FINNISH FOOD AUTHORITY
Ruokavirasto • Livsmedelsverket

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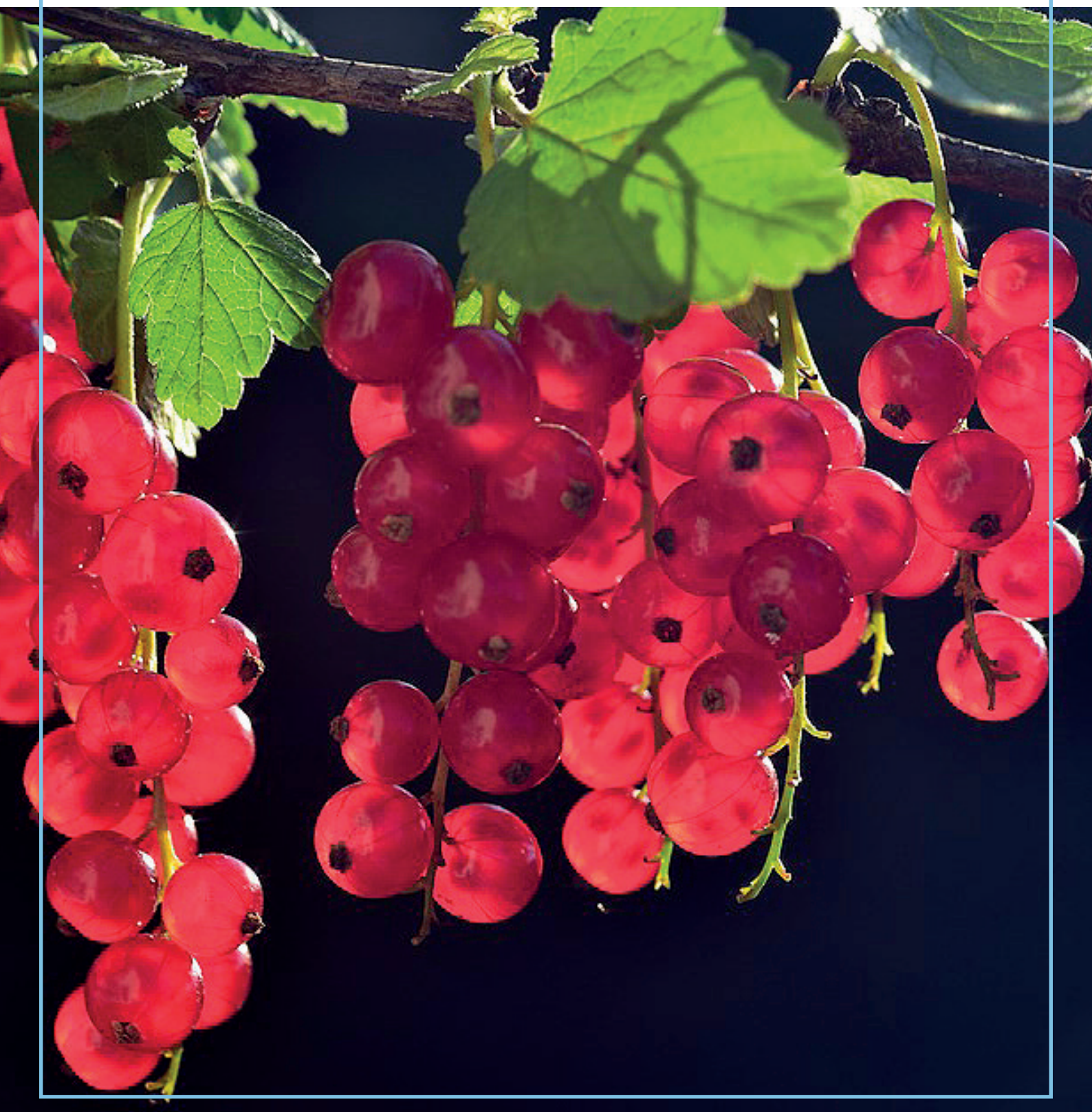
Food Safety in Finland 2020



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Abstract

This report presents the 2020 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; 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 investigations from 2020 show that food safety is at a good level in Finland despite the COVID-19 pandemic. Domestic products do not contain such quantities of chemical substances that would be hazardous for the consumer and the level of food poisoning bacteria in the food studied is very low.

In 2020 the number of food-borne epidemics was significantly lower than in previous years. For the first time the fight against crime in the food chain was incorporated into the national strategy and action plan for combating grey economy and economic crime for 2020–2023.

The control activities planned by the food control authorities were mainly achieved. Despite the COVID-19 pandemic and restrictions and limitations the inspections, sampling and research could be carried out almost as planned. Remote inspections were introduced and controls were made to be more risk-based. The number of food recalls has increased dramatically for both domestic, internal market and third country products. Recalls are an indication of the effectiveness and responsibility of both official controls as well as own-check activities practised by companies.

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Tiivistelmä

Tässä raportissa kerrotaan elintarviketurvallisuuteen liittyvän viranomaisvalvonnan, elintarvikkeiden ja rehujen virallisten valvonta- ja seurantaohjelmien, tutkimusten ja riskinarviointien tuloksista vuodelta 2020, sekä arvioidaan niiden perusteella Suomen elintarviketurvallisuustilannetta ja viranomaistoiminnan tulevaisuuden tarpeita. Raportti syventää elintarviketurvallisuuden osalta EU:n virallista valvontaa koskevan asetuksen (EU) 2017/625 edellyttämää vuosiraporttia, jossa kuvataan valvonnan tulokset koko elintarvikeketjun eri sektoreilla.

Viranomaisvalvonnan ja -tutkimusten tulokset vuodelta 2020 osoittavat, että elintarviketurvallisuus on Suomessa hyvällä tasolla COVID-19 pandemiasta huolimatta. Kotimaassa tuotetut tuotteet eivät sisällä kuluttajalle vaarallisia määriä kemiallisia aineita, ja ruokamyrkytyksiä aiheuttavia bakteereita esiintyy hyvin vähän tutkituissa elintarvikkeissa.

Elintarvikevälitteisten epidemioiden määrä oli vuonna 2020 merkittävästi aikaisempia vuosia alhaisempi. Elintarvikeketjun rikollisuuden torjunta otettiin ensimmäistä kertaa osaksi kansallista harmaan talouden ja talousrikollisuuden torjunnan strategiaa ja toimenpideohjelmaa vuosille 2020–2023.

Elintarvikeviranomaisten suunniteltu valvonta toteutui pääosin. COVID-19 pandemiasta sekä rajoituksista ja rajoitteista huolimatta tarkastukset, näytteenotto ja tutkimus pystyttiin toteuttamaan lähes suunnitellun mukaisesti. Etätarkastukset otettiin käyttöön, ja valvontaa suunnattiin entistä riskiperusteisemmin. Elintarvikkeiden takaisinvetojen määrä on kasvanut voimakkaasti sekä kotimaisten että sisämarkkina- ja kolmasmaatuotteiden osalta. Takaisinvedot ovat osoitus sekä viranomaisvalvonnan että yritysten omavalvonnan toimivuudesta ja vastuullisuudesta.

Beskrivning

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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 2020 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 år 2020 visar att livsmedelssäkerheten i Finland befinner sig på en hög nivå trots COVID 19-pandemin. Produkterna som producerats i Finland innehåller inte kemiska ämnen i mängder som är skadliga för konsumenten, och bakterier som orsakar matförgiftningar förekommer i mycket små mängder i de undersökta livsmedlen.

Mängden livsmedelsburna epidemier var betydligt mindre år 2020 än under tidigare år. Bekämpning av brottslighet i livsmedelskedjan togs för första gången med i den nationella strategin och åtgärdsprogrammet för bekämpning av grå ekonomi och ekonomisk brottslighet åren 2020–2023.

Livsmedelsmyndigheternas planerade kontroll genomfördes till största delen. Trots COVID 19-pandemin och begränsningarna och restriktionerna kunde inspektionerna, provtagningen och undersökningarna genomföras så gott som helt enligt planerna. Distansinspektioner infördes och övervakning inriktades alltmer riskbaserat. Mängden återkallelser av livsmedel har ökat kraftigt gällande såväl inhemska produkter som inremarknads- och tredjelandsprodukter. Återkallelserna är ett tecken på att både myndighetskontrollen och företagens egenkontroll fungerar och bedrivs på ett ansvarsfullt sätt.

TABLE OF 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 2020. Based on the results, the report also assesses the status of food safety and future needs for official 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 different sectors of the food chain as a whole. The results for 2015–2019 have been published in similar Food Safety in Finland reports. In addition, previous years' results can be found on the Finnish Food Authority's website (https://www.ruokavirasto.fi/ and https://www.ruokavirasto.fi/teemat/zoonoosikeskus/).

The report also contains a summary of prioritised food control work in 2020.

Food business operators are responsible for ensuring the safety of their products, providing sufficient and correct information regarding their products, and compliance in their operations. Companies ensure this by carrying out their own check control and sampling activities. The results of 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 control and investigations conducted by the authorities in 2020 show that, despite the COVID-19 pandemic, food safety is at a good level in Finland.

Domestic products do not contain chemical substances in levels dangerous to consumers. Very small amounts of bacteria that cause food poisoning were detected in the analysed food products. The national salmonella control programme has been successful, and the salmonella status of Finnish meat and eggs has remained good. The number of samples from slaughterhouses and meat sector establishments that contained salmonella remained clearly under 1%.

In 2020, the number of food-borne outbreaks was significantly lower than in previous years. This is partly explained by the reduced number of meals consumed in the workplace and restaurants due to the COVID-19 pandemic. It is also likely that the focus on hand hygiene during the pandemic has reduced the number of norovirus type outbreaks, in particular.

The number of hygiene passports issued was 45,000, and 1.35 million passports have been issued in total.

For the first time, prevention of crimes in the food chain was incorporated into the national Strategy and Action Plan for Tackling the Grey Economy and Economic Crime for 2020–2023. Facilitating the identification of fraud throughout the food chain is an important part of the fight against crime and fraud. The pre-trial investigation authorities worked more closely together with the authorities supervising the food chain in pre-trial investigations, and cooperation with the Tax Administration was also stepped up significantly. Criminal proceeds were not examined in the court cases that were heard. Fraud detection was selected as a common priority in the control of organic production for a three-year period, and to begin with, the quality and systematic nature of organic operators' documentation were assessed.

The number of food recalls has increased dramatically, affecting Finnish, internal market and third country products alike. The number of recalls in which the product defect was first detected in the operator's own checks was clearly higher than in the previous year. Recalls are an indication of effectiveness and a responsible approach in both official control and companies' own checks.

In the product safety controls of the Customs, the highest number of defects was found in food labelling, especially regarding special information and warnings. Products were also rejected due to plant protectant residues levels. From 1 January 2020, internal market surveillance of animal-derived foodstuffs (formerly known as inspections of first point of entry) was included in systematic food control carried out by the municipalities.

More than 17,000 Oiva reports were published in 2020. The Oiva results indicate that food companies' level of compliance with statutory requirements is good: 94% of the companies achieved an A or B rating during the year, and an A or B rating was given in 87% of the inspections. The national operating and data handling system for environmental health care (VATI) used to record these results was developed further. The needs to manage control data are extensive, and changing legislation is constantly creating additional needs.

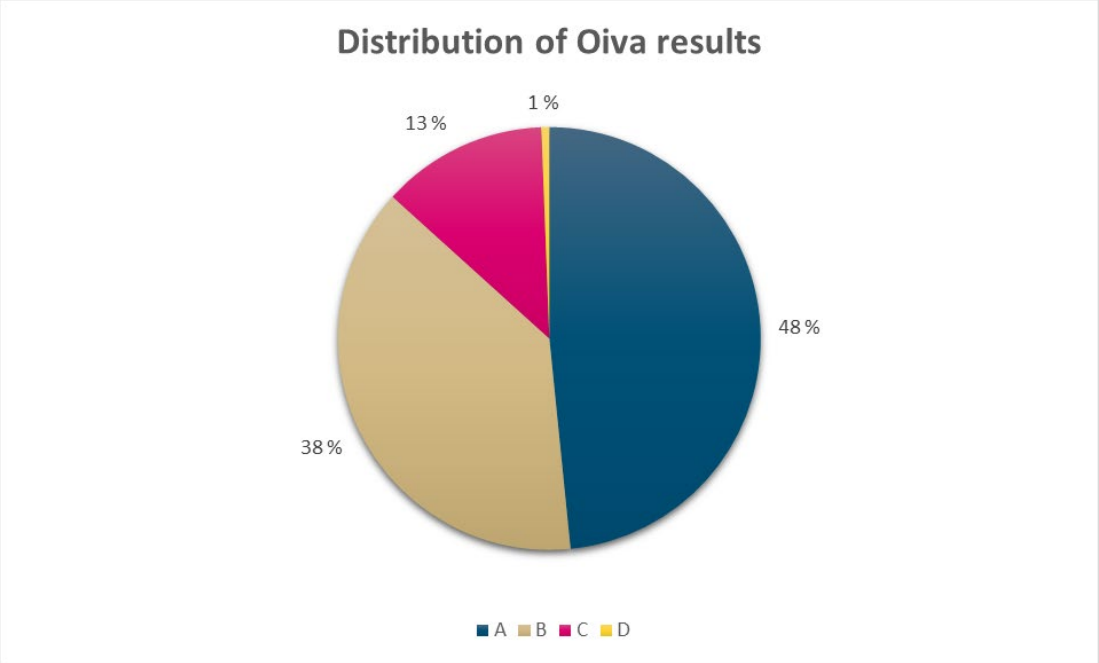

Figure 1. Distribution of Oiva results in 2020

The food authorities' control activities were mainly carried out as planned. Despite the COVID-19 pandemic and the restrictions and limitations created by it, inspections, sampling and research could be carried out almost as planned. Remote inspections were introduced. The targeting of control was increasingly risk based. Research projects were postponed to be implemented in 2021. The perspective of prioritisation in control is also discussed in this report, and a dedicated report on progress made in prioritised areas is included at the end of this report.

In 2020, the value of Finnish food exports increased further to EUR 1.77 billion. The Finnish Food Authority responded to questionnaires and provided training related to food exports as well as continued to conduct a large number of audits.

The new EU Official Controls Regulation and the regulations issued by virtue of it entered into force in December 2019, and year 2020 was marked by a need to address the new regulation in guidelines and training.

1 SYSTEM OF AUTHORITIES RESPONSIBLE FOR FOOD SAFETY

See Table 1 for the human resources allocated to official control tasks associated with food safety in 2016–2020.

Table 1. Food, feed and organic product control personnel in full-time equivalents (FTE). 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	2020	2019	2018	2017	2016
Finnish Food Authority	357	357	338	338	324
Regional Centres for Economic Development, Transport and the Environment	30.8	28.3	26	25.4	24.3
Regional State Administrative Agencies	9.5	9.6*	19	23.8	25.5
Municipalities (estimate)	284	285	270	257	230
Customs	32	32	30	30*	80
National Supervisory Authority for Welfare and Health	1.3	1.5	1.3	1.6	1.1
Finnish Defence Forces	1.6	1.6	2	2.6	2.2
Åland (estimate)	5.4	5.4	5.4	5.4	5.4
Others, including authorised inspectors (the share of organic control is imputed)	36.9**	26.2	14.8	14.3	14.3
Total	758.5	746.6	706.5	698	707

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

In total, approximately 759 person-years were used on food, feed and organic control. There were 62 municipal food control units. The figures do not include reindeer meat inspection conducted by municipal veterinarians under the Regional State Administrative Agency for Lapland, or the work 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.

The Finnish Food Authority continued to participate in the work of a situational awareness committee led by the Grey Economy Information Unit together with 20 other authorities. The committee maintains a website for citizens and policy makers at https://www.vero.fi/harmaa-talous-rikollisuus/. The website is also maintained in English at https://www.vero.fi/en/grey-economy-crime/

Year 2020 was the second year in which the Finnish Food Authority also served as the central agency for food safety control, a task which it took over from its predecessor, the Finnish Food Safety Authority Evira.

2 GENERAL INFORMATION ON FOOD SAFETY

2.1 Food sector companies

See Figure 2 for the number of food product and food contact material companies in Finland by sector in 2020.

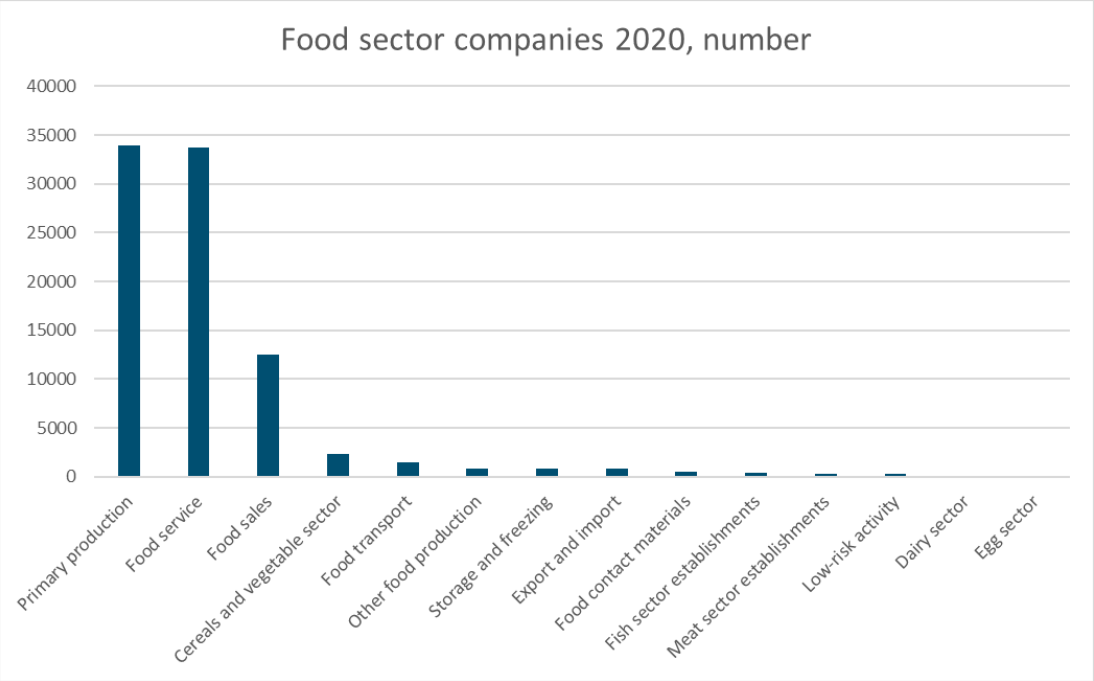

Figure 2. Number of food sector and food contact material companies registered in official systems in 2020

2.2 Oiva food control results

Planned food control is implemented using the Oiva system, and Oiva reports also provide consumers with information about the results of food control in companies. The results of retail shops and food service establishments have been published since 2013, and those of the food industry since the beginning of 2016.

The results of planned food control inspections (Oiva inspection results) are published in the form of Oiva reports. A smiley face shown in the report indicates the result of the inspection. During the inspections, several different requirements are assessed, each of which is given its own assessment result. The overall result of the inspection is determined on the basis of the poorest result. In addition, the report shows the results of two previous inspections. A general description of observations made during the inspection is included at the end of the report.

Table 2. Oiva control visits in 2020

Activity category	Registered control sites (number)	Inspected sites (number)	Inspections (number)	Unplanned inspections (%)	Coverage of inspections (%)	Oiva A, %	Oiva B, %	Oiva C, %	Oiva D, %	Distribution of inspections (%)
Food transport	1464	118	131	8.9	9	90.1	8.4	1.5	0.0	0.8
Food sale	12530	3052	3560	12.6	27	52.9	34.0	12.2	0.8	20.6
Food service	33658	9694	11127	5.9	31	46.9	39.9	12.7	0.5	64.3
Food storage and freezing	807	151	185	45.4	21	56.3	29.5	12.6	1.6	1.1
Food production*	862	197	224	13.5	26	53.8	29.4	16.7	0.0	1.3
Fish sector	370	216	412	4.6	60	46.7	37.7	14.2	1.5	2.4
Meat sector	343	204	626	3.9	61	35.5	48.2	15.0	1.3	3.6
Dairy sector	123	85	200	14.9	73	59	33.5	7.5	0.0	1.2
Egg sector	73	43	55	1.7	59	69.1	23.6	7.3	0.0	0.3
Export and import	777	84	139	18.3	13	33.8	37.4	25.2	3.6	0.8
Cereals and vegetable sector	2356	576	613	8.3	27	48.1	38.3	13.0	0.7	3.5
Low-risk activity in food premises	252	43	44	5.8	20	48.8	39.0	12.2	0.0	0.3
TOTAL	**52242**	**14463**	**17316**		**30**					

* excl. dairy, meat, fish, egg and cereal and vegetable sectors

A total of around 17,300 Oiva control visits, including follow-up inspections, were carried out in food sector companies, most of which (around 14,700) targeted retail premises and food service establishments.

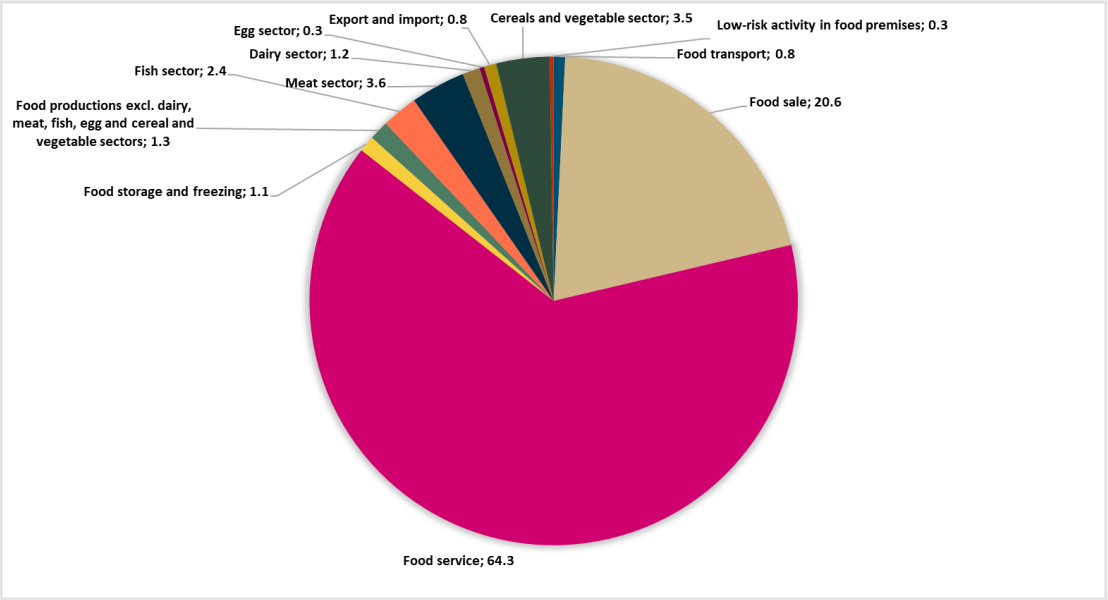

Figure 3. Shares of inspections (%) by company type in 2020.

See Figure 3 for the division of inspections by company type. Service establishments account for more than 60% of all Oiva inspections.

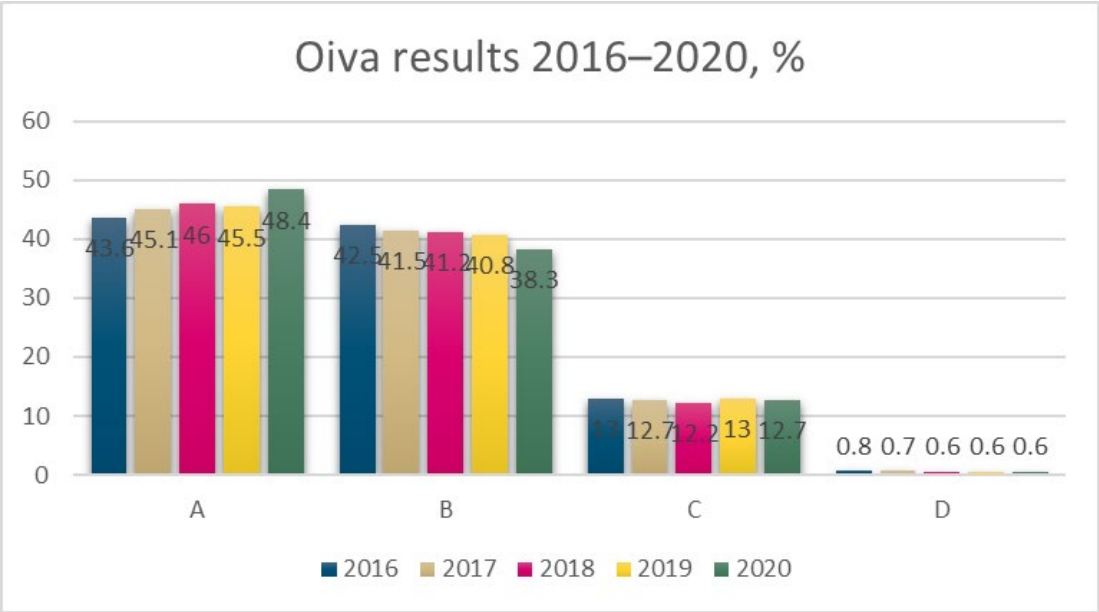

Figure 4. Development of Oiva results in 2016–2020

The results of Oiva inspections have changed little between 2016 and 2020, and excellent and good results are a clear majority (Figure 4). In 2020, the share of sites with an excellent or good result was 94%.

2.3 Hygiene proficiency

People who work in the food sector and handle unpacked readily perishable food are required to have hygiene passports.

In 2020, 812 hygiene passport examiners were heard who had not organised hygiene passport tests or granted hygiene passports for more than three years. On the basis of the hearings, the rights of 736 hygiene passports examiners were cancelled. No new examiners were approved in 2020. At the end of 2020, some 1,330 active hygiene passport examiners approved by the Finnish Food Authority remained.

The hygiene passport examiners held a total of 8,309 hygiene passport tests around Finland. A total of 216,376 tests have been held since 2002. This figure includes regular hygiene passport tests, tests for special circumstances, hygiene passports granted on the basis of a qualification, and renewals of previously granted hygiene passports. The annual number of tests decreased compared to previous years due to the COVID-19 pandemic.

A total of 45,909 hygiene passports were issued by hygiene passport examiners. By the end of 2020, a total of 1,350,037 hygiene passports had been issued. The annual number of tests went down compared to previous years due to the COVID-19 pandemic (Table 3).

Table 3. Hygiene passport tests organised, and hygiene passports granted 2002–2020

Year	Hygiene passport tests (number)	Hygiene passports (number)
2020	8,309	45,909
2019	10,493	57,094
2018	11,061	59,248
2017	11,513	61,897
2016	11,527	61,309
2015	11,668	63,610
2014	12,308	67,750
2013	11,792	67,909
2012	11,746	66,978
2011	12,045	68,376
2010	12,032	69,632
2009	11,711	66,229
2008	11,737	63,028
2007	11,171	63,864
2006	10,948	67,352
2005	12,677	79,134
2004	14,786	108,848
2003	13,944	114,527
2002	4,908	51,102
Total	216,376	1,350,037

The audits of hygiene proficiency examiners carried out in 2009–2020 revealed that the activities of almost every audited examiner gave rise to at least minor remarks. An average of 15% of the audits every year have resulted in the cancellation of a proficiency examiner's rights (Table 4). The most common errors and shortcomings that led to remarks have been related to the following issues: checking the identity of the persons to be tested, the grounds for granting a hygiene passport, archiving the documents on the basis of which the hygiene passports were issued, handing over the examiner's obligations to third parties and the organisation of special situation tests.

Table 4. Audits of proficiency examiners conducted by the Finnish Food Authority and audit results in 2009–2020

Year	Examiners audited	Notice	Cancellation of examiner's rights	Requests for police investigation
	persons	number	number	number
2020	7	6	1	0
2019	21	21	0	0
2018	17	16	1	0
2017	6	2	4	0
2016	6	4	2	0
2015	1	0	1	0
2014	2	1	0	0
2013	18	16	2	0
2012	40	34	6	0
2011	51	42	9	4
2010	35	32	3	1
2009	14	10	4	0
Total	218	184	33	5

See Table 5 for Oiva results related to the verification of hygiene proficiency. Most food establishments were given an A rating, which means that the food operator has ensured that every employee handling unpacked perishable foods holds a hygiene passport following the Finnish Food Authority's model. In addition, the operator has, as part of their own check activities, kept the records required by the Food Act showing that the employees have the necessary hygiene proficiency. A smaller proportion received a B rating, which means that there were minor shortcomings in record-keeping. A C rating was issued to a very small proportion of the total number. It means that the food establishment has not ensured that the employees have hygiene passports and kept no records. No D results were issued.

