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GLOSSARY



OVERVIEW

The Singapore Food Agency (SFA), formed in April 2019, is the lead agency for food-related matters in Singapore and is committed to ensuring and securing a supply of safe food for the nation.

Food security is an existential issue for Singapore. To safeguard Singapore's food security, SFA adopts a multi-pronged approach which includes diversifying food import sources, increasing local production and growing food overseas. SFA also takes a risk-based approach to food safety which is guided by science and consistent with international standards. SFA has in place an integrated farm-to-fork food safety system to ensure that food is safe for consumption.

Today's fast-evolving and complex operating landscape has accentuated Singapore's vulnerability in food

safety and security. More than 90% of Singapore's food supply is imported, with only about 1% of Singapore's land set aside for agricultural use. While there is a strong push towards sustainability, unprecedented disruptions and shifts in the global supply chains arising from the COVID-19 pandemic continue to add pressure to the current food supply resilience situation, which is already weathering effects due to climate change.

This inaugural Singapore Food Statistics 2021 provides a comprehensive coverage of the key trends in Singapore's agri-food sector, so that government, industry and consumers can jointly work together to ensure a supply of safe food for Singapore.

KEY HIGHLIGHTS FROM 2019 - 2021

Diversifying Import Sources

Given Singapore's heavy reliance on imports, a key strategy to enhance its food security is import source diversification. Singapore has increased its food supply sources, from 172 countries and regions in 2019 to 180 in 2021. This has further strengthened the nation's food resilience, especially in the face of global supply disruptions and climate change.

Achieving 30-by-30: Building Capability and Capacity in Local Production

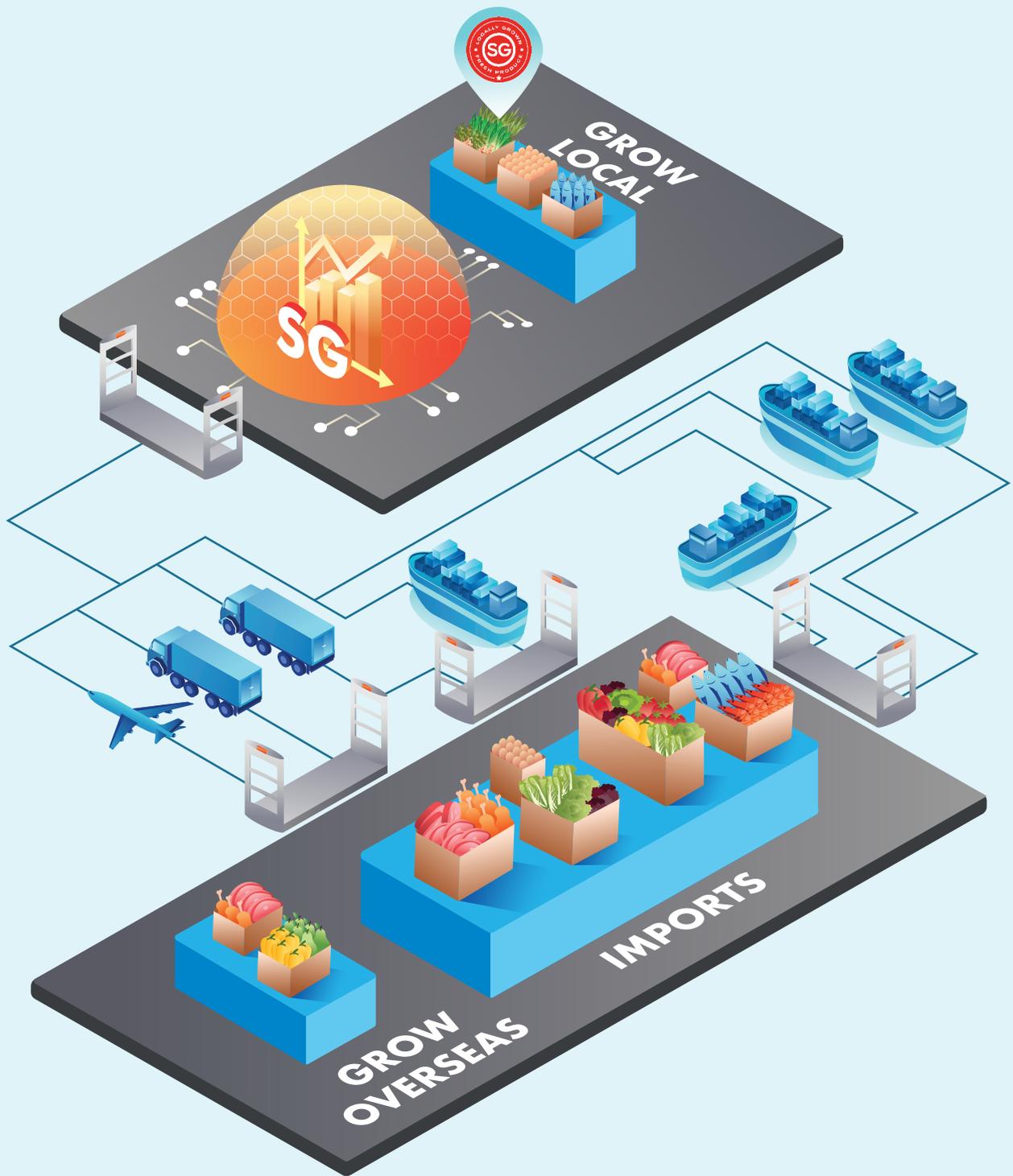
With more than 90% of Singapore's food imported, local farms play an important role in the nation's food security. Local production serves as a buffer by reducing dependence on imports during supply disruptions. SFA is committed to the "30 by 30" goal, to sustainably produce 30% of the nation's nutritional needs locally by 2030. This is done through various avenues such as co-funding support, facilitating long-term investments to increase production and encouraging demand for local produce.

From 2019 to 2021, there was a healthy growth in the number of local farms, which increased from 221 in 2019 to 260 in 2021. The local agri-food sector is

predominantly made up of farms, producing hen shell eggs, vegetables and seafood; they contributed 30%, 4% and 8% of Singapore's total food consumption respectively in 2021. The total value of local production of these food items increased 13%, from \$163.4 million to \$185.2 million from 2020 to 2021. SFA will continue to support local farms to improve productivity, while ensuring local production remains climate-resilient and resource-efficient.

Food safety is a joint responsibility between the government, industry and consumers

There is no food security without food safety. As the national authority for food safety in Singapore, we have in place a regulatory regime that takes a science-based risk management approach and considers joint responsibility in food safety assurance. Singapore has no more than 26 foodborne illness cases related to foodborne outbreaks per 100,000 population annually over the previous 3 years. SFA, together with industry stakeholders and consumers, will continue to work together to build a sustainable and safe food ecosystem for all Singaporeans.



CHAPTER 1

SAFEGUARDING SINGAPORE'S FOOD SECURITY: OUR MULTI-PRONGED APPROACH

HIGHLIGHTS

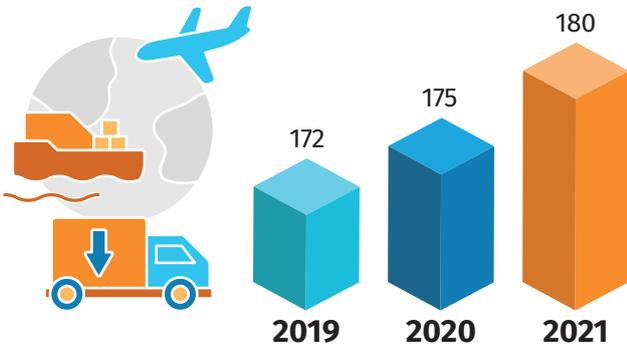
Singapore's food supply sources were further diversified between 2019 and 2021.



With more than 90% of food imported, diversification is a key strategy to ensure Singapore's food security. SFA continuously works to diversify Singapore's import sources so that Singaporeans can enjoy a stable supply of safe food.

● Import ● Local Production

In 2021, the number of imported food supply sources by countries and regions **increased**.



40 countries are allowed to export high-risk food items to Singapore, having met our requirements on food safety and public health.

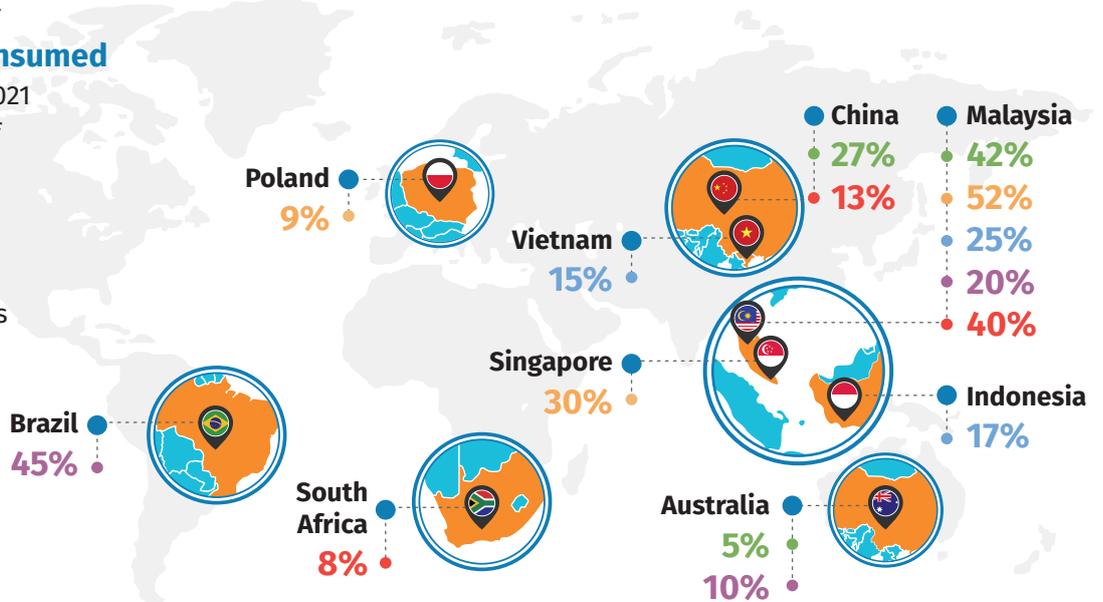
Note: High-risk food items refer to those which are more susceptible to contamination which can lead to foodborne diseases in consumers and include livestock, meat and egg items.

Major sources of commonly consumed food items in 2021

(in terms of % of total tonnage)

- Vegetables
- Hen shell eggs
- Seafood
- Meat
- Fruits

Note: Meat refers to Chicken, Pork, Beef and Mutton.



Our commonly consumed food items arrive from different channels.





DIVERSIFYING IMPORT SOURCES

We are diversifying our sources of eggs and other food items

Ensuring and securing a supply of safe food is a challenge for Singapore. As a small city-state with limited resources, only 1% of land is available for food production. Over 90% of food today is imported to meet our growing consumption needs. In 2021, one person in Singapore consumed an average of around 390 eggs, 100 kg of vegetables, 22 kg of seafood, 62 kg of meat (i.e. chicken, pork, beef, mutton) and 76 kg of fruits.

Multiple challenges could potentially impact Singapore’s food supply, including climate change, disease outbreaks, geo-political uncertainties, global population growth and global pandemics like COVID-19. To overcome these challenges, SFA works closely with industry partners, as well as various government agencies, both locally and overseas, to facilitate agri-trade and form new partnerships with potential suppliers and importers overseas. For instance, Singapore worked closely with Australia to secure priority food items and connect local importers with exporters and producers. Singapore also managed to welcome the first-ever import of frozen shrimps from Saudi Arabia in November 2020.

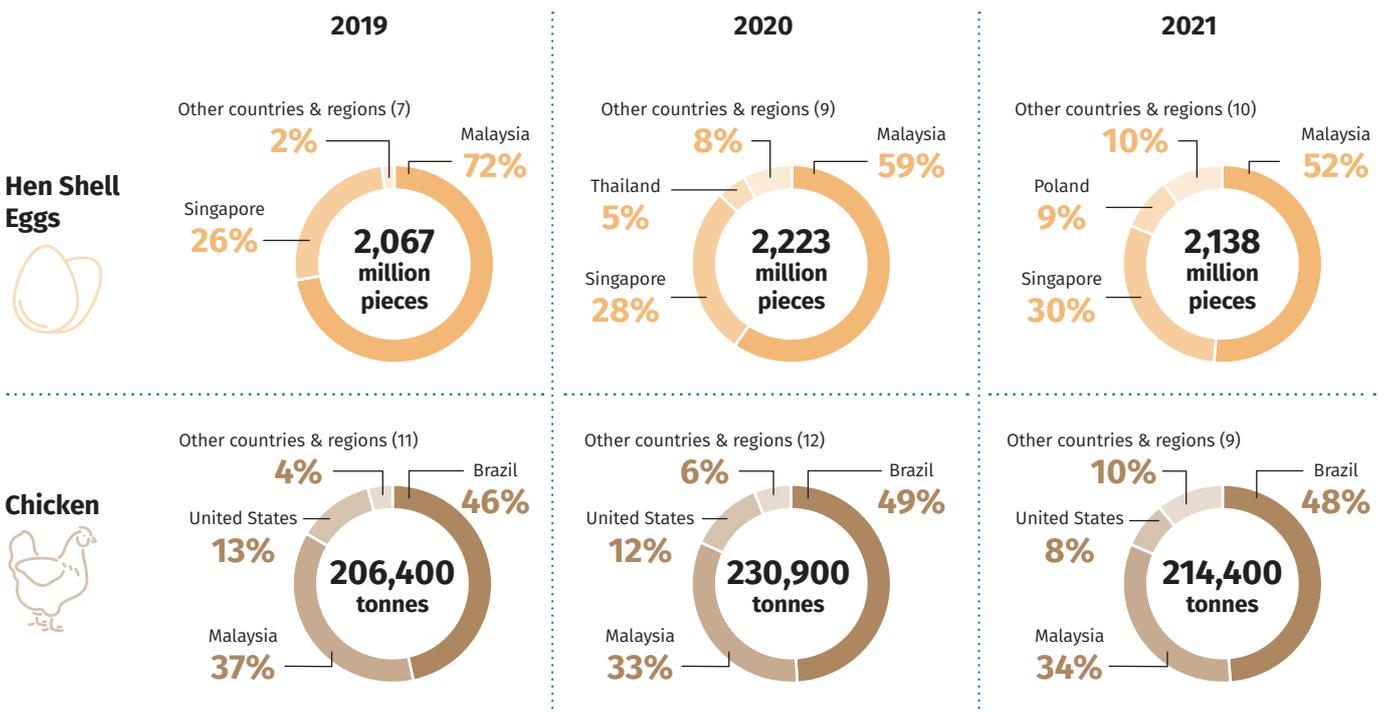
As a result, food importers today are able to leverage Singapore’s connectivity and the global free trade

environment to import from more than 170 countries and regions worldwide. The food industry is encouraged to explore new sources while maintaining existing sources. This allows importers to tap on alternatives when there is a disruption to any one source due to factors such as extreme weather conditions, manpower shortages or logistical bottlenecks.

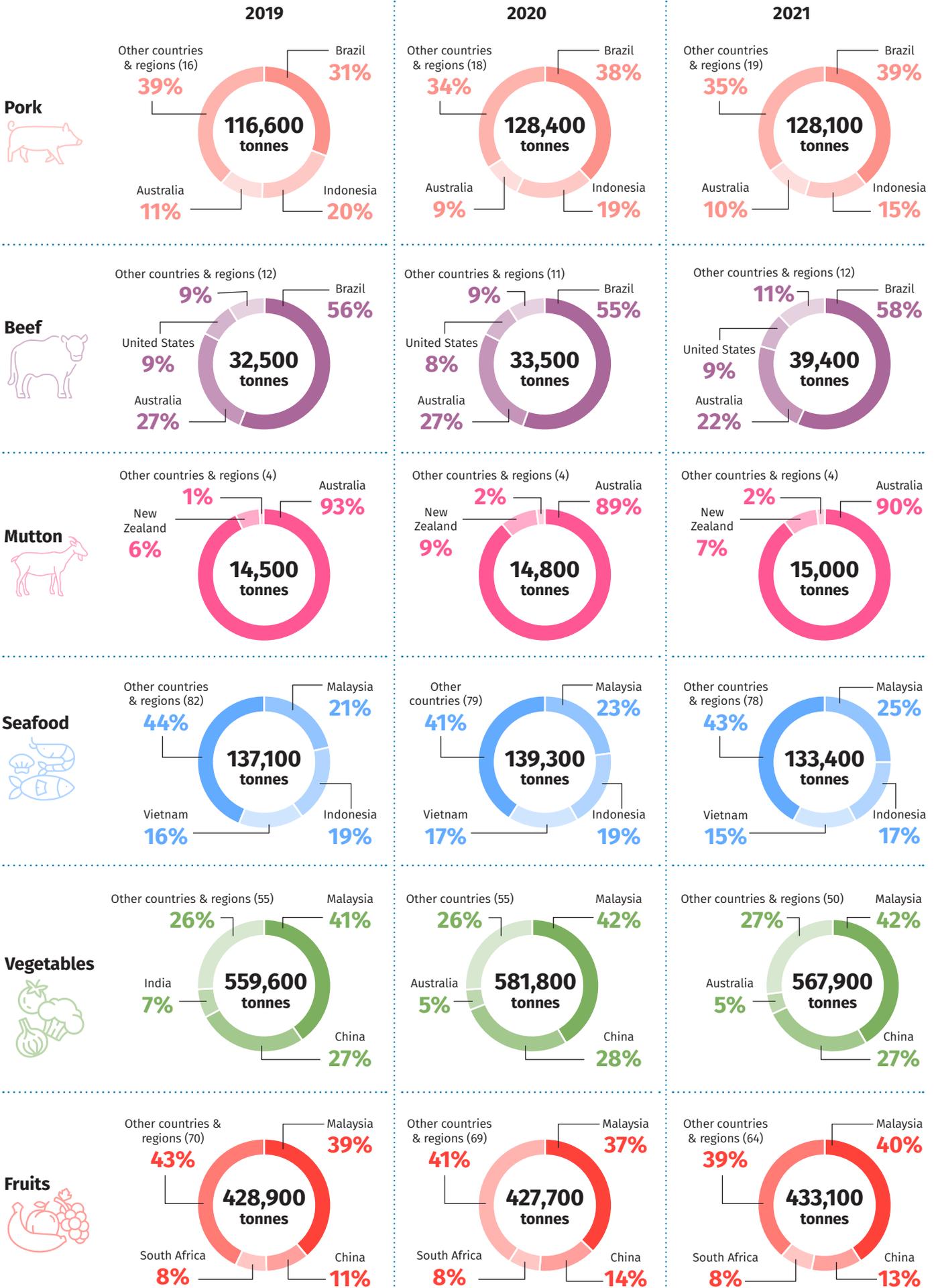
Notably, efforts to diversify the nation’s egg supply over the past 3 years have helped withstand supply disruptions such as farm closures, and ensure a stable supply of eggs in Singapore. For example, in 2021, imported eggs from alternative sources such as Thailand, Australia, Spain and Poland contributed to some 18% of our egg supply, up from 2% in 2019.

