorised as farmed game contained cadmium from the environment. Muscle samples were also tested, but no elevated concentrations of heavy metals were detected in them. Small concentrations of HCB (hexachlorobenzene) were found in a total of six reindeer fat samples, but they did not exceed the limit value set in pesticide legislation. No HCB residues were discovered in the muscle samples examined at the same time. A low concentration of pp-DDE was detected in one wild boar fat sample. Two honey samples included low concentrations of pesticide residues: acetamiprid in one; and pyraclostrobin in the other.

Small concentrations of the mycotoxin Zearalenone or its metabolites were also detected in urine samples taken from pigs (n=30) and cattle (n=6) as in previous years. Additionally, a low concentration of aflatoxin M1 was detected in one milk sample.

The implementation and results of the contaminant control programme in 2022 were very similar to those in previous years (Table 56). Non-compliant samples accounted for 0%, taking into account any residues resulting from veterinary medicines. When the numbers of samples containing contaminants are taken into account, the share of non-compliant samples was on the same level as in the previous years (0.34% in 2022). The analytical methods used allow for the detection of a broader range of medicinal substances and lower concentrations. However, the low levels of residues detected in a few samples did not put food safety at risk.

Table 56. *Number of samples tested in the contaminant control programme for animal-derived food products, number of non-compliant samples and the percentage of samples tested in 2013–2022.*

Year	Sample quantity (qty)	Prohibited substances (qty)	Veterinary medicines (qty)	Contaminants (qty)	Percentage of non-compliant samples/excluding contaminants (%)	Percentage of non-compliant samples/including contaminants (%)
2022	4 076	0	0	14	0	0.34
2021	4 137	0	6	14	0.15	0.48
2020	4 110	0	0	11	0	0.27
2019	4 196	0	1	14	0.02	0.36
2018	4 265	0	0	14	0	0.33
2017	4 218	0	1	10	0.02	0.28
2016	4 234	0	0	10	0	0.24
2015	4 344	1*	0	13	0.02	0.32
2014	4 324	0	0	17	0	0.4
2013	4 341	0	0	33	0	0.76

* No use of prohibited substances was detected.

The use of prohibited growth promoters has never been detected in Finland.

Residues of approved medicinal products that slightly exceeded the limit value have only been found in individual cases. However, there were no cases found in 2022. The results still indicate that foodstuffs produced in Finland are safe for consumption, and that producers carefully comply with the regulations on medical treatment of animals, including withdrawal periods related to treatment.

The number of samples that contain contaminants remained nearly unchanged from 2013 to 2022. The number of samples taken from farmed game remained the same, and consistent with the results of previous years, cadmium was found in a large share of the liver and kidney samples taken from reindeer. No samples were taken from wild game in 2013–2022, which means that the results do not include the test results of visceral samples taken from elk, as was the case in previous years. As it is commonly known that the visceral heavy metal content in game has increased, Finland has decided as a risk management measure not to approve the liver and kidneys of cervids over one year of age as a food product. In contrast, the number of samples containing mycotoxins varies greatly from year to year, and these results cannot generally be predicted. Regarding mycotoxins in feeds for farmed animals, farmers may in some cases be able to influence the feed quality by modifying their practices. Farmers should inspect feed in the late winter, and especially if they have had problems with preserving feed due to difficult weather conditions, for example. This was also evident in the samples that contained mycotoxins, as finding their residues was also fairly common in 2022.

The control of prohibited substances and approved veterinary medicine residues is also part of the control of cross-compliance under the EU common agricultural policy (previously control of compliance with supplementary requirements). Non-compliances may therefore also lead to the extension of the control to cover cross-compliance and imply possible sanctions for farms that apply for agricultural aid.

In 2022, the veterinary medicine residue control programme to be deployed at the beginning of 2023 was planned. This had an impact on the planning of the contaminant control programme and the consideration of risks.

New test methods are used to implement the programme, and their development will continue. In particular, new multi-residue methods provide new opportunities for testing for residues. Changes to the EU regulations have significantly changed the content of the control programme since the beginning of 2023, as the contaminant tests that were previously part of the programme have been transferred to the control programme for contaminants in foods (see Section 8.3). In the future, the veterinary medicine residue control programme will only control the use of growth promoting hormones or other substances banned for farmed animals and the residues of approved veterinary medicines. However, an effort will be made to continue the targeting of sampling, both in terms of timing and location, at food products or animal species with the highest risk of containing residues.

8.2 Plant protection product residues

The plant protection product (PPP) residue control programme for food products is implemented annually as required under EU legislation ((EC) No 396/2005, as amended) and the Commission's monitoring regulations. The objective of the control programme is to ensure that prohibited PPP residues are not present in food products, and that food products do not contain approved PPPs at levels that exceed the maximum residue levels defined in legislation. Finland complies at the annual level with the obligations regarding the number of samples and analyses set in the European Commission's control programme. Member States can plan controls indicated by their national risk-based needs within the framework of the national part of the control programme. In addition to the coordinated control programme and its national part, PPP residues are controlled as required under the regulation on organic production ((EC) No 889/2008), the directive on certain substances and residues in live animals and animal products ((EC) 96/23), and the high-risk product regulation ((EC) No 2019/1973) until 2022. In addition to monitoring compliance with these provisions, PPP residue control produces information about the current situation of residues in domestic and imported products (from the EU Member States and third countries).

PPP residue control is also part of the control of cross-compliance under the EU Common Agricultural Policy. If any non-compliances with the regulations that concern PPP residues are detected in a sample taken from a Finnish food product, auditors from the Centre for Economic Development, Transport and the Environment (ELY) will control the use of pesticides on farms under the Finnish Food Authority's supervision. If necessary, on farms that have applied for agricultural aid, supervision will be enhanced further to control cross-compliance.