There has been an overall improvement in the Oiva results for hygiene proficiency compared to 2019. The number of A and B ratings given to registered food premises has increased somewhat, and the number of C ratings has decreased slightly. On the other hand, the number of A results received by approved food establishments has dropped by several percentage points, and the numbers of B and C results have increased accordingly. Examined by sector, the Oiva results have weakened especially in the industrial manufacture of foodstuffs (excluding dairy/meat/fish/eggs/cereals and vegetables) and in fish sector establishments. The shortcomings in hygiene proficiency have included the fact that hygiene passports are not held by all employees required to have one and that the operator has kept no record of the employees' hygiene passports, or the records are inadequate.

Examined as a whole, the overall Oiva rating distribution in 2017–2020 has remained similar over the years. The differences between approved food establishments and registered food premises have varied over the years. The ratings issued to approved food establishments were slightly poorer in 2017 and slightly better in 2018 than those of registered food premises. The results were similar in 2019, whereas in 2020, approved food establishments had clearly poorer results than registered food premises.

Table 5. Oiva results for the verification of hygiene proficiency

Food establishment	Inspected	Inspections	Result, %				Guidance and advice	Notices	Coercive measures
	number	number	A	B	C	D	number	number	number
Approved	163	168	86.3	10.1	3.6	0	18	6	0
Registered	5127	5267	92.8	5.6	1.6	0	424	82	0
Total	5290	5435	92.6	5.7	1.6	0	442	88	0

2.4 Quality and accountability systems

No operator-specific applications regarding the national quality system for pork meat (named Sikava) were submitted to the Finnish Food Authority in 2020. 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 approx. 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

No new guidelines for good practices were submitted for evaluation in 2020.
The Finnish Grocery Trade Association’s good practice guidelines for own checks in stores and the Central Organization for Finnish Horticulture’s Laatutarha quality system were updated, and the Finnish Food Authority commented on these updates.

Nine Guidelines for good practices have been evaluated in the food sector and one in the feed sector.

2.6 RASFF

In 2020, Finland reported 70 cases of non-compliance related to foods or food contact materials detected in Finland to the EU’s RASFF (Rapid Alert System for Food and Feed) system. This number exceeds last year’s figure by 34 reports. Of these reports, 63 (90%) concerned food products and 7 (10%) contact materials. The number of reports that concerned food products increased notably from the previous year, whereas the number of reports that concerned contact materials remained the same. In addition, 11 feed batches were notified to the RASFF system. The reports were related to poor microbiological quality (20 reports) and plant protection product violations (13 reports). The reports concerned an unapproved novel food more frequently than in previous years, or 11 times. Slightly fewer (8) reports were filed concerning batches unfit for human consumption for microbiological reasons in cases where salmonella was found in meat. Four of the reports related to plant protectants were related to Israeli oranges.

Of the reports filed by Finland, 35 (50%) were based on border control and market surveillance conducted by the Customs. This is eight more than in 2019. Following observations made as part of local food control, 17 reports were filed, which is over four times more than before. The number of reports based on observations made by consumers and restaurants remained the same (5). Finland also filed 13 reports to RASFF related to foodstuffs due to non-compliances observed in the own check activities by companies, which is three more than the year before.

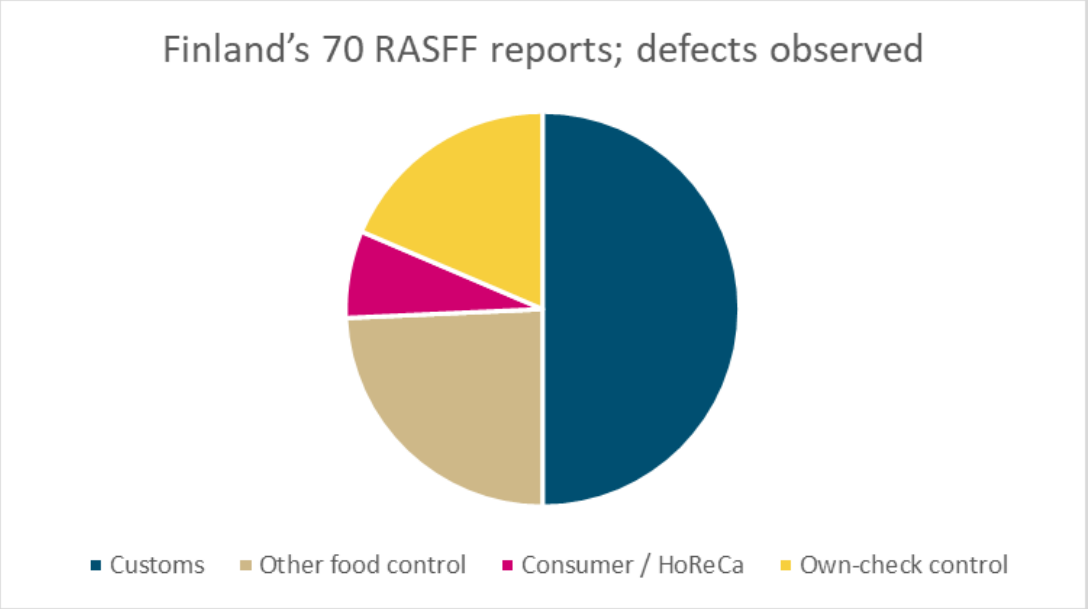

Figure 5. Reports filed by Finland to the RASFF system in 2020

In 2020, 149 RASFF reports were addressed to Finland. This represents an annual growth of as much as 84%. The main reason for this increase were ethylene oxide residues found in Indian sesame seeds, which led to numerous reports in the EU regarding both the seeds and products containing them.

Foods and contact materials reported by Finland and to Finland through the RASFF system are subject to normal control and, if necessary, recall measures in Finland. In addition to the level of the health risk posed by the reported food, measures 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.

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

In 2020, Finland filed 16 reports in the European Commission's Administrative Assistance and Cooperation System (AAC-AA). Three of these reports were related to a Commission project in which the Member States were asked to report on non-compliant food marketing related to the COVID-19 virus. In two reports, Finland asked the Member States for assistance in interpreting the legislation in matters related to the designation of hams and the manufacture of products with registered names. The other 11 reports concerned different quality defects in foods and contact materials.

Finland responded to ten reports concerning foods and contact materials through the AAC-AA system. Two reports related to feeds and two concerning plant health were also responded to. The reports received by Finland concerned minor hygiene-related errors in batches of food imported to Finland as well as inadequate labelling of Finnish foodstuffs. In four of the received reports, a Member State asked other Member States about food control practices or interpretations of legislation. Queries of this type increased in the system towards the end of the year, as a result of which many Member States were concerned over their impact on the AAC system's functional capacity.

Finland filed requests for assistance in seven cases to eight Member States through the ACC-FF system, seeking help in investigating food fraud. Five of these cases were associated with EUROPOL's OPSON project, in which the Customs participated. Finland received a total of 21 reports through this channel, none of which required the Finnish authorities to take action.

2.8 Prevention of crimes in the food chain

For the first time, prevention of crimes in the food chain was incorporated into the national Strategy and Action Plan for Tackling the Grey Economy and Economic Crime: as part of a multi-authority cooperation project under the Action Plan for 2020–2023, prevention of crimes in the food chain will be developed together with an expert of economic crime prevention to be hired by the Finnish Food Authority, and cooperation between the Finnish Food Authority and the Customs in the supervision of cross-border freight traffic will be developed with the help of experts recruited by the Finnish Food Authority and the Customs.

The Finnish Food Authority continued to participate in the work of a situational awareness committee led by the Grey Economy Information Unit together with 20 other authorities. The committee maintains a website for citizens and policy makers at https://www.vero.fi/harmaa-talous-rikollisuus/. The website is also maintained in English.

The use of a multi-sectoral model continued in the fight against crime in the food chain. As fraudulent operators in the food chain often violate the requirements of many different sectors of legislation, the aim is to obtain the widest possible overall understanding of their activities in order to effectively plan and target prevention measures and cooperation between the authorities in the criminal procedure.

As in previous years, the Finnish Food Authority and other control authorities became aware of a growing number of suspected offences in the food chain, and more requests for investigation were also submitted to the police. The pre-trial investigation authorities worked more closely together with the authorities supervising the food chain in pre-trial investigations, and cooperation with the Tax Administration was also stepped up significantly.

The Finnish Food Authority was informed of six court decisions, two of which were rulings by the Court of Appeal. The decisions concerned four cases, two of which were related to primary production; in one case, the prosecutor withdrew the charge of a health offence, and the charge concerning a violation of the Act on Animal By-Products and a register entry offence was dismissed by the District Court, but the Court of Appeal sentenced the operator to 45 unit fines jointly for an animal welfare offence and a register entry offence. In another case related to primary production, a 6-month conditional prison sentence was handed down by the Court of Appeal jointly for an aggravated animal welfare offence, impairment of the environment and a marketing offence. In a case about unclear labelling of meat types used in a food product, a decision to restrict the investigation was made. In one case, meat sector establishment activities had been carried out in a garage, and the defendants were sentenced to a penalty of 60 unit fines for a health offence, a marketing offence and forgery. The charge concerning a violation of food regulations against a fish sector operator was dismissed. The potential proceeds of crime were not investigated in any of these cases.

2.9 Recalls

The number of food recalls continued to grow for the fifth consecutive year. The number of cases included in recalls was 267, which was 67 more than in 2019. The statistics for the different years are not fully comparable due to small variations in recording methods. However, the statistics give valuable insights into long-term trends (Figure 6).

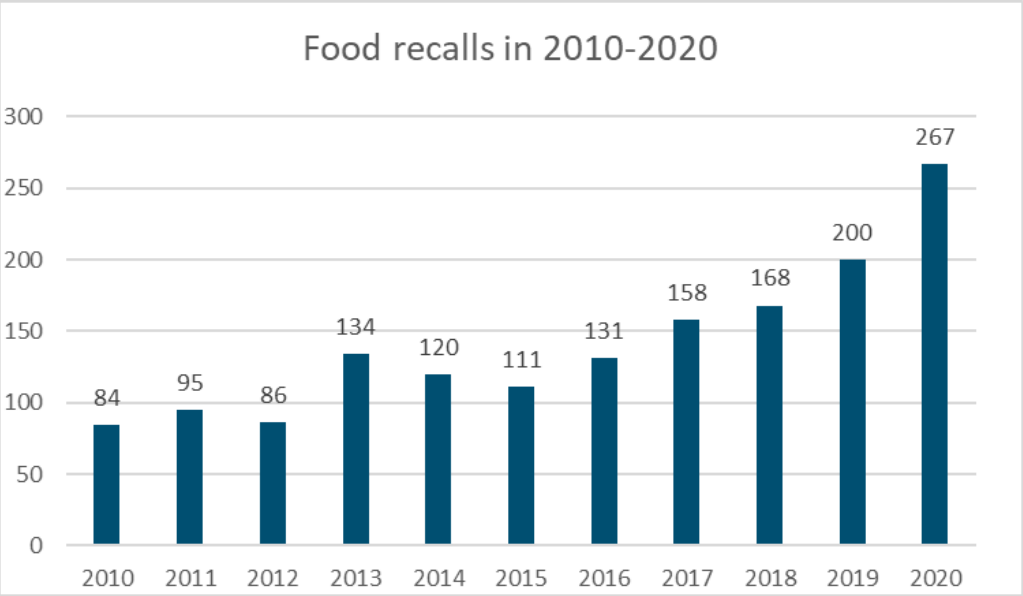

Figure 6. Food recalls in 2010-2020

The statistics also include cases where the product had already reached the distribution chain but was not yet available to consumers. In these cases, the product recall was carried out from the importer's, wholesale dealer's or retail trader's warehouse, and there was no health risk to consumers.

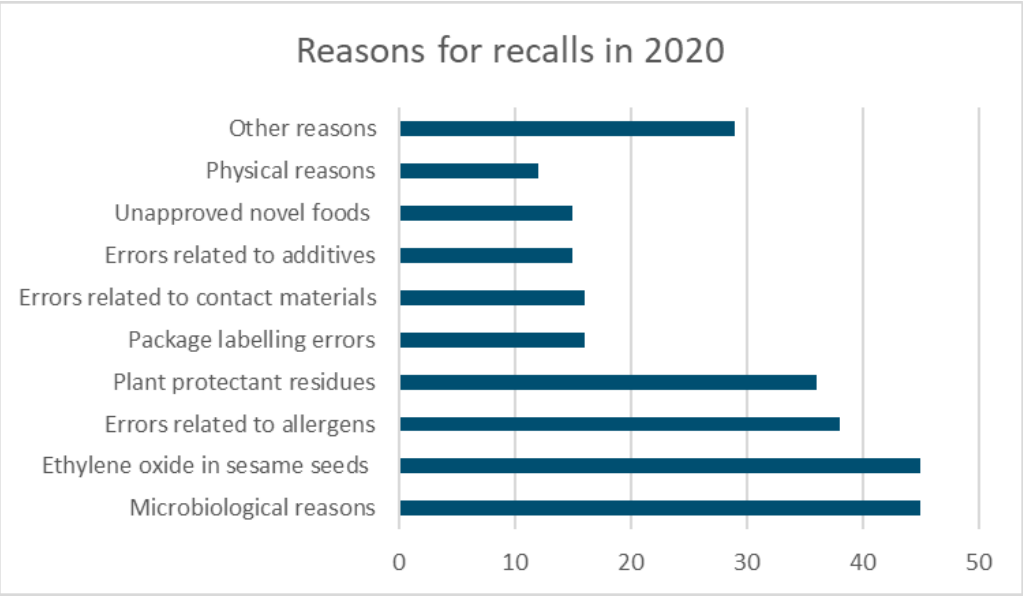

Figure 7. Reasons for recalls 2020

The recalls have been classified by their causes (Figure 7). A phenomenon particular to the year under scrutiny were cases of ethylene oxide residues in Indian sesame seeds and products containing them. Similar defects have not been detected in the past several years, apparently because ethyl oxide residues in this product group have not been analysed. While ethyl oxide is regulated under EU legislation on plant protection products, it had been used in India to treat microbiological defects in the seeds after harvesting. Due to their special features, these cases are shown as a separate group in the examination of recalls. This defect gave rise to 45 recalls. Even without this group, the number of recalls would have increased by 22 cases from the previous year (11%).

Different microbiological issues (salmonella, listeria, etc.) were the most common 'conventional' reasons for recalls, accounting for 45 cases (17%), as did ethyl oxide. In 2020, 14 products were recalled because of salmonella, mostly comprising meat imported from other parts of Europe. Liquid food products were also recalled due to fermentation that caused the packaging to bloat. In seven cases, the reason for the recall was listeria, which was found in five different products, none of which were fish.

A large number of recalls also resulted from allergens, or 38 cases (14% of all recalls). Errors involving allergens were caused by such reasons as contamination during production, labelling errors or a product being packed in the wrong package. Most often, or in 14 cases, the allergen issue was caused by milk.

There was a considerable year-on-year increase in the number of recalls made due to residues of pesticides used in plant production. There were as many as 36 cases of fruit, vegetables or other foods of plant origin that needed to be recalled for this reason. In many cases, the limit values were exceeded by such small amounts that the products did not cause an acute risk to consumers. Consequently, it was sufficient to withdraw the batch in question from sales and destroy it to minimise the cumulative risk to consumers.

If we look at the country of manufacture or production of the recalled foods and food contact materials, we note that excluding the group of sesame seeds, 35% of the products originated from another EU Member State. A similar proportion originated from outside the EU, and the remaining less than 20% cases concerned domestic products. In 2019, one third of all recalls were domestic products. Including the cases involving sesame seeds, the origin of the defective product was outside the EU in 46% of all recall cases.

Most frequently, Finland receives information on product defects leading to recalls through the EU Rapid Alert System for Food and Feed (RASFF). The number of these cases was 92 (34%). In the case of RASFF reports, it cannot always be ascertained whether the error in the other country was first detected in an operator's own check, by consumers, by authorities or by some other means. In cases where the products are of Finnish origin, this can be easier to determine. The number of recall cases in which the product defect was first detected in the operator's own check controls was clearly higher than in 2019 (15% of the cases). The Customs (14%) and supplier/business customers (13%) were also active in reporting needs to recall products.

The specific reason for the increase in the total number of cases is unknown, but it is an indication of our food control chain being of a high quality and effective and, at least for Finland's part, of how active all stakeholders in the chain and consumers are in fostering food safety.

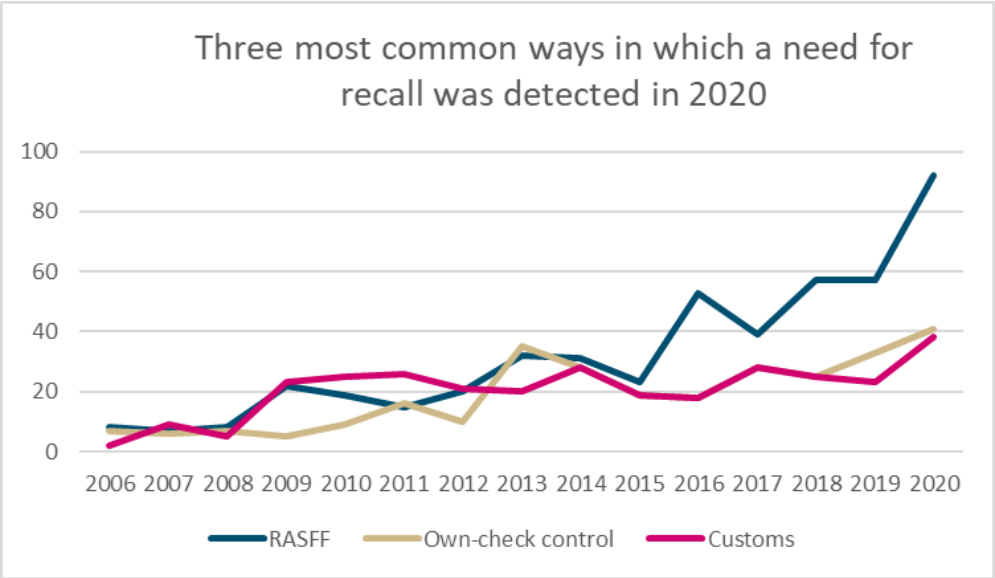

Figure 8. Three most common ways in which a need for recall was detected in 2020

2.10 Foodborne and domestic water borne outbreaks

In 2020, municipal control units reported 55 suspected foodborne or waterborne outbreaks that occurred during that year.

Municipal control units and the Finnish Food Authority submitted a total of 60 reports on their outbreak investigations. The control units submitted investigation reports on all suspected cases they reported in 2020. In addition, five investigation reports were submitted without being preceded by a report of a suspected outbreak. Two of them were reports prepared by the Finnish Food Authority and the Finnish Institute for Health and Welfare in cooperation. Based on the investigation reports, 36 outbreaks were classified as foodborne or domestic waterborne outbreaks. The remaining 24 outbreaks were found to be caused by something else (for example, human-to-human outbreaks or ones related to bathing water), or only one person was affected, and the case was therefore not classified as an outbreak (Figures 9 and 10).

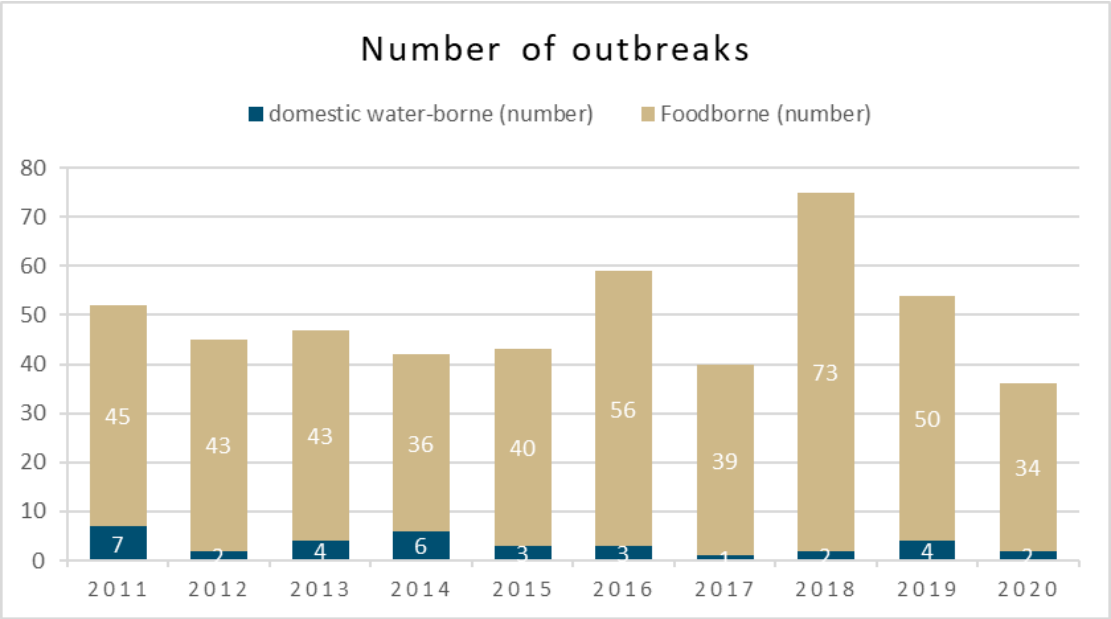

Figure 9. Number of food and domestic water-borne outbreaks in 2011–2020

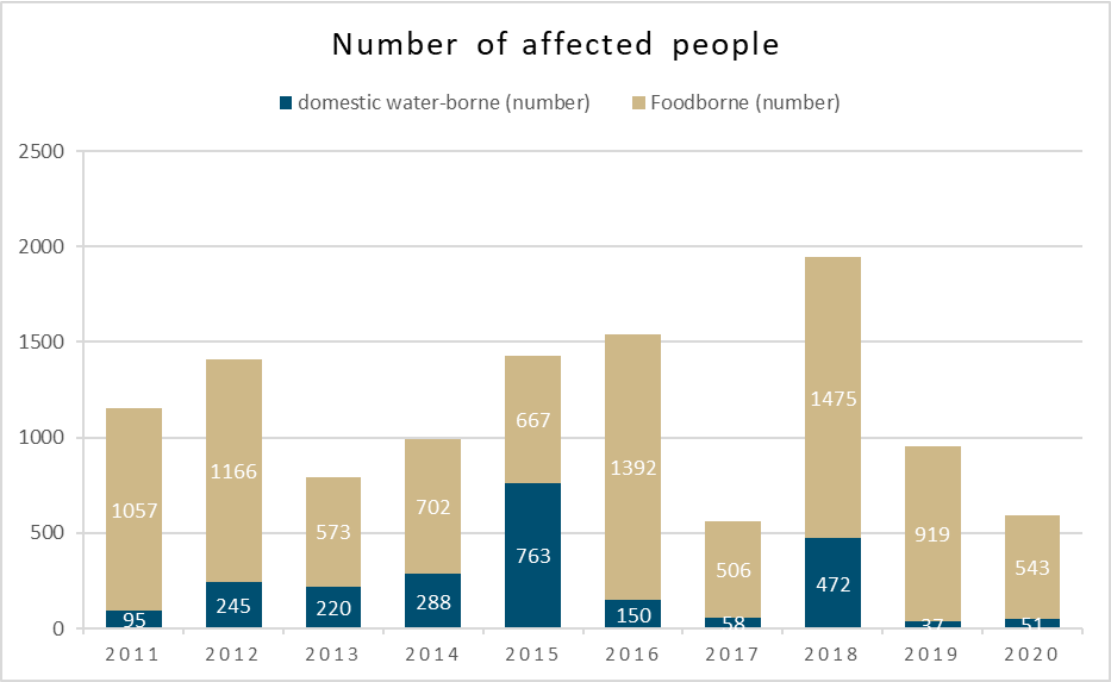

Figure 10. Number of people affected by food and domestic water-borne outbreaks in 2011–2020

The number of foodborne (34 outbreaks, 543 affected persons) and domestic water-borne outbreaks (2 outbreaks, 51 affected persons) reported in 2020 was lower than in 2019. The numbers of outbreaks and people who fall ill fluctuate a great deal from one year to the next. In 2020, one foodborne outbreak was reported, which affected more than 100 people. It was caused by a sapovirus and the infected persons, who came from different parts of Finland, had participated in a gaming event. While the cases were associated with a specific meal, the food in which the virus was transmitted was not identified. Of the most common

causes of food poisoning, norovirus continued to be the most frequently identified pathogen causing outbreaks (10 outbreaks, 104 affected persons). However, its relative share of outbreaks (26%) was clearly lower than in 2019 (44%). An infected kitchen worker was often identified as the factor that led to foodborne norovirus outbreaks (in at least five outbreaks). When classifying virus outbreaks, determining whether the infection occurred through person-to-person contact, food or surfaces is difficult.

The Finnish Institute for Health and Welfare and the Finnish Food Authority jointly coordinate the investigation of outbreaks that have spread to a large geographical area or are challenging for some other reason. Investigations are carried out together with municipal control units. In 2020, two reports were completed on listeria outbreaks that had been diagnosed in different parts of Finland over several years. Both outbreaks were of medium size, and it was suspected that in both cases, the infection had been caused by cooked meat products from different establishments.

Of the toxin-producing causative agents for food poisoning, *Clostridium perfringens* caused one medium-sized outbreak, and *Bacillus cereus* and *Staphylococcus aureus* each caused one small outbreak. In some of the outbreaks whose cause remained unidentified, a suspected toxin producer was pinpointed based on the symptoms and incubation period, although the cause could not be established with certainty. Outbreaks were influenced by an incorrect combination of food storage time and temperature, which is typical of outbreaks caused by these bacteria.

In 2020, salmonella caused three minor outbreaks. In one case, the salmonella strain that caused the outbreak was also found in a grated courgette salad served to those who had been infected through a central kitchen. In the second outbreak, typing indicated that the infected persons belonged to the same cluster as those in an international salmonella outbreak investigated in 2018, in which fresh cucumber was suspected as the source of infection. Tracing vegetables is very challenging, and whether or not cucumber sourced from the same foreign holding was used in this case could not be established.

In addition, three small campylobacter outbreaks and one minor EHEC outbreak were recorded in 2020. The source of 12 outbreaks could not be identified (Figure 11).

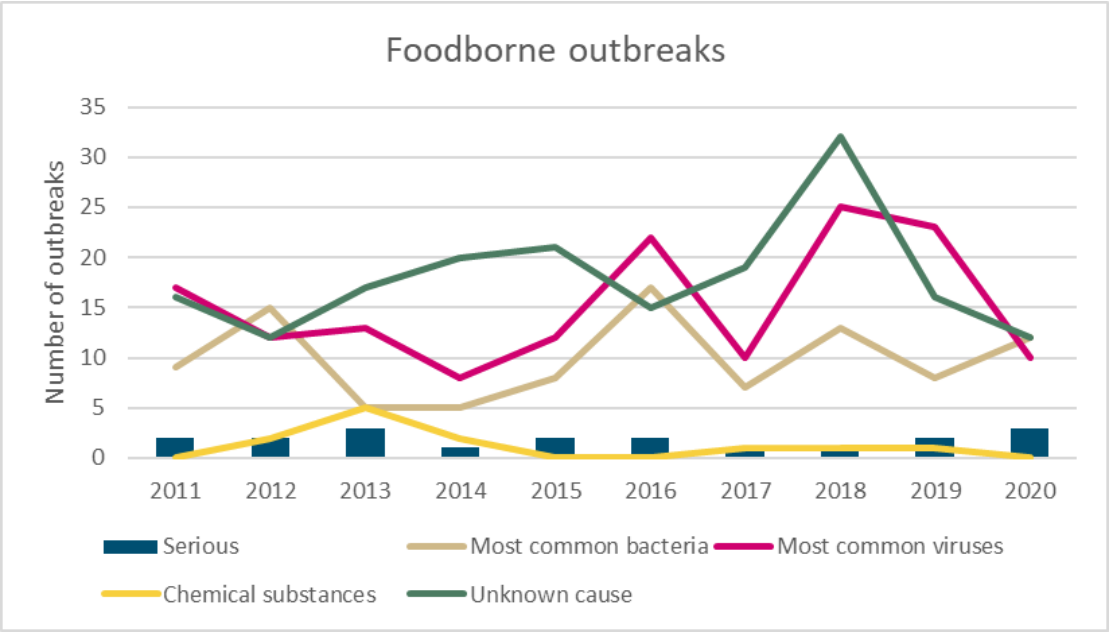

Figure 11. Foodborne outbreaks categorised according to pathogens and severity in 2011–2020. In a severe outbreak, those affected were diagnosed with listeria, EHEC or hepatitis.