Compared to 2020, imported quantities of food items such as vegetables, hen shell eggs, seafood and chicken dropped by 2% to 7% in 2021. This was consistent with the decline of the overall Singapore population, largely due to the drop in non-residents during the COVID-19 pandemic (Department of Statistics, September 2021). This was also the first time there was a year-on-year decrease for both citizen and resident populations since these data were first collected in 1970.

Figure 1.1: Singapore’s Supply of Commonly Consumed Food by Top Sources



Note: (1) Statistics for seafood and meat (i.e. chicken, pork, beef, mutton) include live, chilled and frozen forms. (2) Figures may not add up to the totals due to rounding. (3) For details on Singapore’s population trends, please refer to the report on Population Trends published by the Department of Statistics (DOS).





STRENGTHENING FOOD SAFETY ASSURANCE

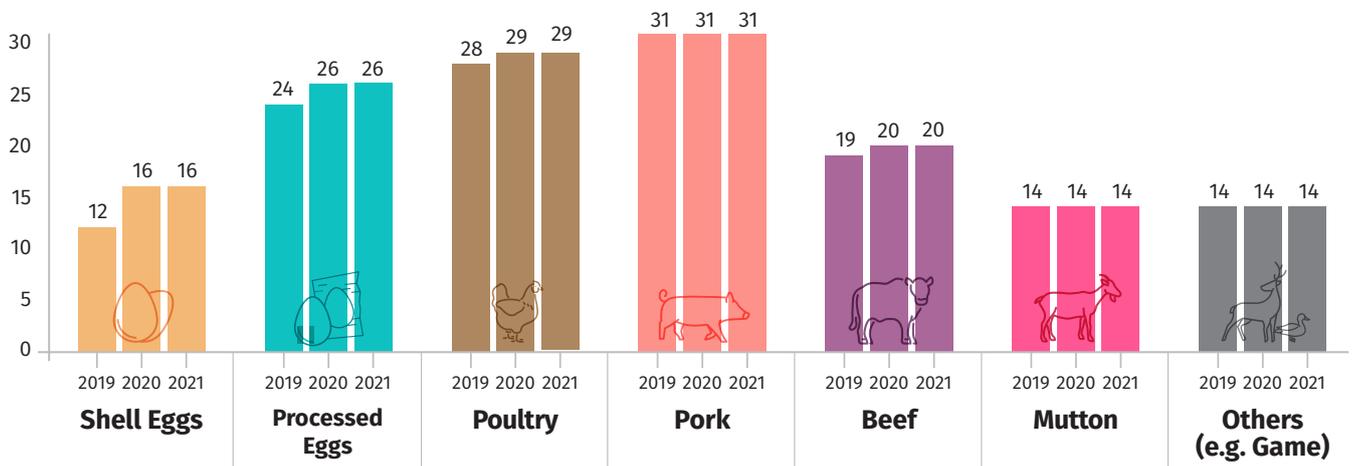
SFA's risk-based accreditation framework provides assurance

SFA's food diversification strategy is closely intertwined with food safety. Our risk-based accreditation framework helps ensure that high-risk products such as meat and meat products, as well as eggs, are imported from accredited sources that meet our food safety and animal health standards and requirements. Accreditation is key as these products can carry food safety risks and animal diseases. Growing food safety risks globally – arising from an increasingly complex supply chain and evolving food business models, technologies and products –

further underscore the importance of accreditation, through which food safety protocols can be ensured and tightened upstream for certain food products.

To further strengthen Singapore's egg supply resiliency, SFA has been working closely with industry and also actively accrediting new sources and facilitating new link-ups, where applicable. Since then, SFA has approved 16 countries for the export of eggs to Singapore, up from 12 in 2019.

Figure 1.2: Number of Approved Countries by Food Type



Note: (1) Poultry refers to chicken, duck, turkey, goose, pigeon, quail, and wild guinea fowl, and includes livestock. (2) Shell eggs refer to fresh hen and quail shell eggs.

SAFEGUARDING SINGAPORE'S FOOD SUPPLY

Singapore's food supply remained stable between 2019 and 2021

Over the past 3 years, Singapore's overall food supply generally remained stable. This is the result of forward-planning efforts to safeguard Singapore's food supply, in preparation of possible disruptions.

The cost of food is generally impacted by a combination of factors, including import prices, energy costs, freight, labour, seasonal weather changes, and global demand. As a small and open economy that imports most of

our food supplies, Singapore may be affected by these developments. From 2019 to 2021, import prices of commonly consumed food varied between -4% and 17%.

Import source diversification, complemented with local food production, hence helps us hedge against supply and price disruptions. By buying from different sources, Singapore can reduce the impact of food supply shortages.

Figure 1.3: Overview of Imports of Commonly Consumed Food by Mode of Transport

Air Road Sea

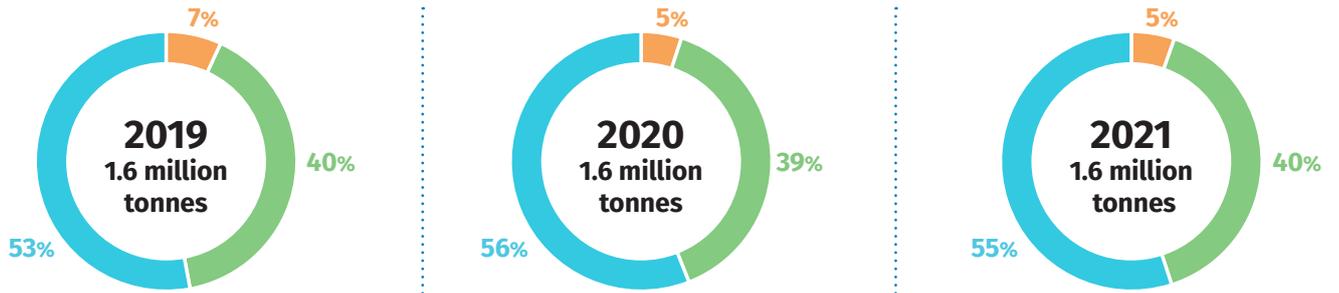


Figure 1.4: Import Quantities by Food Type

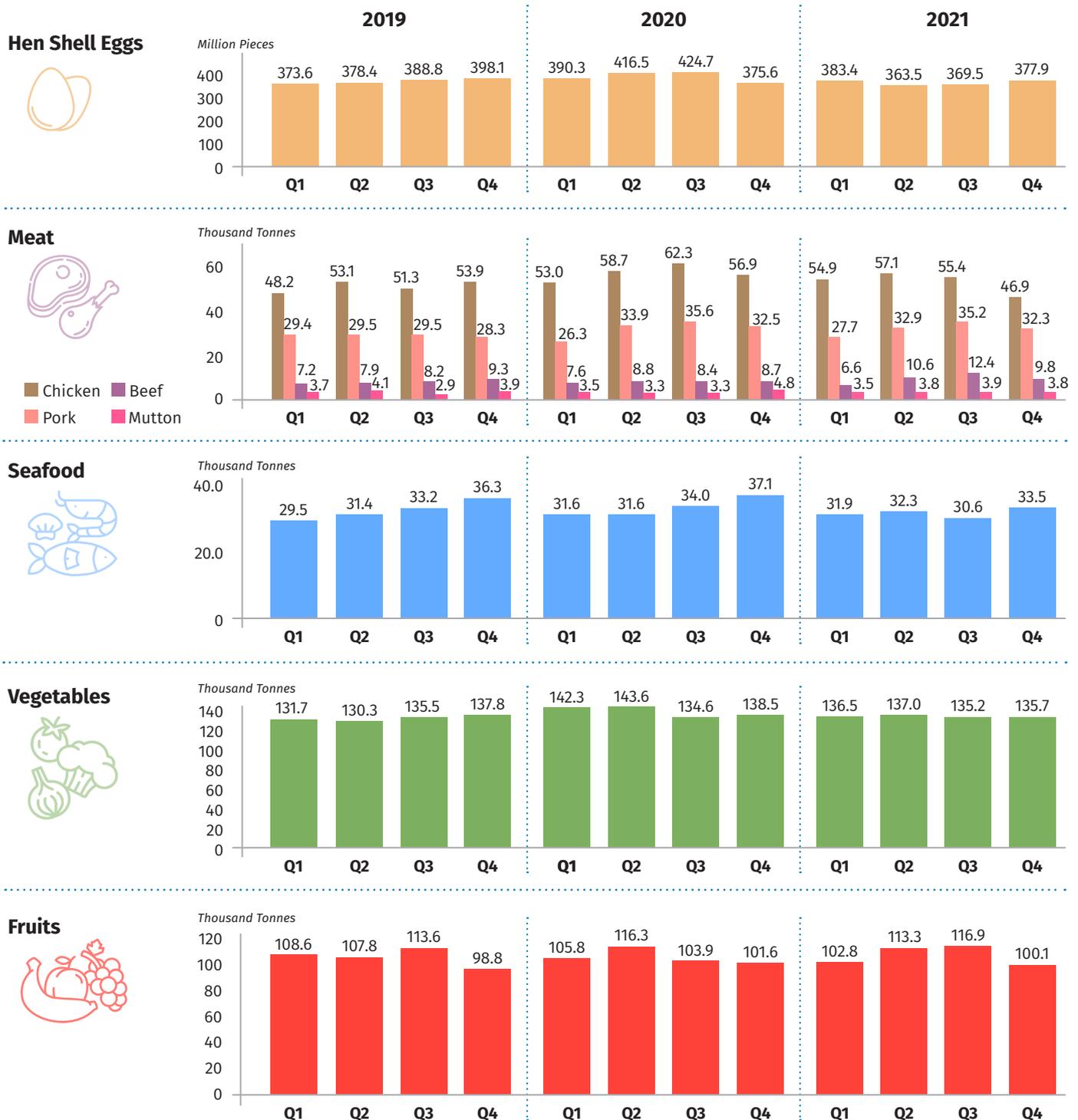
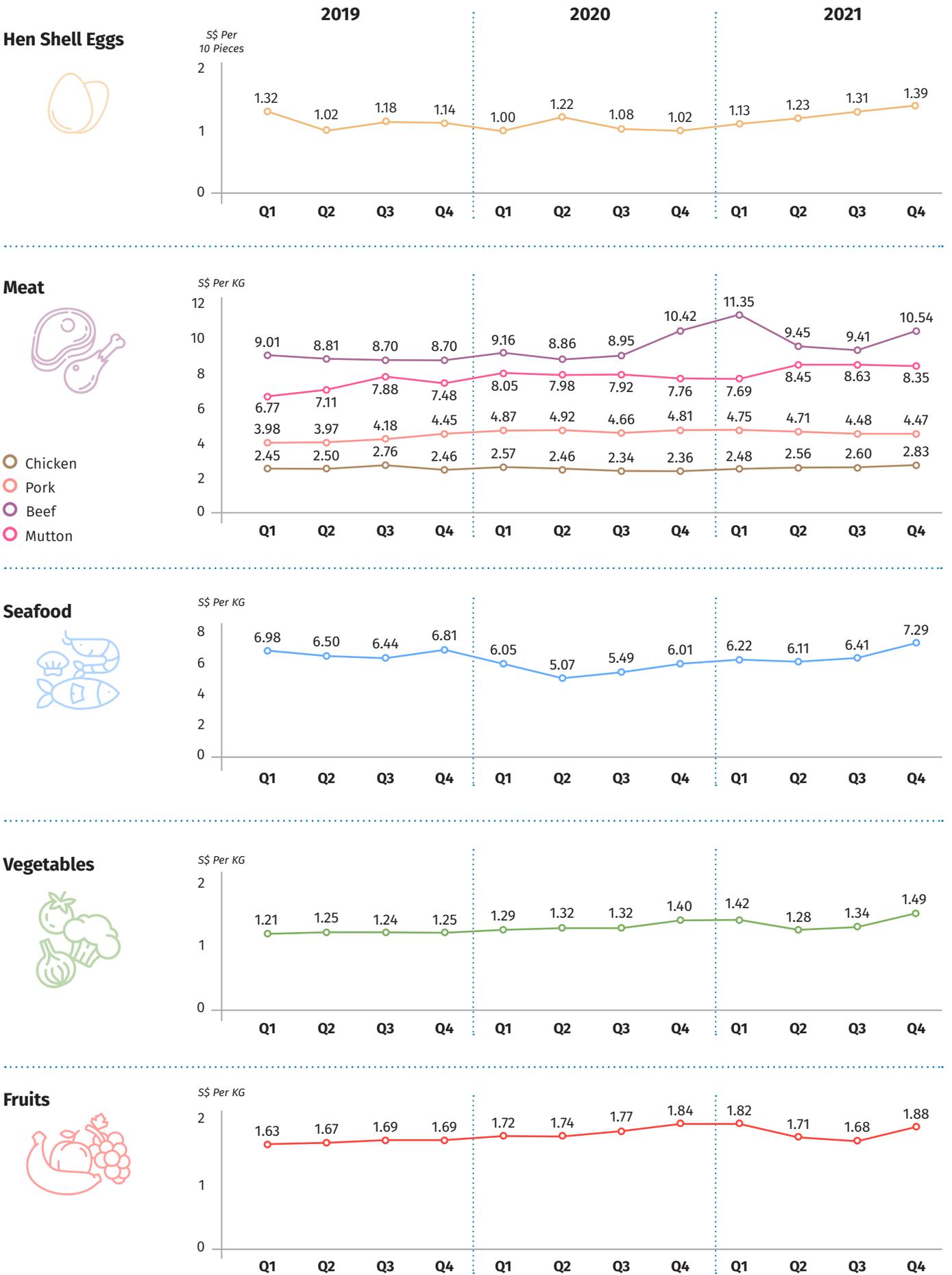


Figure 1.5: Import Prices by Food Type



MANAGING KEY FOOD DISTRIBUTION NODES

SFA pays close attention to local food distribution networks, works closely with industry partners to ensure stable food supply

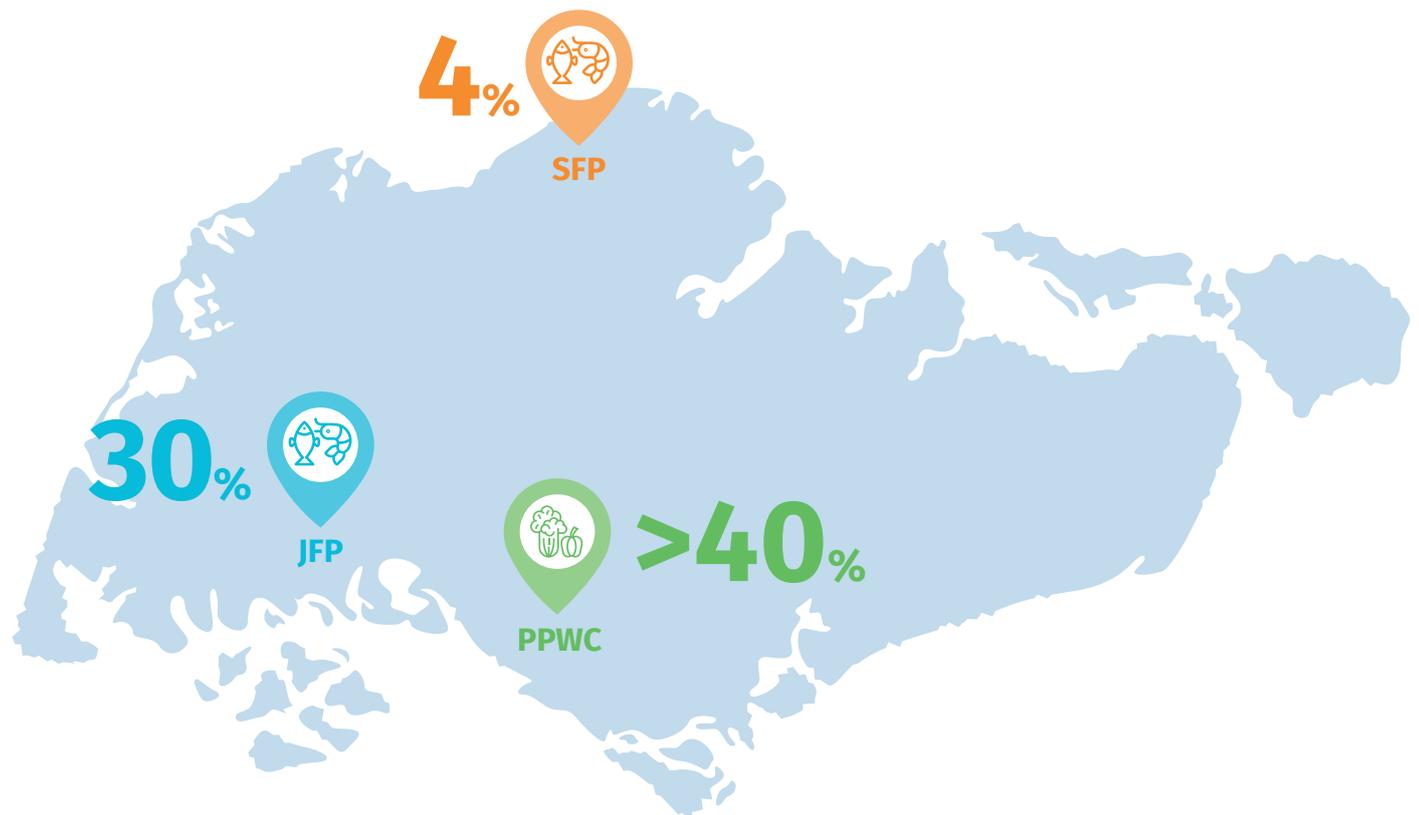
SFA works closely with industry partners to build diversified food supply chains to strengthen Singapore's food security.