The authorities work together to control PPP use and residues in food. The residue control programme is carried out in collaboration between the municipal food control authorities (Finnish products and imported products once they enter the Finnish market), Finnish Customs (other than animal-derived products from the European single market and third countries as they arrive) and Valvira (alcoholic beverages). The Finnish Food Authority also monitors Finnish organic products and animal-derived food products for PPP residues.

The control plans were implemented successfully as a whole. Finnish Customs also took follow-up samples and samples based on high-risk product regulation (EU) 2019/1793 not included in the actual plan. Relatively few animal-derived samples covered by organic control were

analysed, as annual samples are taken under the contaminant control programme for animal-derived foods, but not all organic samples are analysed each year for PPPs. Table 57 presents the fulfilment of PPP residue control relative to plans.

Table 57. *Results of PPP residue control (number of samples) compared to the plan in 2018–2022.*

	Finnish Customs			Finnish Food Authority			National Supervisory Authority for Welfare and Health		
Year	Plan	Actual number	%	Plan	Actual number	%	Plan	Actual number	%
2022	1 500*	1 692	112.8	Total: 637	Total: 563	88	15	34	227
				126 (1)	120 (1)				
				10 (2)	10 (2)				
				204 (3)	202 (3)				
				237 (4)	228 (4)				
				60 (5)	3 (5)				
2021	1 500*	1 670	111.3	Total: 656	Total: 637	97	15	21	140
				138 (1)	127 (1)				
				0 (2)	0(2)				
				221 (3)	189 (3)				
				237 (4)	229 (4)				
				60 (5)	92(5)				
2020	1 500*	1 542	103.0	Total: 602	Total: 525	87	15	22	147
				134 (1)	124 (1)				
				2 (2)	2 (2)				
				230 (3)	206 (3)				
				234 (4)	191 (4)				
				2 (5)	2 (5)				
2019	1 500*	1 318	88.0	Total: 727	Total: 689	94.8	25	22	88
				135 (1)	117 (1)				
				10 (2)	10 (2)				
				206 (3)	205 (3)				
				296 (4)	285 (4)				
				80 (5)	72 (5)				
2018	1 285	1 321	103.0	Total: 606	Total: 575	94.9	25	20	80
				130 (1)	100 (1)				
				5 (2)	5 (2)				
				182 (3)	183 (3)				
				289 (4)	287 (4)				
				- (5)	- (5)				

* The method used by Finnish Customs to calculate planned samples changed in 2019.
(1) fruit and vegetables (including 13 organic samples in 2022)
(2) baby foods, infant formulas and weaning products
(3) foods of animal origin
(4) organic vegetables and plant-derived products (organic legislation)
(5) organic animal-derived products (organic legislation)

A total of 2,289 samples was tested as part of PPP residue control. Taking the measurement uncertainty into account, the maximum residue level (MRL) of PPPs determined in legislation was exceeded, or the requirements of legislation on organic products regarding residues were not fulfilled, in a total of 74 samples (3.2% of all samples). Of these, foods violating organic legislation in which residues prohibited in organic production were discovered consisted of

two samples of Finnish products, seven samples of products imported into Finland from the European single market, and four samples of products imported from third countries. With the exception of one sample taken from a product imported from the European single market, the residue content of all products in breach of organic legislation was below the maximum level set for the corresponding conventional product, and they were consequently fit for consumption as conventional foods. The number of samples non-compliant with the Food Act was 62 (2.7%). The competent food control authorities took the necessary control measures in all cases of non-compliant products.

PPP residues were detected in 787 samples (47%) taken from imported products (from the EU Member States and non-EU countries), most often in fresh fruit and vegetables, tea, and rice. Non-compliant levels of PPPs led to the rejection of 71 product batches. Of these, 11 were organic products containing residues prohibited in organic production. Any non-compliant products were prevented from entering the food product chain, and follow-up samples were taken from subsequent batches before releasing them to the market. Non-compliant product batches were destroyed in most cases. Numerous non-compliances that resulted in the prohibition of import or placement on the market were detected in rice and tea.

In addition, 52 imported batches were given notices due to their PPP residue content. The residue levels of these batches were at, or slightly exceeded the MRL but could not be verified as non-compliant due to the measurement uncertainty in the tests. Of these batches, 26 were food products imported directly into Finland from non-EU countries, and 26 were food products sold in the European single market, some of which had originated outside the EU.

As part of the control of PPP residues, 47 batches of products placed on the market which were potentially an immediate health hazard to consumers were detected, or information about them was obtained through the EU's RASFF rapid alert system. In these cases, the acute toxicity reference value was exceeded, or residues of a PPP not approved in the EU were detected. Based on a risk assessment, 27 batches that were non-compliant in terms of PPPs were reported to the other Member States via the RASFF system.

In the 565 samples taken from Finnish products, residues that did not exceed the MRL were found in a total of 36 samples (6.4%). One regular tomato sample included concentrations of chlormequat residues above the MRL, in addition to which residues of pesticides not permitted in organic production were discovered in two organic samples of domestic origin. The marketing of these rye bread and wheat flour products as organic products was prohibited. In addition, a low concentration of spirodiclofen below the MRL was detected in one strawberry sample. Its use in strawberries has not been permitted since 2021. The reason for the residue was not identified in PPP control.

Table 58 presents the percentage (%) of samples not compliant with the Food Act in 2018–2022 and the percentage of non-compliant samples of all samples tested. Table 59 presents the number of products that were non-compliant with the provisions of food and organic legislation and products that received a notice in 2022.

Table 58. *Percentage (%) of non-compliant samples (non-compliant as conventional foods with residue content exceeding the MRL) in 2018–2022.*

Year	Sample number qty	Non-compliant qty	Non-compliant %
2022	2 289	74*	3.2
2021	2 328	58*	2.5
2020	2 089	48*	2.3
2019	2 029	34*	1.7
2018	1 915	66	3.4

* Since 2019, non-compliant samples have not included samples which have been given notices during investigations carried out by Finnish Customs, as in 2018.

