

AVA VISION

Issue 3-4/2017

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DIVERSIFYING SINGAPORE'S SOURCES OF FRESH PORK

Fresh pork from Sarawak
is now available here



■ AVA inspectors (right) observing the pigs being guided into a pen on-board the vessel.

Pork is the red meat of choice for many Singaporeans. In 2016, we imported close to 117,000 tonnes of pork in total (compared to 29,000 tonnes of beef and 15,000 tonnes of mutton). Our pork supply currently comes from more than 20 countries. While frozen and chilled pork are imported from different countries such as Brazil and the Netherlands, our supply of fresh pork used to come exclusively from the live pigs brought in from Pulau Bulan, near Batam in Indonesia.

AVA is constantly exploring new sources of food, so as to reduce Singapore's vulnerability to potential disruptions to supply. On 18 November 2017, Singapore received its first shipment of live pigs from the state of Sarawak in East Malaysia. This was also the first import of live pigs from Malaysia in 18 years.

The pigs were ferried to Singapore in a specially designed vessel, which was ventilated and had ample space for pigs to move around in their pens. Throughout the journey, the pigs were provided with sufficient feed and water on board, with vessel crew conducting regular checks on their conditions. Upon arrival, AVA inspectors examined the pigs to ensure they were well and healthy. Before and during the slaughter, there were additional checks on the pigs to ensure they were healthy. The carcasses were also checked to make sure that the meat was fit for consumption.

The importer, OJJ Foods Pte Ltd, is selling the meat at wet markets before retailing at supermarkets.

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Scan to watch a video of the live pigs arriving from Sarawak by boat.



■ Live pigs arriving from Sarawak by boat.

A brief history

Imports of live pigs and raw pork from Malaysia were suspended in 1999 due to an outbreak of the Nipah Virus (see box story). Even though there have not been any new outbreaks of the Nipah Virus, the import of live pigs or raw pork from Malaysia remained halted for over a decade due to the presence of Foot-Mouth Disease (FMD). Only processed pork, which had been heat-treated to deactivate the FMD virus, was allowed to be brought in from Malaysia.

In 2010, the World Organisation for Animal Health recognised Sarawak

as a FMD-free region in Malaysia.

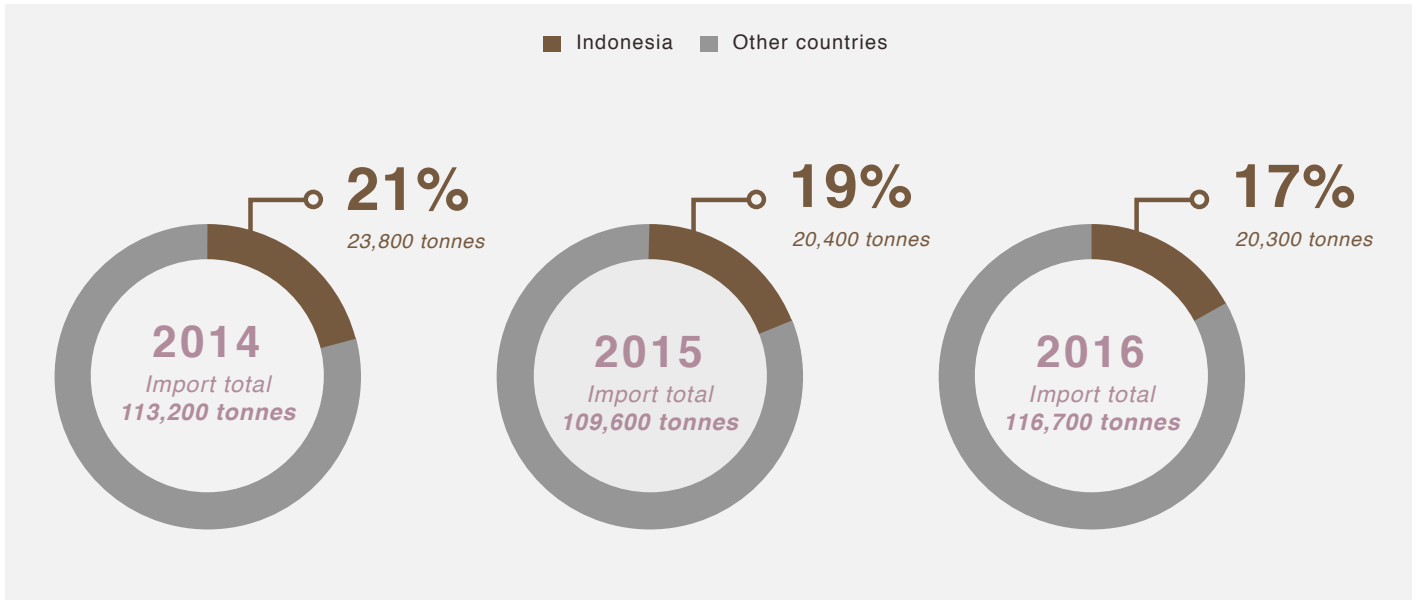
In 2015, AVA assessed Sarawak's animal and veterinary public health programmes, and approved the import of frozen pork from the Malaysian state. In 2017, AVA approved the import of live pigs from Sarawak as well. The import of fresh pork from other regions in Malaysia is currently still not permitted as they are not free of FMD.