Today, SFA manages the Jurong Fishery Port (JFP) and Senoko Fishery Port (SFP), which serve as wholesale and distribution centres for locally-sourced and imported fish and seafood. In 2021, JFP and SFP respectively handled about 30% and 4% of Singapore's seafood imports. The remaining two-thirds of Singapore's seafood imports were distributed to industry through other routes, such as air and sea.

SFA also manages the Pasir Panjang Wholesale Centre (PPWC), the main wholesale and distribution centre for local and imported fruits and vegetables. PPWC

handled over 40% of Singapore's fruit and vegetable imports in 2021.

Notwithstanding the important role the distribution centres play, we were able to limit the impact to our seafood and vegetables supply when these facilities underwent temporary closures in 2021 due to COVID-19. During this time, imports were transported directly to distribution centres or alternative premises of major retailers, merchants ramped up imports and improvements to process flows were made to adapt to the enhanced Safe Management Measures (SMM). This was only possible with the close partnership between SFA and industry partners, to co-create and overcome operational challenges.





SFA licences Singapore’s slaughterhouses to ensure locally-slaughtered livestock are safe to eat

Today, all slaughterhouse facilities in Singapore are licensed by SFA, where they are subject to licensing controls including biosecurity and bio-segregation measures to prevent spread of infectious diseases. Regular inspections and sampling are also carried out to ensure that slaughterhouses adhere to regulations and that the meat is free of foodborne pathogens and chemical containments.

Singapore’s total supply of locally-slaughtered poultry decreased by 4% from 2019 to 2021 from 56.6 million to 54.4 million, whereas the number of pigs slaughtered locally increased by about 15% during the same period from 355,000 to 408,000.

Figure 1.6: Number of Poultry Slaughtered

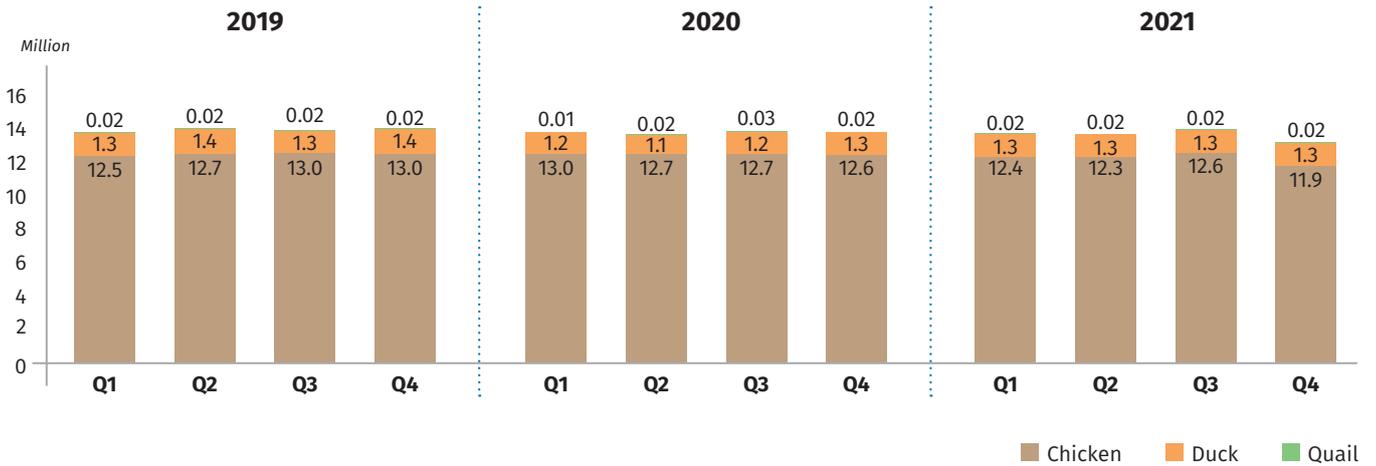
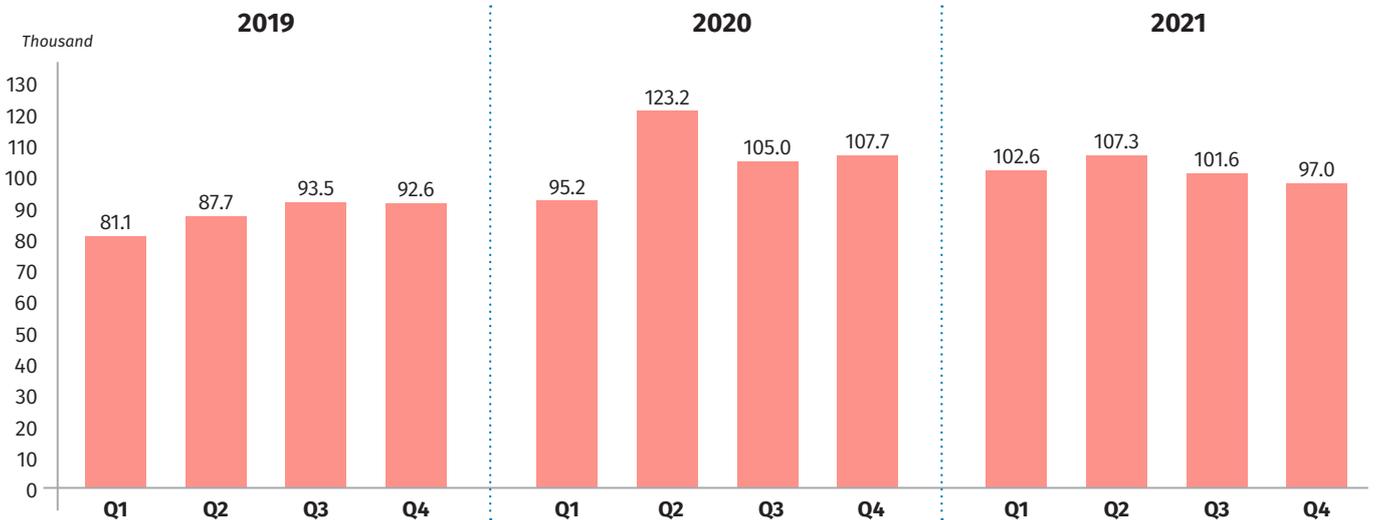
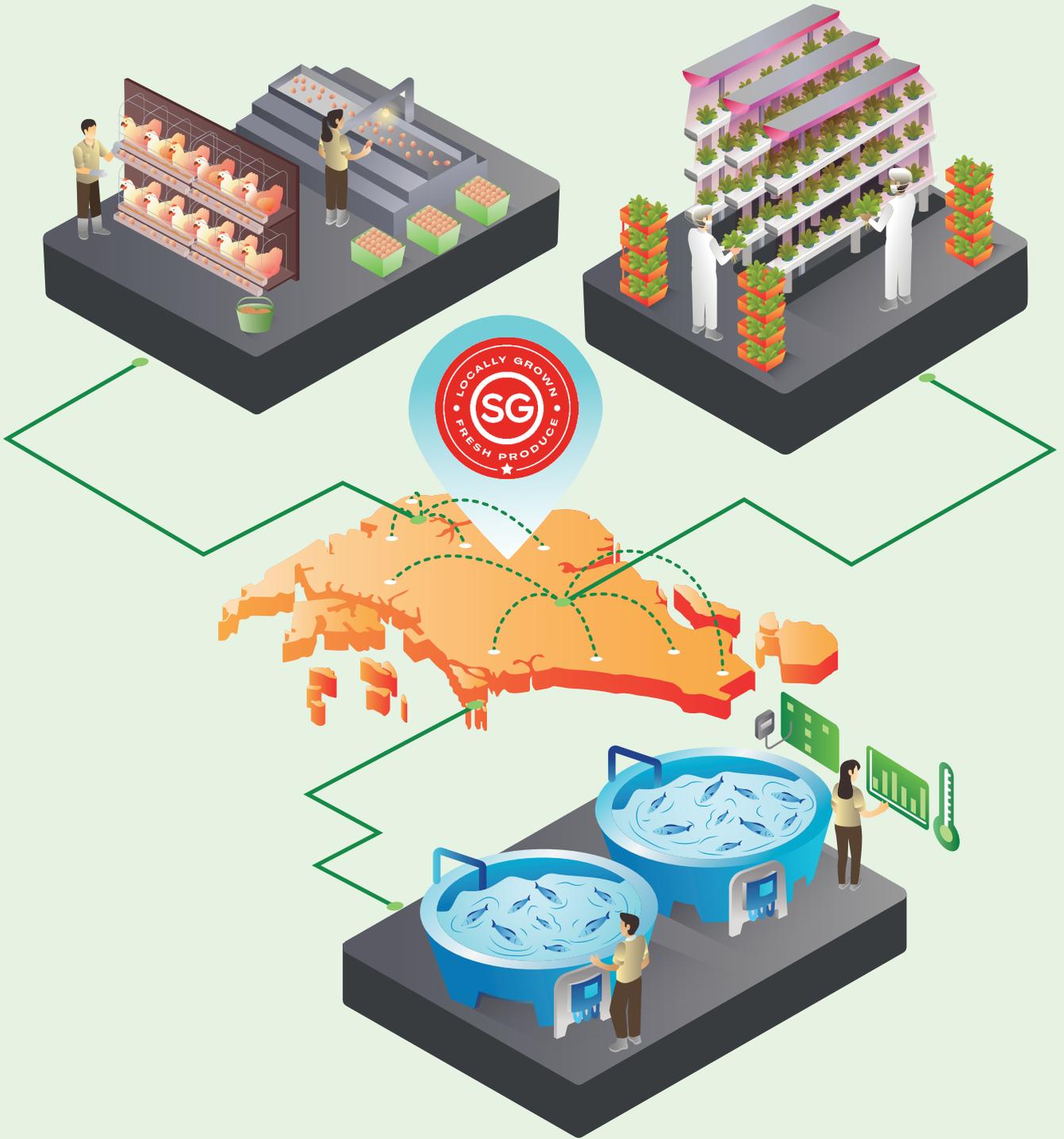


Figure 1.7: Number of Pigs Slaughtered







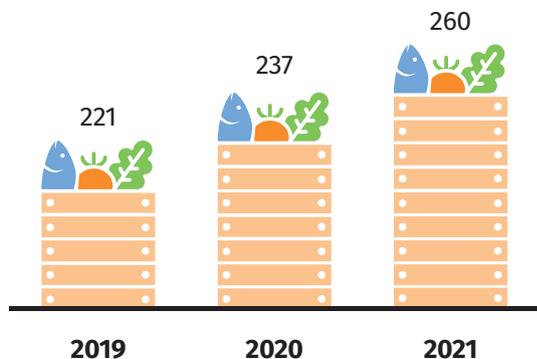
CHAPTER 2

STRENGTHENING SINGAPORE'S FOOD RESILIENCY: LOCAL PRODUCTION

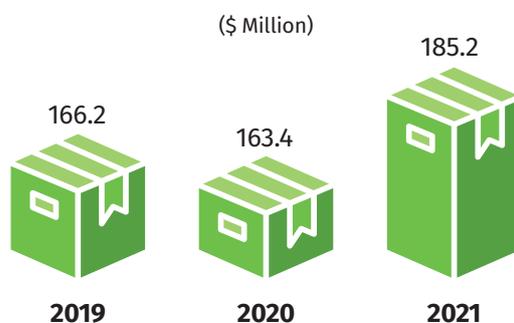
HIGHLIGHTS

While import source diversification has served us well, local production provides a buffer supply in the event our import sources are disrupted.

From 2019 to 2021, the number of licensed local food farms **increased**.

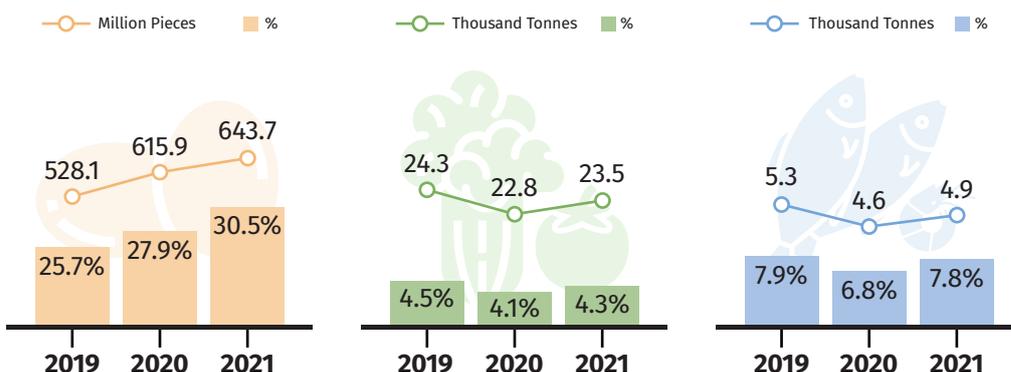


The total value of local production **increased by 13%** from 2020 to 2021.



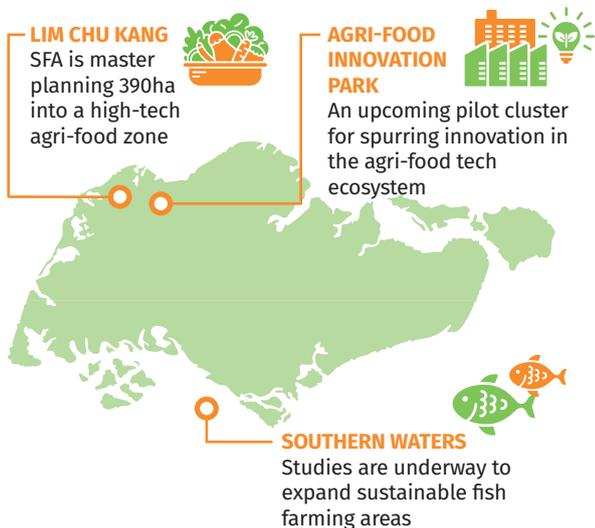
From 2019 to 2021, local production of hen shell eggs **steadily increased**. Around **one in three eggs** consumed in 2021 was locally produced.

Local Production and as a Percentage of Total Consumption by Year (2019 to 2021)



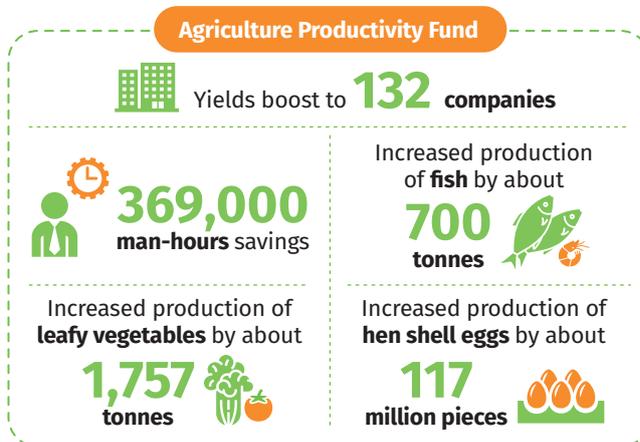
Optimising agricultural space

Only 1% of small, dense Singapore's land is for agriculture. This space needs to be used as efficiently as possible.



Enhancing productivity with technology and advanced farming systems

Since 2014, SFA has committed more than \$50m to support more than 200 projects in their productivity enhancement investments.



* The Agriculture Productivity Fund (APF) was replaced by the Agri-Food Cluster Transformation (ACT) Fund in April 2021 (\$60m allocated).