Table 59. *Share of non-compliant samples (food and organic legislation) detected in PPP residue control of all samples in 2022.*

Origin	Finnish Customs				Finnish Food Authority			National Supervisory Authority for Welfare and Health			
	Samples tested	Residues found	Notices	Non-compliant	Samples tested	Residues found	Non-compliant	Samples tested	Residues found	Notices	Non-compliant
Finnish	0	0	0	0	563	36	3 [5]	2	0	0	0
EU	1 204 [1]	540	26	32 [3]	0	0	0	14	3	0	0
Third-country	488 [2]	247	26	39 [4]	0	0	0	18	7	2	0
Total	1 692	787	52	71	563	36	3	34	10	2	0

[1] Some samples were of third-country origin (the origin of all samples is unknown).
[2] "Customs cleared products", or products imported into Finland from third countries, would be a more appropriate term.
[3] Including seven organic samples non-compliant with organic product legislation, six of which had a residue content lower than the MRL set for conventional products but close to the MRL and which, as ordinary products, would belong to the "notice issued" group.
[4] Including four organic samples non-compliant with organic product legislation, which had a residue content lower than the MRL set for conventional products but close to the MRL and which, as ordinary products, would belong to the "notice issued" group.
[5] Including two organic samples non-compliant with organic product legislation, which had a residue content lower than the MRL set for the conventional product.

In addition to the PPP tests, municipal food control authorities conducted a total of 26 inspections that focused on the adequacy and effectiveness of operators' own check controls of PPP residues within the framework of the Oiva system. The control authorities have received instructions for risk-based selection of control sites monitored for PPP residues based on the impact and scope of the inspections. In 2022, all Oiva inspections resulted in A ratings, meaning no shortcomings were observed in the management of PPPs (Table 60). As in previous years, it is likely that few inspections were carried out in 2022 in proportion to the assumed number of sites to be inspected. Training and guidance are still needed to improve the effectiveness and uniformity of control.

Table 60. *PPP residue control and its results as part of the Oiva system of the municipal food control authorities in 2018–2022 VAT_QV010.*

Year	Inspectionsqty	A %	B %	C %	D %	Guidance and advice qty	Notices qty	Coercive measures qty
2022	26	100	-	-	-	1	-	-
2021	20	100	-	-	-	-	-	-
2020	20	95	-	5	-	-	1	-
2019	20	100	-	-	-	-	-	-
2018	32	100	-	-	-	-	-	-

8.3 Contaminants

The control programme for food contaminants was implemented as required under EU legislation (No 1881/2006 (EC), as amended) and the Commission's monitoring recommendations. The objective is to ensure that the levels of harmful contaminants do not exceed the MRLs defined in legislation and/or the levels considered safe, while also producing information about the current national status. The content of contaminant control has so far not been laid down in EU legislation. Consequently, the Member States plan control activities in accordance with their national risk-based requirements.

The main focus of tests coordinated by the Finnish Food Authority in 2022 was on building a national overview and drafting legislation. The sampling programme included in the control plan coordinated by the Finnish Food Authority was implemented well, and the planned samples were mainly taken (Table 61). The foodstuffs tested in 2022 included lettuce, spinach, barley, oats, potato, onion, eggs, smoked meat and fish, reindeer, and bread prepared at in-store bakeries.

Table 61. *Shares (%) and numbers of planned and actual samples tested for food contaminants in 2018–2022.*

Year	POPs qty/%	Nitrate qty/%	PAH qty/%	Acrylamide qty/%	Heavy metals qty/%	Mycotoxins qty/%	Coumarin qty/%	Radioactive substances qty/%	Perchlorate qty/%	Erucic acid qty/%
2022	31/89	8/53	8/100	10/100	27/108	17/85	-	-	-	-
2021	10/100	10/100	20/100	-	31/103	9/75	-	-	-	-
2020	10/90	10/80	-	-	27/100	20/95	-	-	-	-
2019	10/100	10/100	17/100	16/84	41/114	12/50	-	-	-	17/ 100
2018	10/100	7/70	-	-	20/67	12/60	-	-	-	-

A total of 106 samples was examined as part of the control and survey activities coordinated by the Finnish Food Authority. The samples were analysed for several different compounds. Lettuce and spinach (n=8) were tested for nitrates, barley (n=7) and oats (n=10) for mycotoxins, and potatoes (n=5), onions (n=7), iceberg lettuce (n=5), barley (n=5) and oats (n=5) for heavy metals. Bread prepared at in-store bakeries was tested for acrylamide. In addition, organic eggs (n=15) were tested for per- and polyfluoroalkyl substances (PFAS), and reindeer muscle and liver for dioxins, dioxin-like polychlorinated biphenyl (PCB), indicator PCBs and/or perfluorinated alkyl compounds. Traditional hot-smoked meats and meat products (n=4) and traditional hot-smoked small fish (at most 20 cm, and European river lampreys of all sizes) and fish products made from small fish (n=4) were tested for polycyclic aromatic hydrocarbons (PAH compounds). The tests of smoked products were related to the permanent PAH derogation granted to Finland in 2020, which makes it possible for Finland to permit, in its domestic market, traditional smoked meat and meat products as well as traditional smoked

small fish and fish products made from them, to which higher PAH maximum levels apply. The precondition for the PAH derogation is that the Member States monitor the presence of PAH compounds.