The new supply source of raw pork will better buffer Singapore against potential food shortages and disruptions, and consumers can also look forward to more choices when it comes to buying fresh pork.



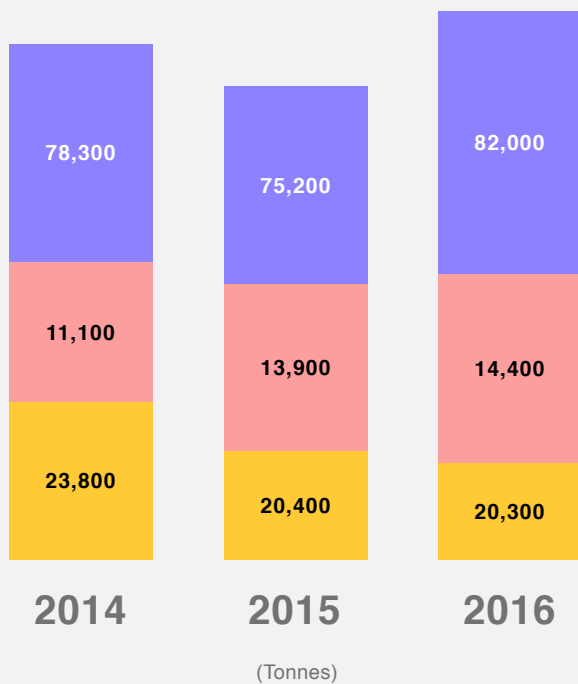
■ An AVA officer inspecting the pig farm at the source in Sarawak.

WHERE DOES OUR SUPPLY OF PORK COME FROM?

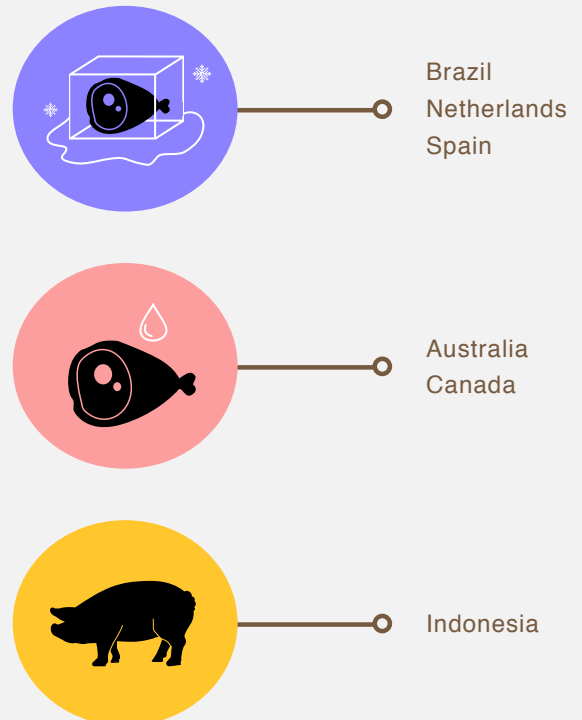


TYPES OF PORK IMPORTED

- Frozen
- Chilled
- Slaughtered from live pig imports



MAJOR SOURCES OF PORK (2016)





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THE NIPAH VIRUS AND FOOT-MOUTH DISEASE

The Nipah Virus (NiV) is named after the village in Malaysia where the disease claimed its first human life. NiV causes respiratory and nervous problems in pigs. It can have devastating effects on animal populations, and has since been found in domestic animal species like dogs, cats, goats, and horses. Also, it has affected humans around the world, from Malaysia and India to Bangladesh and Singapore.

In humans, NiV is marked by fever, headache, drowsiness, disorientation, mental confusion, coma and potentially, death. In the 1999 outbreak in Malaysia, up to half of infected people died. There is no cure.

Foot-Mouth Disease (FMD) is another severe and highly contagious viral infection affecting cattle, pigs, goats, and sheep, as well as deer, antelope, elephants, and even giraffes. Although it is rarely fatal among adult animals, many infected young ones die of it.

FMD presents as blister-like sores on the tongue and lips of animals, in the mouth, on the teats, and between the hooves. As a consequence, infected animals are left weakened and debilitated. Humans are not susceptible to FMD, as it is not readily transmissible to us, but it seriously hampers agricultural production while the livestock recover. Importing animals or meat from FMD-affected regions would jeopardise Singapore's FMD-free status and in turn adversely affect our export trade.