ADVANCING THE “30 BY 30” GOAL

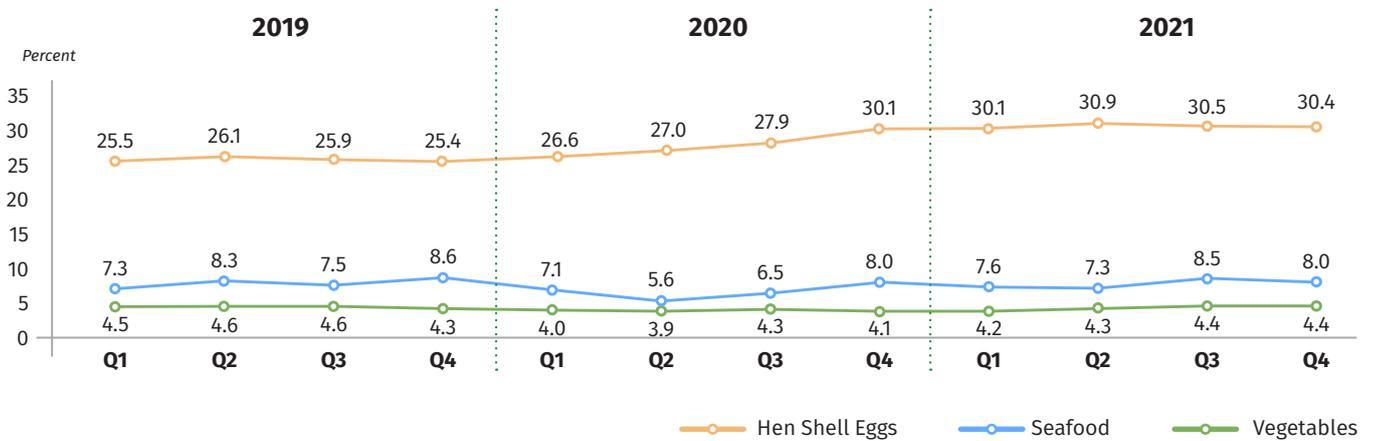
Building the agri-food industry’s capability and capacity to sustainably produce 30% of Singapore’s nutritional needs locally by 2030

The global food system faces many challenges, from short-term disruptions such as disease outbreaks in a source country and the COVID-19 pandemic, to long-term trends such as climate change, global population growth and dwindling resources. In 2019, Singapore announced the “30 by 30” goal to develop the capability and capacity of the local agri-food

industry to sustainably produce 30% of the nation’s nutritional needs locally by 2030.

Today, Singapore’s local agri-food sector is predominantly made up of hen shell egg, vegetable and seafood farms. These contributed 30%, 4% and 8% of our total food consumption respectively in 2021.

Figure 2.1: Local Production as a Percentage of Total Food Consumption



Note: Vegetables are of fresh and chilled forms. Seafood are of live and chilled forms.

Over the previous 3 years, local production has largely remained stable. With capacity and productivity improvements, the local production of hen shell eggs has increased by 7.3% on average year-on-year. This has helped strengthen Singapore’s egg supply resilience, complementing efforts to diversify our import sources to reduce dependence on a single source. The upcoming development of a fourth egg farm in Singapore – with state-of-the-art technologies and environmentally-sustainable practices – will further boost capacity of local egg farms to meet about half of Singapore’s demand for eggs when fully operational from 2024.

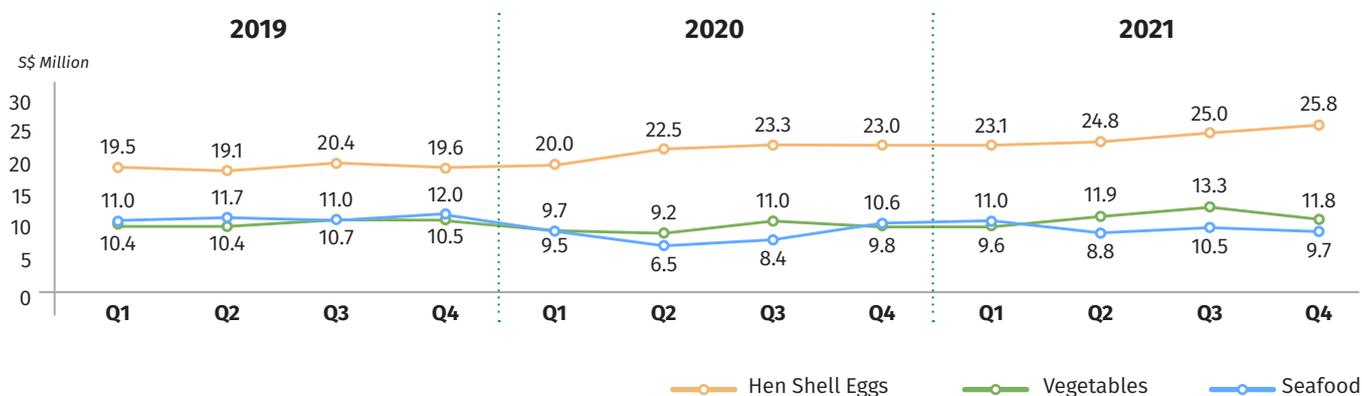
Meanwhile, transient fluctuations were also observed as local production of seafood and vegetables decreased by 14% and 6% respectively in 2020. This arose as farms adjusted their output due to lower sales during the first year of the COVID-19 pandemic. While initial demand surges were observed during periods of food supply disruption, it did not translate to consistent increased demand throughout the year. Nonetheless, local farms played an important role in times of disruption, such as during the two-week closure of the Jurong Fishery Port (JFP) in July 2021, when local fish farms stepped up to keep their production going to minimise the impact of the temporary closure of JFP.

Figure 2.2: Local Production





Figure 2.3: Value of Local Production



Note: Statistics for seafood include live and chilled forms only.

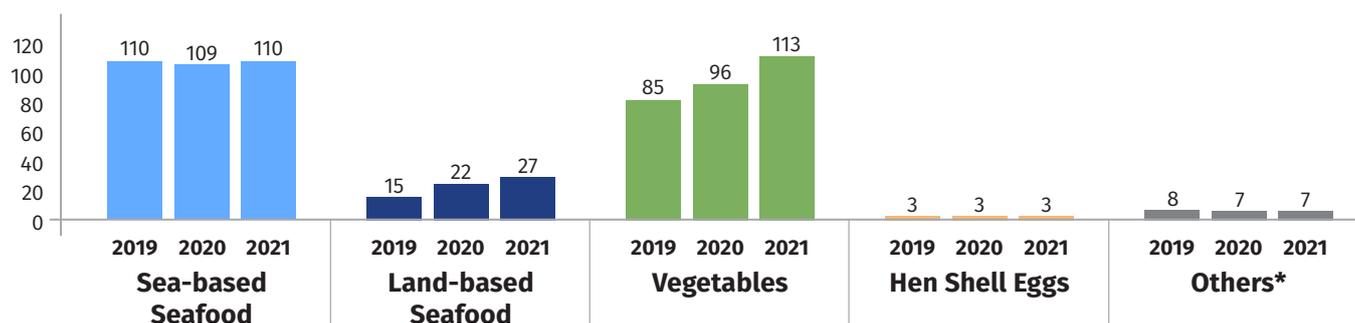
OPTIMISING THE USE OF SPACE FOR THE AGRI-FOOD INDUSTRY

Overcoming land and sea space challenges

Building the capability and capacity of Singapore's agri-food industry is a journey. The COVID-19 pandemic was an unexpected curveball for the industry, which led to unintended delays in the food industry (e.g. setting up new farms, upgrading existing farms). Despite that,

Singapore still managed a healthy increase of about 17% in the number of farms — from 221 in 2019 to 260 in 2021 — to produce food such as fresh eggs, seafood and vegetables. This was on the 1% of Singapore's land area which is set aside for food farms.

Figure 2.4: Number of Licensed Local Food Farms Based on Primary Activities



* 'Others' refers to cattle, goat, frog and quail eggs.

FUNDING SUPPORT FOR LOCAL FARMS TO BOOST PRODUCTION CAPABILITY AND CAPACITY

Funding for R&D and technology adoption pave the way for longer-term transformation

Transforming the agri-food sector into one that is highly productive, climate-resilient and sustainable is key as SFA works towards the “30-by-30” goal. Given limited land and resources, it is imperative to look for innovative ways to leverage technology in order to grow more with less.

As such, SFA has been supporting the industry in driving research innovation and plugging existing technological gaps. Under the Singapore Food Story R&D Programme, a total of \$144 million was set aside to enable R&D in sustainable urban food production, future foods, and food safety science and innovation.

To effectively harness technology to produce food in a productive and sustainable way takes time, given that this remains a nascent industry with more innovative solutions only gaining momentum and credibility in recent years. Adopting such farming technology would also typically require higher upfront capital investment in infrastructure and technological systems.

To accelerate this, SFA administered the \$63 million Agriculture Productivity Fund (APF) from 2014 to 2020,

to co-fund farmers’ investments in the adoption of high-tech equipment and farming systems, R&D and test-bedding of technologies. More than \$50 million has been committed to support 132 companies as of 31 Dec 2021. These projects have reaped considerable productivity outcomes, including savings in man-hours and higher production of key food items such as vegetables, fish and hen shell eggs.

In April 2021, SFA introduced a \$60 million Agri-Food Cluster Transformation (ACT) Fund, to further boost support for local farms to adopt technology and advanced farming systems along the farm-to-fork value chain, with a higher co-funding of up to 70% for a wider spectrum of commonly-consumed food items.

Beyond SFA’s efforts to support farms and boost production, consumers too play a big part in sustaining a healthy agri-food eco-system. While grocery shopping, they can look out for the bright red “SG Fresh Produce” logo which indicates grown in Singapore produce. With increased demand off-take for local produce, farms will be encouraged to increase production. This in turn strengthens Singapore’s food supply resiliency.

Figure 2.5: Cumulative Funding Committed and Disbursed Since Start of Agriculture Productivity Fund (APF)

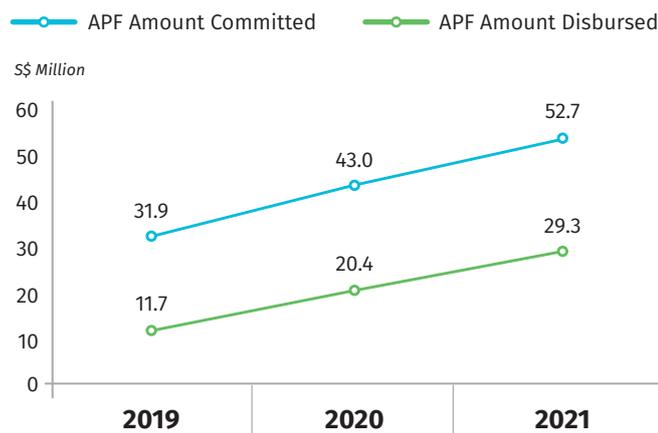
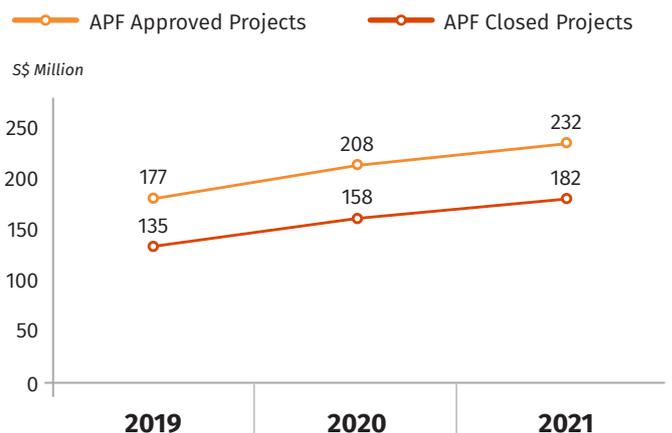


Figure 2.6: Cumulative Number of Projects Approved and Closed







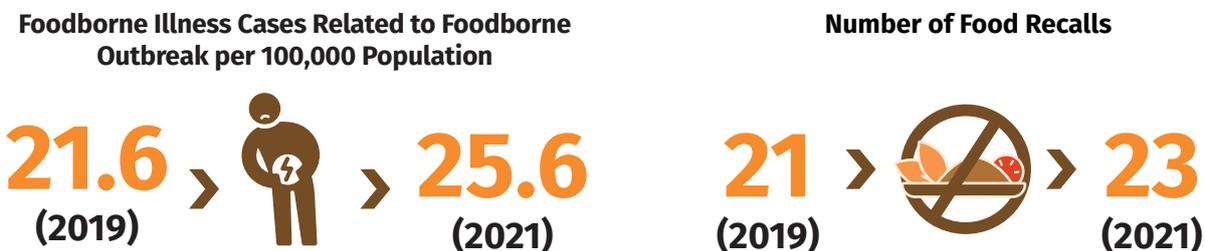
CHAPTER 3

ADOPTING A RISK-BASED APPROACH: FOOD SAFETY IN SINGAPORE

HIGHLIGHTS

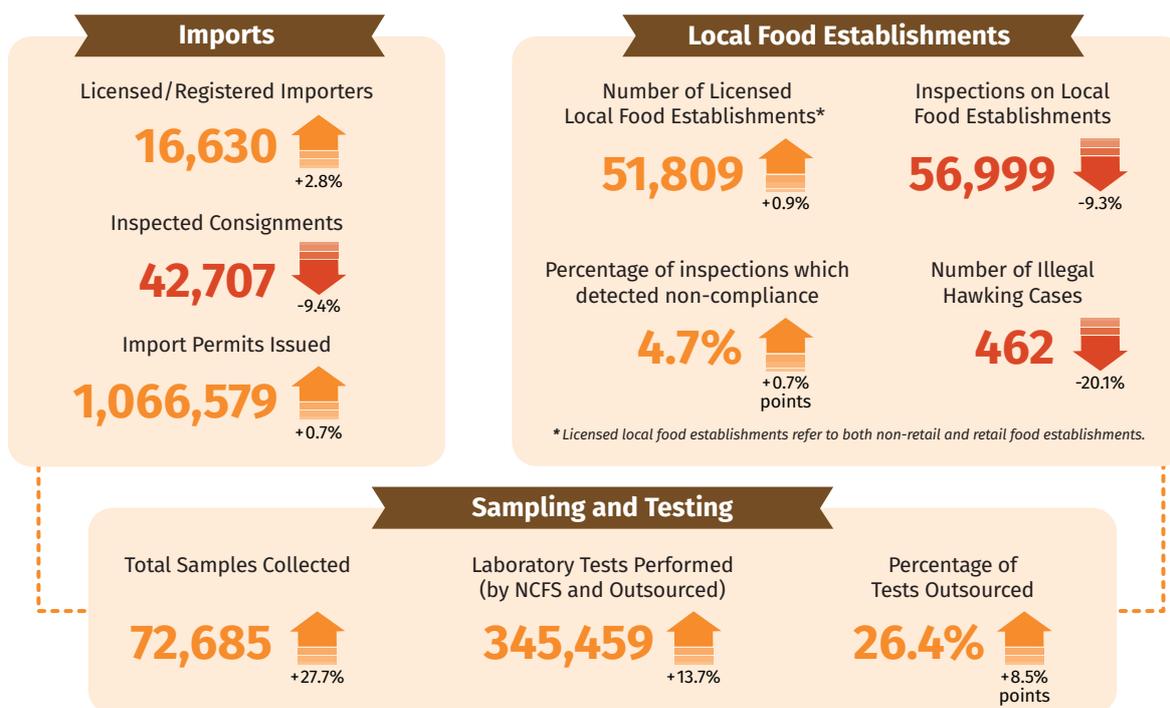
SFA's integrated food safety system from farm to fork help ensure that food is safe for consumption.

The number of foodborne illness cases and food recalls remained relatively stable from 2019 to 2021.



Targeted and data-driven operations help SFA to maximise resources to achieve its mission, despite the increasingly diverse imported food sources and an increase in the number of food establishments.

Figures in 2021 and Annual Percentage Change (2019 to 2021)





RISK-BASED APPROACH TO FOOD SAFETY

SFA takes a risk-based approach to food safety, which meets international standards and is guided by science

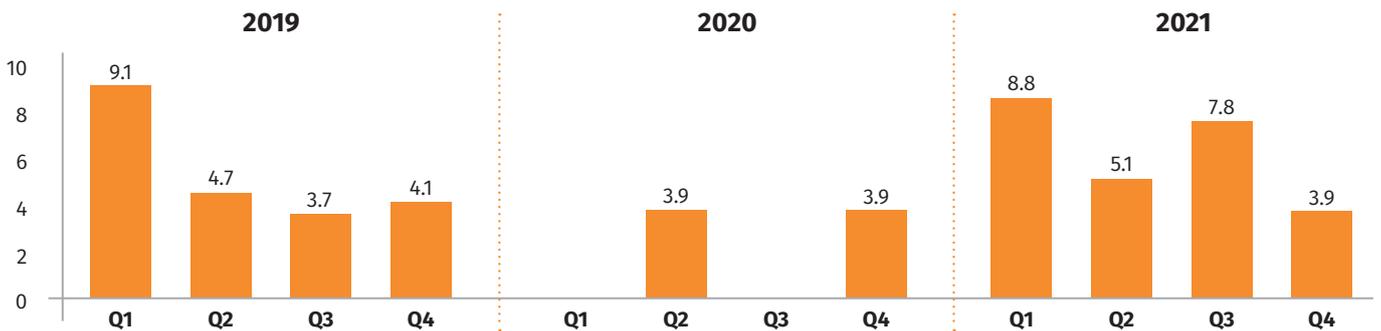
As Singapore imports about 90% of its food from diversified sources, there is a need for SFA’s food safety system to be well-integrated and up-to-date with international standards. This is key to ensuring that Singapore’s population can safely enjoy a wide variety of food in various settings, from their homes to hawker centres and restaurants.