In four of the tested samples, the maximum level permitted for contaminants was exceeded. Excess amounts of cadmium were detected in one onion sample, whereas excess amounts of PAH compounds were found in traditional hot-smoked meat. No other non-compliant products were discovered (Table 62). The competent food control authorities took the necessary control measures in all cases of non-compliant products. In addition, elevated concentrations of PFAS compounds were detected in some of the tested organic eggs. As no maximum limits have so far been set for perfluorinated alkyl compounds in legislation, the elevated concentrations did not lead to product recalls. However, it was important to investigate the reasons for the elevated concentrations, which is why feed reports and information about chicken drinking water and any industry in the vicinity were requested from production farms. Feed samples were also analysed. It was identified that the most significant factor behind the elevated PFAS concentrations was the fish meal made from wild fish and used in the feeding of chickens reared in organic production. Fish meal is key in feeding organic chickens, and its use cannot be discontinued completely. The Finnish Food Authority notified feed operators and egg producers of the risk of PFAS compound residues related to the use of fish meal made from wild fish and required that the amount of such fish meal to be significantly reduced in organic production in the future (see Section 8.5 – Harmful and prohibited substances in feed). In addition, fish meal batches in which the concentrations of PFAS compounds are as low as possible must be used. PFAS concentrations in eggs will be monitored annually in the future.

Table 62. *Number of samples tested as part of the control and survey of food contaminants (coordinated by the Finnish Food Authority) and the percentage of non-compliant products (%) in 2018–2022.*

Year	Number of samples tested	Percentage of non-compliant samples
2022	106	3.7 **
2021	80	1.3 *
2020	63	0
2019	100	0
2018	49	0

* In one smoked elk meat sample, the maximum limit set for PAH compounds in legislation was exceeded. The municipal food control authorities initiated the appropriate control measures to rectify the smoking process before any new products can be placed on the market.
** In one onion sample, the maximum limit set for cadmium was exceeded, while the maximum limit set for PAH compounds was exceeded in three smoked meat product samples.

In addition to these tests, the Finnish Food Authority also investigated contaminants within the framework of the contaminant control programme for animal-derived food products (Section 8.1) and veterinary border inspections (Section 3.1). In addition to the control activities coordinated by the Finnish Food Authority, Finnish Customs and the municipal food control authorities have also monitored contaminants in foodstuffs. In 2022, Finnish Customs tested a total of 837 food samples taken from a broad range of product groups for contaminants. As a result, six samples were deemed non-compliant (Table 63). The largest number of samples, roughly 600, were tested for mycotoxins (ochratoxin A, aflatoxins, patulin and fumonisins). Ochratoxin A concentrations resulting in a rejection were detected in oats and nutmegs. A batch of peanut products was rejected due to aflatoxins. In addition, samples were tested for

heavy metals, nitrate and pyrrolizidinalkaloides. A pineapple beverage (excess concentrations of tin) and a rice product (excess concentrations of cadmium) were rejected due to heavy metals. One batch of dried oregano was rejected because of pyrrolizidinalkaloides.

Table 63. *Quantities of contaminant samples tested by Finnish Customs in 2022 by product group and percentage of non-compliant samples.*

Product group	Samples qty	Non-compliant qty	Non-compliant %
Fats and oils and fat and oil emulsions	19	0	0
Fruit and vegetables	130	0	0
Cereal and cereal products	108	2	1.9
Bakery products	118	0	0
Salts, spices, soups, dressings, salads and protein products	93	2	2.2
Foods intended for special nutrition	40	0	0
Non-alcoholic beverages	5	1	20
Dietary supplements	82	0	0
Processed foods not included in the groups above	27	1	3.7
Other foods not included in the groups above	21	0	0

In 2022, municipal food control authorities conducted a total of 506 inspections related to food contaminants within the framework of the Oiva system. The number of inspections was clearly more than in the year 2021 (n = 372). In particular, there was an increase in inspections, which covered contaminants produced during the processing. The distribution of inspection results is presented in Table 64. In 2022, most of the Oiva inspections resulted in A ratings (93–100% depending on the Oiva line); in other words, no shortcomings were discovered in the management of contaminants. A B rating was issued 29 times, and a C rating four times, in 2022. Shortcomings were typically related to food sector operators insufficiently addressing the management of acrylamide in their own checks.

Overall, the results indicate that although the number of inspections increased, only a few inspections were still conducted relative to the assumed total number of inspected sites. It should be considered whether all sites to be inspected have been identified and whether the Oiva ratings are being used correctly. Training and guidance are still needed to improve the effectiveness and uniformity of control.

Table 64. *Food contaminant control and its results as part of the Oiva system implemented by municipal food control authorities in 2018–2022.*

Oiva line to be inspected	Year	Inspections qty	A %	B %	C %	D %	Guidance and advice qty	Notices qty	Coercive measures qty
17.13 Contaminants from the environment	2022	30	100	-	-	-	1	-	-
	2021	25	100	-	-	-	-	-	-
	2020	15	86.7	6.7	6.7	-	2	1	-
	2019	26	96.2	3.8	-	-	-	-	-
	2018	25	96	4	-	-	1	-	-
17.14 Mycotoxins	2022	20	100	-	-	-	1	-	-
	2021	18	94	6	-	-	-	-	-
	2020	23	87	8.7	4.3	-	2	1	-
	2019	17	100	-	-	-	-	-	-
	2018	32	100	-	-	-	-	-	-
17.15 Contaminants resulting from processing	2022	442	93	6	1	-	25	5	-
	2021	319	88	9	3	-	29	10	-
	2020	318	91.5	7.2	1.3	-	44	5	-
	2019	348	91.6	7.0	1.1	0.3	-	-	-
	2018	112	91	7	3	-	18	3	-
17.16 Other contaminants	2022	14	93	7	-	-	1	-	-
	2021	9	100	-	-	-	-	-	-
	2020	2	100	-	-	-	-	-	-
	2019	8	100	-	-	-	-	-	-
	2018	19	100	-	-	-	-	-	-

Currently, the contaminant control has been carried out based on national needs, and the Member States have been able to plan their control activities from their starting points. However, the start of the food contaminant control programme at the beginning of 2023 will change the control of contaminants, as control activities will be carried out based on detailed requirements laid down in EU legislation. In their control programme, the Member States must address all contaminants and commodity groups for which maximum limits or other regulation-based limits have been set by law. Efforts will be made to ensure risk-based sampling that targets the foods in which contaminants are most likely to occur, both in terms of timing and location.