ENSURING DIVERSIFICATION AND SAFETY

Due to food safety and animal health reasons, only countries and establishments that have been fully accredited by the AVA will be able to export meat and egg products to Singapore.

Accreditation is an upstream measure of AVA's food safety system, in which we assess the robustness of an exporting country's national animal health and food safety system. We also take into consideration the powers of each country's respective authorities to enforce food safety and animal health requirements.

If a country is approved as a source by AVA, the export establishment in that country will then

be individually evaluated to ensure that it meets Singapore's own food safety requirements. An inspection by AVA of that establishment in its home country may also be conducted.

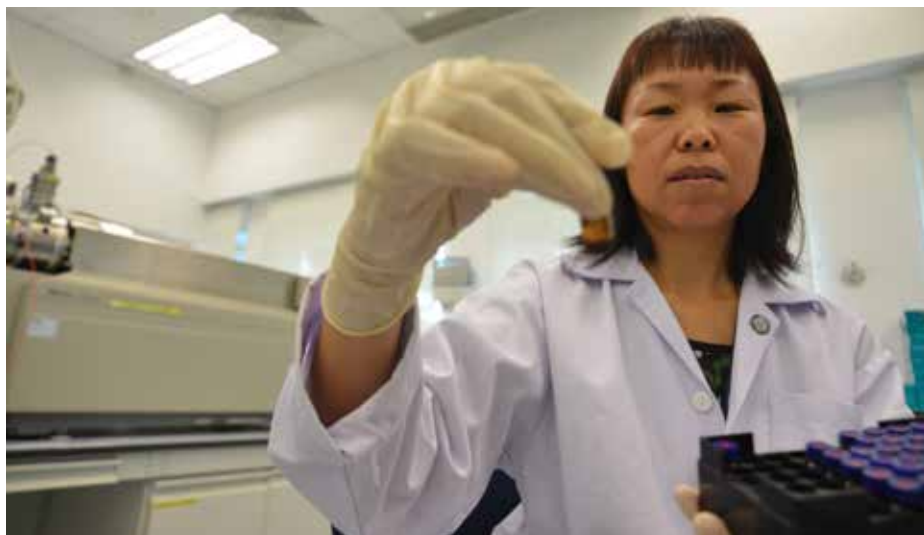
In addition, all our imported food is subjected to our import requirements, routine surveillance, as well as inspection and sampling programmes.

To date, our accredited sources of pork include:

- Frozen pork: 24 countries
- Chilled pork: 6 countries
- Live pigs for slaughter locally and sold as chilled pork: 1 farm in Pulau Bulan, Indonesia; and 1 in Sarawak, Malaysia

COMBATING ANTI- MICROBIAL RESISTANCE

AVA's efforts in addressing the threat of AMR in the food and animal sectors



■ Food samples are regularly tested for a wide range of food hazards such as drug residues including antibiotics.

Antimicrobial resistance (AMR) is a serious threat to public health around the world. Microorganisms, such as bacteria and viruses, can mutate to become resistant to antimicrobial agents like antibiotics and antivirals to ensure their own survival. This makes it harder to treat common infections, as well as infections arising from complications due to medical procedures such as surgery or chemotherapy.

The emergence of AMR is a natural occurrence among microorganisms, but the misuse and overuse of antimicrobials has sped up the development of resistance among disease-causing microorganisms (pathogens). Over time, we have seen an increased number of pathogens developing resistance to multiple antimicrobials. As a result,

patients and animals (including livestock) infected with multi-drug resistant pathogens will have fewer and limited treatment options.

To combat this problem, a National Strategic Action Plan on AMR has been developed by the One Health Antimicrobial Resistance Workgroup, comprising the Ministry of Health, AVA, National Environment Agency, and PUB, Singapore's National Water Agency. The plan is being implemented using a One Health approach, recognising that the AMR issue cuts across sectors, and requires a concerted effort by all relevant stakeholders and the community.



■ The use of vaccinations, for example, can reduce the need for antibiotics. Here, an AVA scientist is conducting a safety trial on an autogenous vaccine for fish.

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The plan aims to reduce the emergence, and prevent the spread of, drug-resistant microorganisms through these five core strategies:

1. Education
2. Surveillance and risk assessment
3. Research
4. Prevention and control of infection
5. Optimisation of antimicrobial use

Ultimately, the global fight against AMR aims to preserve the effectiveness of medicines to treat infectious diseases for as long as possible.

AVA's role in combating AMR

AVA has in place an integrated food safety system based on science and risk analysis to safeguard food safety. All food products, whether imported or locally produced, are required to comply with our safety standards and requirements. For example, only certain antibiotics are allowed to be used in animals, and antibiotic residues found in food must not exceed maximum residue levels (MRL).