Food safety incidents can occur anywhere along this complex global food supply chain. SFA, as Singapore’s food authority, regulates food safety through two main methods. One is through the accreditation of overseas sources for higher-risk products such as meat and eggs, to ensure imports meet our safety standards. Closer to home, we monitor local farms and food establishments through licensing, inspection, sampling and laboratory testing regimes.

All these are key components in ensuring food safety for our nation. The number of foodborne illness cases related to foodborne outbreaks have been kept low, with no more than 26 such cases per 100,000 population annually over the previous 3 years. In 2020, the number of food poisoning incidents fell due to COVID-19 dining restrictions.

Food safety is a joint responsibility. SFA takes a long-term view of food safety and will continue to work with the industry and consumers in order to shape and transform the agri-food sector to ensure that Singaporeans can continue to enjoy a high level of food safety. Consumers need to make informed decisions and adopt good food safety practices. All parties need to work hand-in-hand to ensure the supply of safe food in Singapore.

Figure 3.1: Foodborne Illness Cases Related to Foodborne Outbreak per 100,000 Population



Note: Provisional data as at 31 December 2021. Numbers may change over time depending on the outcome of the investigation of foodborne illness cases. Figure 3.1 includes only the number of persons (also known as cases) affected in foodborne outbreaks involving 15 or more persons. There were no cases in Q1 and Q3 2020.

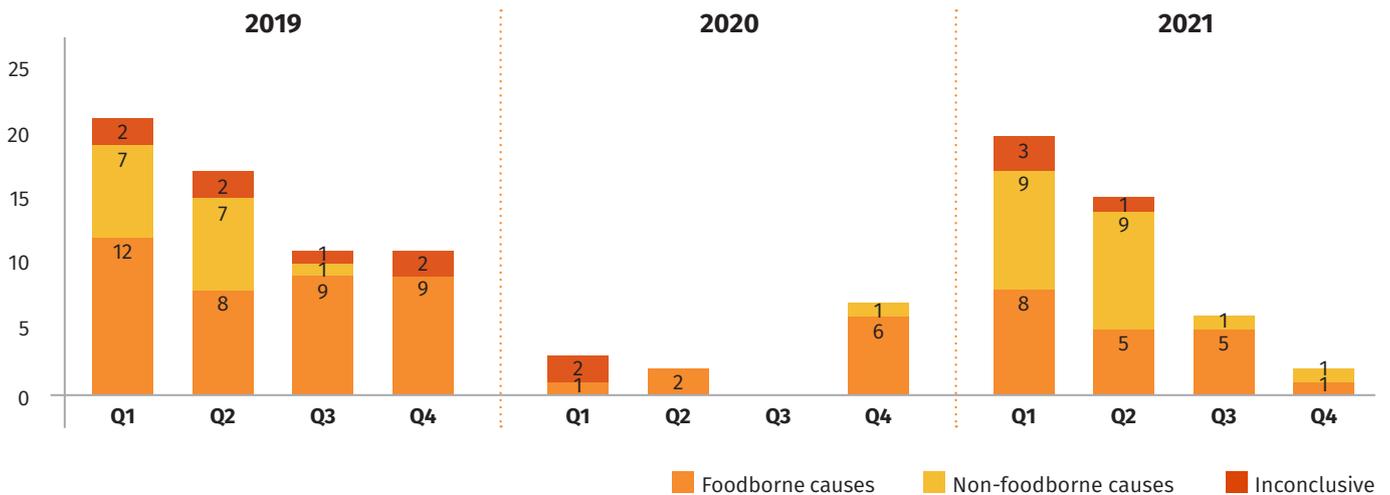
CLOSE WATCH ON GASTROENTERITIS INCIDENTS

SFA regulations underpin Singapore’s food safety ecosystem

Over the past 3 years, the number of major gastroenteritis incidents fluctuated considerably, with significantly fewer incidents in 2020. This was largely due to the COVID-19 safe management measures which resulted in a drop of large-scale commercial cooking activities, such as catering with self-service stations and self-service buffets – the top contributors of gastroenteritis incidents in previous years.

With the relaxation of the safe management measures in 2021, the number of major gastroenteritis incidents rebounded slightly in 2021 to 43, with almost half of them due to foodborne causes. These incidents were primarily attributed to poor housekeeping practices in schools.

Figure 3.2: Number of Major Gastroenteritis Incidents by Causes



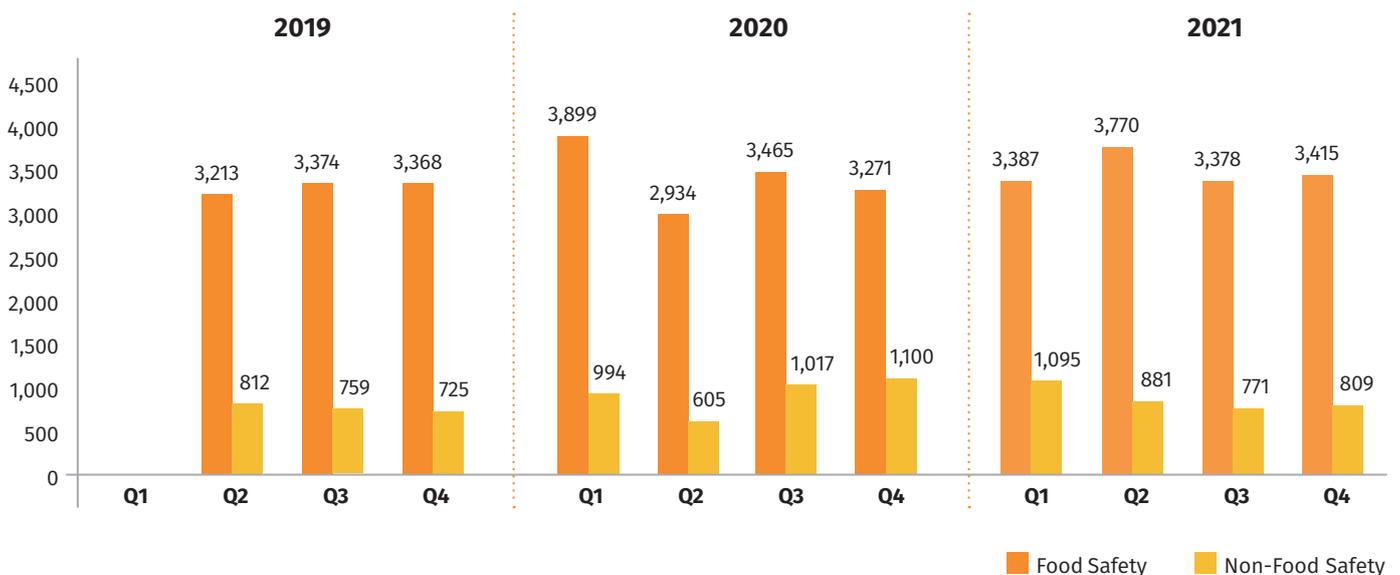
JOINT EFFORTS IN INVESTIGATING PUBLIC FEEDBACK CASES

SFA takes public feedback seriously

On average, SFA receives and investigates over 17,000 cases of public feedback each year. The majority relate to food safety issues such as gastroenteritis incidents, poor hygiene practices among food handlers, dirty premises and foreign matter found in food. Where

warranted, joint investigations for gastroenteritis incidents are conducted together with the Ministry of Health (MOH) and other relevant government agencies such as the Early Childhood Development Agency (ECDA) and the National Environment Agency (NEA).

Figure 3.3: Number of Food Safety and Non-Food Safety Feedback



Notes:(1) Provisional data as at 31 December 2021. Numbers may change over time depending on the outcome of the investigation of foodborne illness cases. (2) Only data formed after SFA's formation in April 2019 is reported.



REGULATING FOOD IMPORTS

A culture of accountability ensures the safety of our food imports

In this complex food ecosystem, food importers play a key role in ensuring our nation’s food security. They help to secure new sources of supply, maintain existing ones and ensure the safety of imported food.

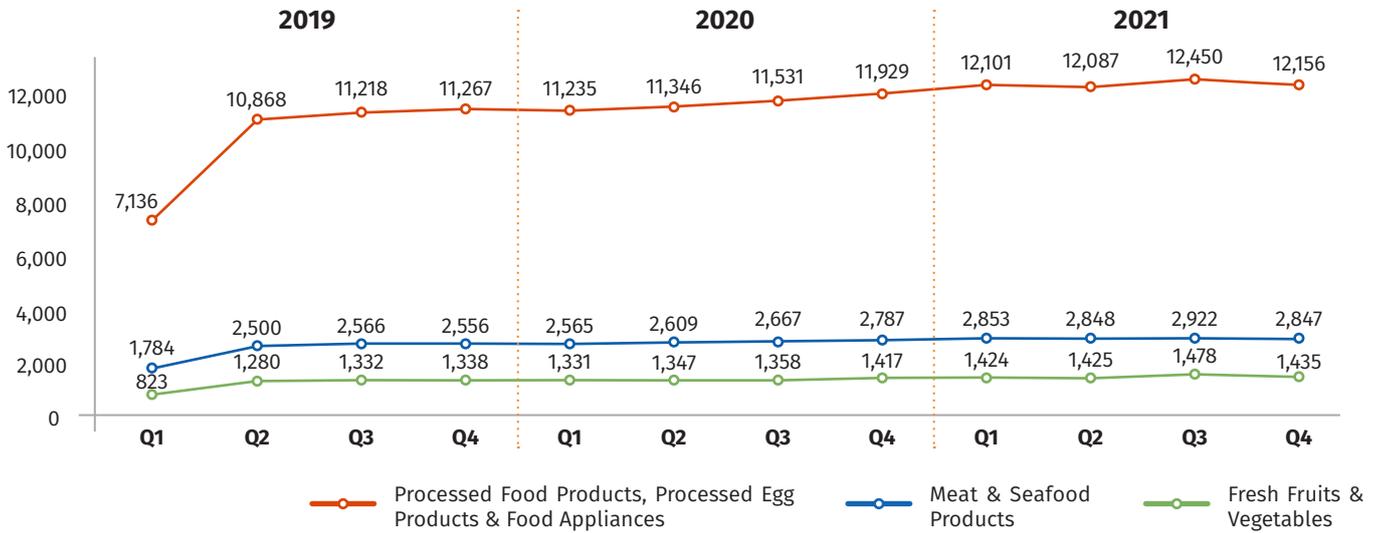
To ensure accountability, SFA requires all food importers to be licensed or registered. Import permits are also necessary for each consignment to enable food traceability and facilitate food recalls in case of infringements. Over the previous 3 years, this pool of licensed/registered importers has expanded. In 2021, a

total of 16,630 licenses and approximately 1.067 million import permits were issued – an increase of 1.9% and 8% respectively from 2020.

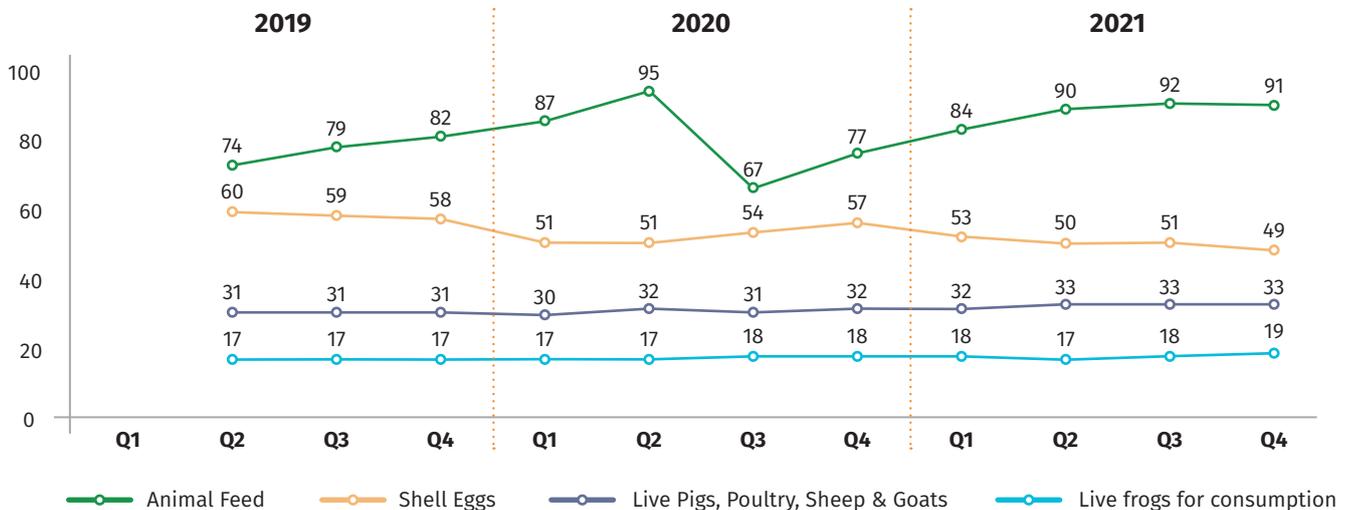
In general, food importers do play their part in meeting food safety requirements and ensuring food brought in is safe for consumption. For the minority who do not comply, SFA takes enforcement actions against them, including the levy of composition fines, suspension of licences and prosecution in court. 2021 saw 102 warnings issued, 59 compound fines imposed and 7 court cases imposed.

Figure 3.4: Number of Licensed/Registered Importers

a) Importers of Fresh Meat, Seafood, Fruits, Vegetables, Processed Foods and Food Appliances



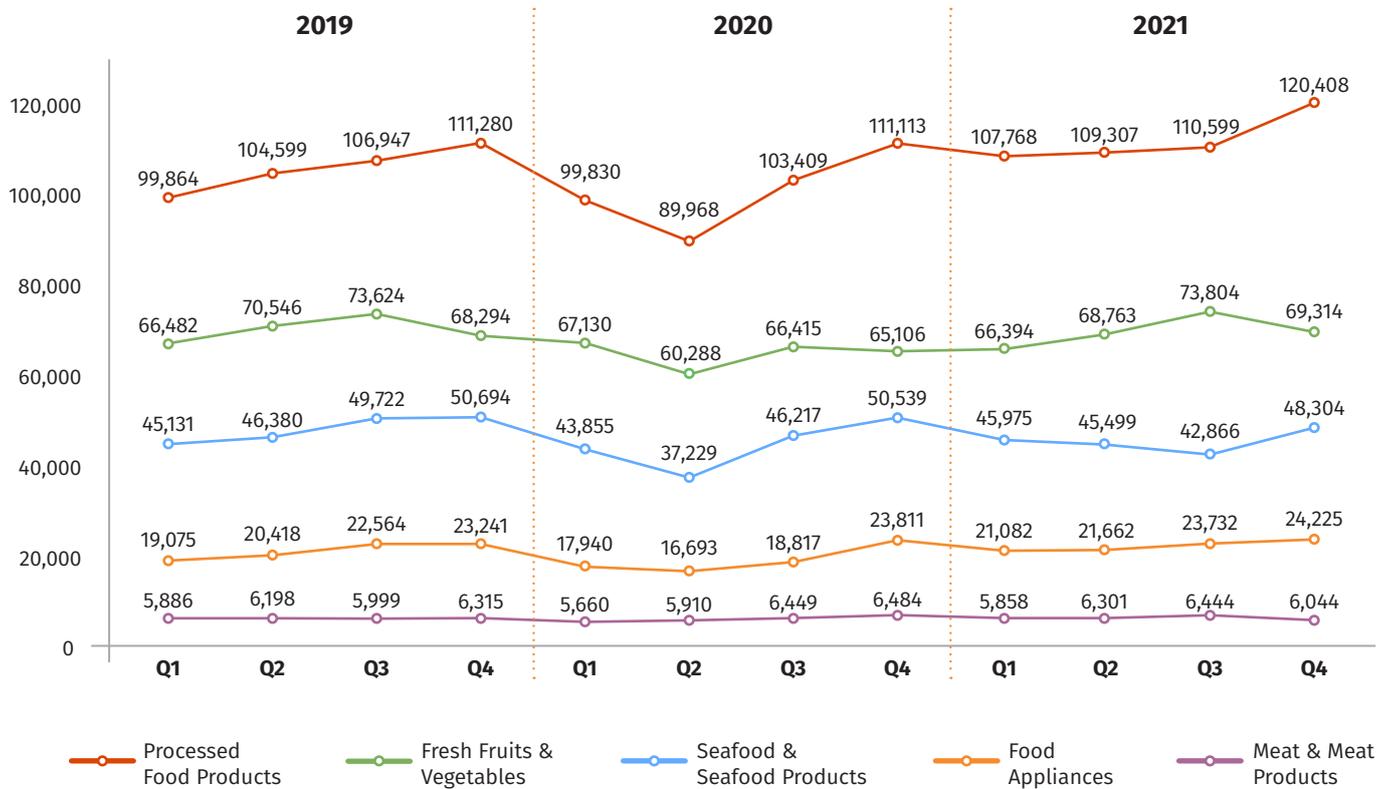
b) Importers of Livestock, Animal Feed and Shell Eggs



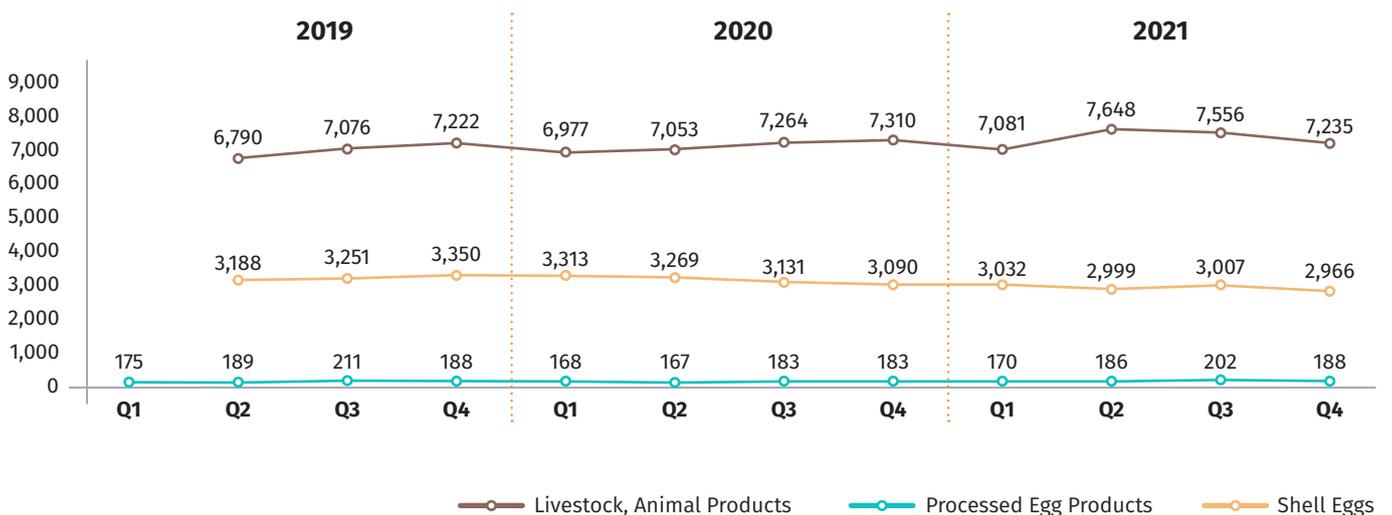
Notes: (1) Food imports requiring a licence: meat, seafood, fresh fruits, vegetables, shell eggs, livestock (i.e. live poultry, sheep and goats); Food imports requiring registration: animal feed for food-producing animals, processed food (including processed eggs), food appliances and live frogs for consumption. (2) Only data formed after SFA’s formation in April 2019 is reported. (3) Following a review in 2020, SFA conducted a once-off removal of importers of feed intended for non-food producing animals, which was tracked by the National Parks Board (NParks) – to ensure alignment with SFA’s mission of ensuring and securing the supply of safe food.