8.4 Control of genetically modified foodstuffs

As no GM plants are cultivated in Finland for food, all genetically modified food products are imported, which means that the main focus of the authorities' product control is on the import control activities of Finnish Customs. Operators' own checks of genetically modified foods in Finland are part of the Oiva control system. Coordinated by the Finnish Food Authority, around ten food samples are additionally taken every year with a risk-based approach as part of the control of genetically modified food.

In 2022, the compliance of genetically modified ingredients and their marketing was controlled during 32 Oiva inspections. Minor shortcomings were discovered, and advice was provided for operators, during two inspections.

Table 65. *Monitoring of genetically modified ingredients in the Oiva system in 2022.*

Year	Number of inspections	Rating A	Rating B	Rating C	Rating D	Guidance (qty)
2022	32	30	2	-	-	2

Seven food samples were taken following the Finnish Food Authority's monitoring and sampling instructions. From six of these, DNA could be isolated for the analysis of genetically modified ingredients. The samples were taken by local food control authorities and the Finnish Food Authority's inspection veterinarians, and they were analysed in the Finnish Food Authority's laboratory.

Risk-based sampling was targeted at ingredients or finished foods that could contain GM materials. Organic products and products claiming to be "GMO-free" are also subject to the control activities. Where possible, the samples were collected from raw materials used in production, making it possible to control the products entering the market in the early stages of their production chain. In 2022, the sample matrices contained soybeans, preserved maize kernels, three maize flour products, and two soy-based hamburger patty products. It was impossible to analyse GM ingredients in one of the hamburger patty products due to processing.

The plan was to take ten samples (70% of which were actually taken). No genetically modified ingredients exceeding the limit of determination were found in any of the samples (Table 66). Minuscule amounts of GM material, which probably ended up in the products as a result of contamination, were detected in one soy and one maize sample, but their concentrations were below the limit of determination. The label of three samples (soybeans, maize-containing flour mixture, maize flour) featured the "GMO-free" claim.

Table 66. *Results of the GM sample collection coordinated by the Finnish Food Authority in 2022.*

Year	Number of samples	GM detected (%)	GMO concentration exceeds the limit or unapproved GMO (%)	Voluntary marketing claim "GMO free" in use (%)	Compliant samples (%)
2022	6	0	0	50	100

Finnish Customs controls the conformity of plant-derived food products and composite food products imported from outside the EU and from other EU Member States to Finland. Finnish Customs analyses around 150 to 200 food samples each year for genetically modified ingredients. More information about customs control is available on the Customs Laboratory's website at: https://tulli.fi/en/web/tullilaboratorio/front-page

8.5 Harmful and prohibited substances in feed

Feed control covers all feed production, manufacturing and distribution phases. The determination of analyses in official sampling focused on harmful and prohibited substances in feed. Official analyses also aimed to verify the concentration levels of key nutrients considering animal health and welfare, as well as livestock production. The targeting of feed sampling and the determination of analyses were defined with a risk-based approach, taking any risk factors related to different types of feeds into account, including the possible transfer of certain harmful and prohibited substances to animal-derived foodstuffs and the possible sensitivity of animal species to different substances.

Multi-methods were used extensively in the analysis of harmful and prohibited chemicals, as well as nutritional substances. The Finnish Food Authority had several different multi-methods and combinations of methods to analyse feed samples that could be used to simultaneously investigate both harmful or prohibited chemical substances and nutritional constituents. Feed control focused extensively on the occurrence of mycotoxins, heavy metals, dioxin, PCB and PFAS compounds, pesticides, coccidiostats, concentrations and residues of medicinal substances and other prohibited substances, genetically modified feed, and ingredients and organisms prohibited in feed.

The number of samples per control line was mainly fulfilled as planned in 2022. A total of 13,594 analyses was conducted from the 2,544 samples collected as part of official feed control, accounting for 105% of the planned scope. The average realised coverage of analyses aimed to detect harmful and prohibited substances in feed was 106% of the planned scope, and these analyses accounted for 87% (11,836 analyses) of all official analyses. Of all the analyses regarding harmful and prohibited substances in feed, chemical analyses accounted for 71.2% (8,423 analyses), microscopic analyses for 2.5% (295), Salmonella analyses for 22.9% (2,715), and other microbiological analyses for 3.4% (403). More information about feed hygiene control is available in Section 7.2.

The control results of the feed samples indicate that feed produced and placed on the market in Finland still largely fulfilled the requirements set for feed safety and quality in feed legislation. No non-compliant concentrations of mycotoxins, heavy metals, melamine and other nitrogen compounds, GTH markers, dioxins, or PCB or PFAS compounds were found in feed. Additionally, no non-compliances were detected in feed relevant to the control of genetically modified organisms, meaning that GMOs not approved in Europe were not found. Nor were any residues of approved genetically modified materials found in feeds that would have made it necessary to label the feed as genetically modified.

Residues of chlormequat and mepiquat, PPPs used as stem reinforcements, were detected in one organic feed product made in Finland. The placement of the feed production batch on the market and its use as organic feed were prohibited, and the batch in question was ordered to be recalled from farms as feed unsuitable for organic production. The feed operator was ordered to provide clarifications and take further action. According to the clarifications, nothing out of the ordinary was discovered in the organic raw materials used in the production of the batch or their suitability for organic production. According to the producer's clarification, nothing unusual had been identified in the organic raw materials used in the production of the batch or their storage, transport or handling. Instead, the operator stated that a small amount of conventional feed had been mixed with the organic feed batch during production due to the inadequate cleaning of a conveyor in the feed production line.