As part of our food safety programme, food products are regularly inspected and sampled for compliance with our food safety standards and requirements. Samples are tested for a wide range of food hazards such as chemical contaminants (e.g. pesticide residues, heavy metals, drug residues including antibiotics) and microbial contaminants (e.g. harmful bacteria like *E Coli*, *Salmonella*, *Listeria*). Food that is found to be unsafe will not be allowed for sale.

On top of our food safety surveillance and tests, AVA also takes an active role in regional efforts to combat AMR in the livestock and aquaculture sectors, including working with Association of Southeast Asian Nations (ASEAN) members to develop regional guidelines on antimicrobial use in food producing animals. This has produced the ASEAN Guidelines on Prudent Use of Antimicrobials in Livestock as well as the ASEAN Cooperation Activities for AMR in the Aquaculture Sector. AVA also shares technical expertise and experience with other countries through activities such as conducting regional training workshops for antibiotic residue testing. AVA will also play a role in coordinating the efforts between the ASEAN livestock and aquaculture sectors.

For local produce, AVA works with local farmers to implement good animal husbandry practices (e.g. vaccinations) to prevent disease incursion and manage diseases, which would reduce the use of veterinary drugs including antibiotics. We have been working with vaccine companies to provide regular talks to farmers and develop vaccines. Nevertheless,

AVA recognises that antibiotics are necessary for the treatment of bacterial infections in animals and when used appropriately, contributes to the health of animals. To this end, AVA advises local farmers to use antibiotics prudently.

Notwithstanding, AVA monitors the use of veterinary drugs (e.g. antibiotics) in our farms. This is done through reviewing veterinary drug wholesalers' records of sales of veterinary drugs to farms and veterinary clinics. Farms are encouraged to undergo certification under AVA's accreditation schemes, such as the Singapore Quality Egg Scheme, as well as the Good Aquaculture Practices for Food Fish scheme that recognises farmers' efforts in implementing good animal husbandry practices.

In Singapore, antibiotics are not allowed to be used for promoting the growth of animals, and certain antibiotics are prohibited for use in food-producing animals. Farmers

who use antibiotics in their animals are required to observe a certain time period (known as withdrawal period) before the animals or animal products can be slaughtered or sold. This will ensure that the antibiotics are passed out of the animals' systems, and any residual antibiotics are at trace levels below the MRLs. AVA also regularly tests local produce to ensure that they do not contain residues of banned substances, and permissible substances do not exceed MRLs.

The community has a role too

Nonetheless, food can be contaminated anywhere along the food chain. While AVA continues to be vigilant and works closely with stakeholders to ensure that regulatory measures are in place and properly enforced, our efforts to safeguard food safety will be in vain if consumers do not practise good food safety habits. For example, meats should be cooked thoroughly as harmful bacteria, which can be found in raw meat, can be eliminated by thorough cooking.

Pet owners are also advised to keep their pets healthy and bring their pets for regular check-ups by their veterinarians. Pet owners should also consult and adhere to their veterinarians' advice on the correct medications to use on their pets. Antibiotics are not always necessary, as not every infectious disease requires antibiotics.



■ Pet owners can play a part in fighting AMR, by consulting and adhering to their veterinarians' advice on the correct medications to use on their pets. Antibiotics are not always necessary.

SHOWCASING FRESH HOME- GROWN PRODUCE

AVA conducts outreach events to raise public awareness of local produce



■ Local produce being featured at the Made-in-Singapore Fair.

Our farmers have been working hard to increase their production. As consumers, we too can play our part in supporting our farmers by choosing local produce when we shop. When we buy more local produce, this demand will enhance the commercial viability of our local farms to invest in technology to increase productivity. To raise public awareness of the merits of local produce, AVA recently conducted the following outreach activities.

7-20 September 2017: Made-in-Singapore Fair

AVA continued to support local produce at NTUC FairPrice's 'Made-in-Singapore' Fair, an annual initiative that seeks to raise public awareness of local food producers and get consumers to buy local. Apart from organising in-store cooking demonstrations of dishes made using locally farmed vegetables, eggs, and fish for consumers to sample, point-of-sale materials on Singapore farm produce and educational signs were also put up to help consumers identify and learn more about local produce.



■ Senior Minister of State for National Development & Trade and Industry Dr Koh Poh Koon (right) shows his support for local produce at the SG Farmers' Market.

23-24 September 2017: SG Farmers' Market

For the first time, AVA brought together 25 local farmers to showcase their produce under one roof. Fresh home-grown produce such as vegetables, fish, seafood, eggs and frog meat were sold at this 'SG Farmers' Market' event held at the myVillage mall in Serangoon Gardens. More than 10,000 visitors got to meet farm representatives, learned how to prepare creative dishes through 'live' cooking demonstrations, and were entertained by stage games.