3 IMPORT OF FOOD PRODUCTS AND CONTACT MATERIALS

3.1 Veterinary border control

A total of 613 batches of food derived from animals were imported directly to Finland from outside the EU (in 2019: 735), of which five (0.8%) (in 2019: four, 0.5%) received a written notice and zero (0%) (in 2019 seven, 1.0%) were rejected. In 2020, fishery products accounted for the largest share of products imported to Finland directly from third countries. The second largest group of food products was meat. Notices were given for incomplete labelling (4) and odour (1).

3.2 Internal market imports of animal-derived food products

From 1 January 2020, internal market surveillance of animal-derived foodstuffs (formerly known as inspections of first point of entry) was included in the systematic food control carried out by municipalities as a result of legislative amendments. Oiva assessment guidelines were updated in spring 2020 by adding issues that were previously included in the first point of entry inspections to the other Oiva assessment guidelines. They included instructions for assessing own checks, traceability and own check inspections. The control data related to them are included in the sectoral aggregates of the previous sections. A new assessment guideline 12.6, 'Special Guarantees for Salmonella', was additionally prepared to support the monitoring of compliance with the requirements of these special guarantees laid down in regulation (EC) No 1688/2005. This assessment line was checked in municipalities in connection with a total of 43 inspections, of which 25 focused on registered food premises and 18 on approved food establishments. While most of the inspections were carried out during inspection visits, eight documentary checks were also conducted.

The distribution of Oiva ratings for registered food premises was the following: A (60%), B (32%), C (4%) and D (4%). The measures used were guidance and advice (9 cases) and a notice (3 cases). No coercive measures were used.

The distribution of Oiva ratings for approved food establishments was the following: A (72%), B (22%), C (6%) and D (0%). The measures used were guidance and advice (4 cases) and a notice (1 case). No coercive measures were used.

3.3 Imports of other than animal-derived food products

Product safety control

The high standard of food control carried out by the Finnish Customs within its competence was maintained in 2020, as 90% of the goal for sampling was attained, and excellent efficiency was achieved in the targeting of samples (28%, goal 23%). Targeting describes the number of non-compliant products found and includes both minor errors (the operator is issued with a notice which they must take into account in their activities and own checks), and errors assessed to be serious (which result in such measures as an import ban).

A total of 335 product batches of foods and contact materials that were seriously non-compliant were found. The import or placing on the market of these rejected products was prohibited, or a notice was issued to correct a detected error in the next import batch.

If the product proves to be non-compliant during investigations, the following import batches will undergo enhanced control until the problem has verifiably been resolved. As verification is regarded at least one product that is investigated and found to be compliant. The Finnish Customs reports to the Finnish Food Authority any non-compliant products it discovers on the market as part of its control activities.

Plant health inspections

The standard of plant health inspections remained high, as the number of inspections complied with the percentages specified in the legislation, and no deficiencies were found in the inspections.

The number of food product batches imported from countries subject to plant health inspections was 1,358. New legislation increased the number of batches covered by the inspections. The documents related to all batches were inspected, in addition to which a physical plant health inspection was conducted on 535 batches.

Control under the Market Organisation Act

The control of olive oils under the Market Organisation Act was effective. This control was organised as a project in which nine oils on the market were examined. Five of them did not meet the requirements based on organoleptic evaluation. The Customs imposed a prohibition of release on any batches of olive oils found non-compliant that remained in warehouses.

Compliance inspections of fruit and vegetables were carried out on both imported batches and those traded in the internal market. A total of eight batches were rejected based on a physical check.

The control of olive oils under the Market Organisation Act was organised as a project and carried out following the plan (see also section 6.5).

A total of 685 batches of citrus fruit, apples and grapes subject to control of specific requirements for fruit and vegetables were imported from third countries. In total, a physical compliance check was carried out on 355 batches, 129 of which were random checks. In addition, physical checks were conducted on 23 products imported from the EU that were subject to special requirements.

Table 6. Foods examined by the Customs in 2020

Product group	Microbiological contamination (number)	Other contamination (number)	Composition (number)	Package labelling (number)	Other (number)	Rejected (number)	Total number of samples	Rejected, %
Cereals and cereal products		9		4		13	127	10 %
Cereal dough based preparations				30		30	151	20 %
Vegetables and vegetable products	3	8	11	3		25	523	5 %
Leguminous seeds and leguminous products		1	1	7		9	47	19 %
Fruit and fruit products	1	19		4		24	609	4 %
Nuts and nut products		3		3		6	70	9 %
Oilseeds and oil fruits		3		3	2	8	75	11 %
Starch roots and tubers	2					2	28	7 %
Herbs, spices and similar		8		1		9	145	6 %
Fruit and vegetable juices, beverages, spreads and equivalent				7	1	8	86	9 %
Fish and fish products					1	1	27	4 %
Imitation meat and dairy products				6	1	7	35	20 %
Hot beverages (coffee, cocoa and herbal drinks)				1		1	11	9 %
Water, water-based soft drinks and similar			1	11	3	15	69	22 %
Raw materials for hot and infused beverages	1	3		3		7	110	6 %
Alcoholic beverages		1	1	7		9	30	30 %
Sweets and chocolate		1	2	35	4	39	115	34 %
Food products for growing children		1		10		11	50	22 %
Foods for persons who follow special diets (including food supplements)	3		5	25	7	33	69	48 %
Composite dishes		1		17	1	19	87	22 %
Spice preparations and sauces			3	12	1	16	114	14 %
Cleaned isolated ingredients				5		5	28	18 %
Food contact materials				4	34	38	394	10 %
Total number of samples							3000	

3.4 Identified defects and their frequency

The largest number of defects in the Customs' product safety controls were found in the labelling of food products, leading to the rejection of almost 150 products. Additionally, errors in the general labelling were a secondary reason for rejecting dozens of foodstuffs. Package labelling errors are detected in almost all product groups, but food products with special labelling requirements are highlighted in terms of error rates. Such products include beans for which instructions and warnings must be provided, and dietary food supplements which are subject to special labelling requirements.

Almost 50 products were rejected due to their plant protectant residue levels being too high, and 30 food products were found to be non-compliant due to incorrect use of additives. In addition, food products were rejected as unapproved novel foods or due to poor microbiological quality, unpermitted irradiation and mycotoxins.

Serious errors in food contact materials were in most cases related to incomplete or missing compliance documents. In addition, such harmful substances as volatile compounds of silicone materials or melamine from melamine containers were observed. These reasons led to 11 products being rejected. Contact materials were additionally rejected because of incorrect labelling and loose particles. No excessive release of heavy metals was detected. As in previous years, products rejected as non-compliant were found in all product groups, and no clear trends or common denominators can be named.

The largest number of minor errors (which led to a notice being issued) were found in package labelling, as shortcomings were observed in the labelling of around 250 food products. In addition, the Customs issued notices for microbiological quality, use of plant protection products, mycotoxin contents and information on salt content in labelling. Seven notices were issued for process contaminants, including acrylic amide and PAH compounds. In contact materials, milder errors (which led to a notice being issued) were mostly found in labelling and documents, while notices were also issued for loose PAA compounds and melamine.

In the control of imported foods, non-compliance is most often observed in the information provided on a product. This may be due to shortcomings in the knowledge or skills of the importing company. Some product groups are subject to numerous labelling requirements, and finding out about all of them takes up the operator’s resources. According to observations made by Customs, the competence of companies importing food products needs to be improved, especially for the part of labelling requirements.

4 EXPORT OF FOOD AND FEED

4.1 Export control systems

China and Russia are Finland's most important non-EU export countries for food and feed. The COVID-19 pandemic, which started in spring 2020, created additional requirements, especially in the export of cold chain foods to China. Despite the challenges of the pandemic, the level of exports to China was maintained, and export volumes increased compared to the previous year. In the summer, the Chinese Customs conducted a remote audit to determine the risk of COVID-19 virus in Finland, and since then, the Finnish Food Authority's Export Section has audited the COVID-19 pandemic preparedness of seven export establishments. The Finnish Food Authority's Export Section audited five establishments approved for Chinese exports (two infant formula establishments, one in the dairy sector and two in the pork sector) and four that had applied for approval (two meat product establishments and two warehouses for dairy products to be exported). The approval applications of these two storage facilities were sent to the Chinese authorities via the CIFER system.

The Finnish Food Authority's Export Section organised seven training events related to Chinese exports for companies and/or the control authorities.

The Finnish Food Authority's Export Section audited eight establishments approved for the Eurasian export control system (three fish sector establishments, three meat establishments, one dairy sector establishment and one warehouse establishment). Four of these audits were conducted remotely. The Finnish Food Authority's Export Section organised training on the TRACES system and Eurasian Economic Union’s export certification procedures for control authorities and representatives of dairy sector establishments.

Regarding Russian exports, the situation has remained more or less unchanged due to sanctions, and there is no sign of the situation changing any time soon.

In 2020, the Finnish Food Authority's Export Section audited establishments exporting pork to the USA and their official control following an adapted audit plan. Exports from all US export establishments can continue normally.

Municipal control authorities and the Finnish Food Authority’s meat inspection veterinarians continued to carry out Oiva inspections related to export requirements laid down by China and the Eurasian Economic Union.

4.2 Prioritised market access initiatives

Finland has sought export growth in newly opened export markets. In 2020, market access was opened for poultry meat and poultry meat products as well as shell eggs and egg products in Singapore and for hatching eggs in South Korea. Taiwan granted Finland Newcastle disease freedom, which will facilitate the market access of eggs and egg products.

An agreement on veterinary health certificates for the following prioritised market access projects was reached with the target country authorities in 2020:

- South Korea: shell eggs
- South Korea: egg products
- South Korea: poultry meat
- South Korea: hatching eggs and day-old chicks
- Singapore: poultry meat and poultry products
- Singapore: shell eggs
- Singapore: egg products

To facilitate the export of the food chain's products, the authorities responded to several export questionnaires required by the target countries. The industries prioritised the market access initiatives by sector (meat, dairy, fish, eggs, feed). In 2020, the Finnish Food Authority prepared and submitted the following market access reports to target country authorities for evaluation:

- South Korea: poultry diseases
- South Korea: butter and infant formula
- Japan: avian influenza regionalisation (update)
- China: vegetable oil
- China: malts
- Singapore: ASF regionalisation
- Taiwan: pork (update)
- Vietnam: pork
- Vietnam: poultry meat

The following additional reports were also submitted to the target countries: Japan: BSE/bovine; Singapore: poultry meat (establishment specific); Singapore: shell eggs (farm specific); and Singapore: egg product (establishment specific). In addition, reports related to avian influenza regionalisation and the production of free-range eggs were prepared for Singapore as well as a report on market access of processed bovine protein for Thailand.

The following other market access projects prepared by the Finnish Food Authority and processed by target country authorities continued in 2020:

- South Africa: pork
- South Africa: poultry meat
- South Korea: ice cream
- Philippines: pork
- Philippines: poultry meat
- Indonesia: dairy products
- China: BSE status
- China: fish feed
- China: poultry meat

4.3 Maintenance of export rights and other export promotion activities

The authorities of export target countries carried out audits related to maintaining existing export rights as document audits in 2020. South Korea conducted an audit related to the export of pork and dairy products, which increased the workload of both authorities and export companies. The audit process went well, and exports from all export establishments continued.

To ensure that export of pork and poultry meat can continue, an export maintenance report required by Japan was prepared in cooperation with the European Commission.

The following country-specific veterinary health certificates for export were prepared or agreed on bilaterally in 2020:

- Albania: pork, e-cert (approved)
- Albania: poultry meat, e-cert (approved)
- United Arab Emirates: food assortments, e-cert (prepared)
- United Arab Emirates: processed food products, e-cert (prepared)
- United Arab Emirates: fishery products, e-cert (prepared)
- United Arab Emirates: eggs and egg products, e-cert (prepared)
- Brazil: milk and dairy products, e-cert (approved)
- Egypt: pet food, e-cert (prepared)
- South Africa: heat treated meat products (prepared)
- South Korea: birds (other than poultry) (approved)
- South Korea: sterile meat products (approved)
- Canada: porcine sperm (approved)
- Canada: porcine blood samples (approved)
- China: meat certificate (approved)
- China: feathers and down (approved)
- Turkey: reindeer meat and reindeer meat products (prepared)

In addition, a general veterinary health certificate was prepared for the export of cervid hides and skins. This certificate can be used to export hides and skins of Finnish origin to several different countries. A free sale certificate was prepared for food contact materials. This certificate can be used to export contact materials if it is necessary to declare in the target country that the products are freely available in the EU.

The European Commission has also made agreements with third countries on a number of certificates. These export certificates are predominantly used in the TRACES System.

5 DOMESTIC FOOD PRODUCTION

5.1 Meat inspection

Compared to 2019, the volume of meat approved in meat inspections increased slightly for both red meat and poultry meat (red meat: 255 million kg in 2019 and 261 million kg in 2020; poultry meat: 134 million kg in 2019 and 141 million kg in 2020). In addition, 2,294 wild game animals, 607 farmed game animals and 41,982 reindeer were inspected. In addition to reindeer, some farmed game animals, elk, bears, sheep and goats were inspected at reindeer slaughterhouses (Tables 7 to 9).

The numbers of partially or completely rejected carcasses and live animals varied by animal species (Tables 7 to 9). The proportions of the reasons for rejections also differ between establishments. The variation in rejection rates between establishments has been analysed as part of the action plan for the harmonisation of meat control. The reasons for the differences include dissimilar recording practices between establishments. The share of carcasses rejected in meat inspections remained the same as in the previous year for red meat, with the share of rejected carcasses being 0.56% (0.56% in 2019). For poultry, the percentage of rejected carcasses (4.3 %) has decreased slightly year on year (4.5% in 2019).

The most common reasons for pigs being rejected were pulmonary membrane infections and pericarditis (23.8% and 5.6% of slaughter pigs respectively). The most common reasons for cattle being rejected were contusions and sores (4.4%) and lung infections (2.6%). In poultry, the most common reasons for rejection were skin changes, changes in the body cavity and slaughter errors. The most common reason for rejecting reindeer was changes caused by parasites. No major changes were observed in the reasons for rejections compared to the previous year.

Finland has the capacity to carry out visual meat inspections facilitated by EU legislation and to reduce the Trichinella testing of pigs from recognised controlled housing conditions. However, the use of these possibilities is still limited, as export countries require traditional meat inspections and comprehensive Trichinella testing. There currently only is one pig holding with recognised controlled housing conditions in Finland. Visual meat inspections of pigs have not been introduced to a significant extent.

Table 7. 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 slaughterhouse	261,237	1,886,437	32,772	62,741	613	834	41,982	2,286,616
Number of animals dead or put down before ante mortem inspection	298	605	102	12	0	0	18	1,035
Number of animals rejected while alive	65	46	14	5	1	17	1	149
Number of partly rejected carcasses	25,139	141,342	4,951	76	1	2	8,305	179,816
Number of rejected whole carcasses	2,065	9,423	858	88	14	25	71	12,544
Number approved in meat inspections	258,809	1,876,363	31,798	62,636	598	792	41,892	2,272,888

Table 8. 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 slaughterhouse	80,673,152	568,685	907,910	2,063	2,063	5,989	6,012	82,166,464
% of animals that died spontaneously	0.142	0.062	0.076	0.113	0	0.2	0	0.141
% of animals rejected while alive	0.026	0.002	0.045	0	0	0	0	0.026
% of partly rejected carcasses	4.164	4.343	7.652	0	2.181	0	0	4.203
% of rejected whole carcasses	4.18	24.434	4.318	6.082	1.939	0.167	0	4.321

Table 9. 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	34	28	331	164	50
Completely rejected	0	0	1	1	0
Partially rejected	0	2	0	2	0

Table 10. Meat inspections of wild game; game handling establishments and reindeer slaughterhouses

	Elk	Other cervids	Bears	Wild boar	Others
Inspected	223	1811	69	1	190
Completely rejected	3	39	1	0	0
Partially rejected	24	179	2	0	165

In reindeer herding areas, reindeer are also traditionally slaughtered elsewhere than in slaughterhouses. This reindeer meat is for the producers' (reindeer owners') household use, and some of it is sold uninspected directly to consumers in the reindeer herding area, or it is used to produce dried reindeer meat sold directly to consumers in this area. No detailed information is available on the quantity of uninspected reindeer meat that is sold directly. Some of the reindeer meat used in the producers' households originated from reindeer slaughtered and inspected in slaughterhouses. Similarly, a large share of reindeer meat entering direct sales is from reindeer that have been slaughtered in slaughterhouses and inspected. Based on the reindeer records and slaughter statistics, the Regional State Administrative Agency for Lapland and the Reindeer Herders' Association estimated that approximately 65% to 70% of all slaughtered reindeer are slaughtered in slaughterhouses and about 25% to 30% elsewhere. There is no information on the volume of uninspected reindeer meat used in producers' households and delivered to direct sales.

Very few reindeer are reared and slaughtered outside the reindeer herding area. In the herding area, they are slaughtered in slaughterhouses approved for farmed game and classified as farmed game in meat inspection statistics.

Only a small percentage of hunted wild game is taken to approved game handling establishments or slaughterhouses and inspected. Most 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 to retail without being inspected. No information is available on the amount of uninspected game and game meat sold. In 2020, 49,128 elks, 342 bears (of which 71 in the reindeer herding area) and 1,211 wild boars were hunted according to the Finnish Wildlife Agency. Meat inspections were carried out on 223 elks (0.5% of those shot by hunters) and 69 bears (20% of those shot by hunters). In addition, 1,811 other cervids were inspected in game handling establishments. One wild boar was inspected (Table 10).

5.2 Control of slaughterhouses and establishments connected to them

At the end of 2020, there were 15 slaughterhouses, 49 low-capacity slaughterhouses and nine game handling establishments approved by the Finnish Food Authority. They included five poultry slaughterhouses, and similarly five low-capacity slaughterhouses for poultry.

In 2020, one game handling establishment was approved as a low-capacity slaughterhouse. No approvals were granted to completely new establishments. The approval of one low-capacity slaughterhouse was cancelled, decreasing the total number of establishments by one.

The Finnish Food Authority organised controls at 56 low-capacity slaughterhouses/game handling establishments, and at three establishments, control and meat inspections were carried out by an official veterinarian employed by the municipality.

At the end of 2020, a total of 36 (in 2019: 37) permanent Finnish Food Authority meat inspection veterinarians and 45 (in 2019: 48) meat inspectors worked in slaughterhouses. In 2020, 92 meat inspection veterinarians were employed in low-capacity slaughterhouses and game handling establishments.

In the control of slaughterhouses, 53 inspection-specific notices were issued, and administrative coercive measures were used in slaughterhouses nine times in total in connection with control at establishments (in 2019: 15 times). Coercive measures in the control of slaughterhouses have mainly focused on the maintenance of facilities and temperature management of food products.

An A or B rating was given to 87% of slaughterhouses, low-capacity slaughterhouses and establishments connected to them, while 13% received a C or D rating (Table 12). No separate control results of inspections carried out at establishments connected to a slaughterhouse are available, as these results are included in the control results of the slaughterhouse in question.

In 2020, facility inspections in slaughterhouses, low-capacity slaughterhouses and establishments connected to them controlled by the Finnish Food Authority focused on monitoring the cleanliness of facilities, surfaces and equipment and the hygiene of food production as well as on the activities and training of personnel. In terms of numbers, inspections in slaughterhouses, low-capacity slaughterhouses and establishments connected to them were the most often related to the cleanliness of facilities, surfaces and equipment (268 times), hygiene of food production (245 times) and the activities and training of personnel (204 times). Information provided on food products was inspected more often (52 times) than in 2019 (30 times). Allergens and substances that cause intolerance, food composition as well as packaging and contact materials were rarely inspected.

The largest percentage of defects (C or D ratings) were found in the maintenance of facilities and equipment (8% of 132 inspections resulted in a C or D rating), maintenance of temperatures of food products (7% of 157 inspections resulted in a C or D rating), the cleanliness of facilities, surfaces and equipment (4% of 268 inspections resulted in a C or D rating) and food production studies (4% of 173 inspections resulted in a C or D rating).

In 2020, the Regional State Administrative Agency of Lapland organised controls at 19 reindeer slaughterhouses and seven establishments connected to them. The number of reindeer slaughterhouses has not changed for several years. In 2020, the Regional State Administrative Agency of Lapland employed 68 part-time meat inspection veterinarians. Some of them only carried out *ante mortem* inspections at reindeer round-up sites. The work input of part-time meat inspection veterinarians in reindeer meat inspections was estimated at 3.5 person-years.

In reindeer slaughterhouses and the establishments connected with them, 91% of inspections resulted in an A or B rating (72% in 2019), while 9% resulted in a C or D rating (28% in 2019). The greatest number of shortcomings was found in the hygiene of food production. In 2020, the Regional State Administrative Agency did not use coercive measures in the control of reindeer slaughterhouses and establishments connected to them (Table 12).

Table 11. Number of inspections at slaughterhouses, low-capacity slaughterhouses and game handling establishments controlled by the Finnish Food Authority and establishments controlled by the Regional State Administrative Agency for Lapland in 2020

	Sites			**Inspection visits**	
	Total	Inspected		Planned	Unplanned
	number	number	%	number	number
Slaughterhouses, low-capacity slaughterhouses and game handling establishments and establishments connected to them	81	54	66	189	1
Reindeer slaughterhouses and establishments connected to them	34*	16	47	22	1

*Reindeer slaughterhouses and the establishments connected to them are recorded as separate control sites, unlike establishments connected to other slaughterhouses, which are recorded together with the slaughterhouse in question.

Table 12. Control results for slaughterhouses, low-capacity slaughterhouses and game handling establishments controlled by the Finnish Food Authority and establishments controlled by the Regional State Administrative Agency for Lapland.

	Inspections	**Result**				**Sanctions**
	Planned incl. follow-up inspections	Inspection-specific result %				Inspections that led to a notice or the use of coercive measures
	number	A	B	C	D	number
Slaughterhouses, low-capacity slaughterhouses and game handling establishments and establishments connected to them	198	28.7	58.5	10.1	2.7	62 (53+9)
Reindeer slaughterhouses and establishments connected to them	23	62.8	27.8	9.4	0	5 (5+0)

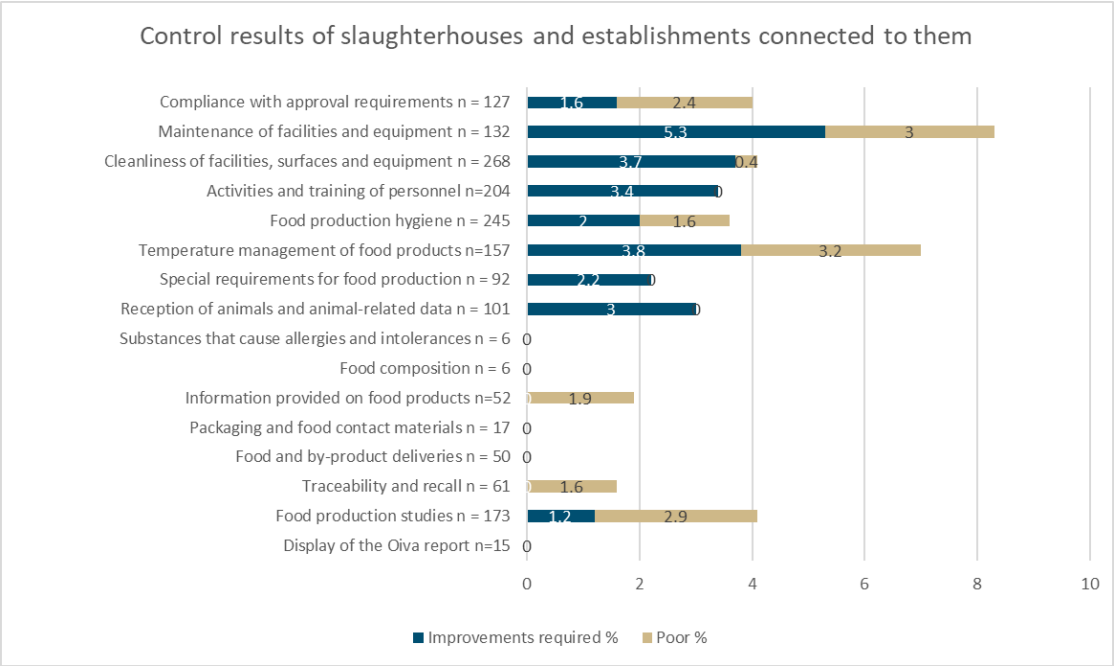

Figure 12. C and D ratings given for compliance with requirements set for slaughterhouses, game handling establishments and low-capacity slaughterhouses and the establishments connected to them (number and %); n= number of inspections focusing on the requirement in question

5.3 Food establishments controlled by municipalities

See Figure 13 for the number of establishments in each sector in 2016–2020.

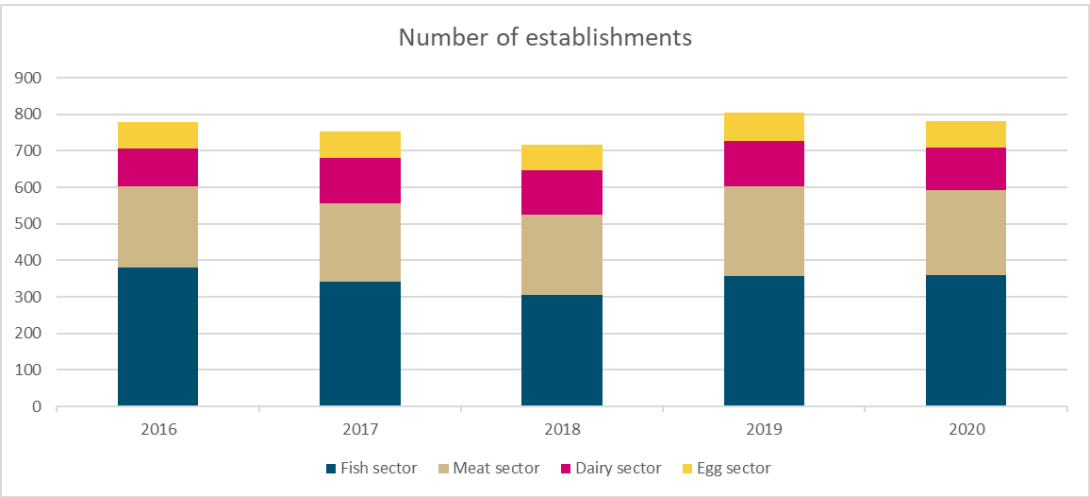

Figure 13. Number of establishments in 2016–2020

The number of establishments that produce animal-derived food products (fish, meat, dairy and egg sector establishments) decreased slightly compared to the year before.

Table 13. Number of establishments and inspections carried out in them

Establishment	Sites			Inspections			
	Sites, total	Inspected sites		Approval inspections	Inspections not included in the control plan	Follow-up inspections	Total
	number	number	%	number	number	number	number
Fish sector establishment	360	221	61	9	20	7	432
Meat sector establishment	232	143	62	11	25	20	477
Dairy sector establishment	118	90	76	5	37	1	249
Egg sector establishment	70	43	61	2	1	2	58

A total of 432 inspections following the control plan were carried out in fish sector establishments (Table 13). Of the fish sector establishments, 61% were inspected, which is less than in 2019. An average of two inspection visits were made to the controlled fish sector establishments in 2020. Inspections not included in the plan accounted for 5% of the total number. Seven follow-up inspections were carried out.

A total of 477 inspections following the control plan were carried out in meat sector establishments. Of meat sector establishments, 62% were inspected, which is similar to the proportion inspected in 2019. An average of three inspections were carried out at controlled meat sector establishments in 2020. Inspections not included in the plan accounted for approx. 5% of the total number. The number of follow-up inspections was slightly higher than in the year before.

A total of 249 inspections following the control plan were carried out at dairy sector establishments, accounting for 76% of these establishments. Compared to previous years, the number of actual inspections conducted has decreased. Inspections not included in the plan accounted for 15% of the total number. One follow-up inspection was carried out.

A total of 53 inspections following the control plan were carried out in egg sector establishments, and 61% of egg sector establishments were inspected. This proportion is similar to the previous years' figures. Around 2% of the inspections were not included in the control plan. Two follow-up inspection visits were made, which was more than in previous years.

The recommended frequency of inspections at all establishments is at least once a year, depending on their sizes.

Table 14. Inspection-specific assessments of establishments and sanctions

Establishment	Inspection visits	Result				Sanctions	
	Inspection included in control plan including follow-up inspections	Inspection-specific assessment %				Inspections that led to a notice	Inspections that led to the use of coercive measures
	number	A	B	C	D	number	number
Fish sector establishment	412	46.7	37.7	14.2	1.5	70	0
Meat sector establishment	415	37.4	44.4	17.5	0.7	99	4
Dairy sector establishment	200	59	33.5	7.5	0.0	21	0
Egg sector establishment	55	69.1	23.6	7.3	0.0	5	1

A total of 1082 planned inspections were carried out in fish, meat, dairy and egg sector establishments. The total number of planned inspections was slightly lower than in previous years. Of these inspections, 85% resulted in an A or B rating, and 15% in a C or D rating.