Residues of monensin in excess of the permitted maximum limit were discovered in one feed product produced in Finland for the final broiler rearing stages. The feed batch was banned and ordered to be recalled. The feed operator was ordered to provide clarifications and take further action. The feed operator took immediate corrective measures in the production process and tested the feed product for residues of coccidiostats under their own check controls. The operator's residue testing only resulted in small concentrations that were below the permitted maximum limit set for feed in non-target feed. In the Finnish Food Authority's follow-up sampling that aimed to assess the impact of the operator's measures, no remarks were made regarding residues of coccidiostats.

Residues of medicinal substances were detected in one market control sample (shredded beef for dogs). The sample contained residues or residual levels of sulfadiazine, a medical substance permitted for food production animals, in excess of the maximum level set for meat for use as food. The marketing of the batch was prohibited, the batch was withdrawn from sale, and the analysis results were sent to the supervisory authority of the feed production country for further measures.

In addition, silibinin and S-Adenosyl methionine were detected in supplementary feed for dogs in the control of feed import documents. The ingredients are not approved in the EU for use in feed as feed additives, and the import of the batch for use as feed was prohibited.

Concentrations of dioxins and PCB and PFAS compounds were determined in feed and fish meal for laying hens in relation to the elevated concentrations of PFAS compounds detected in organic eggs during food monitoring. However, no maximum limits have been set for PFAS compounds in feed in feed legislation. Based on the farm-specific feed investigations and the analysis results of official feed samples, the use of fish meal made from wild fish to feed laying hens in organic production was linked to the concentrations of PFAS compounds in eggs. The Finnish Food Authority notified feed operators and egg producers of the risk of PFAS compound residues related to the use of fish meal made from wild fish and provided instructions that the amount of such fish meal must be reduced significantly in organic production in future. In addition, fish meal batches in which the concentrations of PFAS compounds are as small as possible must be used in organic production, and replacement feed materials must be used.

The production volume of medicated feeds for food-producing animals was low during the year under review. Medicated feed was only produced for fish. Medicated feed production and residue management by an operator manufacturing medicated feed were inspected in conjunction with inspections of establishments under the feed hygiene regulation. The production volumes of medicated feed for fur animals also decreased significantly from the previous year.

Feed control report 2022 (pdf)

Sample-specific analysis reports under the official control of feed are published on the Finnish Food Authority's Website (Reports and studies – Finnish Food Authority).

Information about medicated feed production is available on the Finnish Food Authority's website.

8.6 Food allergens

An allergen defect is a case in which a product contains an ingredient which causes an allergy to some consumers (an allergen) but which is not listed on the label.

Some 50 cases of severe allergic reactions caused by food are reported to the national anaphylaxis register each year, accounting for roughly two thirds of all anaphylaxis cases.

An allergen defect is a typical reason for recalls. The number of recalls made due to allergen defects was 35 in 2022, roughly at the same level as in the two previous years. The number of recalls was 37 in both 2020 and 2021. The underlying causes of allergen defects include allergen contamination in production, a labelling error or a product ending up in the wrong packaging.

Oiva inspections assess the control of allergens and substances that cause intolerance (Table 67). The inspection results in all sectors were very similar to the Oiva inspections in 2021. Based on the Oiva ratings, the activities fulfil the requirements as a rule, or only minor shortcomings have been observed in them.

Table 67. *Oiva results – allergens and substances that cause intolerances in 2022.*

Substances that cause allergic reactions and intolerances					
		Result/number of inspections qty (%)			
Sector	Inspected	A	B	C	D
Food service	6 534	6 302 (96)	189 (3)	43 (1)	0 (0)
Food sale	739	710 (96)	24(3)	5 (1)	0 (0)
Food production/fish sector	39	32 (82)	4 (10)	3 (8)	0 (0)
Food production/meat sector	70	62 (89)	5 (7)	3 (4)	0 (0)
Food production/dairy sector	18	18 (100)	0 (0)	0 (0)	0 (0)
Food production/cereal and vegetable sector	310	291 (94)	13 (4)	4 (1)	2 (1)
Food production/other	87	80 (92)	6 (7)	1 (1)	0 (0)
Food storage and freezing	22	20 (91)	2 (9)	0 (0)	0 (0)

8.7 Nutritional safety

The Finnish Food Authority's strategic goal is that food is healthy and safe. The Finnish Food Authority promotes the achievement of this goal by communicating healthy and safe food choices and diet diversity on its website and through training and stakeholder cooperation. The National Nutrition Council's population-level nutrition and other food recommendations intended for specific age groups and other target groups form the basis of nutrition-related communication. The Finnish Food Authority has ensured that all recommendations also include general instructions for the safe use of foodstuffs. The instructions have been revised based on the most recent research and expert data, as well as feedback on the pages. The revised instructions and the updated website were published in August in Finnish, Swedish and English.

The National Nutrition Council updated special instructions for hospital food for patients with a lower resistance considering the recommendation for nutritional treatment and hospital food for patients in cooperation with the Finnish Food Authority's microbiological food safety unit. In addition, the recommendation includes basic information about food hygiene, operators' own checks, product information (e.g. allergens and the avoidance of contamination), the monitoring of nutritional quality, internal audits, and the Oiva system.

The Finnish Food Authority actively informs food system operators, social and health service professionals, municipalities and wellbeing services county operators about health and sustainability enhancing, diverse, varied and moderate eating and special nutritional issues, thus promoting nutritional safety. The Finnish Food Authority's website offers a large information package on wellbeing from nutrition (in Finnish) which, in addition to information, contains operating models, good practices and self-assessment tools, as well as national monitoring data on the population's food use and nutrition, and the promotion of nutritional health. In 2022, the pages were supplemented to also address the promotion of nutritional health to develop services in the new wellbeing services counties and especially to build interface services. New features include descriptions of operators and services, the management of promoting nutritional health, and the decision-making process in wellbeing services counties and municipalities, including the verification of work and the assessment of impact.