Figure 3.5: Number of Import Permits Issued

a) Meat and Meat Products, Seafood and Seafood Products, Fruits, Vegetables, Processed Foods and Food Appliances



b) Livestock, Animal Products, Processed Egg Products and Shell Eggs



Note: Only data formed after SFA's formation in April 2019 is reported.



TARGETED INSPECTIONS ON IMPORTED CONSIGNMENTS

Regular review of inspection and sampling regimes

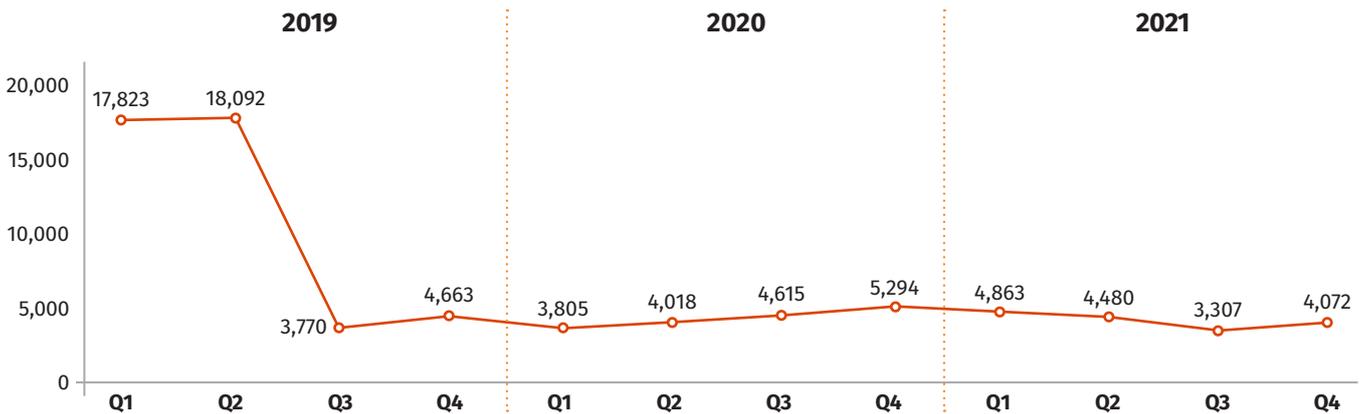
From July 2019 onwards, SFA adopted a risk-based approach towards inspection of imported meat and meat products consignments. Since then, SFA regularly reviews its inspection and sampling regime to ensure sufficient oversight of the safety of our food imports. Import consignments are tested for pathogens, chemicals, contaminants and drug residues. SFA’s robust sampling regime is tiered based on the risk profile of food items, with more requirements and/or inspection and testing regimes imposed for higher-risk food items.

The lab test pass rate of meat and meat products consignments has remained high (98-99%) over the past 3 years while fresh fruits and vegetables had lower pass rates of (84%-91%), mostly due to pesticides violations. With the more complete risk stratification profile for imported fresh produce, SFA was able to revise its inspection regime for meat and meat products and channelled resources to increase the inspection of fresh fruits and vegetables. This revised targeted inspection regime aims to widen Singapore’s food safety net.

In 2021, 96% of the food import samples collected passed SFA’s laboratory tests.

Figure 3.6: Number of Consignments Inspected

a) Meat and Meat Products



b) Non-Meat and Non-Meat Products

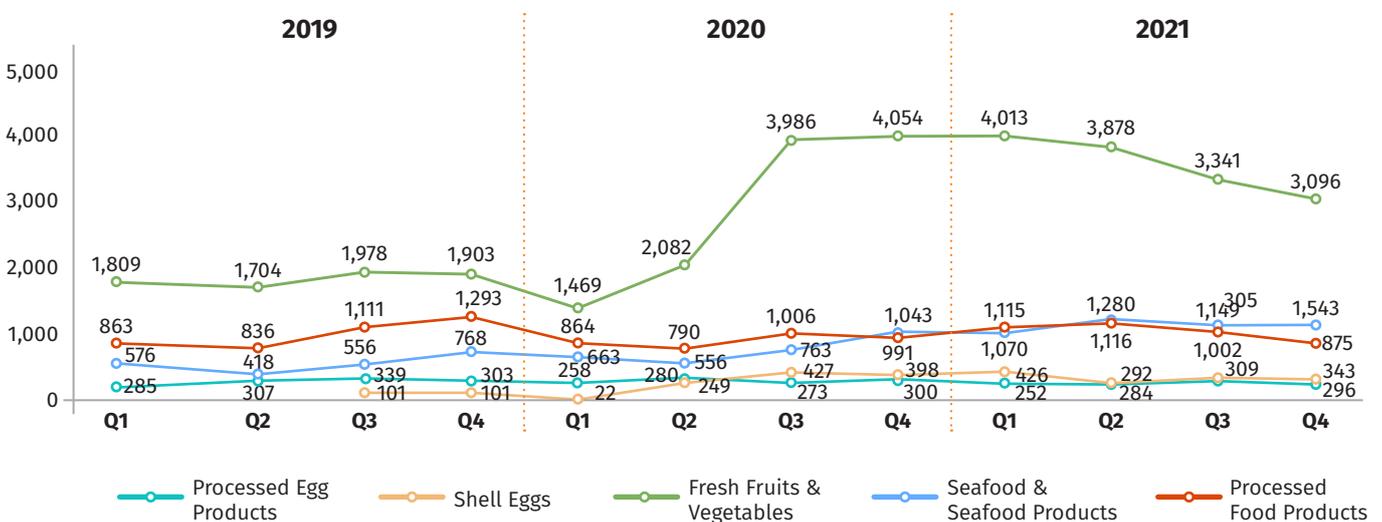
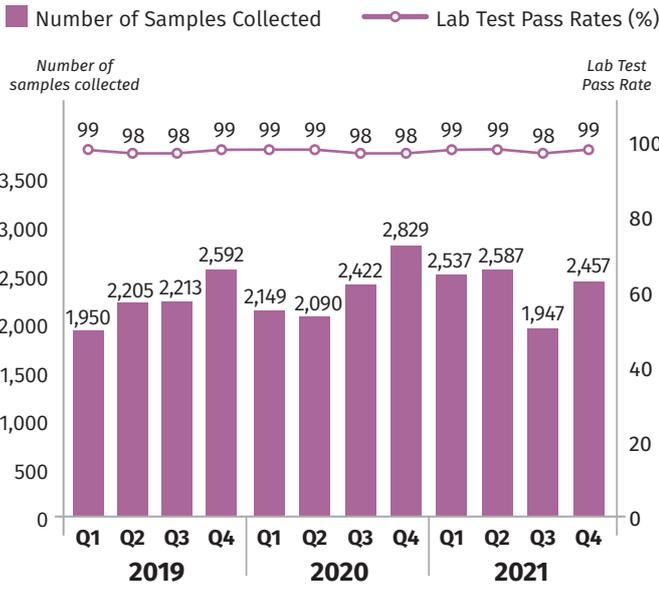
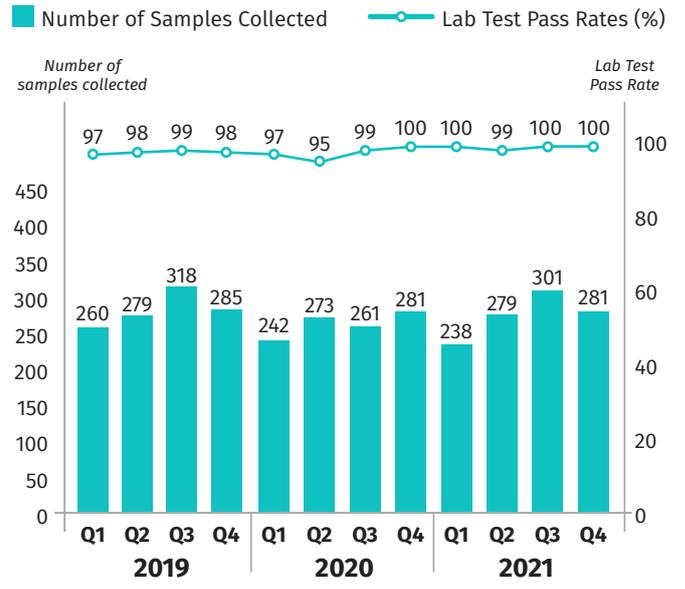


Figure 3.7: Number of Samples Collected and Lab Test Pass Rates

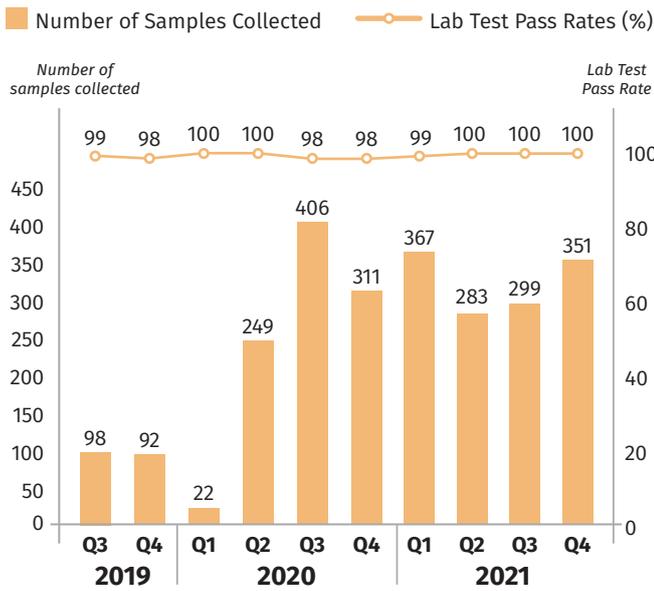
a) Meat and Meat Products



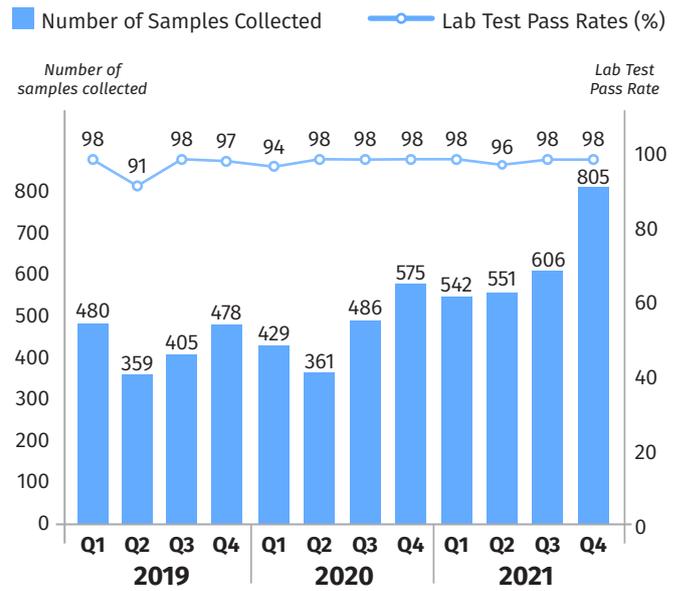
b) Processed Egg Products



c) Shell Egg Products

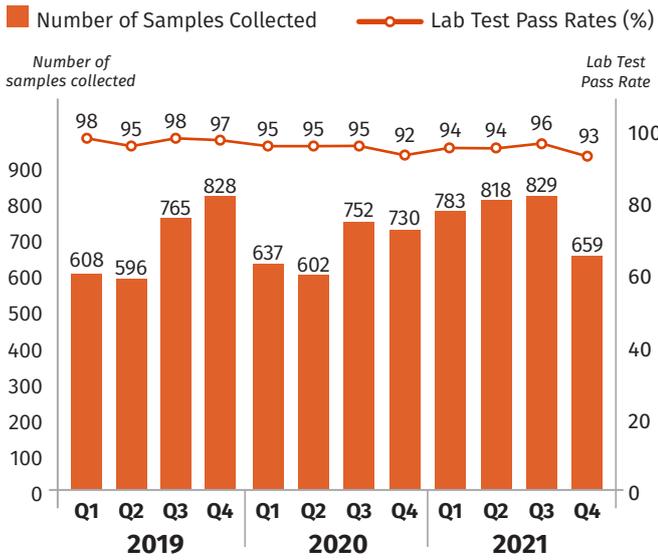


d) Seafood and Seafood Products

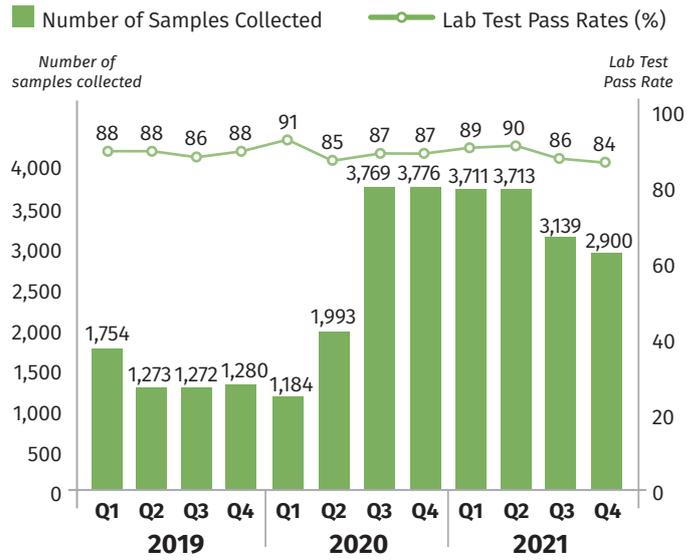




e) Processed Food Products



f) Fresh Fruits and Vegetables



Notes: (1) Only data formed after SFA's formation in April 2019 is reported. (2) From June 2020, SFA increased the inspection and sampling frequency to improve surveillance of fresh fruits and vegetable imports from various sources.

KEEPING WATCH OVER LOCAL FOOD ESTABLISHMENTS

Every link in the food supply chain matters

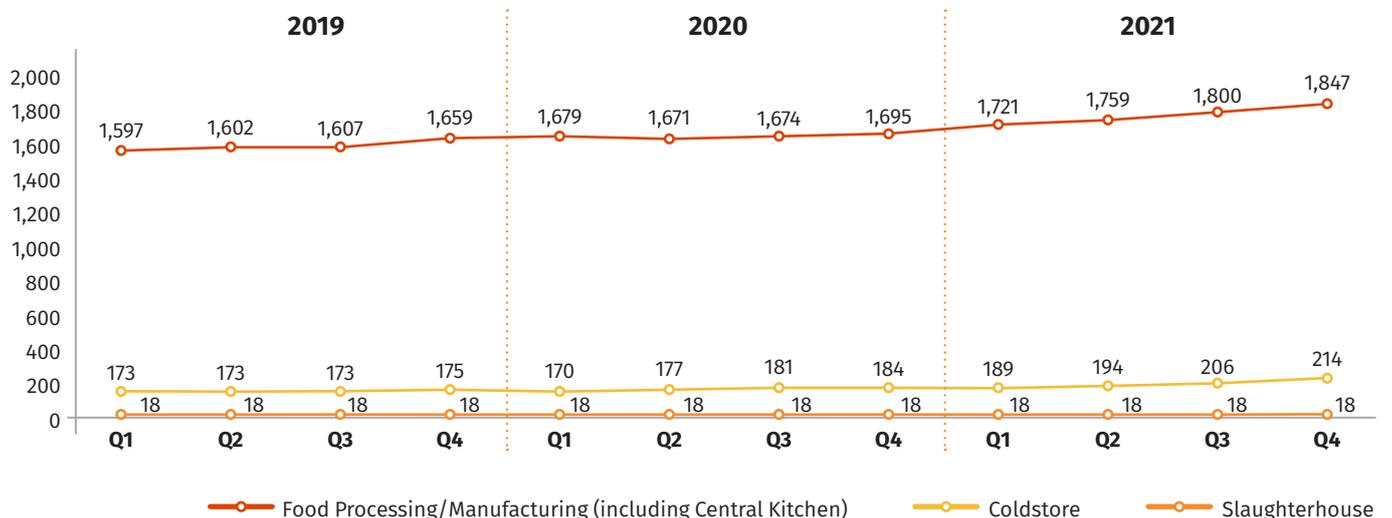
SFA licenses all retail and non-retail food establishments in Singapore, which totalled about 51,800 as at the end of 2021.