Of the planned inspections carried out in fish sector establishments, 84% resulted in an A or B rating, and 16% in a C or D rating (Table 14). The number of A and B ratings decreased slightly from the previous year. While none of the inspections resulted in coercive measures, 17% of them led to notices for corrective action.

In meat sector establishments, approx. 82% of the inspected sites were given an A or B rating, and 18% a C or D rating. The number of A and B ratings decreased slightly from the previous year. and 24% of the inspections led to notices for corrective action and 1% to the use of coercive measures. The number of notices for corrective action and coercive measures increased year on year.

Of dairy sector establishments, 93% of the inspected sites were rated A or B. Only less than 7% of dairy sector establishments were given a C rating. The number of A or B ratings has decreased by 3% compared to previous years. None of the inspected dairy sector establishments were given a D rating, whereas 11% of the inspections led to notices for corrective action. No coercive measures were used. While the numbers of notices for corrective action and coercive measures have remained low, they have increased slightly compared to previous years.

In egg sector establishments, 93% of the inspected sites received an A or B rating, and 7% a C rating. None of the inspected egg sector establishments were given a D rating. The numbers of A or B ratings have decreased slightly compared to previous years, while the number of C ratings has increased somewhat over the same period. Notices for corrective action were issued in 9% of the inspections, and coercive measures had been used in one case. While the numbers of notices for corrective action and coercive measures have remained low, they have increased slightly compared to previous years.

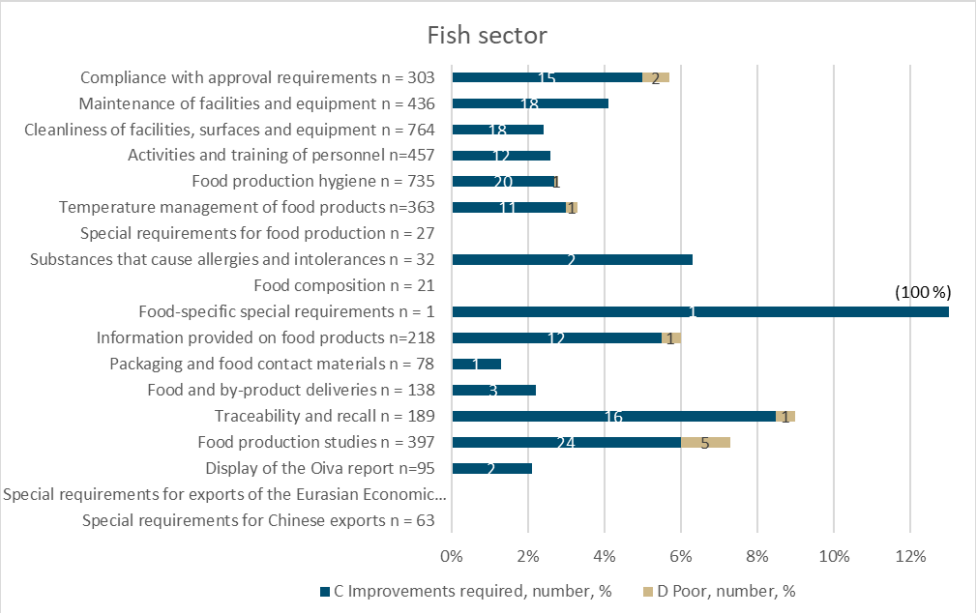

Figure 14. C and D ratings given in inspections concerning compliance with various requirements for fish sector establishments (number and %); n= total number of inspections for the requirement in question

In 2020, the greatest number of inspections at fish sector establishments focused on the cleanliness of facilities, surfaces and equipment (764), food production hygiene (735) and activities and training of personnel (457) (Figure 14). Food composition (21), special requirements for food production (27) and substances causing allergies and intolerances (32 inspections) were controlled the least often.

In proportion to the total number of inspections focusing on each requirement, the highest numbers of shortcomings (C or D rating) were related to traceability and recalls (17), food production studies (29) and compliance with approval requirements (17). In these aspects, C and D ratings accounted for 9%, 7% and 6% respectively. The proportion of C and D ratings for food-specific special requirements was 100%, as a C rating had been given in the only inspection that was conducted.

Few checks of food composition had been carried out at fish sector establishments, including the use of additives, even though information provided on food products had been checked. The largest number of shortcomings in the information provided on food products at fish sector establishments was observed in general information on packaging, which was also inspected the most often. The labelling of fishery and aquaculture products in accordance with special legislation was inspected in approximately one in four labelling inspections. The largest number of shortcomings in food production inspections was related to listeria own checks as well as sampling and own check examinations.

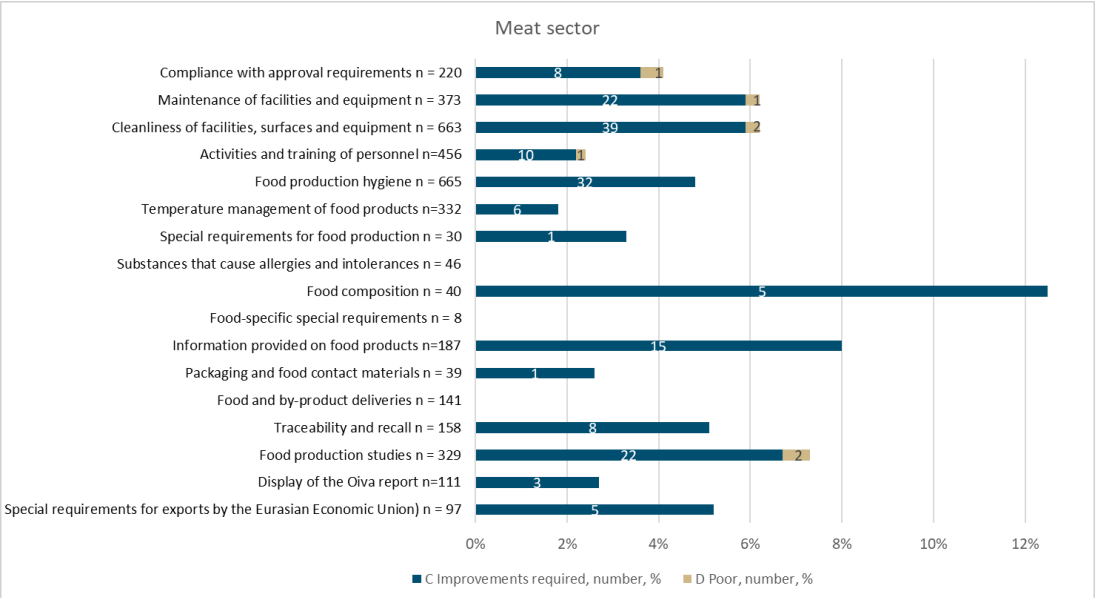

Figure 15. C and D ratings given in inspections concerning compliance with various requirements for meat sector establishments (number and %); n= total number of inspections for the requirement in question

In terms of numbers, the largest number of inspections at meat sector establishments was related to the hygiene of food production (665), cleanliness of facilities, surfaces and equipment (663), activities and training of personnel (456), and maintenance of facilities and equipment (373). Information provided on food products was inspected clearly less frequently than these aspects. Food composition and substances that cause allergies and intolerances were rarely inspected.

The highest relative share of shortcomings (C or D ratings) at meat sector establishments was found in the areas of information provided on food composition (40 inspections), information provided on food products (187 inspections) and food production studies (329 inspections).

The shares of C and D ratings given in these areas were 13%, 8% and 7% respectively. The results indicate that meat sector establishments should in the future invest more in the control of food composition, information provided on food and food production studies (Figure 15).

Table 15. C and D ratings given for compliance with requirements for dairy sector establishments

	Number of inspections	C %	D %
Requirements for sale	4	0	0
Display of the Oiva report	65	0	0
Food production studies	266	2.3	0
Traceability and recalls	74	0	0
Food and by-product deliveries	75	0	0
Packaging and food contact materials	37	0	0
Information provided on food products	113	5.3	0
Substances that cause allergic reactions and intolerances	22	0	0
Food composition	41	0	0
Food-specific special requirements	2	0	0
Temperature management of food products	152	0.7	0
Food production hygiene	402	0.7	0
Activities and training of personnel	276	1.8	0
Cleanliness of facilities, surfaces and equipment	401	1.7	0
Maintenance of facilities and equipment	230	1.7	0
Compliance with approval requirements	177	1.1	0
Eurasian Economic Union's special export requirements	224	1.3	0
Special requirements for Chinese exports	205	1.5	0

In 2020, controls at dairy sector establishments focused on food production hygiene (402). The cleanliness of facilities, surfaces and equipment, activities and training of personnel and food production studies were also controlled extensively in proportion to other aspects (401, 276 and 266 times). Few shortcomings were observed in inspections at dairy sector establishments. No D ratings were given, and C ratings were few (Table 15).

In relative terms, the greatest shortcomings found in dairy sector establishments were related to information provided on the food product (share of C ratings 5.3%, 113 inspections) and in the activities and training of personnel (share of C ratings 2.3%, 276 inspections). Shortcomings were also found in food production studies (share of C ratings 2.3%, 266 inspections) (Table 15).

In the context of Oiva assessments, special requirements for food production, food-specific special requirements and requirements for sale were inspected the least often (six times in total), as has also been the case in the past.

In relative terms, the greatest shortcomings at dairy sector establishments were found in information provided on the food product (5.3%, 113 inspections) (Table 15).

Table 16. C and D ratings given for compliance with requirements for egg sector establishments in 2020

	Number of inspections	C %	D %
Requirements for sale	71	9.9	0
Compliance with approval requirements	79	6.3	0
Activities and training of personnel	64	4.7	0
Information provided on food products	43	7.0	0
Maintenance of facilities and equipment	66	1.5	0
Traceability and recalls	21	4.8	0
Cleanliness of facilities, surfaces and equipment	130	0	0
Food production hygiene	139	0	0
Temperature management of food products	23	0	0
Food production related special requirements	4	0	0
Reception of animals and animal-related data	4	0	0
Food-specific special requirements	2	0	0
Packaging and food contact materials	14	0	0
Food and by-product deliveries	54	0	0
Food production studies	28	0	0
Display of the Oiva report	11	0	0

The largest number of inspections at egg sector establishments in 2020 were related to the hygiene of food production (139), cleanliness of facilities, surfaces and equipment (130), compliance with approval requirements (79) and requirements set for the sale of eggs (71 times). In terms of numbers, food production related special requirements (4), reception of animals and animal-related data (4) and food-specific special requirements (2) were inspected the least often.

Relatively few shortcomings were found at egg sector establishments, where C ratings were given for requirements for sale of eggs (C ratings given in 9.9% of 71 inspections), compliance with approval requirements (C ratings in 6.3% of 79 inspections), activities and training of personnel (C ratings in 4.7% of 64 inspections), information provided on food products (C ratings in 7.0% of 43 inspections), maintenance of facilities and equipment (C ratings in 1.5% of 66 inspections), as well as traceability and recalls (C ratings in 4.8% of 21 inspections). However, the number of C ratings has increased compared to previous years. None of the inspections carried out at egg sector establishments resulted in a D rating (Table 16).

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 16. The number of establishments has increased each year.

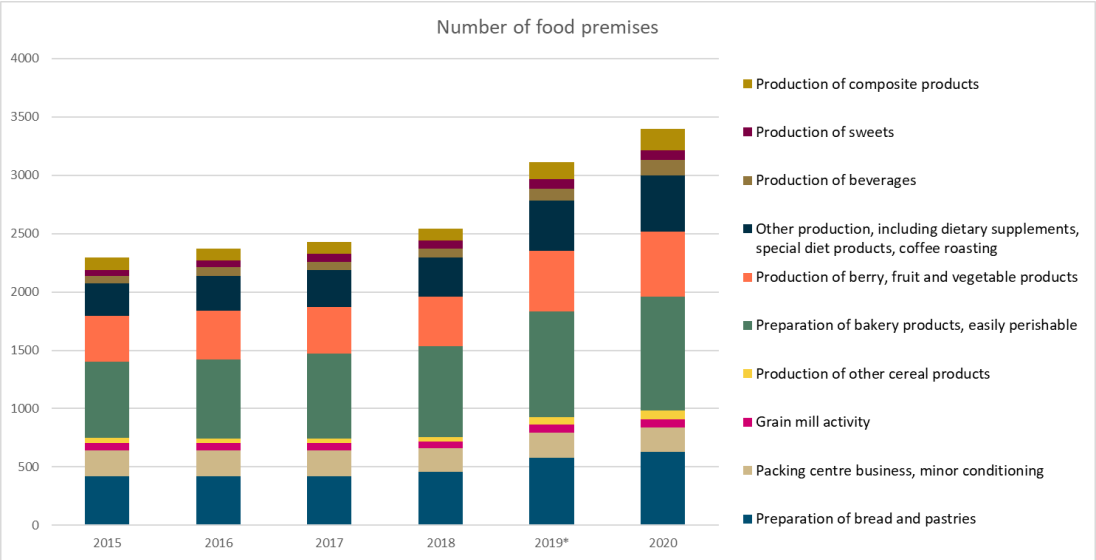

Figure 16. Number of registered food premises in 2015–2020

Table 17. Sites that produce food, inspections and sanctions in 2020

Food premises	**Sites**			**Inspection visits**		**Sanctions**	
	Sites, total	Inspected sites		Follow-up inspections following the control plan	Inspections not included in the control plan	Inspections that led to a notice	Inspections that led to the use of coercive measures
	number	number	%	number	number	number	number
Cereals and vegetable sector	2354	626	27	678	61	97	1
- Grain mill activity	70	12	17	12	2	1	0
- Production of perishable bakery products	976	290	30	313	24	49	1
- Production of bread and pastries	627	157	25	179	10	16	0
- Production of other cereal products	75	13	17	14	1	1	0
- Production of berry, fruit and vegetable products	558	133	24	145	23	24	0
- Packing centre business minor conditioning	214	24	11	24	1	6	0
Production of composite products	182	76	41	68	6	10	0
Production of sweets	84	21	25	22	3	0	0
Production of beverages	131	37	28	35	13	9	0
Other production, including dietary supplements, special diet products, coffee roasting	479	97	20	99	16	20	0

Fewer than one out of three (27%) of food establishments in the **cereal and vegetable sector** were inspected following the control plan. The proportion of inspected sites was the same as in 2019. The majority of inspections in food establishments in the cereal and vegetables sector were conducted as set out in the control plan (678). Approximately 8% of all inspections (61) were not included in the control plan. Approx. 13% of the inspections led to notices for corrective action (97) or the use of administrative coercive measures (1). In 2019, a higher number of inspections (135) led to notices for corrective action than in 2020, but the use of administrative coercive measures remained at a similar level (1 case).

Less than a half (41%) of sites that produce **composite products** were inspected, which was slightly more than in the year before. Most (22) of the inspections were conducted following the plan, while three inspections were not included in it. Approx. 18% (9) of the inspections led to notices for corrective action, which is more than in 2019 (9%, 7 inspections).

One out of four (25%) food establishments that **produce sweets** were inspected. This proportion is slightly larger than in 2019. While 22 inspections were carried out following the control plan, three were not included in it. As in 2019, none of these inspections led to notices or administrative coercive measures.

Around one third (28%) of the sites that **produce beverages** were inspected, which is similar to the proportion of sites inspected in recent years. 35 inspections were carried out following the control plan, while 13 were not included in it. The proportion of inspections that led to notices for corrective action was 19% (9 inspections). This number is higher than in 2019, in which year notices for corrective action were issued in connection with 10% of the inspections.

Inspections were carried out at one out at five sites (20%) engaged in **other production**, which is a similar proportion as in 2019. In previous years, inspections have been carried out at one third of the sites. In 2020, the majority of inspections were conducted following the control plan (99), while 16 were not included in the plan. Approx. 17% of the inspections led to a notice for corrective action (20 inspections), which is slightly more than in the previous year. The group of sites engaged in other production includes those producing food supplements and foods for special consumer groups (Table 17).

Table 18. Results of food production inspections in 2020

Food premises	**Inspections**	**Result**			
	Planned incl. follow-up inspections	Inspection-specific result			
	number	A %	B %	C %	D %
Cereals and vegetable sector	613	48.1	38.3	13	0.7
- Grain mill activity	12	75.0	25.0	0	0
- Production of perishable bakery products	279	41.8	41.8	15.3	1.1
- Production of bread and pastries	151	52.3	37.7	9.3	0.7
- Production of other cereal products	13	38.5	53.8	7.7	0
- Production of berry, fruit and vegetable products	136	51.1	34.1	14.8	0
- Packing centre business, minor conditioning	22	68.2	22.7	9.1	0
Production of composite products	76	66.7	21.3	12	0
Production of sweets	19	57.9	31.6	10.5	0
Production of beverages	36	44.4	33.3	22.2	0
Other production* (including dietary supplements, special diet products, coffee roasting)	93	46.2	34.1	19.8	0

In Oiva inspections of sites operating in the **cereal and plant sector**, an A or B rating was given in 86% and a C or D rating in around 14% of the inspections.

At sites producing **composite products**, a total of 88% of the inspections resulted in an A or B rating, and 12% in a C rating. No inspections resulted in a D rating.

At sites that **produce sweets**, a total of 90% of the inspections resulted in an A or B rating, and 11% in a C rating. No inspections resulted in a D rating.

Of inspections at **beverage companies**, 78% resulted in an A or B rating, while 22% received a C rating. No inspections resulted in a D rating.

In **other production**, approx. 80% of the inspections led to an A or B rating, 20% to a C rating and none to a D rating. In 2019, a D rating was given in 2.2% of the inspections.

The results of the inspections are very similar to those in previous years.

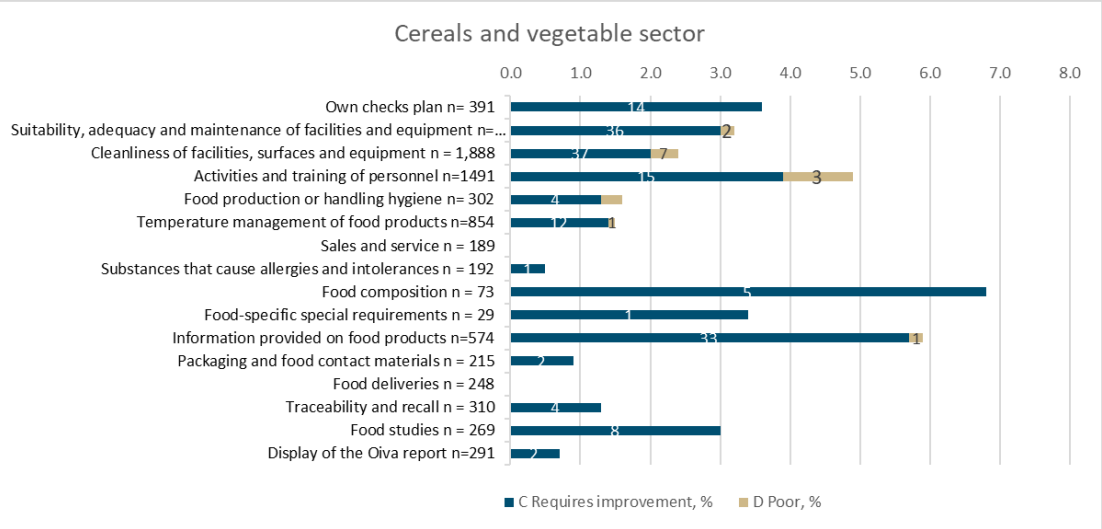

Figure 17. C and D ratings for compliance with various requirements set for vegetable and cereal sector establishments (number and %); n= Number of inspections for the requirement in question

Based on the conducted inspections, the cereal and vegetable sector is fairly compliant with legislation. In relative terms, the highest number of shortcomings was related to requirements for food composition (6.8% of inspections resulted in a C rating, 5 inspections), information provided on food products (5.7% of inspections resulted in a C rating, 33 inspections, and 0.2% in a D rating, one inspection), activities and training of personnel (3.9% of inspections resulted in a C rating, 15 inspections, and 1.0% resulted in a D rating, 3 inspections), as well as the cleanliness of facilities, surfaces and equipment (2.0% of inspections resulted in a C rating, 37 inspections, and 0.4% resulted in a D rating, 7 inspections) (Figure 17).

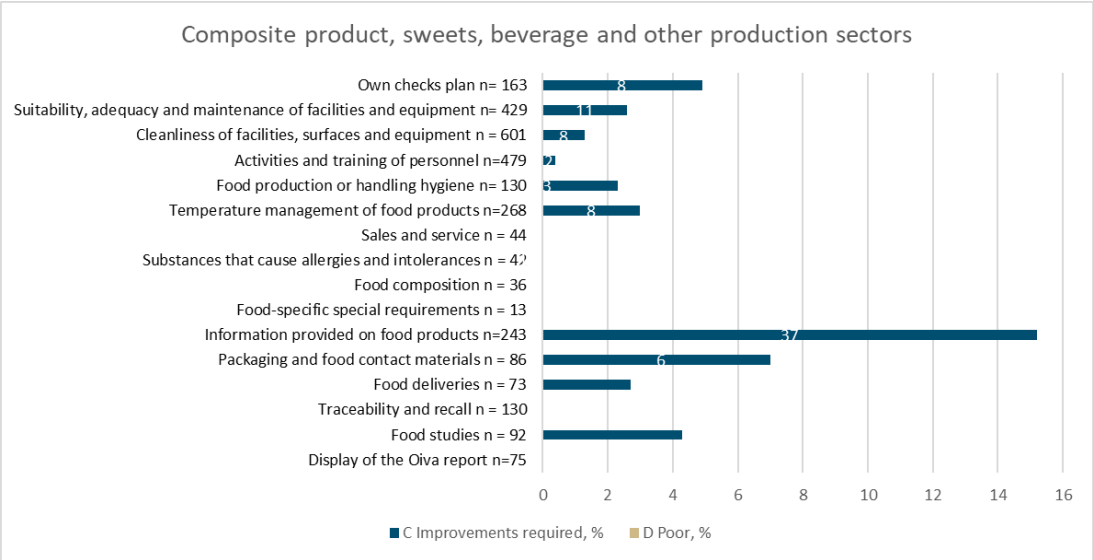

Figure 18. C and D ratings given for compliance with set requirements for composite products, sweets, beverages and other production (e.g. dietary supplements, special diet products, coffee roasting) (number and %); n= Number of inspections for the requirement in question

The inspection results indicate that the standard of facilities, equipment and conditions as well as the activities of personnel also seems to be good in the fields of composite products, sweets, beverages and other production (e.g. dietary supplements, special diet products, coffee roasting establishments). No lack of compliance leading to a D rating was found in the inspections. In relative terms, the most significant shortcomings were found in information provided on food products (C ratings in 15.2% of inspections, 37 inspections), packaging and food contact materials (C ratings in 7.0% of inspections, 6 inspections), in the own check plan (C ratings in 4.9% of inspections), in food production studies (C ratings in 4.3% of inspections, 8 inspections) and in temperature management of food products (C ratings in 3.0% of inspections, 8 inspections) (Figure 18).

5.5 Organic production

The control of organic production was carried out as planned, apart from additional inspections conducted without prior notification. Despite the COVID-19 pandemic, all annual inspections set out in the control plan were conducted and all samples were obtained as required by the regulations, but after March, organic operators were notified of all inspections and visits in advance. Remote communication tools were used to conduct some of the inspections. The results indicate that remote inspections were quite adequate for demonstrating compliance during an exceptional year.

More than 98% of operators registered in the control system complied with production-related terms and conditions. Consequently, the targeted impact was achieved, and Finnish consumers can rely on the accuracy of organic labelling (Table 19).

Fraud detection was selected as a common priority in the control of organic production for a three-year period, and to begin with, the quality and systematic nature of organic operators' documentation were assessed.

Table 19. Indicators for impact in organic production.

	Percentage of operators issued with marketing bans		
	2018	2019	2020
Plant production	0.5	0.7	0.6
Livestock production	1.2	1.4	1.5
Feed manufacturing and importation	-	-	5.0 (2)
Food manufacturing and importation	2	1	0.5
Production and sale of alcoholic beverages	-	0.6	-

Market surveillance of organic products

Market surveillance of organic products is carried out in retail stores in connection with Oiva inspections. In 2020, municipal food inspectors conducted 295 Oiva inspections focusing on the labelling and authenticity of organic products. Control of organic products in retail stores must take place every three years. Control is essential for ensuring that consumers are not misled.

Table 20. Market surveillance inspections of organic food products in 2018–2020

	2017	2018	2019	2020
Number of inspections, total	209	161	157	295
- Retail sales points		82	97	253
- Serving places		62	31	28
- Others		17	29	14

Shortcomings were found in 9.5% of market surveillance inspections of organic products. This is 1.2 percentage points more than in 2019. The most common reason for deviations was organic products placed too close to conventional products, resulting in a risk of consumers confusing the two types of products. In 2020, the Finnish Food Authority provided municipal inspectors training on the control of organic production in retail shops. The Finnish Food Authority intends to continue raising retailers' awareness of the requirements related to sales of organic products by informing them and training municipal inspectors.

Table 21. Results of market surveillance inspections in 2017–2020

Results on a scale		Corrective measure	Percentage (%) of inspected			
			2017	2018	2019	2020
A	All conditions met	No action	93	92.5	91.7	90.5
B	Small defect	Guidance and advice	7	6.2	6.4	8.8
C	Misleading activities	Notice for corrective action within a set time limit	0.5	1.2	1.9	0.7
D	Serious misleading activities	Coercive measures or prohibitions, the defect must be corrected immediately	0	0	0	0

Report on organic production control in 2020, pdf (in Finnish)

5.6 Alcoholic beverages

The number of remarks and notices issued by the National Supervisory Authority for Welfare and Health (Valvira) regarding the activities of wholesalers and product control decreased slightly from the previous year. Of the alcoholic beverages covered by market surveillance, 8% did not fully meet the requirements applicable to them. This is similar to the previous year's figure. As a rule, the deviations observed in the operators' activities were related to own checks, record-keeping and incorrect labelling. No marketing bans of alcoholic beverages were issued by Valvira in 2020, and Valvira received four notifications of recalls from operators. Defects observed in product control mainly consisted of inadequate labelling of products, in addition to which two deviations in composition were observed. Almost 99% of the control sites met the requirements. Based on the control results, the standard of safety in alcoholic beverages is good.

While Valvira's control plan for 2020 estimated that 150 inspections would be carried out, their number ultimately was 78. Due to the COVID-19 pandemic and the restrictions imposed to control its spread, physical checks were suspended in mid-March, and they only continued after the summer holiday season in September. Instead of physical checks, control took the form of register checks, document inspections (mainly focusing on own check plans) and market surveillance of alcoholic beverages. Eight remote inspections were also conducted. Remote inspections used to monitor the wholesale trade of alcoholic beverages will be developed further in 2021. The number of control inspections conducted as set out in the plan was 31, while the number of initial inspections at alcohol production sites or wholesale warehouses including inspections referred to in the Food Act was 13, and 31 organic inspections were also conducted. While the focus was on manufacturers of alcoholic beverages, the plan for 2020 also targeted inspections more extensively at wholesalers of alcoholic beverages and especially those within the scope of the organic system.

The inspections covered 15% of manufacturers and wholesalers, which is slightly less than in 2019. As the Alcohol Act was amended, supervision carried out by Valvira pursuant to the Food Act changed as of 1 March 2018, and in addition to production sites and duty-free storage sites, Valvira now also inspects taxable warehouses maintained by wholesalers.

Valvira took 80 market surveillance samples in 2020, all of them as specified in the control plan. The number of analyses carried out to study plant protection product residues was approximately 350 per sample, whereas the average number of analyses performed on other samples was five per sample. The implementation rate, which was 59%, was higher than in 2019.

The shortcomings identified in inspections of alcoholic beverage producers were mainly related to their own check plans and inadequate record-keeping as well as incorrect labelling and deviations in the composition of products. In addition, one prohibition on using well water was issued in 2020. Shortcomings observed in product control included not only package labelling but also indicating the product's alcohol content. In some products, the alcohol content determined by analysis exceeded the legal tolerance compared to the alcohol content indicated on the label.

Valvira has prepared instructions on the labelling of alcoholic beverages, which were updated in 2020. Control inspections will be conducted to ensure that producers' and wholesalers' own check plans include a sufficiently detailed description of the actions taken to guarantee that the mandatory labelling of alcoholic beverages meets the legal

requirements. Pursuant to the Alcohol Act, deviations in the alcohol content labelling of alcoholic beverages lead to administrative coercive measures. As inspections are conducted, package labelling is also checked, and instructions are issued to the operator in question. In the future, attention will also be paid to ensuring that own check plans include a sufficiently detailed description of factors related to quality assurance and analysis of alcohol content.