The Nutrition Commitment system administrated by the National Nutrition Council was maintained as part of Society's Commitment to Sustainable Development (www.sitoumus2050.fi). An evaluation report and development plan for the Nutrition Commitment system was published on the Finnish Food Authority's website in February 2022. The system will be developed and its visibility and use will be improved in cooperation between the National Nutrition Council, the National Commission on Sustainable Development of the Finnish Government and Motiva, as well as in interaction with stakeholders, including stakeholder seminars. By means of the Nutrition Commitments, food sector operators, the food industry, trade, mass catering and the food media can make their nutritionally responsible activities visible, aiming to implement nutrition and food recommendations and improve the nutrition of the population. At the end of the year, the system consisted of 84 commitments, most of which included several measures aiming to promote the sale of fruit and vegetables, diversify their service and use, and improve the nutritional quality of foodstuffs in mass catering, among other things. What is new about the Nutrition Commitment system is that it is the first time food media have made nutrition commitments regarding the provision of information about recipes and nutritional content.

9 FOOD SAFETY RISK ASSESSMENT AND RESEARCH PROJECTS

Risk assessment

Risk assessment related to food safety is carried out by the Finnish Food Authority in projects. Alongside projects, various continuous tasks related to risk assessments include various expert services, the monitoring of GM and new foods imported into the European single market, national and international working groups, and the provision of training. The information, communication and risk assessment activities of the European Food Safety Authority (EFSA) between Finland, the EFSA and different Member States through the national EFSA Focal Point have been lively.

The Cysticercosis in cattle project calculated 0.004% as the Cysticercosis rate in Finnish cattle. Based on the assessment, the disease is very rare in Finland. The risk of consumers being infected by Finnish beef was considered to be very low, and the discontinued use of beef cheek cuts would not increase it in practice. In the LEX4BIO project, the Finnish Food Authority assesses changes in exposure to heavy metals as a result of recycled fertilisers and the resulting risk posed to consumer health.

The VirSta project assessed the impact of production methods on potential viruses in foodstuffs containing pork and therefore on consumers. An information package about the hepatitis E virus (HEV) was published for professionals in various sectors in the form of a video and texts. In addition, a literature review on the stability of the African swine fever virus (ASFV) was prepared. A web-based assessment application will be launched to assess the stability of HEV and norovirus. The assessment of the exposure caused by carcinogenic contaminants generated in food production, i.e. process contaminants, and the related disease burden will continue in the Proco project. The popularity of medium patties has increased in Finland, as a result of which the Finnish Food Authority will assess the impact of their production on the food poisoning risk.

The assessment of additive intake was specified using product name shares. The intake of three additives (E407, E338–343, E450–452, and E160e) exceeded the maximum limit for the acceptable daily intake in consumers who consume the additive in question in large volumes. However, the average intake was significantly lower. For example, a more accurate assessment would be required to set recommendations for the use of food, but more detailed information about concentrations and volumes would be required.

Concentrations of harmful substances in Finnish fish and fish products have been studied at regular intervals since the beginning of the 2000s. The work will continue in the EU-Fish IV project, which also studies concentrations of useful substances and aims to prepare a risk-benefit analysis and assess the safe amount of use for each fish species. The national

Salmonella control programme and the risk of consumers being infected with Salmonella through food groups under the programme have also been assessed since the beginning of the 2000s. Salmonella risk assessments have now been updated, and the risk assessment methods have been developed to obtain up-to-date information.

The FOODNUTRI project has accelerated food processes created in various projects and the modification of statistical consumer risk assessment models into applications that are easier to use. The Finnish Food Authority has also started to plan dynamic and interactive risk assessment reports.

The development of the preparedness of communication between risk assessments and risk management and that of common guidelines continued in the ENCOMRAN project. In addition, the FS4EU project seeks to develop communication and interaction. It involves not only risk assessment and risk management parties but also stakeholders.

Research on microbiological food safety

The Finnish Food Authority and the University of Helsinki studied the amount of methicillin-resistant Staphylococcus aureus (MRSA), linked to production animals, in pig nostril and skin samples on two pig farms and in a clean controlled environment. In addition, strains isolated from pigs were studied using genome-based methods and compared to strains isolated from infection and monitoring samples by the Finnish Food Authority in 2008–2017. Samples were taken from ten pigs on two farms and in a controlled environment once a week for three weeks, and quantitative and qualitative analyses were conducted. The amount of MRSA was low in the samples taken on the two farms (10–103 cfu per swab), and even lower in the controlled environment. In the controlled environment, the nostril carrier material decreased over time, while the skin carrier material remained unchanged. The comparison of the strain genomes showed that strains isolated during different years were very closely related, which suggests that these general spa t034 strains do not need to change in people or animals in Finland.

The study was partly published in a 2022 doctoral dissertation on the prevention of MRSA in production animals and its zoonotic spread. The other partial publications of the dissertation studied the prevalence of MRSA and ESBL bacteria in Finnish veterinary surgeons, identified the hygiene practices of veterinary surgeons visiting stables and farms, and investigated the usability of phages to reduce the prevalence of MRSA in pigs.