Our nation's resilient supply chain weathered the worst months of the COVID-19 pandemic well. The number

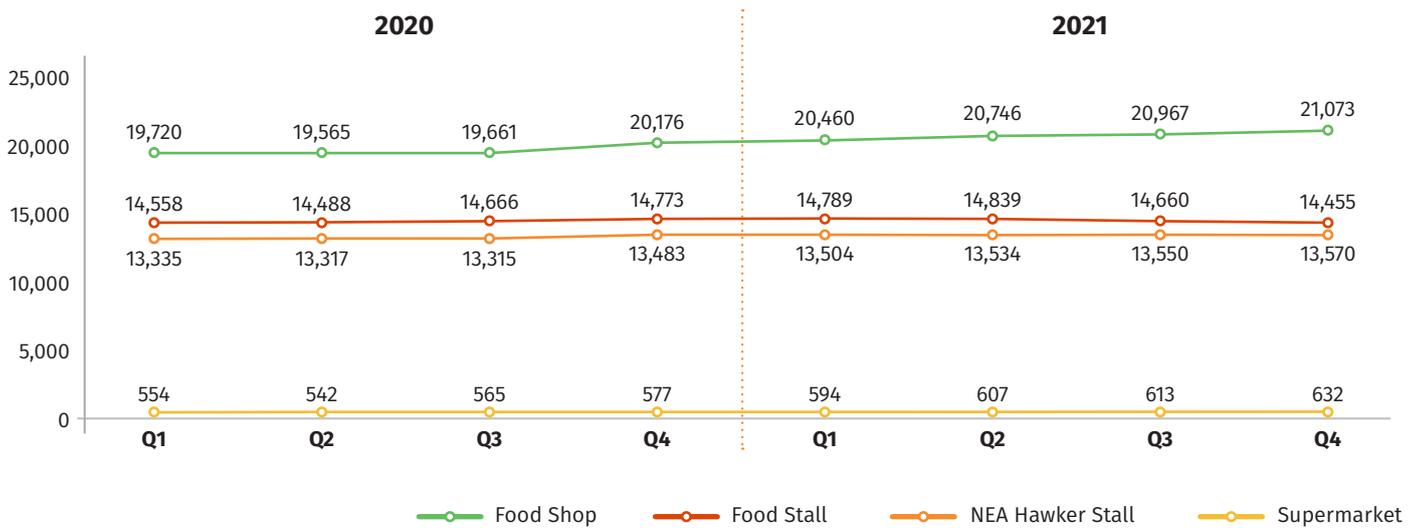
of licensed non-retail food establishments grew considerably from 2020 to 2021. There are now 9% and 16% more processing/manufacturing establishments and coldstores in Singapore respectively. Concurrently, the number of retail food establishments increased by around 2% to about 49,700.

Figure 3.8: Number of Licensed Food Establishments

a) Non-Retail Food Establishments



b) Retail Food Establishments



Note: (1) Non-retail food establishments, which include slaughterhouses, food processing and manufacturing establishments and coldstores, are required to store food properly before it is sold to wholesalers and retail food establishments. (2) Only data formed after SFA's formation in April 2019 is reported.

ENSURING SAFE FOOD FOR ALL

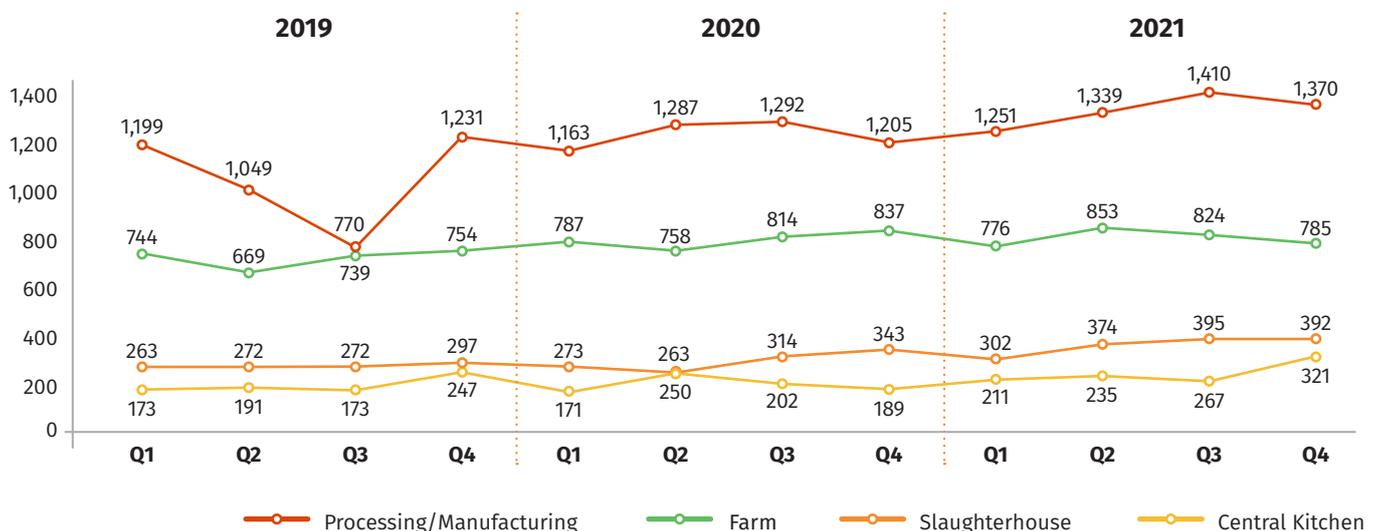
SFA's inspection standards assure and enhance food safety across the increasingly diverse network of retail and non-retail food businesses

In addition to food importers, SFA maintains a comprehensive and risk-based inspection process to keep local food establishments in check. Lapses in licensing conditions, regulatory requirements, biosecurity, food safety and hygiene practices call for immediate rectification, and may lead to enforcement action.

Non-compliance with SFA's standards of inspection by retail food establishments remained low between 2019 and 2021, at 3% on average. Non-retail food establishments showed a similar trend over the same period, except for central kitchens which typically saw higher non-compliance rates.

Figure 3.9: Number of Inspection Visits

a) Non-Retail Food Establishments



b) Retail Food Establishments

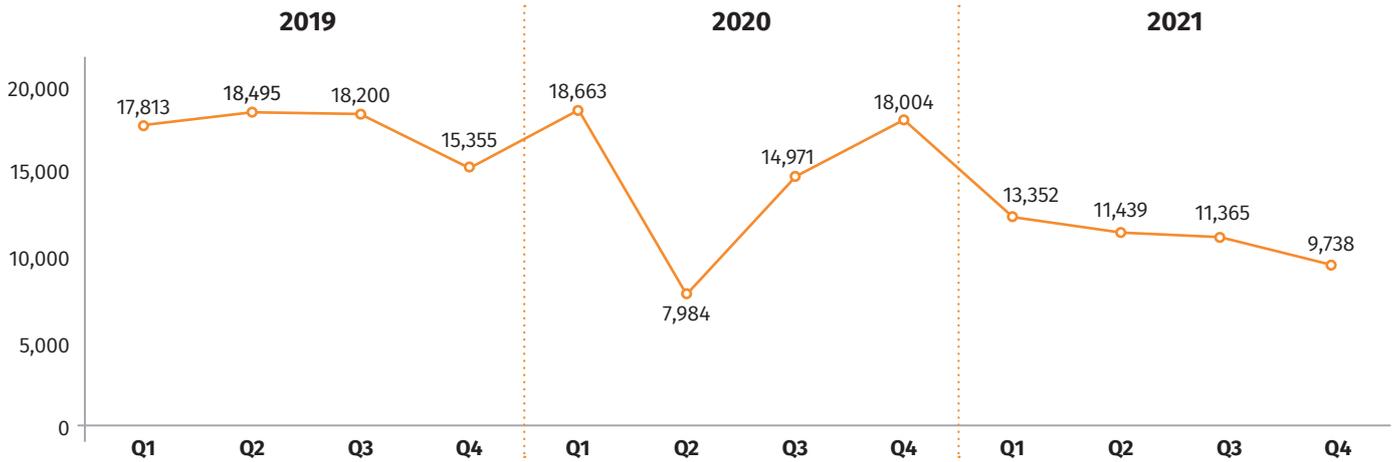
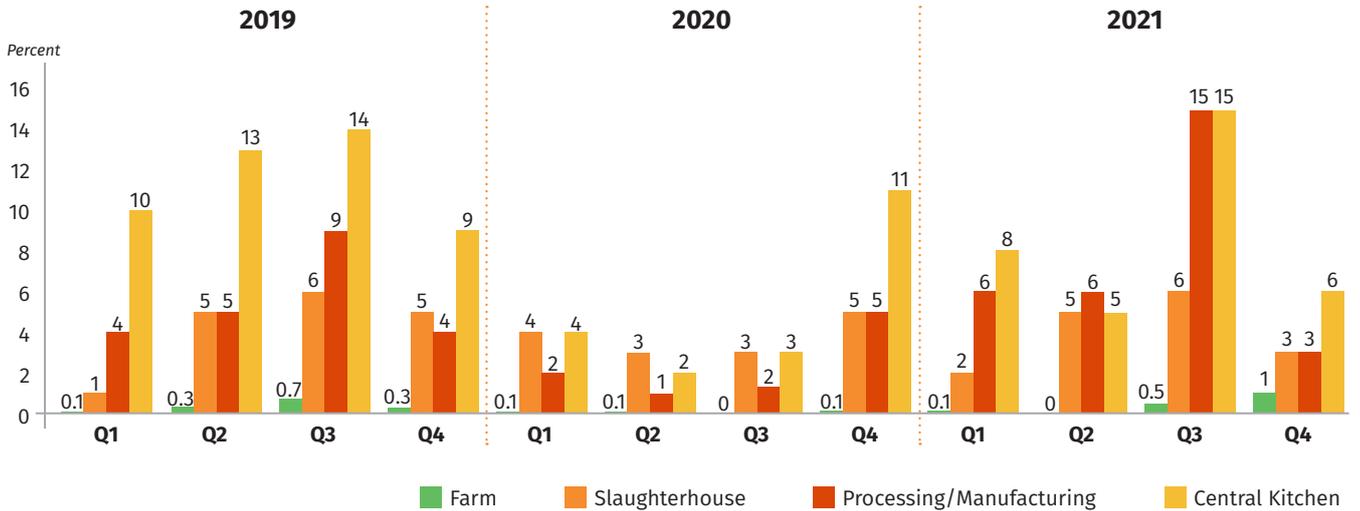
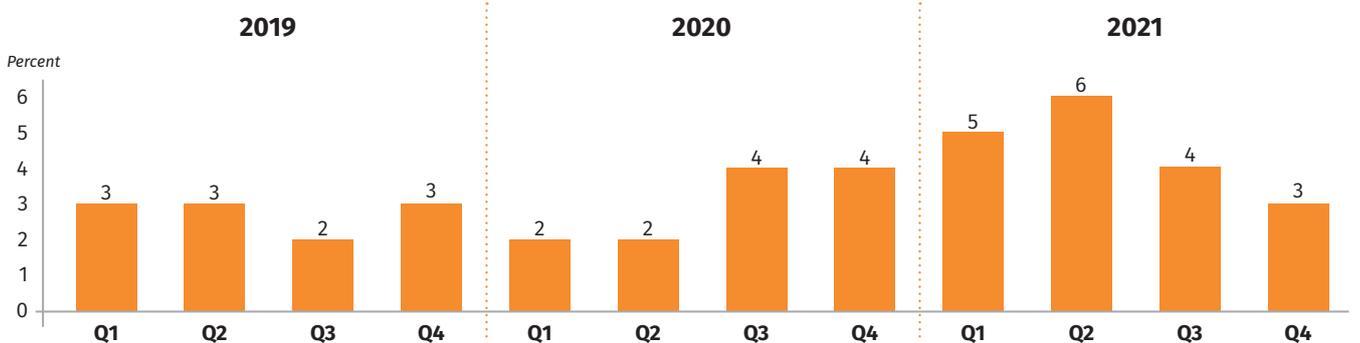


Figure 3.10: Percentage of Inspection Visits Detected with Non-Compliance

a) Non-Retail Food Establishments



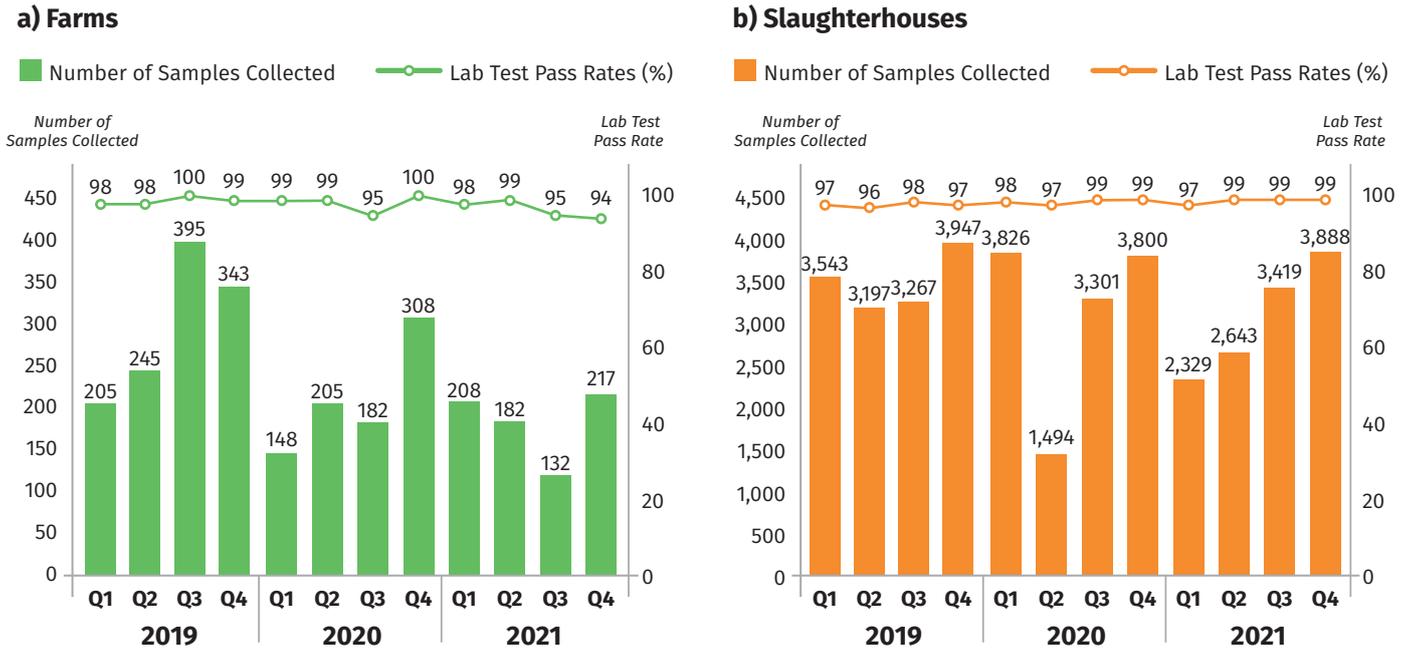
b) Retail Food Establishments



Sampling is conducted at farms and slaughterhouses to test for foodborne pathogens and chemical contaminants. Regulatory samples from produce and livestock are collected from farms and slaughterhouses and then sent for laboratory testing. This upstream

compliance rate remained high on average (98%) since 2019. SFA’s market monitoring programme, which identifies potential food safety risks in retail food products for regulatory sampling or testing, further complements SFA’s upstream tests.

Figure 3.11: Number of Samples Collected and Lab Test Pass Rates



THE IMPORTANCE OF JOINT RESPONSIBILITY IN FOOD SAFETY

SFA implements schemes to encourage industry-side compliance with food safety regulations

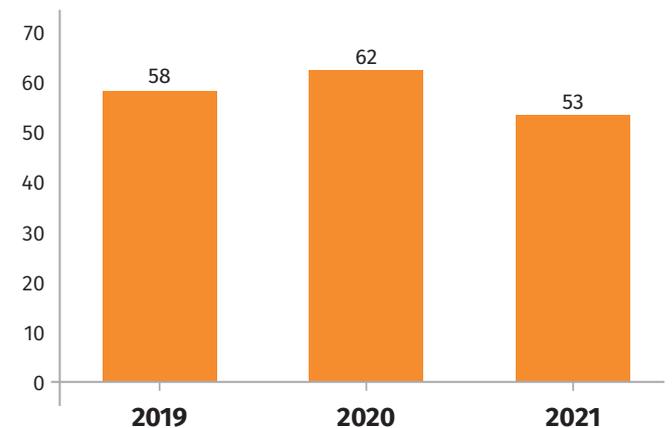
Retail food establishments are subject to the Point Demerit System (PDS) which is a systematic and fair approach to deal with the suspension and cancellation of licences for food safety infringement. It accords demerit points based on the severity of the infringement. Upon accumulating 12 demerit points or more within 12 months, the retail food establishment’s licence, depending on its past record of suspensions, is either suspended or cancelled.