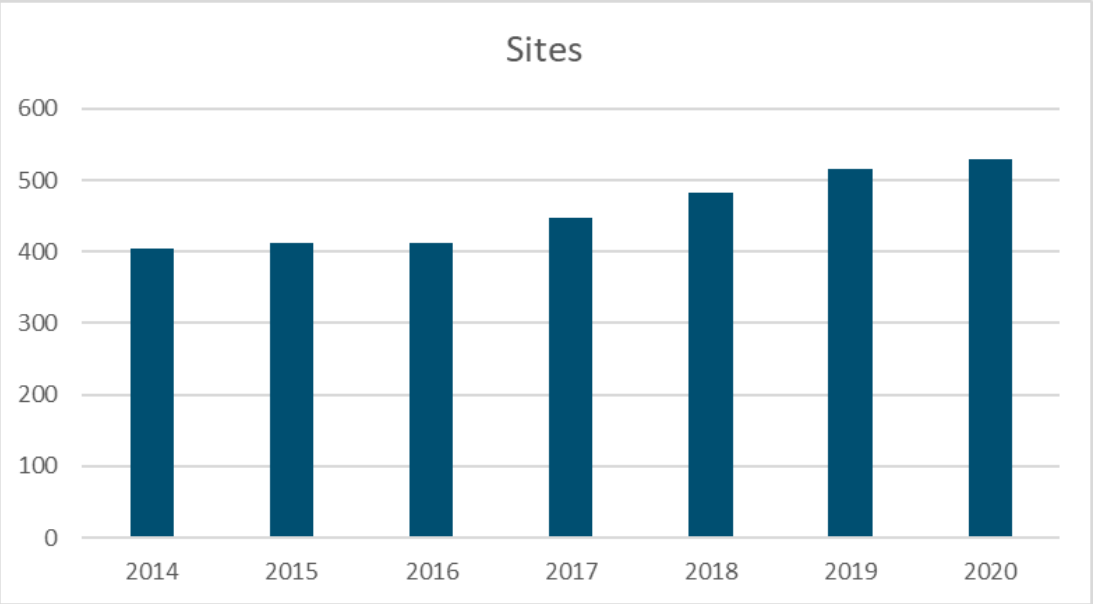

Figure 19. Controlled sites in the alcoholic beverage production and wholesale sector 2016–2020

Table 22. Alcoholic beverage production and wholesale sites, inspections and sanctions in 2020

	Sites			Inspection visits		Sanctions	
	Sites, total	Inspected sites		Inspections following the control plan including follow-up inspections	Inspections not included in the control plan	Number of notices issued	Number of coercive measures used
	number	number	%	number	number	number	number
Production and wholesale of alcoholic beverages	529	78	15	78	0	8	1

5.7 Food contact materials

Control of food contact material manufacturers, importers and wholesalers

In 2020, the total number of registered control sites in the food contact material sector was 498. The majority of registered control sites in the food contact material sector are located in Southern, Western, Inland, and Southwestern Finland (423 sites that operate in the contact material sector). See Table 23 for the food contact material control sites by operation type.

Table 23. Food contact material sites and their operation types.

Activity type	number	% of all sites
Manufacturers	171	34
Importers	165	34
Wholesalers	248	51

The overall coverage of inspections was 22.6%, which is slightly more than in the year before (20% in 2019). The aim is to reach a coverage of about 33% of the sites, which means that each contact material control site should on average be inspected once every three years.

Table 24. Inspections at sites in the food contact material sector in 2019-2020 and distribution of ratings

Year	Total number of inspected sites		Rating			
	number	%	A%	B%	C%	D%
2019	110	29	67.1	23.8	8.8	0.4
2020	109	22.6	61	28	11	0

See Table 24 for the inspection results. Operators in the contact material sector must have a quality management system referred to in EU Regulation 2023/2006 and comply with it in their activities. Compliance with the quality management system is assessed separately by means of inspections in seven different areas. See Table 24 for the distribution of ratings as a compilation of all ratings given for different areas. The number of A ratings has decreased slightly since the previous year, and the number of B and C ratings has increased accordingly. The percentage describing the total share of A and B ratings decreased slightly from the previous year to 89% (91% in 2019). However, notices were only issued as a result of ten inspections in 2020, compared to 24 in the year before. The largest number of notices were issued to importers (7). No coercive measures were used, similarly to the year before.

Control of contact material use in food establishments

The use and compliance of contact materials in food establishments were inspected 4,609 times following Oiva guideline 14.1. This figure is significantly lower than in 2019, in which year 5,599 of such inspections were conducted. The number of line 14.1 inspections has decreased every year since 2018. Contact materials were inspected in 4,522 food establishments, which accounts for 8.9% of the sites to which this inspection is relevant. As a proportion of all Oiva inspections carried out in food establishments, however, contact materials were checked in 26.6%, which is slightly more than in 2019, in which year contact materials were inspected as part of 24.7% of Oiva inspections. According to the Finnish Food Authority's Oiva inspection guidelines, the use of contact materials should be inspected at nearly all food control sites at least once every three years (approx. 33% of the control sites each year). There is some way to go before this objective is reached, even if contact materials were controlled relatively frequently in proportion to the number of Oiva inspections.

The share of A + B ratings has remained very similar over the years. Table 25 shows the distribution of the numbers of contact material inspections carried out in food establishments and of the Oiva ratings given in them between 2016 and 2020.

Table 25. Contact material inspections (Oiva guideline 14.1) in food establishments in 2016–2020 and the distribution of ratings in these assessments

Year	Number of inspected sites	Rating			
		A%	B%	C%	D%
2020	4522	92.7	6.4	1	0
2019	5599	91.2	7.9	0.9	0.0
2018	6747	91.7	7.5	0.8	0.0
2017	6415	92.8	6.5	0.7	0.1
2016	5882	92.2	7.1	0.7	0.0

Notices related to contact materials were issued in connection with 1.1% (50) of the inspections, which is somewhat more than in the year before (1% in 2019).

Table 26 shows the distribution of contact material inspections (Oiva guideline 14.1) in the activity categories of different food establishments and the distribution of their results. In proportion to all Oiva inspections carried out, the safety of contact materials was controlled the most often at low-risk sites, in other manufacturing (excluding meat, fish, eggs and dairy) and sites in the cereal and vegetables category. The highest number of C ratings was given in other manufacturing and storage/freezing. The comments in the inspection reports indicate that similarly to previous years, the greatest shortcomings were related to the suitability of disposable gloves for handling fatty foods. The comments also concerned using bin liners and shopping bags for food storage and worn-out microwave containers. While great many shortcomings in demonstrating compliance related to individual contact materials were observed, they generally did not have a major negative effect on the rating issued as a result of the inspection.

Table 26. Distribution of contact material inspections (Oiva guideline 14.1) in the operating classes of different food establishments and the distribution of their ratings

ACTIVITY CATEGORY	Total of all Oiva inspections	Inspections following Oiva inspection guideline 14.1 and distribution of their ratings							Number of notices issued
		Inspected sites	Total inspections	% of all Oiva inspections	A %	B %	C %	D %	
Transport	131	0	0	0.0	-	-	-	-	-
Sales	3560	686	694	19.5	95.4	4.2	0.4	0	3
Service	11127	3323	3382	30.4	92.9	6.2	0.9	0	31
Storage, freezing	185	15	16	8.6	93.8	0	6.3	0	1
Other production*	224	83	86	38.4	82.6	10.5	7	0	6
Fish	412	75	79	19.2	79.7	19	1.3	0	5
Meat	626	58	61	9.7	83.6	14.8	1.6	0	2
Milk	200	33	37	18.5	83.8	16.2	0	0	0
Egg	55	13	14	25.5	100	0	0	0	0
Export and import	139	7	7	5.0	100	0	0	0	0
Cereal and vegetable	613	211	215	35.1	92.6	6.5	0.9	0	2
Low-risk foods	44	18	18	40.9	88.9	11.1	0	0	0
TOTAL	**17316**	**4522**	**4609**	**26.6**	**82.8**	**7.4**	**1.5**	**0**	**50**

* excluding meat, fish, milk, eggs

5.8 Food transport

Table 27. Food transport control sites, inspections and sanctions

Transport	Sites			Inspection visits		Sanctions	
	Sites, total	Inspected sites		Planned 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
	number	number	%	number	number	number	number
Total food transports	1462	136	9	133	13	3	0
Transport	860	70	8	68	9	1	0
Cooled transportation	597	41	7	41	2	2	0
Warm transportation	160	11	7	9	2	0	0
Frozen transportations	248	15	6	15	0	0	0

As we can see in Table 27, the coverage of food transport controls remains low. The low number of inspections is partly due to the difficulty of accessing transport fleet. The consignee typically sets high requirements for transport temperatures, and in this respect, the standard of reception practices and own checks has been found to be good. The own check plan and its adequacy, the general suitability of the facilities for transport operations and the activities of the personnel have been the key areas observed during inspections. Another area to which attention has been paid is conditions during transport, depending on the type of transport in question.

Table 28. Inspection-specific results for food transport

Transport	Inspections	Result			
	Planned incl. follow-up inspections	Inspection-specific result			
	number	A %	B %	C %	D %
Food transport	131	90.1	8.4	1.5	0
Transport	68	95.6	4.4	0	0
Cooled transportation	44	81.8	13.6	4.5	0
Warm transportation	7	100	0	0	0
Frozen transportations	12	83.3	16.7	0	0

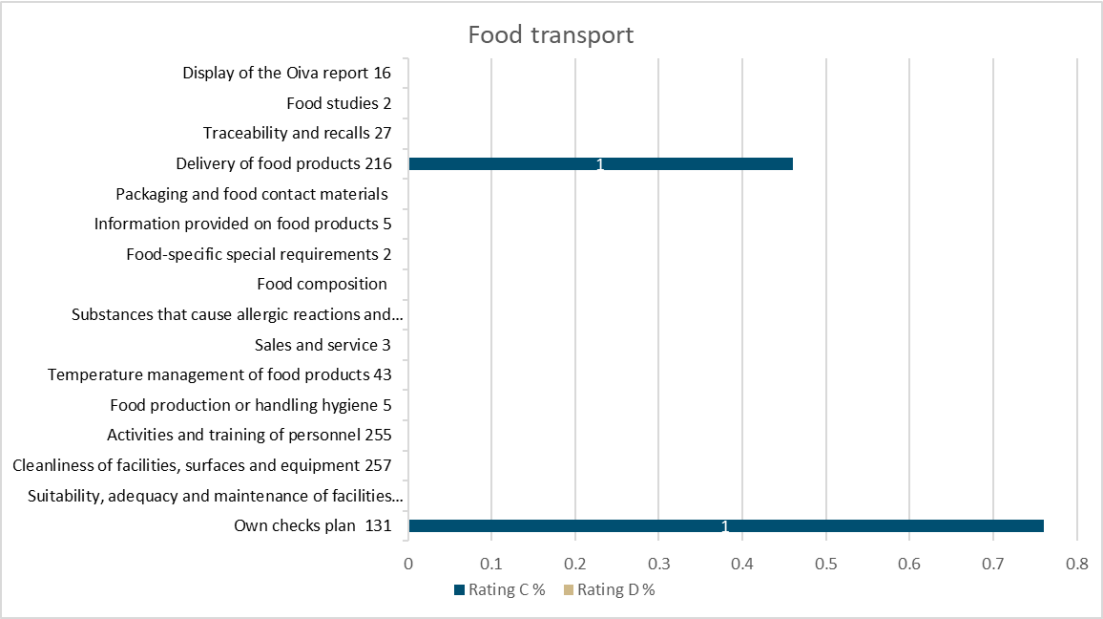

Figure 20. C and D ratings given for compliance with requirements set for food transport (number and %); n= number of inspections for the requirement in question

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

A total of 39 inspections of ATP classified means of transport were carried out by control units. A total of 23 control sites were inspected. No notices were issued in connection with the inspections. Fewer ATP vehicle inspections were conducted than in 2019. As ATP vehicles are certified and also 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 29. Controlled sites, inspections and sanctions in the wholesale and storage sectors in 2020

Food establishment	Sites			Inspection visits		Sanctions	
	Sites, total	Inspected sites		Inspection following the control plan including 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
	number	number	%	number	number	number	number
Food wholesale	602	100	17	133	13	32	0
Food storage and freezing	808	170	21	213	168	29	1
- storage of animal-derived foods	153	73	48	97	142	13	0
- storage of other foods	623	86	14	97	21	14	1
- freezing of food products	48	11	23	11	2	2	0
- packing of food products	62	7	11	8	3	0	0

Compared to the 2019 report, the number of both wholesale (4%) and storage and freezing (1%) sites had increased somewhat (Table 29). Inspections covered 17% of the wholesale sites, and 91% of the inspections were those included in the control plan. Notices were issued as a result of 32 inspections, which is two more than in 2019.

Inspections covered 21% of control sites involved in the storage and freezing of food products. Of these inspections, 61% were included in the control plan. The number of notices given on the basis of the inspections was 29, and administrative coercive measures were used once. The number of notices went up by around one third compared to 2019.

Table 30. Inspection-specific results of food product wholesale and storage in 2020

Food establishment	Inspections	Result			
	Planned incl. follow-up inspections	Inspection-specific result			
	number	A %	B %	C %	D %
Food wholesale	115	48.7	25.2	23.5	2.6
Food storage and freezing total	185	56.5	29.3	12.5	1.6
- storage of animal-derived foods	85	56.0	29.8	14.3	0
- storage of other foods	74	63.5	23.0	9.5	4.1
- freezing of food products	18	27.8	50.0	22.2	0
- packing of food products	8	62.5	37.5	0	0

At wholesale sites, 74% of the inspections resulted in an A or B rating, which is four percentage points less than in 2019. A C or D rating was given in 26% of inspections of wholesale sites, which is four percentage points less than in 2019.

Of the sites involved in the storage and freezing of foods, 86% received an A or B rating in an inspection, which was seven percentage points less than in the previous year, whereas 14% of these sites received a C or D rating. This was 7% less than in the previous year.

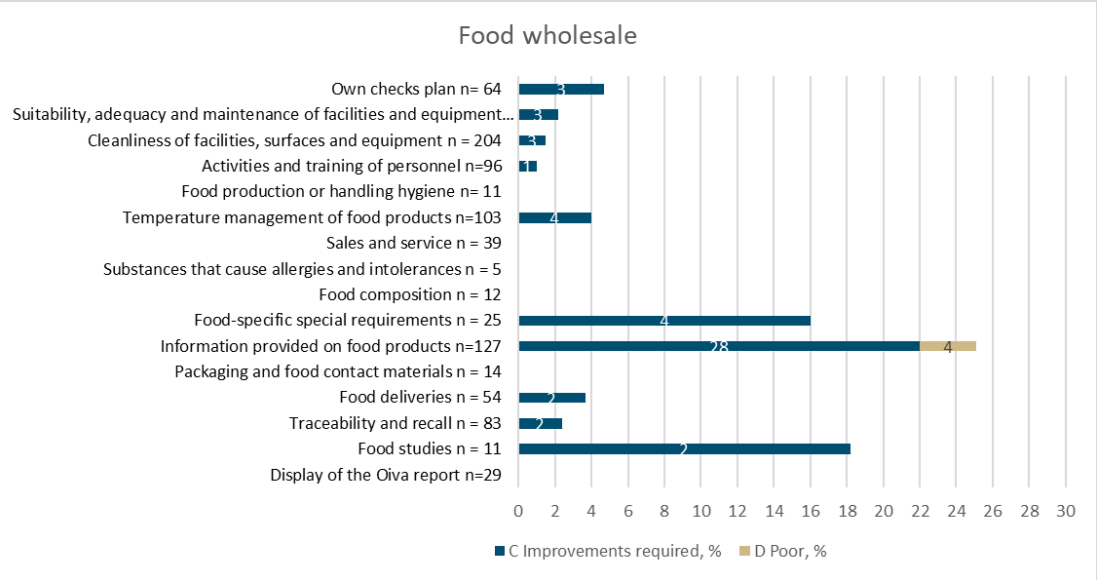

Figure 21. C and D ratings given for compliance with set requirements for the wholesale of food products (number and %); n= Number of inspections for the requirement in question

In proportion to the number of inspections focusing on wholesale trade in foods, the highest number of shortcomings (C or D rating) was found in information provided on food and food studies (Figure 21). The highest number of shortcomings was found in inspections related to information provided on food products.

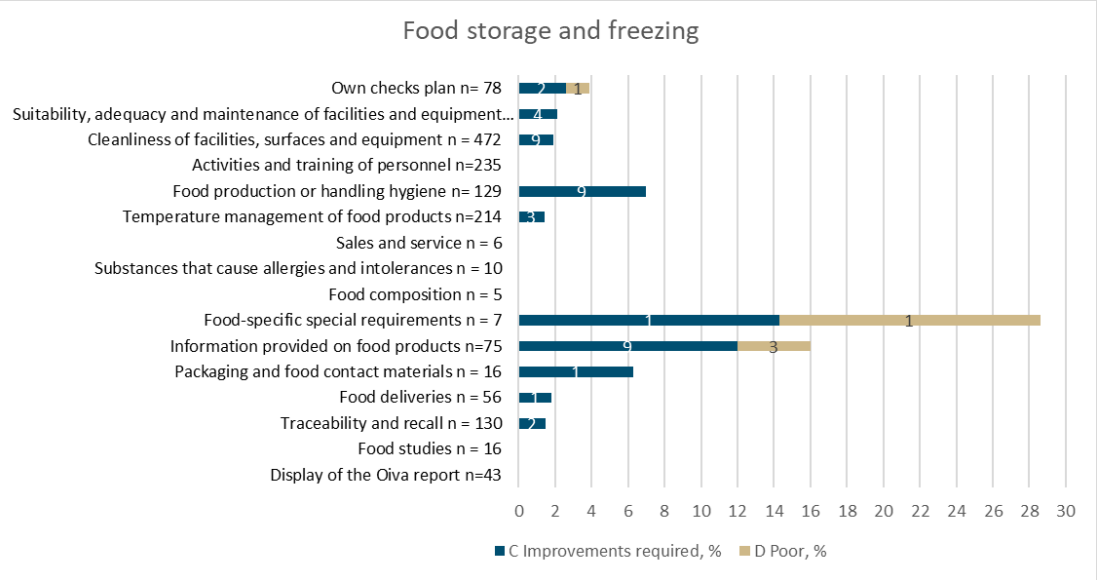

Figure 22. C and D ratings given for compliance with set requirements for the storage and freezing of food products (number and %); n= Number of inspections for the requirement in question

In proportion to the number of inspections focusing on the storage and freezing of foods, the highest number of shortcomings (C or D rating) was observed in information provided on food and food-specific special requirements (Figure 22). In numeric terms, the highest number of shortcomings was observed in the information provided on foods, cleanliness of facilities, surfaces and equipment, and hygiene of food processing and production.

5.10 Food retail sale

Table 31. Food retail control sites, inspections and sanctions, all inspections in 2020

Food establishment	Sites			Inspection visits		Sanctions	
	Sites, total	Inspected sites		Inspection following the control plan including 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
	number	number	%	number	number	number	number
Food retail sale	11 519	3261	28	3486	475	469	11

There were 11,519 retail sites in 2020, of which more than one fourth were inspected. Compared to 2019, the number of sites increased by about 3% (11,182 in 2019), whereas the number of inspected sites remained more or less the same (3,229 sites inspected in 2019). In 2020, almost the same number of inspections was conducted in retail sales as in the previous year, or 3,961 in total (in 2019, 3,913 inspections altogether), of which 11 (0.3%) led to the use of administrative coercive measures.

Table 32. Inspection-specific Oiva results for food retail in 2017–2020

Food retail sale	Planned incl. follow-up inspections	Inspection-specific result			
Year	number	A %	B %	C %	D %
2020	3275	52.9	34	12.2	0.8
2019	3500	47.7	38.4	12.8	1.1
2018	3870	47.1	38.6	12.9	1.4
2017	4087	45	40.3	13.6	1.1

The number of inspections carried out at retail sites has decreased year by year, but their results improved somewhat in 2020. As a rule, activities were compliant with the requirements, or only minor shortcomings were observed in them. 87% of inspections resulted in the best possible ratings of A and B, while 13% resulted in the poorest ratings of C or D.

Table 33. 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 2020

Food establishment	Inspections following the control plan				
	Inspections	Distribution of results of food premises for compliance with set requirements			
	number	A %	B %	C %	D %
Retail sale	3486	89.7	8.2	2	0.1
Service	11307	87.9	9.8	2.2	0.1

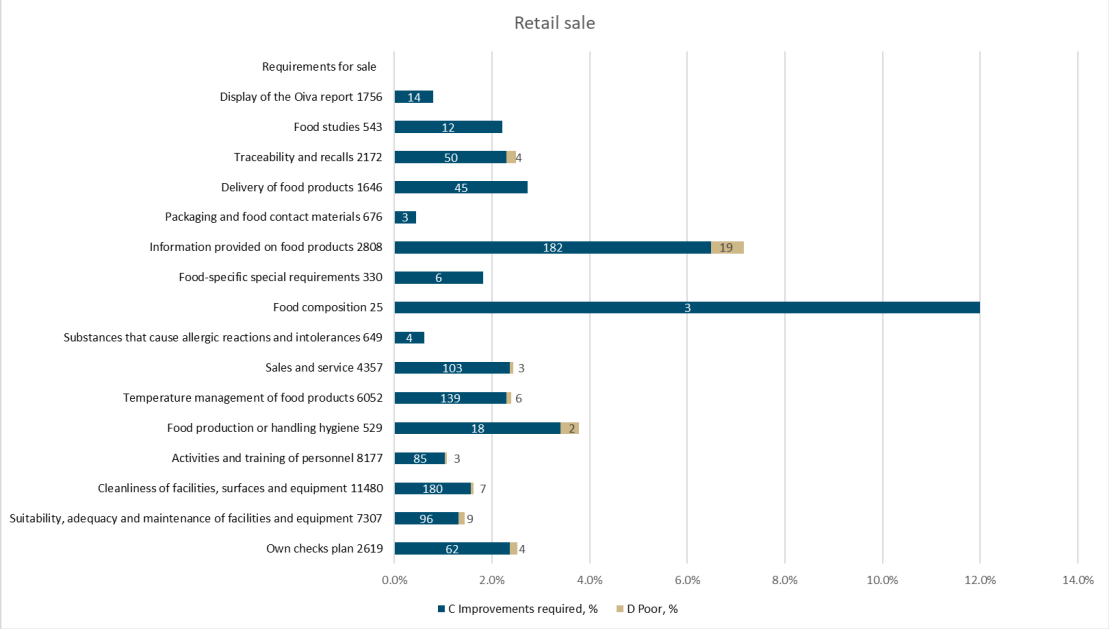

Figure 23. C and D ratings given for compliance with requirements set for retail sale of food (number and %); n= number of inspections for the requirement in question in 2020

As a rule, the results for different areas were good: As or Bs accounted for more than 96% of all ratings (Table 33). Ratings of A or B were given in 93% of the inspections focusing on information provided on food products, while this figure for the composition of food was 88%. This area was only inspected 25 times, however, as retail sale rarely involves these activities.

In food retail sale, the greatest shortcomings (ratings C or D) within this area were found not only in the information provided on food and food composition but also in issues related to food production or handling hygiene and delivery of food products.

Table 34. Control sites, inspections and sanctions for low-risk activities involving food in 2020

Food establishment	**Sites**			**Inspection visits**		**Sanctions**	
	Sites, total	Inspected sites		Inspection following the control plan including 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
	number	number	%	number	number	number	number
Low-risk activity	251	50	20	49	3	9	0

Table 35. Inspection-specific results for low-risk activities involving food in 2020

Food establishment	**Inspections**	**Result**			
	Planned incl. follow-up inspections	Inspection-specific result			
	number	A %	B %	C %	D %
Low-risk activity	32	48.8	39	12.2	0

Low-risk activities refer to the handling of animal-derived food products as referred to in Regulation 1258/2011. In 2020, 20% of such operators engaged in meat handling were inspected. The inspections were conducted following the plan (Table 35). As a rule, low-risk activities have been compliant with the requirements, and only a few shortcomings have been identified.

5.11 Food service

See Figure 24 for the numbers of food service establishments subject to food controls.

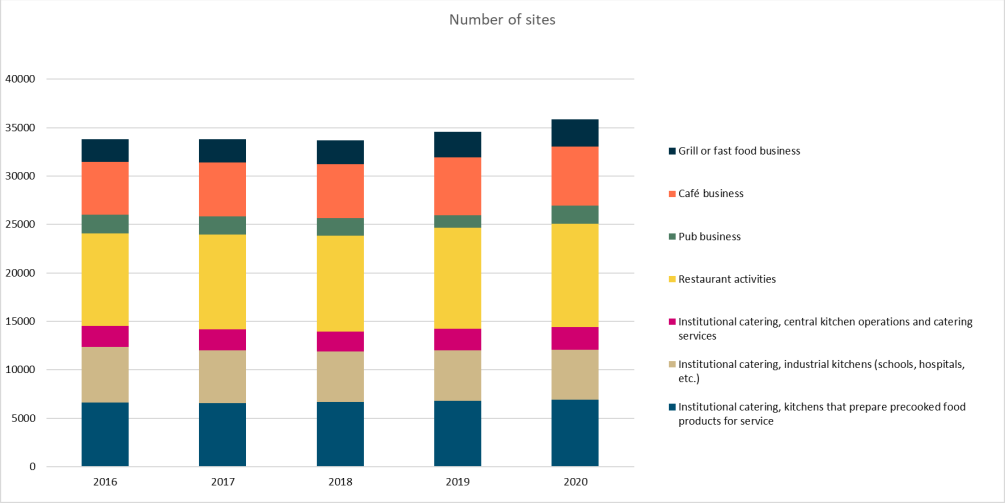

Figure 24. Number of food service establishments controlled by municipalities in 2016–2020

There were a total of 33,671 food service establishments in 2020 (Table 36).

Table 36. Food service control sites, inspections and sanctions in 2020

	Sites			Inspection visits		Sanctions	
	Sites, total	Inspected sites		Inspections following the control plan including 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
	number	number	%	number	number	number	number
Total food service	33671	10294	31	11307	710	1543	27
- Grill or fast food business	2810	799	28	846	72	139	2
- Café business	6104	1175	19	1174	115	116	2
- Pub business	1882	162	9	148	23	10	0
- Restaurant business	10670	4466	42	5084	368	1000	23
- Institutional catering, central kitchen	2296	925	40	1036	28	82	0
- Institutional catering, industrial kitchen	5186	1537	30	1587	56	96	0
- Institutional catering, kitchens that prepare precooked food products for service	6901	1374	20	1432	48	100	0
Food control by the Finnish Defence Forces							
- institutional catering and field kitchens	205	70	34	105	30	26	2

Food service establishments are classified into five categories by their activities. The largest number of them are institutional catering establishments and restaurants (Figure 24 and Table 36).

In relative terms, the largest number of inspections at food service establishments was carried out at restaurants and institutional catering establishments (central kitchens), while the smallest number focused on cafés and pubs. Inspections not included in the control plan (6.9%) were generally related to complaints made by consumers, including suspected food poisoning or other suspicions. 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 catering establishments, as inspections led to few notices and coercive measures. Notices were given and coercive measures undertaken in connection with inspections at restaurants, grill and fast-food businesses and cafés (Table 36).

86.8% of food service establishments were given an Oiva rating of A or B, and 13.2% a rating of C or D (Table 37). Few D ratings were given in inspections of food service establishments. When we examine food service establishments in more detail, we notice that regardless of their type of activity, institutional catering establishments are all of a similar standard, and they have obtained better Oiva results than other operator types. Approx. 94% of institutional catering sites were given an Oiva rating of A or B and 6% a rating of C or D. The results correspond with last year's results.