Chemical food safety and nutrition

The second part of "Trans fat situation in the Finnish food market", a two-stage monitoring project funded by the Ministry of Agriculture and Forestry, is currently in progress. The purpose of the project is, by using certain foodstuffs, to monitor the impact of the legislative amendment on trans fats in food sold to consumers in the Finnish market. Under Regulation (EC) No 2019/649, the maximum amount of trans fat other than that naturally present in fats of non-animal origin (industrial trans fats) in foodstuffs is 2 g/100 g. In the first part of the project, the concentration of added trans fat in foods was studied before the legislation entered into force, whereas in the second part, the study will be repeated once the legislative amendment on trans fat has been in force for at least one year. The same samples will be used in the second part as in the first part: some 120 foodstuffs that are assumed to contain trans fat, including ice cream, vegetable fat mixtures, biscuits and various frozen products. The fat content and fatty acid composition of the samples will be analysed, and their natural and industrial trans fat

content will be calculated. The final report will include the analysis results produced during the second part and their comparison with the first phase's results. The results will serve to assess the effectiveness of the Joint Research Centre's instructions for calculating industrial trans fat. In addition, packaging labels regarding fat content and saturated fat will be inspected and compared with the analysis results. The goal of the second part is to assess the suitability of the European Commission's tolerance guidelines for packaging labels for assessing the compliance of these concentrations with requirements.

In the EU-Fish IV project, the Finnish Food Authority's chemistry unit will determine the concentrations of inorganic arsenic and mercury in fish.

10 PRIORITIES OF FOOD SAFETY IN 2022

10.1 Control authority's toolkit

The implementation of the "(Food) Control authority's toolkit" priority coordinated by the Finnish Food Authority began in 2021. The plan is to continue this priority until the end of 2024. The overall objective is to build up the administrative competence of the control authorities and to carry out inspections effectively and consistently. This goal will be achieved by combining the knowledge and skills needed in food control as a food control toolkit, in which information can be found easily and in a comprehensible form.

In 2022, the Food sector and Information about food products pages on the ruokavirasto.fi website were updated, and guidelines for administrative competence were prepared.

The website update was part of the comprehensive update of the ruokavirasto.fi website. A Webropol survey and Teams interviews were conducted to collect feedback from customers and official partners, which was then addressed during the update. A new structure was built for the "Food sector" and "Information about food products" pages, to which the current content was added. The project was carried out through workshops for structure and content production using the expertise of external service designers and the Finnish Food Authority's new content production instructions. Instructions and legislation were made easier to find by combining them in a single accordion menu on the Instructions and legislation page. Product- and industry-specific requirements were also collected on a single page. The "Information about food products" pages were targeted more clearly at consumers, and their name was changed to "Instructions for consumers".

10.2 Sites within the scope of control

The implementation of the "Sites within the scope of control" priority coordinated by the Finnish Food Authority began in 2020. The plan is to continue this priority until the end of 2024. The goal is to identify and add to the scope of control all such food sector operators and functions that are legally within the scope in accordance with law and the Finnish Food Authority's guidelines. The goal will be achieved by identifying the types of operators and operations that have been discovered to fall outside the scope of control for one reason or another, and recognising any tools that help identify them. Because a large number of such operators and operations, as well as their identification tools, were discovered, key focus points were prioritised in cooperation with municipal control units.

The prioritised operator types and tools are 1) online shops engaged in food activities; 2) mobile food establishments; 3) cooperation with the Finnish Tax Administration; and 4) web crawler focused on food websites. A separate progress plan and schedule were defined for each of these four areas.

As a result of the work carried out in 2022, some 60 companies engaged in the food sector were discovered about which no information was available in municipal food control, and which were added to the registers of the municipal food control authorities. Information about the companies outside the scope of control was obtained in cooperation with the Finnish Tax Administration and municipal food control units. The usual reason for falling outside the scope of control is ignorance of food control obligations in companies. Cooperation with the Finnish Tax Administration and the control units will also be continued in 2023, while also promoting the other key areas.

10.3 Developing the prevention of crime in the food chain in cooperation between the authorities

The food chain authorities participated actively in official cooperation projects under the action plan for combating the shadow economy and economic crime. The control network for the prevention of crime in the food chain, established using additional resources provided by the project for combating the shadow economy and economic crime, met every three to four weeks via a remote connection, focusing on various crime prevention themes. Representatives of the various authorities in the control chain participated in training events: municipal food control units; the Regional State Administrative Agencies; the ELY Centres; the Finnish Food Authority; and Finnish Customs.

The "Food Fraud Road Show II", covering all Finnish police departments (11), the National Bureau of Investigation and Finnish Customs, was held during the spring, when a training event was organised for all the authorities involved in the criminal process regarding food chain crime and its prevention. In addition, food chain control authorities from the area of each police department and representatives of the Finnish Tax Administration, the execution authorities, and the occupational safety and health authorities participated in the training event.

Members of the control network met regularly at meetings regarding the overview of food chain crime prevention to discuss the situation and new phenomena in their respective areas. The exchange of information significantly improved the ability to discover food chain crime in the control field.

The action plan project of the Finnish Food Authority and Finnish Customs focused on developing cooperation in controlling cross-border freight traffic. The project aimed to identify both the authorities' processes related to uncovering and the investigation of food chain crime. To identify any needs to enhance and develop cooperation and coordination, an intense control trial was carried out regarding the import of spices, fresh berries and meat products, and several cases of suspected crime in the import of animal-derived foodstuffs were processed.

Various units from Finnish Customs, the Finnish Food Authority and municipal food control participated in the trial. Intensified control helped detect food import cases in which the legal requirements were not met. It was discovered that meat products that could not be imported into Finland based on restrictions issued to prevent the spread of African swine fever, were imported, most of the tested spices were non-compliant, and berries of foreign origin were sold as Finnish berries.

In cases of suspected crime related to the import of animal-derived foodstuffs, deficiencies were discovered in verifying the country of origin, documents of products under the special guarantees for Salmonella, and compliance with the ATP agreement. In addition, several cases in which foodstuffs were imported into Finland outside the scope of food control were also discovered.

During the project, the cooperation models required between the Finnish Food Authority, Finnish Customs and municipal food control units were also prepared to improve the effectiveness of the prevention of food fraud regarding imported foodstuffs.

FINNISH FOOD AUTHORITY

Ruokavirasto • Livsmedelsverket

ruokavirasto.fi
foodauthority.fi
livsmedelsverket.fi