■ A 'live' cooking demonstration at SG Farmers' Market attracts throngs of visitors who are keen on learning new ways to cook local produce.



■ Visitors at the Asia Pacific Food Expo 2017 eager to learn more about local produce and frozen meat.

17-20 November 2017: Asia Pacific Food Expo

AVA participated in the Asia Pacific Food Expo 2017 to promote local produce and frozen meat to consumers. Visitors enjoyed the cooking demonstrations where ingredients such as local produce and frozen meat were used, and had the opportunity to sample these dishes. Quizzes were conducted after each cooking demonstration to reinforce understanding of our messages among the visitors. They also learned more about local produce and frozen meat through our educational materials and collaterals.



GROWING FOOD IN THE CITY

AVA trains community gardeners to grow edible plants

In 2015, AVA started the MasterGrower programme to equip gardening enthusiasts with the necessary skills to grow leafy and fruited vegetables in HDB housing estates. Under the programme, community gardeners go through a two-month training conducted by an AVA expert, who will teach them the basics of growing pesticide-free vegetables from-seed-to-harvest, as well as tips on managing plant pests and diseases.

Upon completion of the training, these community gardeners, or MasterGrowers, then share their skills with other community gardeners. A few have also volunteered at AVA's local produce roadshows, and as associate trainers in the MasterGrower programme itself. To continuously upgrade our MasterGrowers' skills, a series of half-day courses are provided for our volunteer trainers and MasterGrowers. Such masterclasses are conducted twice a year. To date, the programme has benefited more than 75 community gardens around Singapore, and more than 300 MasterGrowers have been trained.

The MasterGrower is also an advocate for local produce, helping to raise awareness of the importance of local produce to Singapore's food security. Through our MasterGrowers, AVA also aims to foster an appreciation of the efforts farmers put into producing food for us, and thereby encourage the community to learn to cherish and not waste food. In addition, we take this opportunity to spread important messages on food safety and encourage gardening without the use of pesticides.

Training was previously conducted at AVA's Horticulture Services Centre in Sembawang, with a 10-sqm planting ground that yielded more than 60kg of leafy vegetables to-date. From 2017, in order to further raise awareness of the programme and reach out to more community gardeners, AVA began collaborating with the National Parks Board (NParks) to hold the MasterGrower sessions at HortPark.

Over the past year, AVA and MasterGrowers have been active in the following events and initiatives:



■ MasterGrowers and their harvests at AVA's Horticulture Services Centre.

Community Edibles Competition

NParks conducted a Community Edibles competition on 3 November 2017. AVA supported the event by sponsoring seeds of various edibles such as white bitter melon, high-yield long bean, sweet Hawaiian papaya, and orange flesh sweet melon, which were specially chosen for their abilities to grow well in Singapore's tropical climate. Our MasterGrowers also gave a series of 'How-to-Grow' talks during 'NParks Gardeners-Days-Out' between May and October 2017.

Sembawang GRC's NS50 event

AVA has been working with the community gardeners in Sembawang GRC to guide them in growing vegetables and spices. These crops were part of the ingredients used to prepare food for an event in October 2017 that commemorated the 50th anniversary of National Service (NS). Guests were invited to lunch with Members of Parliament (MPs) for

Sembawang GRC, such as Minister of Transport Mr Khaw Boon Wan and Minister for Education (Higher Education and Skills) Mr Ong Ye Kung.

Setting up community gardens

As part of its vocational training curriculum, the Movement for the Intellectually Disabled of Singapore's (MINDS) Idea Employment Development Centre requested AVA's assistance to customise a farming module/training programme for its clients and facilitate the training conducted by MasterGrower volunteers at its premises. With AVA's guidance, MINDS constructed a 50-sqm greenhouse at one of its premises in March 2017. The greenhouse, which uses a convenient tray planting system, can consistently produce about 70kg of leafy vegetables per crop cycle. The produce is used in MINDS' central kitchen, and there are plans to develop more of such greenhouses.



■ Sembawang GRC MPs at the NS50 event featuring produce from community gardens. (Photo: Sembawang Town Council).



■ MINDS' community greenhouse with automatic irrigation systems.

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■ With AVA's help, MINDS now has in place a tray planting system that can consistently produce about 70kg of leafy vegetable per crop cycle.

We also collaborated with Ng Teng Fong General Hospital to develop a community edibles garden for the hospital's volunteers to conduct activities and for patients to relax in. AVA guided the volunteers on how to grow leafy vegetables, and trained four MasterGrowers for this garden.

Sharing technical expertise

AVA developed a low-cost, vertical, leafy vegetable planting system for Ang Mo Kio-Teck Ghee GRC's



■ A training session on how to grow vegetable seedling for transplanting, at Ng Teng Fong General Hospital's community edibles garden.

community garden pilot trial, which began in November 2017. Made with common materials such as a recycled shoe rack, this system increases the amount of planting space, and beautifies the fences around the community garden.