Over the previous 3 years, notwithstanding the increase in the number of licensed retail food establishments, the annual number of licensees suspended under the PDS has remained stable.

From 1 Jan 2023, the PDS will complement the new Safety Assurance for Food Establishments (SAFE) licensing framework, which replaces the old grading scheme. SAFE focuses on food establishments’ food safety track records rather than an annual snapshot assessment of the premises’ food safety performance under the grading scheme. This provides a better reflection of

the food establishments’ consistent efforts in food safety assurance, enabling consumers to make more informed choices.

Figure 3.12: Number of Food Establishments Suspended due to Point Demerit System



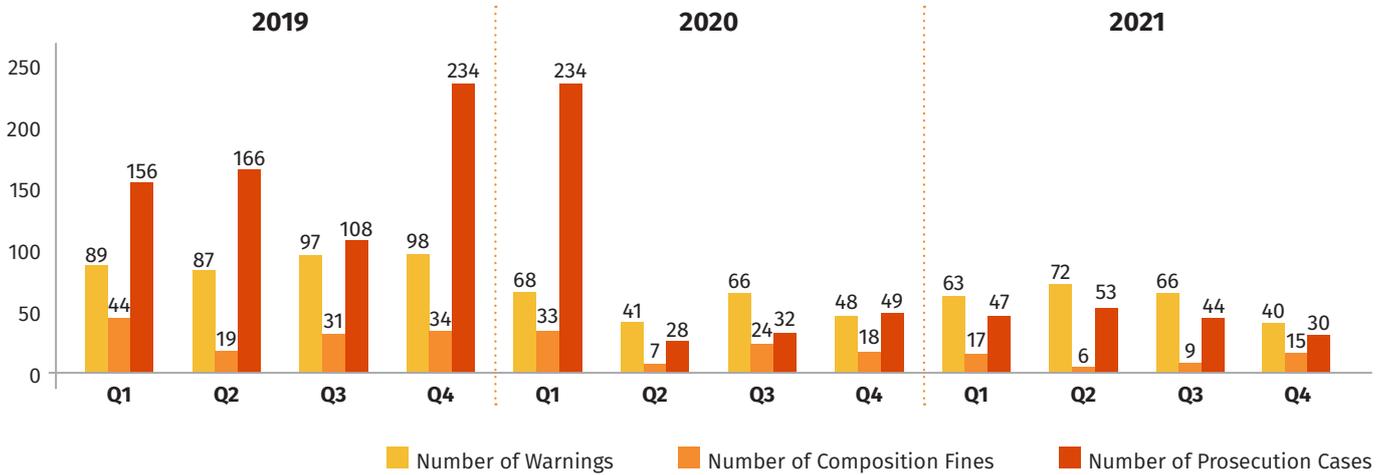


Apart from poor hygiene and storage practices, illegal food hawking poses a threat to food safety as it impedes tracing investigations in the event of a gastroenteritis outbreak.

follows SFA’s new approach to improve the surveillance of unlicensed hawkers by leveraging technology, as well as through continual, island-wide surveillance of illegal hawking hotspots in response to public feedback.

Illegal hawking cases have steadily declined over the past 3 years — from 1,163 in 2019 to 462 in 2021. This decrease

Figure 3.13: Number of Illegal Hawking Cases and Enforcement Action Taken



BUILDING A SUSTAINABLE AND SAFE FOOD ECOSYSTEM FOR ALL

Advanced surveillance and the National Centre for Food Science support food safety interventions

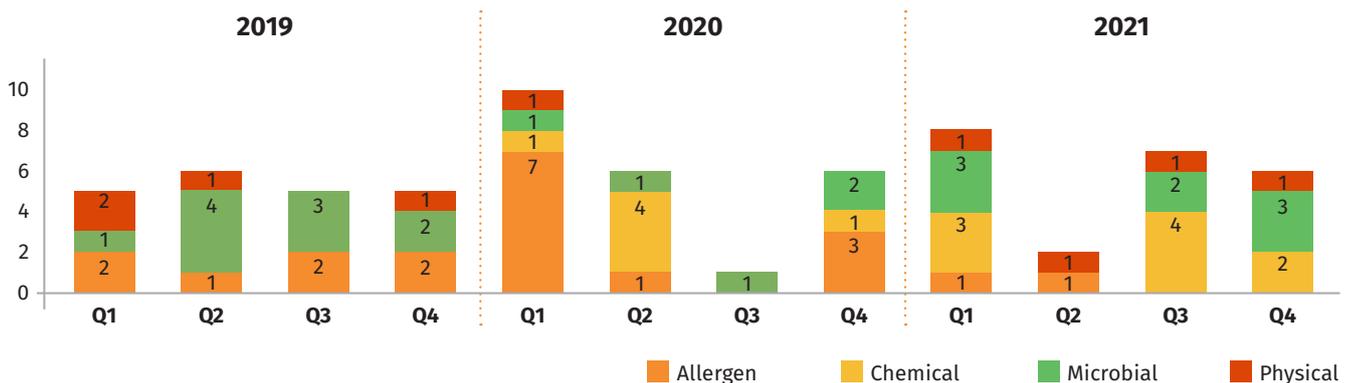
Swift and timely intervention is paramount in minimising food safety incidents. SFA effected 23 food recalls in 2021, comparable to previous years.

serious cases result in general corrective action or product movement controls.

These interventions begin with SFA surveilling open information reports of food safety incidents, food recalls and food safety concerns. There are multiple response processes such as investigations and laboratory tests to tackle food safety incidents. Legislative power also enables SFA to conduct effective and prompt food recalls, while minimising risks to public health. Typically, less

SFA’s National Centre for Food Science (NCFS) plays a crucial role in enforcing Singapore’s food safety regulations. Given the fast-evolving developments both locally and internationally, NCFS continuously seeks new ways to monitor food safety intelligently and puts in place agile and proactive processes — through leveraging data analytics and more targeted market monitoring, in partnership with the other approved food laboratories.

Figure 3.14: Number of Food Recalls by Reason



THE LABORATORY RECOGNITION PROGRAMME (LRP) BROADENS AND STRENGTHENS FOOD SAFETY CAPABILITIES IN SINGAPORE

Cross-sector capability-building helps meet Singapore's increasing sampling and testing needs

To further widen the food safety net, SFA has expanded our collaborative network and built up the sector's capability in the area of food safety and food science.

In April 2020, SFA rolled out the Laboratory Recognition Programme (LRP), which recognises private laboratories with food testing capabilities. The LRP is essential in expanding our trusted ecosystem and boosting food testing services for local industry stakeholders. This includes tests for food export certification and other commercial purposes.

In 2021, 12 private testing laboratories were recognised under the LRP. These laboratories are staffed by highly competent scientists and equipped with state-of-the-art testing equipment and facilities. These labs are expected to take on an increasing proportion of the testing volume in Singapore. In 2021, around 1 in every 4 laboratory tests was outsourced as compared to just 1% in 2019.

Figure 3.15: Number of Samples Taken

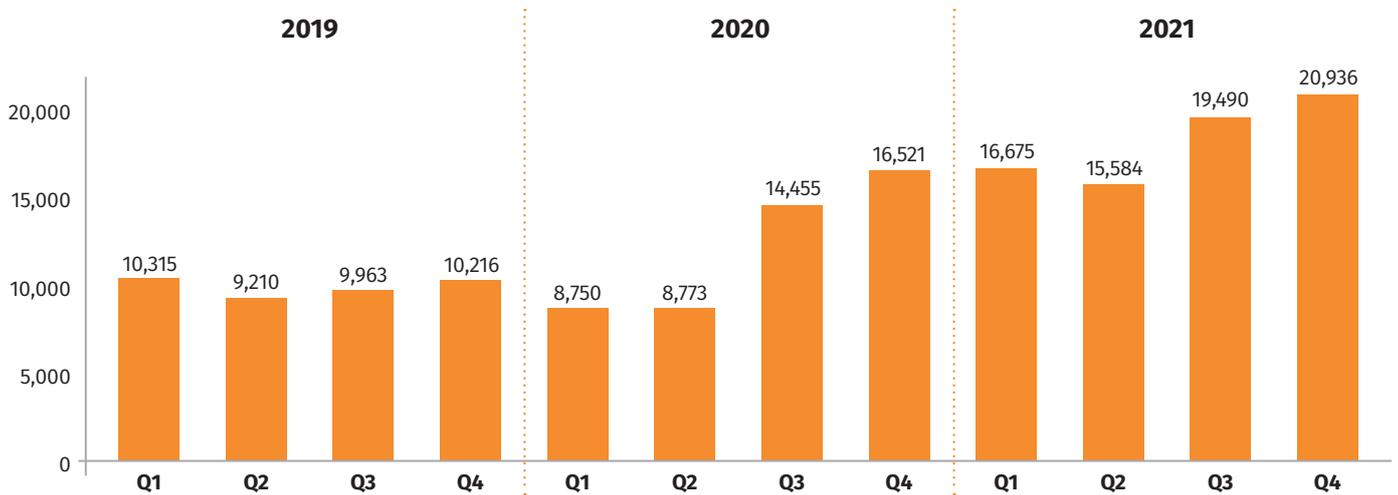
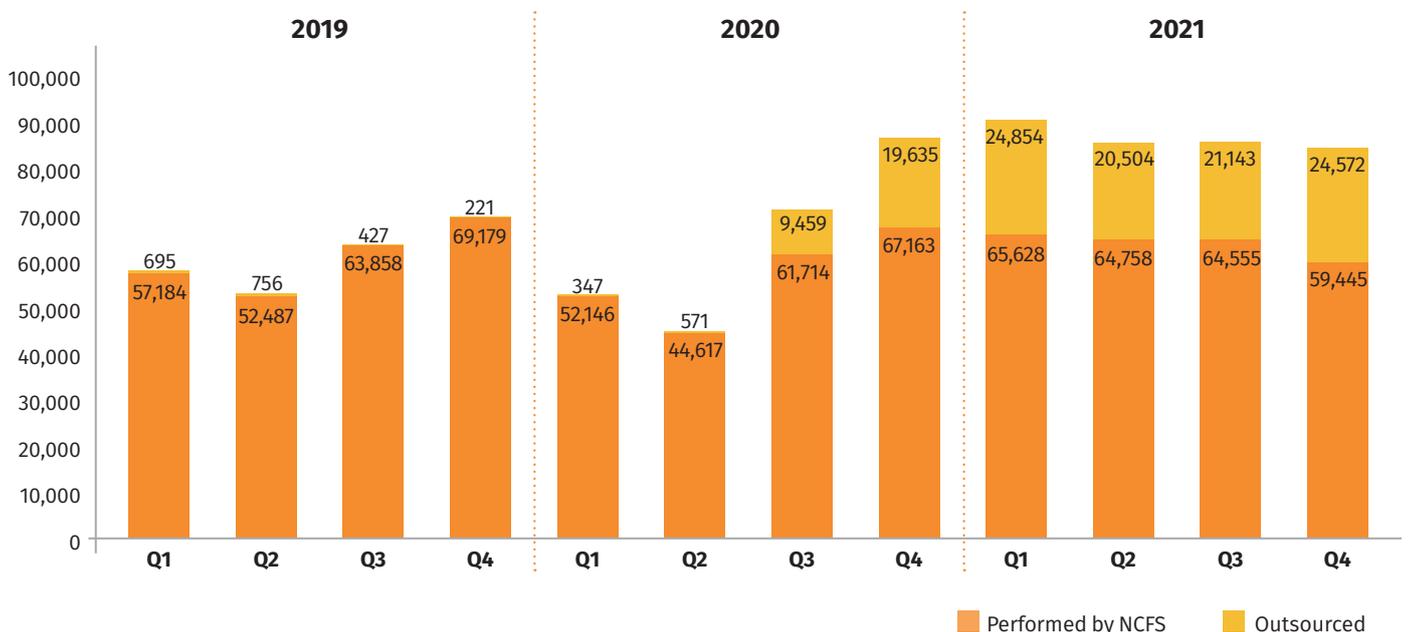


Figure 3.16: Number of Laboratory Tests Performed



GLOSSARY

SAFEGUARDING SINGAPORE'S FOOD SECURITY: OUR MULTI-PRONGED APPROACH

CONSIGNMENT

Each line item within a permit.

CONSUMPTION

Derived from the sum of food quantities that are imported, produced locally by food farms and from local landings, excluding exports.

IMPORT PRICES

Derived from the Customs Value (i.e. Cost, Insurance, and Freight (CIF) value) declared by importers divided by the declared imported volume (in kilograms).

LICENSED IMPORTERS

Importers with an active import licence regardless of whether they import any food within the period of review.

PERMIT

Cargo Clearance Permit (CCP) as required by the Singapore Customs.

SUPPLY

Food that is imported, produced locally by food farms, and from local landings.

STRENGTHENING SINGAPORE'S FOOD RESILIENCY: LOCAL PRODUCTION

FOOD FARMS

Farms which are approved to perform food farming as their main activity, as defined in the farm licence. Each farm is identified by its unique farm index number.

LOCAL LANDINGS

Fish catches within Singapore waters by local fishing vessels.

LOCAL PRODUCTION QUANTITY

Declared quantity of local produce sold by local food farms.

VALUE OF LOCAL PRODUCTION

Declared sale value of local produce sold by local food farms.

ADOPTING A RISK-BASED APPROACH: FOOD SAFETY IN SINGAPORE

FOOD RECALL

Action taken to remove from the supply chain unsafe food that has been made available for sale, in instances where there is public health and food safety risk.

FOODBORNE ILLNESS

Gastroenteritis caused by consuming contaminated food or beverages.

ILLEGAL HAWKING

Activities involving peddling goods or setting up makeshift stalls to sell goods without a valid licence under the Street Hawking Scheme.

MAJOR GASTROENTERITIS INCIDENT

Gastroenteritis incident investigated by agencies such as the Ministry of Health (MOH) and Singapore Food Agency (SFA).

SAMPLE

Food samples taken by Singapore Food Agency (SFA) officers for laboratory testing.

TEST

Different parameter tests conducted on samples collected.

CATEGORIES OF FOOD

ANIMAL PRODUCTS

Food animal products (e.g. animal feed for food animal, semen for reproduction of food animal etc.), food fish fry and food fish brood stock etc.

FOOD APPLIANCES

Items that are to be used in contact with food or beverages which do not require electricity to function. These include foodware such as bowls, cups, plates and pans, as well as utensils such as chopsticks and spoons.

FRUITS

Raw and unprocessed fruits, excluding those that have undergone some processing such as cutting, peeling, canning and freezing.

LIVESTOCK

All types of live animals including live poultry, pigs, sheep, goat, and live turtles for human consumption.

MEAT

Whole carcasses or parts of any animal or bird. These can be in chilled, frozen, processed or canned forms and include products that contain more than 5% meat content, as well as animal oil and fat.

PROCESSED EGG PRODUCTS

Include salted and preserved eggs, liquid and powdered eggs as well as cooked eggs.

PROCESSED FOOD PRODUCTS

All food products and food supplements that are not grouped as meat products, seafood products or fresh fruits and vegetables. These include mineral water, wine, infant formula, milk and milk products, biscuits and cooking oil.

SEAFOOD AND SEAFOOD PRODUCTS

Any species of fish and includes crustacean, shellfish, echinoderm, molluscs, and the young and eggs thereof. Such species are also termed "fish" in the Wholesome Meat and Fish Act and can be in live, chilled, frozen, processed or canned forms.

SHELL EGGS

Fresh hen and quail shell eggs.

VEGETABLES

Raw and unprocessed vegetables, excluding those that have undergone some processing such as cutting, peeling, canning and freezing.

TYPES OF LOCAL RETAIL FOOD ESTABLISHMENTS

FOOD SHOPS

Retail food establishments such as coffeeshops (main operator licence), restaurants, eateries, and food catering businesses.

FOOD STALLS

Individual food stalls located within coffeeshops, food courts, canteens and non-National Environment Agency (NEA) hawkers centres (which includes hawkers centres managed by private owners, Housing Development Board (HDB) and JTC Corporation).

NEA HAWKER STALLS

Stalls located within National Environment Agency (NEA)-managed hawkers centres.

SUPERMARKETS

Retail supermarkets with a physical shop. Does not include online e-stores.

TYPES OF LOCAL NON-RETAIL FOOD ESTABLISHMENTS

COLD STORE

Any chiller, freezer, cold room or other refrigerated facility used for storage of meat or fish products, including any refrigerated conveyance used for transportation of meat or fish products in the course of any trade or business.

FOOD MANUFACTURING

Preparation of food for sale and includes any one or more of the following: (a) making food by combining ingredients; (b) significantly changing the condition or nature of food by any process, such as milling flour or peeling, cutting and freezing fruits; (c) bottling or canning food, including bottling water; (d) making ice.

Does not include: (i) cooking or otherwise preparing food at a particular place for retail sale at the place, including sale for immediate consumption; or (ii) making ice at a particular place for use at the place.

FOOD PROCESSING ESTABLISHMENTS

Any factory, plant or other premises where food products (including meat products and fish products) intended for human consumption are prepared, manufactured, processed or repacked for distribution sale to wholesalers or retailers, or for export.

SLAUGHTERHOUSES: Any premises where live animals are slaughtered for the production of meat products.