Table 37. Inspection-specific Oiva inspection results of food service establishments in 2020

	Inspections	**Result**			
	Planned incl. follow-up inspections	Inspection-specific result			
	number	A %	B %	C %	D %
Total food service	11128	46.9	39.9	12.7	0.5
Grill or fast food business	831	45.4	39.4	14.8	0.4
Café business	1187	49.3	40.9	9.4	0.4
Pub business	92	55.4	39.1	5.4	0.0
Restaurant business	5008	35.6	45.2	12.2	0.9
Institutional catering					
- central kitchen	1010	57.5	35.8	6.7	0.1
- industrial kitchen	1576	63.1	31.5	5.5	0.0
- kitchen that prepares precooked food products for service	1424	59.4	33.4	7.2	0.0

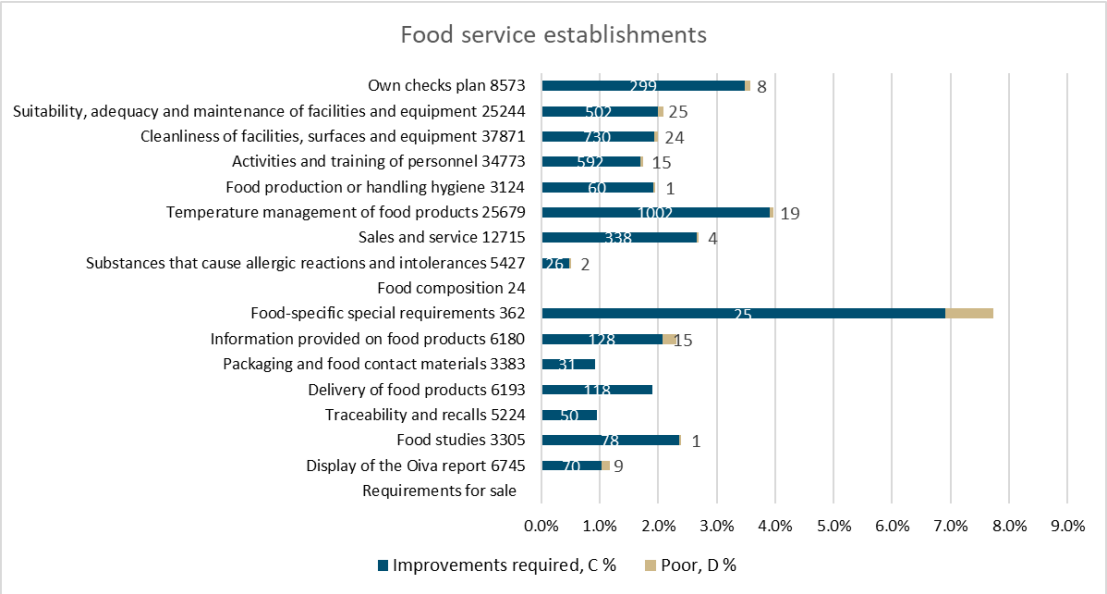

Figure 25. C and D ratings given for compliance with requirements set for food service establishments (number and %); n= number of inspections focusing on the requirement in question in 2020

Activities in food service establishments were as a rule compliant with the requirements, or minor shortcomings were observed, as 97% of the results in different areas of the requirements were excellent or good (Table 37).

In numerical terms, the greatest number of shortcomings (C or D rating) found at food service establishments were related to temperature management of food products (1,021 times, 4%), cleanliness of facilities, surfaces and equipment (754 times, 2%) and activities and training of personnel (607 times, 1.7%).

Temperature management of food products concerns the storage of food products. Temperature management during serving is inspected as part of the sales and serving inspection entity.

Food control by the Finnish Defence Forces

2020 was an exceptional year because of the COVID19 pandemic. Despite official control pursuant to the Food Act being suspended in spring 2020 for about two months, the targets set for food control were achieved relatively well in the Defence Forces in 2020. Based on the risks, control was increasingly focused on field kitchen services provided in connection with field exercises. The results indicate that the control was targeted correctly and that operators need further guidance in the area of field kitchen services.

It was felt that the control of field kitchen services was more effective when the control, and control personnel, were visible in the field and when feedback and guidance could be reviewed co-operatively with military trainers. Efforts have been made to provide more guidance during inspections. In the future, the impact of control in the Finnish Defence Forces' operating environment will be enhanced by means of easy-to-use inspection tools, internal summaries of the inspection results and internal audits.

The control and guidance of operators will be prioritised further in the same vein to ensure that the existing control resources can be used as efficiently as possible. The use of a uniform inspection form based on an OIVA assessment introduced in the control of field kitchen services

in 2019 has been put on a permanent footing in 2020. A national operating and data handling system for environmental health care (VATI) has also been introduced, even if inspection reports are yet not submitted through this system.

Such parties as the Finnish Food Authority, the Regional State Administrative Agencies and municipal authorities have engaged in inter-authority cooperation.

Food control in the Defence Forces was implemented well in the exceptional year (plan implementation rate 66%, inspection coverage 34%).

Most of the shortcomings found and notices for corrective action issued as part of planned control in 2020 were related to own checks, shortcomings in the records kept on them and general hygiene. In total, 12 notices and two orders were issued.

The main focus of the control was on field kitchen services. The most common shortcomings observed in these services were associated with the verification of own checks as well as general hygiene arrangements and their implementation (including hand washing points). The most serious shortcomings were observed in the management of storage temperatures and in the area of allergen management as a whole.

Minor shortcomings were observed within the framework of planned food control in carrying out own checks at the sites. Based on the shortcomings observed in field kitchen services, an update of the Defence Forces' own check guidelines was launched, which also includes an update of the guidelines for allergen management. The turnover of military personnel results in a continuous need to train not only conscripts who work in field kitchen services but also instructors. Efforts have been made to address the identified skills gaps by launching measures for updating the learning materials on food and water hygiene intended for those working in field kitchen services of the Defence Forces.

The Finnish Defence Forces did not have official food control audit activities in 2020.

To ensure that they are aware of the relevant regulations, operators have been provided with versatile instruction, guidance and training, both in connection with inspections and in other contexts. Efforts have been made to share good practices. The development of online training platforms continued and, for example, the production of instruction videos began in summer 2020. Due to the COVID-19 pandemic, the food poisoning teams held their meetings by virtual means.

Efforts to develop the content of inspection reports continued as the use of a uniform inspection form became established in the control of field kitchen services. In addition to this, photographs will also be attached to the inspection reports in the future if necessary, providing examples of not only the shortcomings found but also good practices. An effort has been made to ensure an instructive approach in the inspections, guiding the operators in the use of correct methods.

In operating year 2020, competence examiners approved by the Finnish Food Authority working in the Finnish Defence Forces provided food hygiene training and organised tests for obtaining a hygiene passport at 22 different events. The COVID-19 pandemic hampered the organisation of training and examinations, and some of the training sessions had to be cancelled in spring 2020. The number of training sessions went up despite this, as in larger units, smaller training sessions and examinations were organised for the divisions to be trained.

Administrative coercive measures were used twice during the year under review (an order and a time limit). In addition, the operators were issued with notices (26 in total) requiring them to address operational and structural shortcomings.

A total of eight office holders employed in the capacity of veterinarians participate in official environmental health control tasks in the Defence Forces. However, a significant part of the personnel's work input is allocated to other official supervision duties, including expert tasks. The share of human resources allocated to food control is approximately 1.35 person-years. As the Finnish Defence Forces is a national control unit, being scattered across the country is a special feature of its operating environment. An individual office holder is required to travel long distances to the sites. In addition, the same personnel’s duties include many other official and expert tasks in environmental health care. On average, however, the resources available for food control are estimated to be sufficient for risk-based monitoring. The allocation of resources in the Defence Forces' area of responsibility in 2020 was reasonably well managed. A great deal of time was also taken up in 2020 by substitution and recruitment processes and the subsequent induction training phases. Efforts have been made to ensure the most efficient use of substitute resources by defining a limited job description for substitutes.

In 2020, the possibilities of using personnel resources for food control were undermined by the COVID-19 pandemic, as a result of which official control came to a halt for around two months in spring 2020.

Food control mainly focuses on supervising the field kitchen services and own check systems of the Defence Forces' administrative units and their practical implementation. Control and guidance are targeted at field kitchen services provided in connection with military exercises.

The use of the national operating and data handling system for environmental health care (VATI) to prepare the inspection reports of garrison restaurants, personnel restaurants and recreation centres run by volunteers will be established in 2021. An up-to-date situational picture regarding other sites is maintained in the Defence Forces' system. The Finnish Defence Forces have made no plans to participate in national control projects in 2021.

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 on the production, sale and marketing of food products with registered names was 369, or 26 less than in 2019. For the numbers of inspections in the areas covered by the different Regional State Administrative Agencies, see Figure 26.

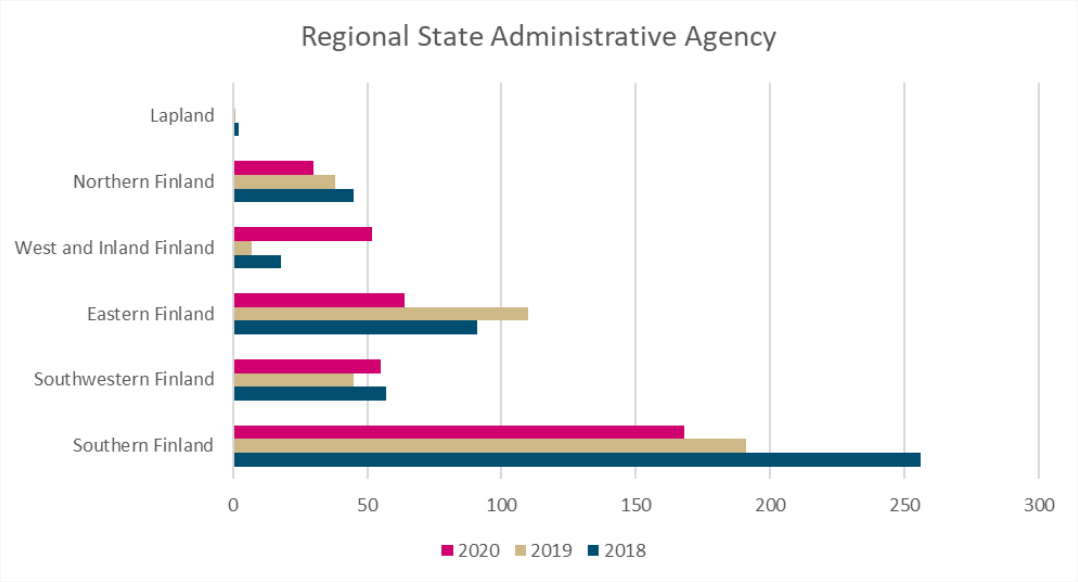

Figure 26. Distribution of inspections focusing on products with registered names in the areas of Regional State Administrative Agencies in 2018–2020.

Food service establishments accounted for the highest number of inspections by far (89%; institutional kitchens, cafés, grill and fast-food businesses). Food sales accounted for 6% of the inspections, and sites producing baked goods, for example pies, accounted for 4%. Of all inspected sites, 73% received an A rating, 19% a B rating, and 7% a C rating. For the distribution of inspections and Oiva assessments in different activity categories, see Figure 27.

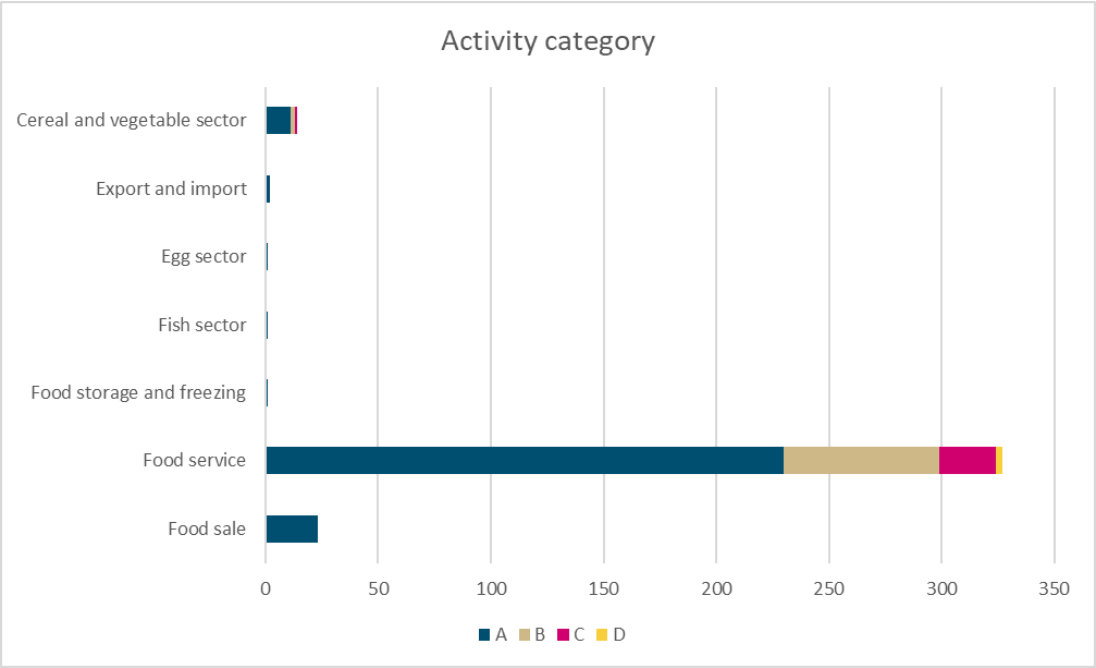

Figure 27. Distribution of inspections of food products with registered names and Oiva assessments by activity category.

Valvira carried out two inspections of products with registered names (sahti, Finnish vodka) in connection with inspections included in manufacturers' plans.

6.2 Requirements for the sale of fruit and vegetables

Five inspections of packing centres targeting a total of 24 product batches were conducted to control compliance with the requirements set for the sale of fruit and vegetables. Due to the COVID-19 pandemic, the number of inspections of wholesalers was less than a half of the targeted figure. A total of ten fruit and vegetable wholesale operators were inspected, and the number of batches inspected was 58 in total. No inspections were carried out in retail stores during the pandemic.

The largest number of inspections was carried out on tomatoes, apples, bell peppers, salads and grapes. In relative terms, strawberries, nectarines, grapes and bell peppers accounted for the highest number of non-compliant batches. The largest number of inspections was carried out on fruit and vegetables cultivated in Finland, followed by batches declared as originating in Spain, the Netherlands and Austria. In relative terms, the highest number of non-compliant batches came from the Netherlands (33%), Spain (33%) and Finland (6%). The most important reason for non-compliance was a labelling error (seven batches), followed by surface defects (five batches) and spoilage (five batches).

The Customs inspected fruit and vegetables imported from third countries and supplied on the internal market for compliance. In total, physical compliance checks targeted 356 batches of fruit and vegetables imported from third countries, including random sampling of 129 batches. By far the highest number of checks focused on citrus fruits, or 332 batches (93% of all inspected fruit and vegetable batches). Of all inspected batches, slightly over 2% were rejected. Citrus fruit accounted for the largest number of rejected batches (2% of all inspected citrus fruit), in all cases because of spoilage. The highest number of non-compliant batches came from Israel (four batches) and South Africa (two batches). The Customs

inspected 23 batches of fruit and vegetables imported from the EU, all of which were compliant.

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 after the most recent inspection. Fifteen inspections were carried out in 2020 (Table 38). Thirteen of the inspections consisted of measuring new barn egg farms to approve the site as a barn egg production farm before it starts operating. One of the inspections concerned an existing barn egg production farm, which had been converted into a free-range farm. Another separate inspection was also carried out on the same free-range farm to check the terraces built for it.

Table 38. Inspection visits to egg production farms

Inspected site	Number of inspections					Total number of barn egg farms in the Finnish Food Authority's register				
	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
Barn egg farms	10	5	6	4	13	186	187	124*	127	131
Free range egg farms	6	1	3	0	2	10	10	11	11	12

* The decrease in the number of registered poultry farms producing barn eggs from 187 registered farms in 2017 to 124 in 2018 is the result of a register update in 2018 and the removal from the register of 63 farms that had either ceased to operate or switched to another production sector.

Table 39. Inspection visits to egg production farms

Reason for inspection	Number of inspections completed				
	2016	2017	2018	2019	2020
New barn egg farms	10	5	6	4	13
New free range egg farms	6	1	3	0	2
Inspections of compliance with requirements on existing barn/free range egg farms	0	0	0	1	0

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 on the sale of eggs. No targets can be set for these inspections as it cannot be known in advance whether new egg farms will be established, or the production form of existing egg farms will be converted to free-range egg production. The number of inspections conducted increased in 2020 compared to the period between 2017 and 2019. In 2020, many egg producers converted from enriched cage production to barn egg production. The likely reason for this is that the central trade organisations have announced their intention to cease selling eggs produced in enriched cage systems from 2024 on. Most of the inspected new farms were multi-tiered systems.

Egg packing centres

There were 73 egg packing centres in Finland in 2020. A total of 77 inspections were carried out at these centres to assess compliance with the requirements for sale. Of these inspections, 25 concerned the quality and weight grading of eggs, 27 the labelling and packaging of eggs, and 22 the records kept of eggs at egg packing centres. The number of times compliance with sales requirements at egg packing centres was assessed in inspections conducted in 2020 went down compared to 2015–2019, the period during which Oiva assessments have been carried out in egg packing centres. The drop in the number of inspections may have been due to the COVID-19 pandemic, which has generally reduced the number of inspections carried out at establishments.

An A rating was given in 83.1% (64) of the inspections at egg packing centres on compliance with the requirements for sale, while 7.8% (6) of the inspections resulted in a B rating and 9.1 % (7) in a C rating. No inspection resulted in a D rating.

The distribution of ratings for inspections at egg packing centres focusing on compliance with the requirements for sale was as follows: 92.3% of inspections that looked into compliance with the requirements for quality and weight grading of eggs resulted in an A or B rating, while 7.7% resulted in a C rating. 92.8% of the inspections that looked into compliance with the requirements for stamping eggs and package labelling resulted in an A or B rating, while 7.1% resulted in a C rating. An A or B rating was given in 86.9% and a C rating in 13.0% of the inspections focusing on egg-related record keeping (Table 40). Seven inspections at egg packing centres concerning requirements for the sale of eggs resulted in a C rating. No D ratings were given in these inspections.

The distribution of inspection results on compliance with requirements for sale has remained similar between 2016 and 2019. Most inspections have resulted in an A or B rating, which account for 90% of the ratings annually. Few inspections have resulted in a C rating, and hardly any in a D rating.

An A or B rating was again given in more than 90% of the inspections of sales requirements at egg packing centres in the areas of Quality and weight grading of eggs and Stamping and labelling of eggs in 2020. The number of egg packing centres that received an A or B rating for egg-related record keeping fell to less than 90% in 2020. The share of C ratings went up to 13.0% regarding Egg-related record keeping at egg packing centres.

During nine inspections, guidance and instruction were provided related to compliance with requirements for sale at egg packing centres. Guidance and instruction regarding the quality and weight grading of eggs were provided during three, the stamping and labelling of eggs during four, and egg-related record keeping during two inspections.

Four inspections related to compliance with the requirements for the sale of eggs carried out at egg packing centres led to notices. Notices were given in inspections relating to the weight and quality grading of eggs once, the stamping of eggs and labelling of egg cartons twice, and records kept on eggs by egg packing centres once.

Egg packing centres were issued with guidance related to monitoring the correct weight and quality grading of eggs, advice, and a notice to check the eggs in different weight classes regularly, to keep records of the weighing results, and to take the necessary corrective action related to own checks.

Guidance, advice and a notice were issued regarding the stamping of eggs. It was pointed out to operators that all eggs should be stamped when delivered for retailing. Only A class eggs which have been classified by quality and weight as well as stamped may be delivered for retailing. In primary production, eggs can also be sold without stamping. In each inspected batch, up to 20% of eggs with illegible stamps are tolerated. Stamps are considered illegible when they are partly or entirely missing, they are unclear, or they contain errors. Labelling errors exceeding the 20% tolerance allowed by law were found in one inspection. All stamps were illegible, and a large part of the eggs had no stamps, as the operator finds stamping them unnecessary. The correctness of the stamps on eggs was not monitored regularly as required by the own check plan. The legibility of the stamps must be checked regularly, and exceptions must be recorded. A stamping machine was out of order, and it had not been fixed. The inspector specified a date by which the stamps must reach an appropriate standard.

Guidance and advice were provided on labelling of egg cartons during inspections concerning compliance with requirements for sale. Shortcomings in labelling were observed, and the packing centre's ID was missing in the labelling of egg cartons.

Shortcomings were observed in egg records kept by egg packing centres. No records had been kept because, according to the operator in question, the data can be found in different vouchers. This does not meet the obligation of keeping records, however, and there was no central source in which matters could be checked. The operator was urged to bring the records up to the required standard. The records must be in a format that can be presented to the inspector. Among other things, egg packing centres must have records of eggs received from each producer itemised by production method and date, as well as information on where eggs have been delivered from the packing centre after quality and weight classification and stamping.

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

Table 40. Inspection-specific results of inspections relating to compliance with requirements for sale at egg packing centres in 2020

Control of compliance with requirements for sale at egg packing centres	**Inspections**	**Result**			
	Planned incl. follow-up inspections	Inspection-specific result			
	number	A %	B %	C %	D %
Egg quality and weight grading	26	84.6	7.7	7.7	0
Stamping of eggs and labelling of egg cartons	28	82.1	10.7	7.1	0
Records kept on eggs by egg packing centres	23	82.6	4.3	13.0	0

6.4 Marketing of food products

The majority of food sector businesses market their products or strive to promote their sales by other means. In 2016–2019, however, as few as around 1% of Oiva inspections have focused on marketing (Table 41). In 2020, marketing inspections were selected as one of the national priorities of food control (see section 10.1, Food control priorities related to Oiva lines). This increased the number of inspections to the point that the marketing of food products was inspected at a total of 1,763 sites in 2020. The share of marketing inspections in all Oiva inspections increased almost ten-fold.

Table 41.Number of sites inspected for marketing of food products and the share of Oiva inspections that marketing inspections accounted for in 2015-2020

Year	Number of Oiva inspected sites	Number of sites inspected for marketing	Share of marketing control in completed Oiva inspections
2015	21807	94	0.4 %
2016	20262	190	0.9 %
2017	19866	178	0.9 %
2018	20409	236	1.2 %
2019	18393	232	1.3 %
2020	15659	1763	11 %

Over the period running from 2015 to 2019, the relative share of A ratings given in the control of marketing has declined, and the relative share of C ratings has increased (Figure 28). This is probably due to the fact that, as inspectors have gained experience, they have been more confident in giving ratings based on the Oiva guidelines and also dared to take on more difficult supervision cases. As the inspection numbers went up in 2020, marketing was controlled in a more balanced manner, rather than only focusing on risk sites. This can also be seen as the increased proportion of A ratings. The most common shortcomings leading to C and D ratings were the use of pharmaceutical claims and unapproved health claims.

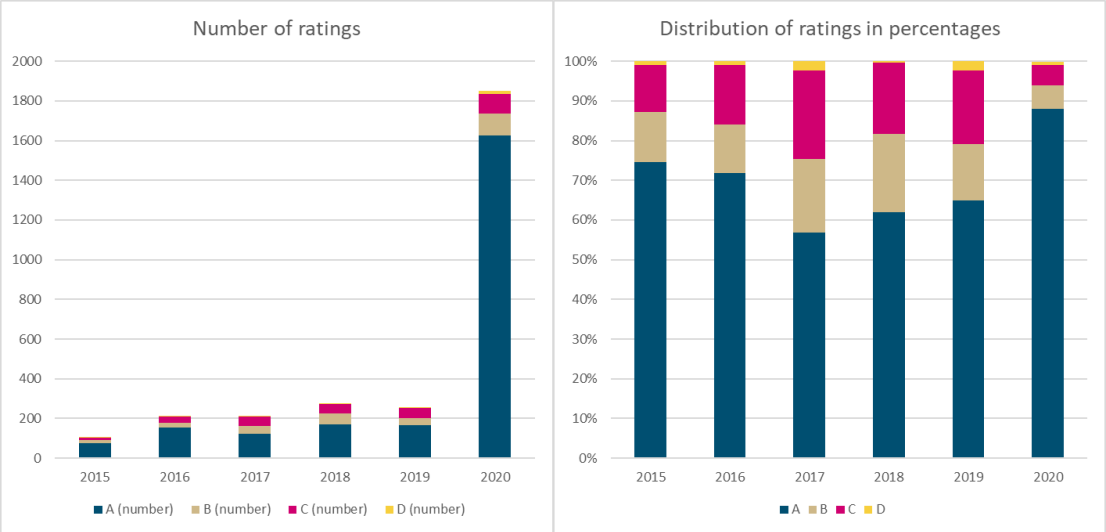

Figure 28. Number of ratings given in control of food marketing and their distribution (%) in 2015–2020

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 contents of the package.

Three different brands of extra virgin olive oil were inspected for conformity with olive oil requirements under the Finnish Food Authority's supervision. Samples were taken from retail stores in different retail chains. Based on both chemical laboratory analyses and organoleptic evaluation, all three of the extra virgin olive oils were of the quality they were labelled as, or extra virgin olive oil. The labelling of the extra virgin olive oils inspected was mainly in order. While all of these oils had labelling compliant with the olive oil legislation, from the perspective of general labelling, it could have been slightly clearer in some respects. Control requests concerning correcting the labelling were sent to the food control authorities responsible for supervising the operators, and they took the necessary measures.

In connection with the control project, the Customs Laboratory took samples of nine different extra virgin olive oils. Five of the olive oils examined did not meet the quality requirements for extra virgin olive oil, and on the basis of their organoleptic characteristics, their quality class corresponded with that of ordinary virgin olive oil, rather than the extra virgin olive oil indicated by the labels. One of these products, which were withdrawn from the market, was from Tunisia, three from Spain and one from Italy. Two of the olive oils also lacked additional labelling compliant with the requirements of the olive oil legislation concerning the manufacturing technique and special storage conditions.

7 MICROBIOLOGICAL MONITORING PROGRAMMES

7.1 Salmonella in food products

The national salmonella control programme has been included in the own check control programmes of slaughterhouses, low-capacity slaughterhouses and meat cutting establishments. Own checks for salmonella were inspected at 37 sites in total, which represented around one third of slaughterhouses and low-capacity slaughterhouses as well as approx. one sixth of meat cutting establishments. The number of inspections was in the same range as in previous years. In these inspections, 89% of the operators were given an A or B rating and 11% a C or D rating. There were minor shortcomings in own checks at six sites (B). More serious defects (C) in sampling were detected at two sites. A follow-up visit was made to one of these sites in 2020, and the situation was found to have improved (A). Sampling had been neglected completely at two sites (D), and coercive measures were taken.

In 2020, samples for the national salmonella control programme were taken at pig and cattle slaughterhouses according to the numbers specified in the sampling plan for individual slaughterhouses prepared by the Finnish Food Authority. 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. For the numbers and results of the samples examined, see Tables 42 to 45.

The national salmonella control programme has been successful, and the salmonella status of Finnish meat and eggs has remained good. The number of samples from slaughterhouses and meat sector establishments that contained salmonella remained clearly under 1%. Of the examined sample types, salmonella bacteria were identified in no more than 0.06%. The average occurrence is well below the national 1% target.

Table 42. Samples taken in pig and cattle slaughterhouses and low-capacity slaughterhouses according to the salmonella control programme in 2020

Sample type	Regulation requirement	Actual number of samples	Number of positive samples	Percentage of positive samples
Lymph node samples				
Slaughter pig	3,000	3,328	2	0.06
Sow and boar	3,000	3,225	2	0.06
Cattle	3,000	3,229	1	0.03
Carcass swab samples				
Slaughter pig	3,000	3,268	0	0
Sow and boar	3,000	3,033	0	0
Cattle	3,000	3,164	0	0

Table 43. Neck skin samples taken from carcasses in broiler, turkey and chicken slaughterhouses in 2020

Animal	Number of samples	Number of positive samples	Percentage of positive samples
Broiler	1269	0	0
Turkey	275	0	0
Chicken	0	0	0

Table 44. Meat samples from cutting plants in 2020

Animal	Number of samples	Number of positive samples	Percentage of positive samples
Domestic meat			
Slaughter pig	1278	0	0
Sow and boar	100	0	0
Cattle	1277	0	0
Broiler	57	0	0
Turkey	60	0	0
Chicken	0	0	0
Duck	0	0	0
Goose	2	0	0
Guinea fowl	0	0	0
Imported meat			
Slaughter pig	11	0	0
Sow and boar	0	0	0
Cattle	85	0	0
Broiler	0	0	0
Turkey	8	0	0
Chicken	0	0	0
Duck	0	0	0
Goose	0	0	0
Guinea fowl	0	0	0

Table 45. Sampling in establishments that produce minced poultry meat and poultry meat preparations in 2020

Domestic meat	Number of samples	Number of positive samples	Percentage of positive samples
Broiler	708	0	0
Turkey	109	0	0
Chicken	0	0	0

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

7.2 Salmonella in feed

Pursuant to Finnish legislation, no salmonella bacteria may be present in feed. Both official controls and own check controls by operators 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 surveillance. If necessary, feed samples are also taken on holdings to identify the source of salmonella infections 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 own check control for salmonella that concerns the production and import of feed, as well as production facilities, storage and transportation.

The total number of salmonella analyses on feeds and feed environment samples conducted as part of official control in 2020 was 2,370. Of the salmonella analyses associated with imports, manufacture and market surveillance, 2,125 targeted feed raw materials, 223 mixed feeds and 8 feed additives. In the control of primary production, a total of ten feed and feed environment samples were additionally taken for salmonella analyses from salmonella-infected farms and from farms to which it was suspected that feed contaminated with salmonella had been delivered. Four feed environment samples were taken in an inspection of transport vehicles. Salmonella occurring in feed materials was mainly analysed in samples taken on imports. Salmonella analyses of mixed feeds and feed additives were mainly carried out on samples from domestic production and market surveillance. Salmonella analyses of feeds accounted for 90% of all salmonella analyses (92% in 2019, 94% in 2018, 93% in 2017, 93% in 2016, 92% in 2015).