Between June and September 2017, AVA also helped the Hindu Endowments Board-Ashram Halfway House in Sembawang to develop a planting schedule and trained some of its staff for its garden.



■ AVA officers (in orange) sharing with President of Singapore Mdm Halimah Yacob, the work that has gone into the HEB-Ashram Halfway House's community garden.



Community gardeners who are interested in the MasterGrower programme or wish to find out about our technical advisory services can contact AVA via www.ifaq.gov.sg/AVA/apps/feedback.aspx or reach out to their NParks community garden manager.

NURTURING RESPONSIBLE PET OWNERS

As an animal lover and believer of pet adoption, Chong Poh Choo takes joy and pride in promoting responsible pet ownership



Q: What do you do at work?

Chong Poh Choo (Executive Manager, Community Outreach Department, AVA):

I manage AVA's community outreach programme called 'Responsible Pet Ownership' (RPO). We encourage pet owners to be both responsible and considerate. When owners are responsible, their pets will in turn benefit by being healthy, happy and sociable. Considerate and civic-minded pet owners will also contribute to a hygienic and peaceful community, where animals and humans co-exist in harmony.

Q: What activities did you recently engage in to educate the public on RPO?

Annually, there are two major items in our calendar – an RPO public event, and a matchmaking session between prospective pet owners and rescued animals. For example, in November 2017, we organised the *Happy Pets Happy 'Hood II* event to educate visitors about animal welfare, responsible pet ownership, considerate pet ownership, and stray animals. This was our second year organising a week-long event at Punggol Waterway Point together with our animal re-homing partners.

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■ Watch video of Poh Choo introducing herself and her work at <http://bit.ly/2BXOAnH>.



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Also, from 14 to 16 April 2017, we took part in Pet Expo and set up 'The Pawfect Match' activity. Taking the format of a speed-dating event, the 'Pawfect Match' allowed potential pet owners to interact with and learn more about the shelter animals that were available for adoption. We worked closely with our animal welfare group partners for these adoption drives.

In addition, we reach out to our audience via school talks, learning journeys to AVA's Animal Management Centre, and participation in events organised by the community or animal welfare groups. We also advise individuals who are considering pet ownership, and produce relevant collaterals and materials to promote RPO.

Q: Are there any new activities or initiatives being planned for RPO?

We are hoping to do more for the pre-school sector. Children these days pick things up really quickly and we want to start seeding RPO in them from young so they learn the right ways of interacting with and caring for animals.

Q: Share some less well-known facts about your job.

We are a very lean team. Including my Director, there are only three of us. We are seasoned event planners – from conceptualisation to grand openings, we have been through it all. Planning and running an event requires a lot of time,



■ Poh Choo taking a group of pre-schoolers through the educational exhibits at Happy Pets Happy 'Hood II.



■ Poh Choo works closely with AVA's animal re-homing partners during events such as the Pet Expo 2017.

effort, coordination, and dexterity in handling anything unanticipated at the last minute.

We stand a lot – usually at events, I am on my feet for about 10 to 12 hours a day. When we conduct learning journeys, we stand for at least two hours.

Despite all our hard work, we are sometimes judged harshly by people – this happens especially when we are at public events. I have had an event visitor curse at me to my face

and I have been called a hypocrite in public because these persons do not agree with AVA's animal control policies. It is a lot of verbal abuse for anyone to swallow, but as a public-facing AVA officer I just have to keep my cool, listen patiently and, where I can, firmly explain our policies.

Q: What motivates you at work?

It has to be my passion for animal welfare. It is a personal conviction I have towards these animals.



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■ Pre-schoolers on a learning journey at AVA's Animal Management Centre.

Q: Do you have pets of your own? What is one piece of advice you would give anyone regarding pet care or ownership?

Believe it or not, I always tell people not to keep pets! I think pet ownership is wonderful, but it is really not a walk in the park – literally or not – for everyone. You have to be ready for the responsibilities. If you think someone else in the family or society is going to pick up after your pet, then no, I don't think you should keep one. I've counselled my friends and relatives on pet-related issues for many years and I know of so many people who give up their pets because they cannot take the hardship of chores, training, caring, and so on.

I have two dogs, a cat, a chinchilla, and a gerbil. They were all adopted. I am a firm believer in pet adoption. My oldest dog stays with my parents because he's very used to being there. My family and I spend a good

amount of time regularly cleaning up after and grooming our pets. Annually, the animals will go to the vet for a regular check-up.

Q: What do you find enjoyable/satisfying about your work?

Under the RPO programme, AVA adopted nine animals, and I love caring, playing with, and checking on them. These three cats, a rabbit, two guinea pigs, two chinchillas, and one terrapin love interacting with our audiences during learning journeys and school talks. Seeing them transform from abandoned animals to beloved pets with a cause – and looking absolutely fabulous – gives me an immense sense of satisfaction.