A total of 20 feed batches were found to be salmonella positive either in official controls or an operator's own checks (2019: 24, 2018: 29, 2017: 16, 2016: 18, 2015: 5). While the number of contaminated batches was quite large, the batch sizes were partly smaller than before. Operators applied for the Finnish Food Authority's permission to treat the imported batches found to be positive for salmonella, and the batches were only approved after they had been found to be clean. In total, batches that were positive for salmonella accounted for 36 million kg of imported feed materials (2019: 60.7 million kg; 2018: 57.7 million kg; 2017: 37.1 million kg; 2016: 35.6 million kg; 2015: 10.3 million kg).

No salmonella was found in any feed materials or mixed feeds produced in Finland for food-producing animal species. Salmonella was not found in feed samples collected on farms due to salmonella infections in animals. Salmonella was not detected in feed environment samples taken in transport vehicles or samples of feed produced from animal by-products intended for fur animals. In market surveillance, salmonella was detected in one batch of feed intended for wild birds.

The Finnish Food Authority received reports from 64 feed sector operators on own check control samples from factory environments and salmonella findings in them. Salmonella was not found in mixed feed produced in Finland for food-producing animal species in operators' own check controls.

7.3 Campylobacter control in broilers

In accordance with the national Campylobacter control programme, all broiler slaughter batches are tested for Campylobacter in the period extending from the beginning of June till the end of October. During the remaining months, the Finnish Food Authority provides a guideline on testing targets for each poultry slaughterhouse, which is based on a calculation that takes into account the incidence rate of Campylobacter in Finland in these months. Attainment of the targets set out in the programme is evaluated based on the numbers of tests carried out obtained from the laboratories.

The national Campylobacter control programme has been integrated into the own check control programmes of broiler slaughterhouses. In 2020, the own check control for Campylobacter was inspected at all four poultry slaughterhouses. In three slaughterhouses, the Campylobacter control gave rise to no remarks (A), whereas minor shortcomings related to sampling were found in one (B). As in the year before, these minor shortcomings were related to the handling of the samples.

For the number of samples and positive results under the Campylobacter control programme in broiler slaughterhouses in 2020, see Table 46. Based on the results in 2020, the prevalence of Campylobacter in broilers has remained at a low level over the long term, albeit it was slightly higher than in 2017–2019. See Figure 29 for the percentage of Campylobacter positive slaughter batches in all slaughter batches inspected in 2012–2020.

Table 46. Campylobacter sample numbers and prevalence in broiler slaughterhouses in 2020

Year	Period	Tested slaughter batches, target (number)	Tested slaughter batches, actual (number)	Positive slaughter batches (number)	Positive slaughter batches (%)
2020	1.1.-31.5. and 1.11.-31.12.	331	335	5	1.5
	1.6.-30.10.	All	1,713	5	5.0
	Entire year	-	2,048	90	4.4

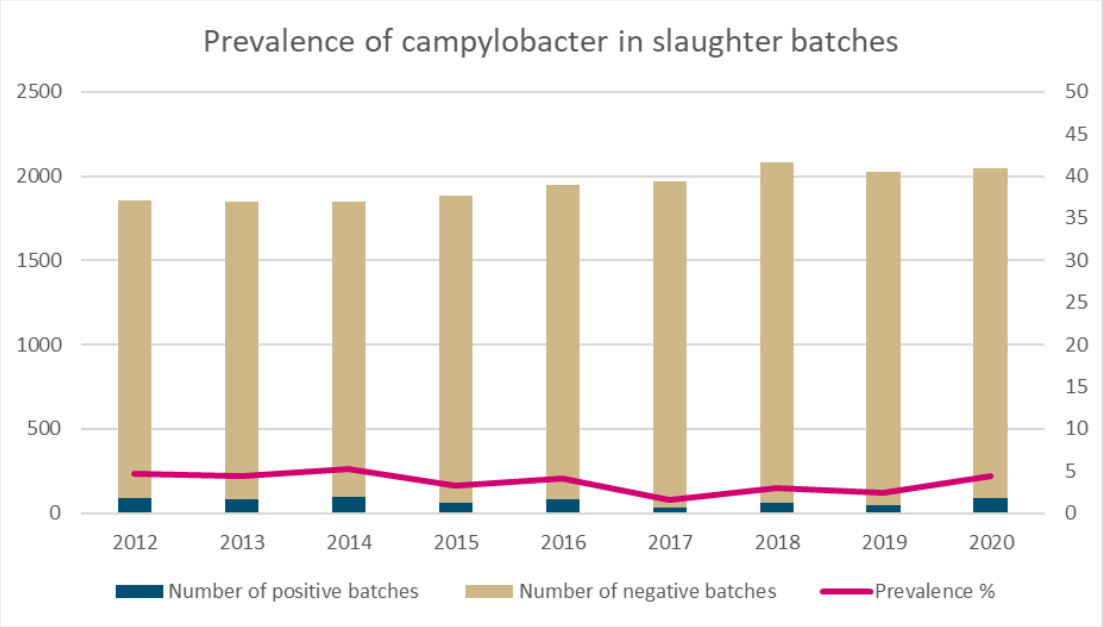

Figure 29. Campylobacter prevalence in broiler slaughter batches in 2012–2020

In addition to the national Campylobacter control programme, as from the beginning of 2018, slaughterhouses have tested broiler carcasses for Campylobacter in accordance with the test requirements set for all 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 47. Campylobacter in carcass samples from broiler slaughterhouses in 2018–2020

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

7.4 EHEC control in cattle

EHEC testing according to the EHEC control programme are included in the own check control programmes of cattle slaughterhouses. The slaughterhouse-specific number of annual samples is determined in the sampling plan drafted by the Finnish Food Authority. In addition, EHEC own checks are carried out in low-capacity slaughterhouses in which the yearly number of cattle slaughtered exceeds 100. The own check control for EHEC in cattle slaughterhouses and low-capacity slaughterhouses was inspected at six sites, or approx. one third of cattle slaughterhouses in 2020. The EHEC own checks were compliant (A or B rating) in all slaughterhouses and low-capacity slaughterhouses inspected. A minor shortcoming found in one inspection (B) concerned labelling samples, as in the year before.

See Table 48 for the number of EHEC own check samples examined in cattle slaughterhouses and low-capacity slaughterhouses as well as the test results in 2013–2020. The table also contains the results of EHEC samples taken in cattle holdings associated with investigations of human EHEC infections. Both faecal and environmental samples are examined from the holdings. Seven of the cattle holdings inspected on the basis of infections in humans proved to be positive for EHEC in 2020.

The targeted number of samples from cattle slaughterhouses was not achieved and, consequently, the EHEC control programme was not implemented as planned. Slaughterhouses were allowed to suspend sampling due to the COVID-19 pandemic in April and May, and during this period samples were not taken as planned. The EHEC sampling at low-capacity slaughterhouses was also not fully carried out as required by the control programme.

EHEC positive faecal samples accounted for 2.8 % of the samples collected. The number of positive faecal samples decreased from the previous year.

Table 48. Own check control samples tested for EHEC in cattle slaughterhouses and cattle holdings inspected as a result of infections in humans in 2013–2020

	2013	2014	2015*	2016	2017	2018	2019	2020
Slaughterhouse faecal samples								
Target number of samples	1522	1522	600	600	600	600	600	600
Actual number of samples	1560	1545	625	627	625	624	651	574
Number of positive samples	32	40	17	13	9	18	21	16
Percentage of positive samples	2.05	2.59	2.72	2.07	1.44	2.88	3.23	2.79
Cattle holdings inspected as a result of infections in humans								
Number of inspected holdings	8	6	4	5	5	7	14	13
Number of positive holdings	4	2	1	1	4	3	8	7

*An amendment to the Regulation, which entered into force in January 2015, reduced the required number of faecal samples from slaughter cattle to an annual minimum of 600 for EHEC tests across the country. The target for tests in low-capacity slaughterhouses did not change.

7.5 Recognition of controlled housing conditions for pigs and examinations for Trichinella

The official recognition of controlled housing conditions for pigs allows for a reduction in the number of Trichinella tests in connection 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 the examination for Trichinella 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 apply to a single holding or a group of holdings (‘compartment’). In 2020, there was one pig holding in Finland recognised by the Finnish Food Authority as having controlled housing conditions. In practice, this means that slightly under 600 slaughtered pigs were exempt from an examination for Trichinella in 2020. All other pigs slaughtered in Finland were examined for the presence of Trichinella in meat inspections. The result was negative for all of the approx. 1.8 million tests.

7.6 Antimicrobial resistance monitoring programme

Antimicrobial resistance is monitored annually within the framework of the FINRES-Vet monitoring programme, which is based on Implementing Decision 2013/652/EU and nationally selected control subjects.

The zoonotic bacteria included in the programme are salmonella and campylobacters. In 2020, antimicrobial susceptibility was studied as part of the Salmonella control programme in salmonella strains isolated from cattle, pigs and poultry. The susceptibility of campylobacters was studied in *C. jejuni* strains isolated from slaughtered bovines and from broilers in the campylobacter own check programme. Very small amounts of resistance are found in salmonella strains yearly. In 2020, all strains apart from two isolated from Finnish livestock or foodstuffs were susceptible. One strain of *Salmonella* Enteritidis showed resistance to quinolones (nalidixic acid, ciprofloxacin) and reduced susceptibility to colistin,

and one monophasic strain of *Salmonella* Typhimurium was resistant to ampicillin, sulfonamides and tetracycline. Both resistant salmonella strains were found in pigs.

Of *C. jejuni* bacteria isolated from slaughter batches of broilers, 3.4% (3/87) were resistant to antibiotics of the quinolone group (nalidixic acid, ciprofloxacin). This represent a further reduction from the previous years, in which quinolone resistance was found in 15% (2019) and 25% (2018) of the tested strains. Additionally, 2.3% (2/87) of the strains showed resistance to tetracycline in 2020. Tetracycline resistance was most recently detected in 2016, in which year around 6% of the studied strains were resistant to it. No resistance was found to the other tested antibiotics (erythromycin, gentamicine, streptomycin). Since 2013, varying degrees of quinolone resistance, in particular, has been found in broilers in different years, and the proportion of strains resistant to quinolone has varied from 0% to 25%. The reason for the occurrence of or variation in resistance is not known, as no antibiotics are used in broilers intended for slaughter in Finland.

Of *C. jenuni* bacteria isolated in cattle, 29% (29/100) showed quinolone resistance. Additionally, 12 strains were resistant to tetracycline and one to streptomycin. The most recent study of the prevalence of resistance in campylobacter found in cattle dates back to 2016. In that year, approx. 10% (5/48) of the strains showed quinolone resistance, whereas one strain was resistant to tetracycline (2%) and, similarly, one to erythromycin. The magnitudes of these proportions were also similar to 2016 in 2012. The reasons for the increased proportion of strains resistant to quinolones and tetracylin are unknown.

The presence of *E. Coli* bacteria producing ESBL, AmpC and carbapenemase was monitored in 2020 in slaughtered broilers, cattle and fresh broiler meat in retail stores. The occurrence of ESBL/AmpC was 0.3% (1/309) in slaughtered broilers and 0.3% (1/296) in broiler meat. Both findings were ESBL producers by their phenotype. The prevalence of ESBL/AmpC producing *E. Coli* in both broilers and broiler meat has decreased significantly compared to the previous monitoring year 2018. While the ESBL/AmpC prevalence was also low (3.1%) in cattle, it showed a clear increase compared to the previous monitoring year of 2016 (1.3%). The antimicrobial resistance of *E. Coli* indicator bacteria found in cattle and broilers was low; 97% of all *E. Coli* strains isolated in cattle and 83% of the strains isolated in broilers were fully susceptible to all tested antibiotics.

8 CHEMICAL FOOD SAFETY

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

The national residue control programme for live animals and animal-derived food 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 Council Directive 96/23/EC). The goal is to make sure 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 2020, efforts were made to implement the national residue control programme almost as planned, despite the COVID-19 situation. No samples from wild game (elk) were tested. Tests were performed on a total of 4,110 samples, and nearly 45,000 results were obtained. The use of so-called multi-residue methods has been further expanded in analytics. See Table 49 for sample numbers based on production figures categorised by animal species or food products, the distribution of analyses between different groups of substances, and the number of non-compliant samples in 2020. 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 49. Number of samples tested in the residue control programme for animal-derived food products categorised by animal species or food products for tests (number) in different substance categories and the number of non-compliant samples in 2020

Animal category or animal-derived food product	Prohibited substances	Approved veterinary medicinal products	Contaminants	Total samples	Non-compliant samples (number) and detected residues
Bovines	718	386	179	1,136	
Pigs	582	813	228	1,409	
Poultry	402	304	67	587	
Sheep	16	25	10	37	
Horses	25	18	4	40	
Elk	0	0	0	0	
Farmed game	9	55	30	81	5 liver/cadmium 4 kidney/cadmium
Milk	197	279	87	279	1 aflatoxin M1
Fish	77	57	69	193	
Egg	142	202	50	202	
Honey	56	56	38	56	2 lead

The residues of some prohibited growth promoters of farmed animals or their metabolites may also occur naturally in small concentrations. In addition to the results listed in Table 48, thiouracil was found in one urine sample from cattle and one from a pig. This may occur when animal feed has contained cruciferous plants. Natural concentrations of beta-testosterone were found in three bovine blood samples. Nandrolon alpha and beta were found in urine samples from two pregnant cows and two horses. Nandrolon beta was detected in one urine sample from a pig, and three broiler blood samples contained estradiol 17 beta at natural concentrations. No use of prohibited substances was observed.

Residues of permitted antimicrobials were detected in two samples. Minor residues of the antimicrobial sulfadiazine were found in one honey sample, and emamectin, which is used to control parasites, was detected in one fish liver sample.

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 three reindeer fat samples. Their concentrations did not exceed the MRL value set in the pesticide regulations, and no HCB residues were found in muscle samples. Lead levels slightly exceeding the limit value were found in two honey samples.

Small concentrations of mycotoxin zearalenone or its metabolites were also detected in urine samples taken from pigs or cattle in 2020 (13 in total), and a low concentration of ochratoxin was detected in a pig kidney sample. One milk sample showed a concentration of aflatoxin M1 that slightly exceeded the limit value.

The implementation and results of the residue control programme in 2020 were very similar to those in previous years (Table 50). The percentage of non-compliant samples is usually between 0 to 0.02% of the tested samples, taking into account any possible residues from medical treatment of the animals. When samples that contain contaminants are also taken into account, the percentage of non-compliant samples is slightly higher (0.27 % in 2020). Nevertheless, the low levels of residues detected in a few samples did not put food safety at risk.

Table 50. Number of samples tested in the residue control programme for animal-derived food products, number of non-compliant samples and the percentage of samples tested in 2010–2020

Year	Samples	Prohibited substances	Approved veterinary medicinal products	Contaminants	Percentage of non-compliant samples/excl. contaminants	Percentage of non-compliant samples/incl. contaminants
	(number)	(number)	(number)	(number)	(%)	(%)
2020	4110	0	0	11	0	0.27
2019	4196	0	1	14	0.02	0.36
2018	4265	0	0	14	0	0.33
2017	4218	0	1	10	0.02	0.28
2016	4234	0	0	10	0	0.24
2015	4344	1*	0	13	0.02	0.32
2014	4324	0	0	17	0	0.4
2013	4341	0	0	33	0	0.76
2012	4424	0	1	38	0.02	0.86
2011	4369	0	1	48	0.02	1.1
2010	4344	0	0	30	0	0.6

* no use of prohibited substances observed

The use of prohibited growth promoters has never been detected in Finland. Residues of approved veterinary medicinal products slightly exceeding the limit value have been found in individual cases, but there were no such cases in 2020. The results indicate that food products 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 has remained nearly unchanged from 2014 to 2020. The number of samples taken from farmed game has remained the same and, consistently with results from 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 2014–2020, which means that the results do not include test results of visceral samples from elks 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 to not approve the liver and kidneys of elks over one year in age as a food product. On the other hand, 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 the feed in late winter, in particular, especially if they had problems with preserving the feed, for example due to difficult weather conditions. The autumn and winter of 2019–2020 were particularly rainy in Finland, which hampered the preservation of feed grain, similarly to the year before. This was evident in the samples that contained mycotoxins, as finding their residues was also fairly common in 2020. Low levels of lead were found in two honey samples, and official investigations concluded that they probably originated in old honey processing equipment that was in poor condition.

Controlling residues of prohibited substances and approved veterinary medicinal products is also a part of the control of cross compliance under the EU's Common Agricultural Policy; this is why non-compliance may also lead to enhanced control to cover compliance with supplementing requirements and imply possible sanctions for farms that apply for agricultural aid.

As the residue control programme for animal-derived food products is implemented following EU regulations, the capacity of Member States to plan the control procedures based on their national risk profiles or to make significant year-to-year changes to the monitoring is limited. New research methods are deployed to implement the programme, and their development will continue. In particular, new multi-residue methods provide new opportunities for examining residues. Known changes to the EU regulations will significantly change the content of the programme as from 2023, as the contaminant tests that are currently part of the programme will be eliminated. There will also be minor changes to control systems. 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 with the annual obligations regarding the number of samples and analyses set in the European Commission's control programme. Member States are able to 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 organic control regulation ((EC) No 889/2008), directive on certain substances and residues in live animals and animal products (96/23/EC) and the so-called high-risk product regulation ((EC) No 2019/1793). In addition to monitoring compliance with these provisions, PPP residue control produces information on the current situation of residues in domestic and imported products (from the EU Member States and third countries).

PPP residue control is also a 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 will control the use of pesticides on farms under the Finnish Food Authority's supervision. On farms that have applied for agricultural aid, supervision will, if necessary, be enhanced further to control cross-compliance.

Authorities work together to control PPP use and residues in foodstuffs. The residue control programme is carried out in collaboration between municipal food control authorities (Finnish products and imported products once they enter the Finnish market), the Customs (other than animal-derived products from the EU internal market and third countries as they arrive) and the National Supervisory Authority for Welfare and Health Valvira (alcoholic beverages). The Finnish Food Authority also monitors Finnish organic products and animal-derived food products for PPP residues. The Centres for Economic Development, Transport and the Environment control the use of PPPs as instructed by the Finnish Food Authority.

The control plans were implemented rather successfully as a whole, although the actual numbers of domestic plant-based products inspected, samples of animal origin, and plant-based products under organic legislation in the Finnish Food Authority's area of responsibility remained slightly below the planned level. On the other hand, the number of

samples taken by the Customs and Valvira exceeded the planned number. The Customs also took follow-up samples and samples based on the so-called high-risk product regulation (EU) 2019/1793 not included in the actual plan. For the actual number of samples compared to the goals of the PPP residue control plan, see Table 51.

Table 51. Results of PPP residue control (number of samples) compared to the plan in 2013–2020.

Year	Customs			Finnish Food Authority			City of Helsinki			National Supervisory Authority for Welfare and Health		
	Plan	Actual number	%	Plan	Actual number	%	Plan	Actual number	%	Plan	Actual number	%
2020	1,500*	1542	103	134 (1)	124 (1)	87	-	-	-	15	22	147
				2 (2)	2 (2)							
				230 (3)	206 (3)							
				234 (4)	191 (4)							
				2(5)	2 (5)							
				TOTAL 602	TOTAL 525							
2019	1,500*	1318	88	135 (1)	117 (1)	94.8	-	-	-	25	22	88
				10 (2)	10 (2)							
				206 (3)	205 (3)							
				296 (4)	285 (4)							
				80 (5)	72 (5)							
				TOTAL 727	TOTAL 689							
2018	1285	1321	103	130 (1)	100 (1)	94.9	-	-	-	25	20	80
				5 (2)	5 (2)							
				182 (3)	183 (3)							
				289 (4)	287 (4)							
				- (5)	- (5)							
				TOTAL 606	TOTAL 575							
2017	1345	1535	114	1,321 (1)	1,231 (1)	83.4	-	-	-	25	22	88
				22 (2)	22 (2)							
				183 (3)	203 (3)							
				2,384 (4)	2,224 (4)							
				505 (5)	845 (5)							
				TOTAL 440	TOTAL 367							
2016	1500	1686	112	1,371 (1)	1,261 (1)	87.1	80	80	100	25	24	96
				102 (2)	82 (2)							
				403 (3)	353 (3)							
				3384 (4)	2864 (4)							
				185 (5)	185 (5)							
				TOTAL 543	TOTAL 473							
2015	1435	1760	123	202	169	83.7	100	100	100	25	26	104
2014	1340	2036	152	239	223	93.3	100	101	101	30	23	76.7
2013	1550	1921	124	245	244	99.6	110	110	100	30	20	66.7

* The method used by the Customs for calculating planned samples has changed as from 2019.

[1] fruit and vegetables (incl. 9 organic samples in 2020)

[2] baby foods, infant formulas and weaning products

[3] animal-derived food products (185 samples as part of the contaminant control programme for animal-derived food products and live animals in 2020)

[4] organic fruit and vegetables and plant-derived products (organic legislation, in 2020 incl. 1 sample of baby foods)

[5] organic animal-derived products (organic legislation).

A total of 2,089 samples were 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 in 48 samples (2.3%). Of these, foods violating against organic legislation in which residues prohibited in organic production were found consisted of one sample of Finnish oats and four products imported into Finland from the EU. 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 competent food control authorities took the necessary measures in all cases of non-compliant products.

PPP residues were found in 787 samples (51%) from imported products (from EU Member States and non-EU countries), the largest part of which were fresh fruit and vegetables and rice. Non-compliant levels of PPPs led to the rejection of 47 product batches. Four of these were organic products containing residues prohibited in organic production. The supply of any non-compliant products to the food product chain was halted 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-conformities that resulted in an import prohibition or marketing ban were detected in rice imported from India and Pakistan, root ginger from China and oranges from Israel. Of these non-compliant batches, 23 were food products imported directly from non-EU countries to Finland, and 20 batches were food products sold in the internal market, some of which originated from outside the EU. This indicates that not all non-EU countries are able to comply with farming practices that respect the EU's MRL requirements. On the other hand, product batches imported via another EU Member State that originate in third countries are also included in the statistics on intra-EU imports, meaning that the non-compliances are even more frequently related to third countries than these figures indicate.

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 investigations. Of these batches, 24 were food products imported directly from non-EU countries to Finland, and 28 were food products sold in the internal market, some of which originated from outside the EU.

As part of the control of PPP residues, 14 batches of products placed on the market which were potentially an immediate health hazard to consumers were detected, or information on 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. Recalls within the scope of the legislation on PPP residues were highlighted in 2020 because of recalls motivated by ethylene oxide residues found in Indian sesame seeds. These consumer recalls were made regarding numerous different batches of 45 products. Based on a risk assessment, 12 batches that were non-compliant in terms of PPPs were reported to the other Member States via the RASFF system.

In the 525 samples taken from Finnish products, residues that did not exceed the MRL level were found in a total of 33 samples (6.3%). These products included strawberries, apples, parsnips, carrots, onions, raspberries, cucumbers and salads. None of the samples taken from conventional Finnish foods were in violation of the provisions of the Food Act. In one sample of organic oats, residues of a PPP prohibited in organic production were found, which proved to have been transported by wind. However, the sample that violated organic legislation met the requirements of food legislation.

Tables 52 and 53 show the percentage (%) of samples not compliant with the Food Act in 2013–2020 and the percentage of non-compliant samples among all samples tested in 2020.

Table 52. Percentage (%) of non-compliant samples (non-compliant as conventional foods with residue content exceeding the MRL) in 2013–2020

Year	Number of samples	Non-compliant	Non-compliant
	number	number	%
2020	2089	48*	2.3
2019	2029	34*	1.7
2018	1915	66	3.4
2017	2008	57	2.8
2016	2263	28	1.2
2015	2088	35	1.7
2014	2383	49	2.1
2013	2240	63	2.8

* Unlike in previous years, the figures for non-compliant samples in 2019 and 2020 do not include those to which a notice was issued during the customs examination.

Table 53. Share of non-compliant samples (food and organic legislation) detected in the PPP Residue Control Programme of all samples in 2020

Origin	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	Non-compliant
Domestic	0	0	0	0	525	33	1 [4]	0	0	0
EU products	1,134 [1]	551	28	27 [3]	0	0	0	0	0	0
Third-country products	408 [2]	236	24	20	0	0	0	22	4	0
Total	**1,542**	**787**	**52**	**47** [3]	**525**	**45**	**1** [4]	**22**	**4**	**0**

[1)] Some samples were of third-country origin (the origin of all samples is not known)
[2)] 'Customs cleared products', or products imported to Finland from third countries, would be a more apt term
[3)] Incl. four organic samples not compliant with organic legislation, which had a residue content lower than the MRL set for conventional products
[4)] Incl. one organic sample not compliant with organic legislation which had a residue content lower than the MRL set for the conventional product

In addition to the control programme, municipal food control authorities conducted a total of 21 inspections that focused on the adequacy and effectiveness of own-check controls of PPP residues within the framework of the Oiva system (Oiva line 17.12). The sites to be monitored for PPP residues in the Oiva system are selected based on the risk according to the effectiveness and scope of the inspections. In 2020, most of the Oiva inspections resulted in A ratings, meaning that no shortcomings were observed in the management of PPPs (Table 54). One inspection site was given a C rating (shortcomings), and a follow-up inspection was conducted to ensure that the shortcomings were rectified. It can be concluded from the results that PPP residues were probably inspected fairly infrequently in proportion to the number of sites that were expected to need inspection. As in previous years, we must ask if the sites to be inspected have been identified correctly, if the

parameters defined in the guidelines are too wide and if the assessment scale is used correctly. Training and guidance are still needed in order to improve the effectiveness and uniformity of control. The Control Network for Contaminants and Pesticide Residues organises training around three times a year and also strives to develop the Oiva monitoring of PPP residues. As the national operating and data handling system for environmental health care (VATI) develops, an effort will also be made to assess the number of sites to be inspected in more detail.

Table 54. PPP residue control and its results as part of the Oiva system implemented by municipal food control authorities in 2015–2020

Year	Inspections	A	B	C	D	Guidance and advice	Notices	Coercive measures
	Number	%	%	%	%	Number	Number	Number
2020	21	95	-	5	-	-	1	-
2019	21	100	-	-	-	-	-	-
2018	32	100	-	-	-	-	-	-
2017	22	100	-	-	-	-	-	-
2016	44	95	5	-	-	2	-	-
2015	25	96	4	-	-	1	-	-

8.3 Contaminants

Control of food contaminants is implemented as required under the EU legislation ((EC) No 1881/2006, as amended) and the Commission's monitoring regulations. The objective of the control is to ensure that the levels of harmful contaminants do not exceed the MRL levels defined in the legislation and/or the levels considered safe, while also producing information on the current national status. The content of contaminant control has so far not been set in EU legislation. Consequently, Member States plan the control according to their national risk-based needs.

The main focus of research coordinated by the Finnish Food Authority is on creating national situational awareness and drafting legislation. In 2020, the sampling included in the control plan coordinated by the Finnish Food Authority was implemented well, and only some of the planned samples were not taken (Table 55). The foods tested in 2020 included salads, rye, oats, wheat, rice, strawberries, raspberries and fresh-water fish (perch, vendace, pike, roach, and bream).

Table 55. Planned number of samples (number) and actual number of samples (% of planned) tested for food contaminants in 2012–2020 (control and mapping by the Finnish Food Authority)

Year	Contaminant									
	POPs	Nitrate	PAH	Acrylamide	Heavy metals	Mycotoxins	Coumarin	Radioactive substances	Perchlorate	Erucic acid
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%	-	-	-	-
2017	10/100%	12/120%	34/85%	40/100%	34/85%	8/80%	-	-	-	34/85%
2016	10/100%	10/100%	30/100%	-	118/97%	20/75%	-	-	-	-
2015	-	15/67%	10/120%	-	-	71/82%	-	-	50/100%	-
2014	40/90%	11/92%	-	46/93%	46/93%	44/95%	-	60/100%	-	-
2013	40/90%	32/78%	-	32/44%	46/93%	34/94%	30/100%	-	-	-
2012	40/100%	38/76%	225/74%	32/0%	50/100%	20/80%	14/100%	-	-	-

A total of 63 samples were examined as part of the control and mapping coordinated by the Finnish Food Authority. Several different compounds were analysed in the samples. Fresh-water fish (n = 9) were tested for dioxins, dioxin-like PCBs, indicator PCBs, perfluorinated surface treatments and brominated flame retardants. Salads (n=8) were tested for nitrates. Rye (n=9), oat flakes (n=4) and wheat flour (n=6) were tested for mycotoxins (incl. DON, zearalenone, ochratoxin A and ergot alkaloids). Additionally, strawberries (n=12), raspberries (n=5) and rice (n=10) were tested for heavy metals (incl. lead and cadmium). No non-compliant samples were found (Table 56). For some of the compounds, no maximum limit has so far been set in legislation (including ergot alkaloids, perfluorinated surface treatments, brominated flame retardants, certain heavy metals and mycotoxins); however, as a rule their concentrations in foodstuffs were very low, and the results indicated no need for control measures. Contaminants have additionally also been examined 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 control coordinated by the Finnish Food Authority, the Finnish Customs and the municipal food control authorities have also monitored contaminants in foodstuffs.