Also, I love meeting people – pre-schoolers, students, aunties, uncles... I love being able to share with them about RPO and listen to them, be it their stories or their rants!

PROMOTING RESPONSIBLE PET OWNERSHIP AT AVA'S HAPPY PETS HAPPY 'HOOD II EVENT

AVA's Responsible Pet Ownership (RPO) event, *Happy Pets Happy 'Hood II*, returned to Waterway Point in Punggol on 13-19 November 2017 with an extensive and engaging interaction exhibition gallery. The gallery's content touched on four key areas – RPO, considerate pet ownership, animal welfare, and stray animals. About 23,000 visitors acquired knowledge about pet ownership, their role in safeguarding animal welfare, and what to do when they encounter stray dogs.

Twelve of AVA's animal re-homing partners were at the event to help spread RPO messages and raise funds for their respective organisations. Edutaining stage performances and pet-related craft activities were also part of the event. In addition, free basic pet health checks were provided by veterinarians from private clinics and educational institutions who volunteered their time and expertise for this meaningful initiative.





LEADERSHIP CHANGES AT AVA

On 1 October 2017, AVA welcomed its new Chief Executive Officer, Mr Lim Kok Thai. Mr Lim joined AVA from the Singapore Police Force (SPF). He replaced Ms Tan Poh Hong, who helmed AVA for eight years.

Under Ms Tan's leadership, AVA strengthened Singapore's food security by building strong partnerships with the industry and other stakeholders. Through the Agriculture Productivity Fund and other initiatives, AVA transformed Singapore's local farming landscape. Through these efforts, Singapore's ranking in the Global Food Security Index climbed from 16th in 2013 to third in 2016. Ms Tan also led AVA in reviewing and strengthening legislation to raise animal welfare standards in Singapore. The Ministry of National Development (MND) and AVA thank Ms Tan for her years of dedicated service.



■ Mr Lim Kok Thai

Mr Lim Kok Thai held various key appointments including Commander of Bedok Police Division and Director of Operations in SPF. Most recently, as Deputy Commissioner of Police (Policy), Mr Lim ensured that the various staff functions operated at an optimal level. He also served as Assistant Director in MND's Housing Division from 1999 to 2001 and Senior Director at the National Security Coordination Centre, National Security Coordination Secretariat, Prime Minister's Office in 2014.

AMENDMENTS TO THE SALE OF FOOD BILL

The Sale of Food (Amendment) Bill was passed by Parliament on 7 November 2017. The proposed amendments are intended to enhance AVA's food safety regime, protect the interests of consumers, and enable them to make informed choices.

The key proposed amendments are:

1. To broaden the scope of the Act: Currently, the Sale of Food Act allows AVA to regulate food safety related issues for food products in our market. For example, by prohibiting the sale of contaminated food, and setting food safety requirements. The amendments will expand to allow AVA to prescribe new regulations that go beyond food safety. For example, AVA will be empowered to regulate the information contained on food labels and in advertisements, including requiring mandatory declarations or prohibiting certain health or nutrition related information in labels and advertisements of food products. This will help consumers make more informed buying decisions.

2. To empower AVA to effect recalls of food and food contact articles: Currently, AVA can only recall a food product or food contact article after it has found the items to be contaminated with safety hazards. With the amendment, on reasonable grounds that an item poses a safety risk, AVA can issue directions to recall the item or impose corrective actions so as to remove such a risk to consumers. The amended Sale of Food Act will also stipulate the penalties for non-compliance with these directions.

3. To empower AVA to license all non-retail food businesses: Currently, food importers are either compulsorily registered or licensed by AVA. Food processing establishments (e.g. meat and seafood cold stores, food manufacturers) are also licensed by AVA. On the other hand, food warehouses are registered with AVA on a voluntary basis. The amended Act will enable AVA to require all non-retail food businesses – such as warehouses, wholesalers, and distributors – to be licensed. AVA will implement this licensing process in phases starting with warehouses that store food of the highest risk category (e.g. dairy and infant food), and a grace period will be given for operators to comply.

FOOD INDUSTRY CONVENTION 2017: THE LEAP INTO INNOVATION AND INTERNATIONALISATION

The biennial AVA Food Industry Convention was held on 1 November 2017 to the theme of 'Food Security – The Next Leap'. It was graced by Minister for National Development Mr Lawrence Wong, with more than 470 guests from the food industry, government agencies, academia, and overseas trade offices in attendance.

Experts from the University of Oxford's Food Systems Programme and Monash University's Food Innovation Centre provided insights into plausible future scenarios and ways to build resilience in food security, as well as the importance of creating competitive advantages through innovation.