Table 56. Number of samples tested as part of the control and mapping of food contaminants (coordinated by the Finnish Food Authority) and the percentage of non-compliant products (%) in 2013–2020

Year	Samples tested	Percentage of non-compliant samples
	number	%
2020	63	0
2019	100	0
2018	49	0
2017	172	2(**)
2016	179	1(*)
2015	80	0
2014	149	0
2013	99	0
2012	316	2

*) In two raw grain samples, the maximum permissible limit defined for ergot sclerotia in the legislation was exceeded. The maximum limit of ergot sclerotia is applied to untreated grain brought to the market for first processing. First processing refers to any physical or thermal treatment of the grain, excluding drying. Consequently, applying the maximum allowed limit in the cereal chain is appropriate as the cereal is received after primary treatment, for example. In these two cases, the collection of samples by authorities was focused on primary production, and municipal food control authorities undertook appropriate control measures. This included making sure that the buyer of grain was made aware of the excessive level of ergot sclerotia in the raw cereal, enabling them to take the necessary risk management measures and to ensure for their part that food products brought to market do not contain it at concentrations exceeding the maximum allowed limit.
**) The maximum allowed limit defined for ergot sclerotia in legislation was exceeded in three raw grain samples. In one arugula sample, the maximum allowed limit defined for nitrate in legislation was exceeded.

Municipal food control authorities conducted a total of 358 inspections related to food contaminants within the framework of the Oiva system. See Table 57 for the distribution of inspection results. The Oiva results indicate that shortcomings in contaminant management (C rating) were detected at six of the inspected sites. The identified shortcomings were related to the fact that food business operators had not taken into account PAH or acrylamide management in their own checks, or they had not found out about the maximum levels of contaminants set for raw materials used in production by the legislation and how this should be addressed in the procurement of raw materials.

Table 57. Food contaminant control and its results as part of the Oiva system implemented by municipal food control authorities in 2015–2020

Inspected item	Year	Inspections	A	B	C	D	Guidance and advice	Notices	Coercive measures
		number	%	%	%	%	number	number	number
17.13 Environmental contaminants	2020	15	86.7	6.7	6.7	-	2	1	-
	2019	26	96.2	3.8	-	-	-	-	-
	2018	25	96	4	-	-	1	-	-
	2017	21	81	19	-	-	4	-	-
	2016	23	91.3	8.7	-	-	1	-	-
	2015	18	88.9	11.1	-	-	2	-	-
17.14 Mycotoxins	2020	23	87	8.7	4.3	-	2	1	-
	2019	17	100	-	-	-	-	-	-
	2018	32	100	-	-	-	-	-	-
	2017	22	95	-	5	-	-	1	-
	2016	28	100	-	-	-	-	-	-
	2015	21	100	-	-	-	-	-	-
17.15 Process contaminants	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	-
	2017	62	81	16	3	-	10	2	-
	2016	62	82.3	14.5	1.6	1.6	8	2	1
	2015	32	68.8	31.3	-	-	10	2	-
17.16 Other contaminants	2020	2	100	-	-	-	-	-	-
	2019	8	100	-	-	-	-	-	-
	2018	19	100	-	-	-	-	-	-
	2017	25	96	-	4	-	-	1	-
	2016	26	96.2	3.8	-	-	1	-	-
	2015	7	85.7	14.3	-	-	1	-	-

For the time being, national needs have been addressed in contaminant control, and the Member States have been able to plan the control from their national starting points. The forthcoming amendments to EU legislation will significantly change the control of contaminants as from 2023; in the future, EU regulations will require the Member States to implement an annual control programme for certain contaminants. There will also be minor changes to control systems. As far as possible, efforts will be made to ensure risk-based sampling that targets the foods in which residues are most likely to occur, both in terms of timing and location, also in the future.

8.4 Control of genetically modified foodstuffs

As no genetically modified plants are cultivated in Finland for food, all genetically modified food products are imported, which means that the main focus of official controls is on the import controls of the Customs. The control of genetically modified foods in Finland is part of the Oiva control system. Under the coordination of the Finnish Food Authority, around ten food samples are additionally taken every year on a risk basis as part of the control of genetically modified food.

In 2020, the compliance of genetically modified ingredients and their marketing was controlled in 20 Oiva inspections. While 95% of the inspections found no shortcomings, guidance was provided during 15% of them (Table 58).

Table 58. Monitoring of genetically modified ingredients in the Oiva system in 2020

Year	Number of inspections	Rating A	Rating B	Rating C	Rating D	Guidance (number)
2020	20	19	1	-	-	3

Eight food samples were taken following the Finnish Food Authority's monitoring and sampling instructions. 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.

Based on risks, sample collection focused on raw materials and finished food products that might contain GM ingredients (including soy, maize, rapeseed, Asian rice, papaya). Organic products and products claiming to be 'GMO free' are also subject to the controls. 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.

The plan was to take ten samples (80% of which were actually taken). No genetically modified ingredients were found in any of the samples (Table 59).

Table 59. Results of the GM sample collection coordinated by the Finnish Food Authority in 2020

	Number of samples	GM detected (%)	GMO concentration exceeds the limit or unapproved GMO (%)	Voluntary marketing claim 'GMO free' in use (%)	Compliant samples (%)
2020	8	0	0	0	100

The Customs controls the conformity of plant-derived food products and composite food products imported from outside the EU and from EU Member States to Finland. The Customs analyses around 150 to 200 food samples each year for genetically modified ingredients. More information on customs control can be found on the Customs Laboratory's website at: https://tulli.fi/web/tullilaboratorio/etusivu

8.5 Harmful and prohibited substances in feed

Feed control covers the whole operating chain from the primary production of feed to manufacture, import, export, marketing, storage, transportation and use on farms. The results of feed sample controls indicate that feed produced and placed on the market in Finland for the most part continued to meet the safety and quality requirements laid down in feed legislation. Multi-methods were used extensively in the control to detect harmful and prohibited chemical substances. The use of multi-methods further enhanced the effectiveness of controlling residues of harmful and prohibited chemical substances in feed, which are examined in individual samples, as well as the control of nutritional factors.

The number of samples taken and analyses completed as part of the official control of feed were mainly as planned in 2020. Due to the COVID-19 pandemic situation in 2020, the

official sampling activities had to be suspended for a fixed period, despite of which the sampling was mainly carried out as planned. The total number of feed analyses conducted by the authorities largely corresponded to the plan.

A total of 13,641 samples collected as part of official feed control were analysed. The Finnish Food Authority had at its disposal a number of different multi-methods and/or combinations of methods for analysing feed samples that could be used to simultaneously investigate both harmful/prohibited chemical substances and nutritional constituents. Analyses of harmful and prohibited substances in feeds accounted for 84% of all official analyses (11,471 analyses). The official samples were extensively tested for residues of such substances as mycotoxins, heavy metals, pesticides, coccidiostats, medicinal products and other prohibited substances as well as for genetic modification. Chemical analyses of harmful and prohibited substances in feeds accounted for 71.7% of all official analyses (8,232 analyses).

No non-compliant levels of dioxins, mycotoxins, melamine and other nitrogen compounds were found in feeds, nor residues of active substances in coccidiostats or medicinal substances. Additionally, no non-compliances were found in feeds relevant to the control of genetically modified organisms; consequently, no GMOs not approved in the EU were found. No concentrations of authorised genetically modified materials were found in feed that would have required the labelling of the feed batch.

In two cases, residues of PPPs were found in Finnish organic feeds. In the first case, the PPP residues were related to a batch of raw material used to manufacture the previous batch of conventional feed at the plant, from which the residues were transferred to the organic feed produced later. In the second case, the PPP residues came from a conventional raw material used to produce organic feed and its PPP residues. A marketing ban was imposed on both production batches of feed, their use as organic feed was prohibited, and the operators were ordered to recall these production batches of feed as unsuitable for organic production. Feed business operators were also issued with orders to provide information and take corrective action to reduce plant protectant residues in their production processes.

Heavy metal residues that exceeded the permitted maximum level were found in feed batches from two Finnish manufacturers. In the first case, the excess level of heavy metals in complementary feed was associated with a batch of peat raw material used to manufacture the feed. The second case was about prohibited marketing of a feed additive as a complementary feed, which resulted in excessive heavy metal levels in the complementary feed. Both feed batches were banned, and the operators were ordered to recall them. Feed business operators were additionally issued with orders to provide information and take corrective action.

An annual report on analysed feed samples collected by the authorities is published on the Finnish Food Authority's website.

The production volume of medicated feeds for food-producing animals was low during the year under review. Medicated feed was only produced for fish and piglets. The production of medications and residue management by operators manufacturing medicated feeds were inspected in connection with the statutory inspections of these operators' establishments under the regulation on health rules on animal by-products. The production of medicated feed for fur animals decreased significantly compared to the previous two years. The production of fur animal feeds as a whole also decreased.

For more detailed information on the preparation of medicated feeds, see the Finnish Food Authority's website.

8.6 Food allergens

An allergen error is a case in which a product contains an ingredient that causes an allergy to some consumers (an allergen) not listed on the labelling.

In 2020, a total of 75 cases of serious allergic reactions were reported to the Finnish National Anaphylaxis Register, 47 of which were caused by food. In 2019, 74 similar cases were reported, 49 of which were caused by food; the respective figures in 2018 were 62 and 39.

The number of recalls due to allergen errors (37 cases accounting for approx. 14% of all recalls) decreased in 2020 to the 2018 level. In that year, the greatest number of recalls were caused by allergen-related reasons (36 foods, accounting for 21% of all recalls). In 2018, the increase in the number of recalls due to allergen errors was almost three times that in 2017. In 2019, as many as 54 recalls related to allergens were made (27% of all recalls).

The underlying causes of allergen errors 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 60). The inspection results in all sectors were very similar to the Oiva inspections in 2019. Based on the Oiva ratings, the activities fulfil the requirements as a rule, or only minor shortcomings have been observed in them.

Table 60. Oiva results – allergens and substances that cause intolerances, results for 2020

Sector	Inspected	Result / Number of inspections			
		A	B	C	D
	number	Number (%)	Number (%)	Number (%)	Number (%)
Food service	5424	5229	167	26	2
		(96.4)	(3.1)	(0.5)	(0.0)
Food sale	656	632	20	4	
		(96.3)	(3.0)	(0.6)	
Food production / Fish sector	32	27	3	2	
		(84.4)	(9.4)	(6.3)	
Food production / Meat sector	53	45	8		
		(84.9)	(15.1)		
Food production / Dairy sector	22	22			
		(100.0)			
Food production / Cereal and vegetable sector	192	180	11	1	
		(93.8)	(5.7)	(0.5)	
Food production / Other	42	40	2		
		(95.2)	(4.8)		
Food storage and freezing	10	10			
		(100.0)			

8.7 Nutritional safety

The Finnish Food Authority promotes nutritional safety by publishing on its website the population-level nutrition recommendations produced by the National Nutrition Council and other food recommendations intended for specific age groups and other target groups. The Finnish Food Authority has ensured that all recommendations also include general instructions on safe use of foodstuffs. The Finnish Food Authority maintains the instructions on safe use of food and publishes them on its website in Finnish, Swedish and English.

The Finnish Food Authority actively informs food system operators, social and health service professionals, municipalities and regional operators about health-enhancing, diverse, varied and moderate eating and special nutritional issues, thus promoting nutritional safety.

The Food recommendations for older adults published in 2020 address nutritional safety. They also cover the basics of food hygiene, own checks, product information, nutritional quality monitoring, internal audits and the Oiva system.

The nutrition commitment system administrated by the National Nutrition Council was maintained as part of Society's Commitment to Sustainable Development (www.sitoumus2050.fi). The nutrition commitments promote and make visible the way in which food recommendations are followed in the food industry, trade and institutional catering. Some of the measures included in the commitments concern food education measures in schools, early childhood education and care and non-governmental organisations. At the end of the year, the system consisted of 61 commitments, most of which include a number of measures aiming to, among other things, improve the nutritional quality of foodstuffs and to increase the supply and availability of meals and snacks compliant with the recommendations.

9 FOOD SAFETY RISK ASSESSMENT AND RESEARCH PROJECTS

Risk assessment

Risk assessments related to food safety are produced in multiannual projects focusing on specific themes. Due to the COVID19 pandemic, most of the projects are behind schedule.

The first so-called rapid risk assessment (systematic gathering of up-to-date information on risks and factors related to them) carried out in crisis situations took place in spring 2020 concerning the potential food safety risks of SARS-CoV-2. The Finnish Food Authority's SARS-CoV-2 work has continued since the beginning of the pandemic. On-going work has also included other expert services, control of GM-containing and novel foods introduced to the internal market, and training provision. The information, communication and risk assessment activities of the European Food Safety Authority (EFSA) between Finland, the EFSA and different Member States through the (EFSA Focal Point) hosted by the Finnish Food Authority gathered further momentum.

The risks posed by the environment to the food production chain were studied in the Harmful animals project (zoonoses) and Cystericosis in bovines project. The former aims to map vulnerable parts of the food chain and potential risk management measures, whereas the latter assesses the possibilities of streamlining the work stages of meat inspection. The LEX4BIO project, on the other hand, is striving to identify optimal recycled fertilisers and techniques for reducing harmful environmental impacts.

Food-borne viral diseases resistant to environmental factors are expected to increase globally. The VirSta project assesses the effects of food production on the preservation of hepatitis E (HEV) and African swine fever virus (ASFV) in foods containing pork. Exposure to carcinogenic contaminants (process contaminants) and the burden of cancer associated with them are evaluated in the risk assessment of process contaminants.

The risk profile produced in the Contaminants project to support the planning of food control will highlight key contaminants requiring monitoring in Finland in an order of priority and the knowledge gaps associated with them. A more detailed assessment of the intake of additives was launched to pave the way for national food use recommendations and other potential risk management measures. The development of a risk-benefit analysis was initiated by comparing the fibre and heavy metal contents of oilseeds and cereals.

The statistical risk assessment models developed by the Finnish Food Authority are publicly available as open source codes and, if necessary, they can be modified for the user's needs. The results of the COMRISK project concluded in 2020 emphasised the importance of communicating about risk assessments. This is why user interfaces and tools that are easier to use are also being developed of the models, including the RiskRanking, which illustrates food safety risks, and the BIKE model, which assesses consumer exposure to chemical and biological hazards. In the FS4EU project, the parties in which include not only risk assessment and risk communication actors but also all those participating in risk analysis with their stakeholders, an effort is made to further improve communication and interaction between the different parties. A study of modelling the food use data needed for risk assessment by alternative methods was launched.

Efforts have also been made to improve risk assessment communication in everyday work both externally and within the Finnish Food Authority. In addition to articles in professional journals and general press, a report on heavy metals related to food and domestic water consumption and PAHs in food was published in 2020. While adults' exposure to heavy metals and aluminium was lower than children's, some adults still exceeded the limit of safe intake. The highest risk of heavy metal exposure affected women of reproductive age, whereas one in five women over 45 years of age are at risk of osteoporosis fractures due to cadmium exposure. Another report on children's PAH exposure noted that breads, cereals and muesli or smoked meat and fish products are not a health risk to children aged between 3 and 6 in Finland.

Research on microbiological food safety

A total of 200 samples from imported foods were tested for ESBL bacteria in a joint pilot project of the Finnish Food Authority, the Finnish Customs Laboratory and the University of Helsinki. The samples belonged to four different food groups: vegetables, fruit and berries, meat, and seafood. The samples, which were obtained from nine different food stores in Helsinki region in autumn 2018, were examined in 2018–2020. They included uncooked, frozen and cooked products. The foods came from 35 different countries, both inside and outside the EU, and from two oceans. E. coli or K. pneumoniae bacteria producing the ESBL enzyme were found in a total of 11 (18%) of the meat samples and three (5%) of the plant samples. The meat samples containing ESBL bacteria were raw broiler meat and turkey, while the vegetable samples were coriander and chilli. The samples that contained ESBL bacteria originated from three different countries (Lithuania, Poland and Malaysia). When interpreting the results, however, it should be noted that comparisons between countries are not meaningful due to the limited number of samples. No ESBL bacteria were found in fruit, berries and seafood.

Anniina Jaakkonen proved in her doctoral dissertation https://helda.helsinki.fi/handle/10138/315061, which was completed in 2020, that pathogenic STEC and *Campylobacter jejuni* strains can survive on farms for months and contaminate milk in the tank, despite of enhanced hygiene practices. The dissertation found that the consumer safety of raw milk can only be guaranteed by heat treatment.

A research project was carried out with two slaughterhouses to investigate STEC sampling and analysis methods in slaughter cattle. A total of 172 surface swab, faecal and meat samples were examined in the project. STEC bacteria confirmed by culture were found in 9 out of 85 (11%) surface swab samples and 10 out of 70 (14%) faecal samples. No STEC bacteria were found in the meat samples (17 samples). The isolated bacterial strains represented different serotypes. Only three of these strains were identified as serotypes associated with infections in humans in the EFSA's STEC risk assessment report (https://doi.org/10.2903/j.efsa.2020.5967). Both stx2 and eae genes were identified in one strain of serotype O26 and one strain of serotype O145. These strains can be considered pathogenic to humans. No STEC strains of serotype O157 were found in the study (E. Coli O157). As the STEC control programme is updated, faecal samples tested for E. Coli O157 will be replaced by surface swab samples from cattle. The programme will be expanded to include the entire STEC bacterial group. As analytics covers the entire STEC group, this is likely to provide plenty of additional information on the presence of STEC bacteria in Finnish bovine carcases.

Chemical food safety and nutrition

A tool for testing strawberries for a falsely indicated country of origin, which was developed in the Makera project, is now in use, and its final report can be accessed on the Finnish Food Authority's website at: https://www.ruokavirasto.fi/globalassets/yhteisot/tieteellinen-tutkimus/liitteet/alkuperaltaan-aidot--hanke-loppuraporttitiivistelma-2020.pdf. The Chemistry Unit of the Finnish Food Authority has the capacity to receive strawberry samples collected as part of control and to determine their geographical origin as an outsourced service. The update of the reference database used for the analysis continues, with approximately ten samples being received from strawberry growers in different parts of Finland annually. The Finnish Food Authority has acquired an analysis instrument used to measure the relationships between different isotopes to determine the origin of the produce, and this method is being validated for use.

The 'National salt and nutrition control project 2019' launched in summer 2019 together with the Food Composition Section will continue until the end of June 2021 to ensure as comprehensive sampling as possible. A total of 120 samples (60 bread/sausage samples, 60 samples of convenience foods) will be analysed for salt content and composition (dry matter, protein, ash, fat, fatty acids, sugars, starch). The Inorganic Chemistry Section analysed these 120 samples to determine their salt content, while the Composition and Origin Section analysed the composition of convenience foods.

A joint Nordic project, 'Are gluten-free products a healthier alternative? A pilot study on nutrients and heavy metals' that analysed the nutritional make-up of 40 products, with the exception of vitamins, has now been completed. The project team analysed some samples themselves and outsourced the rest. https://pub.norden.org/temanord2021-516

A monitoring project funded by the Ministry of Agriculture and Forestry is investigating the situation of trans fats on the Finnish food market. The project will be implemented in two parts; the first part will be completed by summer 2021, while in the second part, the sample collection will be repeated once a legislative amendment concerning trans fats has been in force for at least one year. The final number will 122 samples of ice creams, vegetable fat blends, biscuits and various frozen foods among others. The fat content and fatty acid composition of the samples will be analysed for the project. Composition analyses of these samples will also be produced for the National Food Composition Database Fineli. The separately agreed sample pools will be analysed by the Composition and Origin Section for moisture, protein, ash and minerals, and by the Inorganic Chemistry Section for minerals.

10 PRIORITIES OF FOOD SAFETY IN 2020

10. 1 Priorities of food safety control related to Oiva lines

Control of maintenance (Oiva lines 2.2 and 2.3) and cleaning (Oiva lines 3.1 and 3.2)

Supervising maintenance and cleaning was a priority of control both in registered food premises and approved food establishments in 2020. The Finnish Food Authority had already started planning this work in 2019. The control of these priority areas will continue in 2021, as not all planned control visits could be carried out in 2020 due to the COVID-19 epidemic. This priority area comprises Oiva lines 2.2 and 2.3 related to maintenance and lines 3.1 and 3.2 related to cleaning discussed below.

The control results will be reported and communicated about in 2022.

Maintenance and cleaning are basic elements in the operation of food establishments. Should these areas fail, contamination and poor condition of surfaces may impair food safety. With regard to maintenance and cleaning, the aim is to ensure that the work of municipal control authorities is consistent, to intervene in any shortcomings identified, and to ensure that the shortcomings are addressed on the agreed schedule.

The work on priority areas consisted of municipal food control authorities inspecting the Oiva lines related to maintenance and cleaning at the inspection sites following the plan, in addition to other aspects that the inspection plan covered. Maintenance and hygiene were also priorities of control in the establishments supervised by the Finnish Food Authority.

Before the actual inspections went ahead in practice, lectures on this topic were given in connection with some training events. Together with the different regional state administrative authorities, the Finnish Food Authority held five training events for the food control authorities in the relevant regions in 2020. In addition, training was provided for the inspection veterinarians of the Finnish Food Authority's Meat Inspection Unit.

Marketing control (Oiva line 13.3)

Controlling the marketing of foodstuffs (Oiva line 13.3 Marketing) was selected as a priority of national food control in 2020, and these efforts will also continue in 2021.

Almost every company markets its products. Considering this, the marketing of foodstuffs has been inadequately controlled. The objective of the prioritised work is to ensure that the marketing of food products is controlled regularly, food business operators are treated equally, food products are marketed in compliance with the legislation, and consumers are not misled.

The prioritised work consists of municipal food control authorities conducting the planned inspections of food establishments and, in addition to other planned lines, also inspecting Oiva line 13.3 Marketing in 2020–2021. The Finnish Food Authority offers training, guidelines and interpretations to support operators and communicates about food marketing and its control under the theme #pikkasenlaiton.

Thanks to the prioritised work carried out in 2020, the control levels of food marketing increased almost tenfold. For more information on the national results of food marketing control, see section 6.4. Marketing of food products.

Control of food improvers (Oiva line 11.1)

Building up municipal control units' competence related to the control of food improvers (Oiva line 11.1 Additives, flavourings and enzymes) was one of the priorities in 2019 and 2020.

Based on feedback received from the control units, controlling the additives, flavourings and enzymes used in foodstuffs was experienced as difficult and time-consuming, as it requires detailed knowledge of the extensive legislation on food improvers. The guideline of inspecting each Oiva line at inspection sites no less than once every three years was not achieved for Oiva line 11.1. Major differences between control units in inspections of line 11.1 were also observed. Some control units had focused a relatively large amount of attention on line 11.1 in their inspections, while others had not.

The purpose of this priority was to increase and harmonise the control of food additives, flavourings and enzymes. In order to promote this goal, the Finnish Food Authority's food improver expert paid one-day guidance visits to municipal control units, in which 60 out of 62 control units and 304 inspectors participated.

During a typical guidance visit, the morning was spent examining the basis of food improver control, including legislation, guidelines, the adequacy of documentation, recipe calculation and the progress of the inspection. In the afternoon, the participants focused on product information requested from controlled sites, which were compared to statutory requirements. Alternatively, an inspection visit could be made to a company that manufactures, imports, supplies or uses food improvers. The situation of controlling line 11.1 was also discussed during the day, and methods for solving problems and correcting shortcomings were discussed together.

The guidance visits were regarded as an effective way to promote the learning of aspects experienced as challenging and difficult and applying the lessons learned in practice. Participants would also like to see such visits in the context of other challenging areas of food control.

10.2 Projects

National salt and nutrition control project (Oiva lines 13.1 and 13.2)

In 2019, the Finnish Food Authority selected monitoring the salt and nutritional value indications in food labelling as one of the priorities of control. By using control as a policy instrument, the Finnish Food Authority contributes to reducing the use and intake of salt at the population level. This project, whose duration originally was one year, started in July 2019. Because of the COVID-19 pandemic, the Finnish Food Authority decided in spring 2020 to extend the project with one year until 30 June 2021. Its aim is to complete a sufficient number of inspections and obtain adequate samples. The results of the project will be reported by March 2022 at the latest. General information will be provided on the findings, and they will also be discussed during national training days for food control authorities.

The project on salt and nutritional value control monitors nutritional information significant in terms of salt intake as well as the compliance and accuracy of food labelling. It also examines the amount of salt in food, in particular, and assesses the need to indicate that a foodstuff has a high salt content. The project examines both packaged and unpackaged foods. The amount of salt in bread, sausages and cold meat products will be examined, and the mandatory nutritional value information provided on convenience foods will be scrutinised. The results may affect the legislation which requires producers to flag a food as having a high salt content and/or guidelines for providing information on nutritional values. The project will develop the capacity of the Finnish Food Authority's laboratory to examine nutritional information in food labelling.

During this project, guidance and advice will be provided to food business operators and control authorities, especially regarding information on nutritional value and salt content in labelling. The inspections will be carried out in municipalities as Oiva inspections of lines 13.1 and 13.2, and the data gathered on the inspections will ultimately be entered in a dedicated WEBROPOL inspection form. By means of this project, the Finnish Food Authority can prepare in advance for a possible country-specific survey on the control of nutritional value information in food labelling at the EU level. In addition, the project will also collect information on other mandatory general food information.

The Finnish Food Authority is responsible for the planning and implementation of the project, advisory services, training and final reporting. The Finnish Food Authority participates in project implementation by conducting inspections of establishments (inspection veterinarians) and control of imports from third countries (border control). The Finnish Food Authority's laboratory examines the samples collected by municipalities and the Finnish Food Authority. The Customs Laboratory contributes to the project by examining the salt content of imported breads, among other things. The Regional State Administrative Agencies also provide guidance and instructions to municipal food control authorities. The municipal food control authorities carry out inspections, provide guidance and take samples.

Pathogens in packaged leaf vegetables 2018–2020 project

In 2018–2020, a national project examining pathogens in packaged leaf vegetables was carried out. The project focused on the incidence of pathogens in retailed ready-to-eat leaf vegetables, salad mixes and fresh herbs. The samples were tested for the occurrence of Shiga toxin-producing *Escherichia coli* (STEC), enteropathogenic *E. coli* (EPEC) bacteria, as well as bacteria in the *Bacillus cereus* group and the *Bacillus thuringiensis* bacterium that is one of this group. The samples were also tested for *E. Coli* to assess their hygienic quality.

The samples were collected between February 2018 and the end of 2020. Because of the COVID-19 pandemic, the project was suspended for about six months between March and October 2020. The samples were collected and basic tests on them were carried out by local food control units. The Finnish Food Authority was responsible for planning the project and conducting any further tests on the samples. The Finnish Food Authority is in the process of compiling and analysing the project’s results, and once completed, they will be reported on the Finnish Food Authority's website.

10.3 Other priorities

Harmonisation of meat inspection and slaughterhouse control

The aim of this priority area was to apply the EU Official Controls Regulation and other new legislation on meat inspection in a way that would harmonise meat inspection and slaughterhouse control. Training on this legislation was organised for operators, and two separate training days were arranged for inspection personnel. The guidelines for meat inspection were discussed with operators and meat inspection personnel at several events. The update of guidelines for red meat inspection was postponed till early 2021.

Improving preparedness to monitor and combat fraud in organic production 2020–2022

In 2020–2022, the aim of organic control as a whole will be to guide operators in planning their book-keeping, to improve the quality of the accounts, and thus also improve the quality and effectiveness of control. Organic control has shown that over the long term, fraud can be detected not only by collecting samples but also examining the operators' balance sheets. In 2020, separate priority areas were integrated into other training provided for inspectors and Regional Centres for Economic Development, Transport and the Environment.

Authorised inspectors assess the aspect selected as a priority on annual inspections and record the results on the inspection form. Inspections of Oiva line 12.5 every three years will continue as part of the market surveillance conducted by municipal authorities. In 2020, municipal control authorities inspected the authenticity of organic produce twice as often as in 2019. The number of minor shortcomings detected during the inspections carried out by municipal control authorities was higher than in 2019. The results indicate that the priority work has had a high impact on the market surveillance of organic produce. It has raised operators’ awareness and improved the quality of control.

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