In addition, speakers from the National University of Singapore Business School, Poultry East Asia Ltd, and Sino-Singapore Jilin Food Zone Development and Management Co Ltd shared their experiences and best practices on business growth and internationalisation

amid an increasingly globalised food system. Through internationalisation, companies will benefit from greater access to overseas food sources, in turn contributing to Singapore's food security.

AVA also took the opportunity at the Convention to thank its stakeholders and collaborators for their contributions. Some 117 tokens of appreciation were presented to key members of AVA's business clusters, joint taskforces, and industry working groups and consultation panel.



ASEAN MINISTERS MEET IN CHIANG MAI, THAILAND

Officials from MND and AVA, led by Senior Minister of State Dr Koh Poh Koon, attended the 39th Meeting of the ASEAN Ministers on Agriculture and Forestry (AMAF), and the 17th Meeting of the AMAF Plus Three on 28-29 September 2017 in Chiang Mai, Thailand.

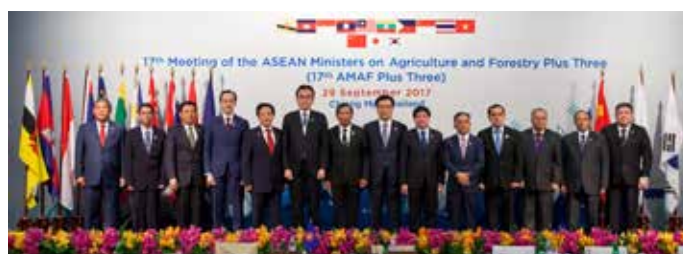
As the immediate past AMAF Chairman, Singapore handed the AMAF Chairmanship over to Thailand at this meeting. During the past year, Singapore hosted events including the 38th AMAF Meeting and 16th AMAF Plus Three meetings; the Special Senior Officials' meetings; as well as various Sectoral Working Group meetings. In October 2016 in Singapore, AMAF leaders also completed the signing of the Agreement on the Establishment of ASEAN Coordinating Centre for Animal Health and Zoonoses – the Centre will enhance the prevention and control of transboundary animal and zoonotic diseases in the region.

In Chiang Mai, AMAF leaders exchanged views on regional development in the food, agriculture, and forestry sectors. Several guidelines, frameworks, and documents related to food security, food safety and agricultural product quality, as well as fisheries were also endorsed.

In addition, AMAF leaders welcomed Singapore's initiatives in building partnerships and technical

capacities to address antimicrobial resistance (AMR). In consultation with ASEAN Member States, Singapore developed the ASEAN Guidelines on Prudent Use of Antimicrobials in Livestock, and will be spearheading ASEAN cooperation in fighting AMR in the aquaculture sector. These efforts provide opportunities for ASEAN to learn from each other through the sharing of best practices. They also complement Singapore's National Strategic Action Plan to combat AMR, which was jointly developed by One Health agencies including AVA.

The Agriculture Ministers from ASEAN Member States, China, Japan, and the Republic of Korea also noted the assessment on the ASEAN Plus Three Cooperation Strategy (APTCS) on Food, Agriculture and Forestry (2011-2015), as well as the various collaborative activities implemented. To continue this cooperation framework, the Ministers endorsed the APTCS on Food, Agriculture and Forestry for the period 2016 to 2025, to provide the scope and strategic areas for this cooperation.





FACILITATING THE ARRIVAL OF WORLD'S RAREST BLUE MACAWS IN SINGAPORE

To mark the 50th anniversary of the establishment of diplomatic relations between Brazil and Singapore, the Jurong Bird Park welcomed the world's rarest blue macaws to its park.

As the guardian of animal health in Singapore, AVA worked to facilitate the macaws' entry into Singapore. The import of animals into Singapore is subject to AVA's import conditions, including vaccination and health certification requirements. Depending on the country of export, animals may have to undergo post-arrival quarantine. The regulation of animal imports into Singapore is a key strategy in preventing the introduction of animal diseases.

Before the macaws arrived in Singapore, they underwent tests for bird flu, as well as 21 days of pre-export isolation to ensure they were free from signs of infectious and contagious diseases.

Upon their arrival in Singapore, the macaws were physically inspected for any clinical signs of illness or disease by our officers at AVA's Changi Animal and Plant Quarantine Station. A rapid test for bird flu was conducted, and accompanying documents were verified to ensure the birds complied with our import requirements.

The macaws – one Spix's macaw and two Lear's macaws – are now housed in the Jurong Bird Park's revamped Parrot Paradise exhibit, which opened on 22 November 2017.



Photo: Wildlife Reserves Singapore



Photo: Wildlife Reserves Singapore



Editorial Advisors
Dr Choo Li Nah, Elaine Pong

Editorial Assistant
Hawa Md Resat

Editor
Nicole Liang Huimei

Contributors
Ahmad Hafiz Jumadi, Chong Poh Choo,
Cliff Tham, Marcus Ong



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