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AVA VISION

Issue 2/2016

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S'PORE HOSTS AMAF MEETINGS

The ASEAN Ministers on Agriculture and Forestry (AMAF) platform continues to provide leadership and establishes strong regional cooperation in agriculture, food security, fisheries and forestry matters.



“Agriculture will always be a key priority for ASEAN. Whether it is to ensure food security for our people or to tackle emerging concerns in agriculture such as antimicrobial resistance, it is important that regional cooperation and partnerships are strengthened.”

***Coordinating Minister for Infrastructure and
Minister for Transport, Mr Khaw Boon Wan***

Singapore successfully hosted the 38th Meeting of the ASEAN Ministers on Agriculture and Forestry (AMAF) on 6 October 2016, and the 16th Meeting of the AMAF Plus Three (AMAF+3) on 7 October 2016. In his opening address for the meetings, Minister Khaw stressed the importance of agriculture in

ASEAN and the need for the region to strengthen cooperation. Under the chairmanship of Minister for National Development, Mr Lawrence Wong, the AMAF platform continued to provide leadership and established strong regional cooperation in agriculture, food security, fisheries and forestry matters.



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■ (8th and 9th from right) Minister for National Development & Second Minister for Finance, Mr Lawrence Wong and Minister of State for National Development & Trade and Industry, Dr Koh Poh Koon with ASEAN ministers.

Some of the key outcomes of the AMAF meeting were the adoption of the Key Performance Indicators for the Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025), and the Strategic Plans of Action for various sectoral working groups. Progress and achievements were also attained in the harmonisation of standards for food, agriculture, and forestry products across the member states.

The ministers also discussed the impact of antimicrobial resistance in agriculture as this resistance can threaten global public health, and significantly impact agriculture, food security and safety, as well as food trade. ASEAN ministers have agreed to strengthen regional cooperation to use antimicrobials prudently, enhance surveillance and research, and promote good animal husbandry practice to mitigate adverse impacts in this area.

The fishery sector also made headways in enhancing sustainable fisheries management, collaborative research, information and data exchange, as well as collaboration between the public and private sectors. Likewise, strides were made in promoting sustainable

forestry practices through the implementation of a number of initiatives.

Following this, ASEAN ministers met their counterparts from China, Japan, and the Republic of Korea on 7 October 2016. The AMAF+3 meeting, also chaired by Minister Wong, has helped to further enhance cooperation between the countries in areas such as food security, as well as climate change mitigation and adaptation. Progress in the implementation of an emergency rice reserve and development of a food security information system was noted.

The next AMAF meetings will convene in Thailand in 2017.



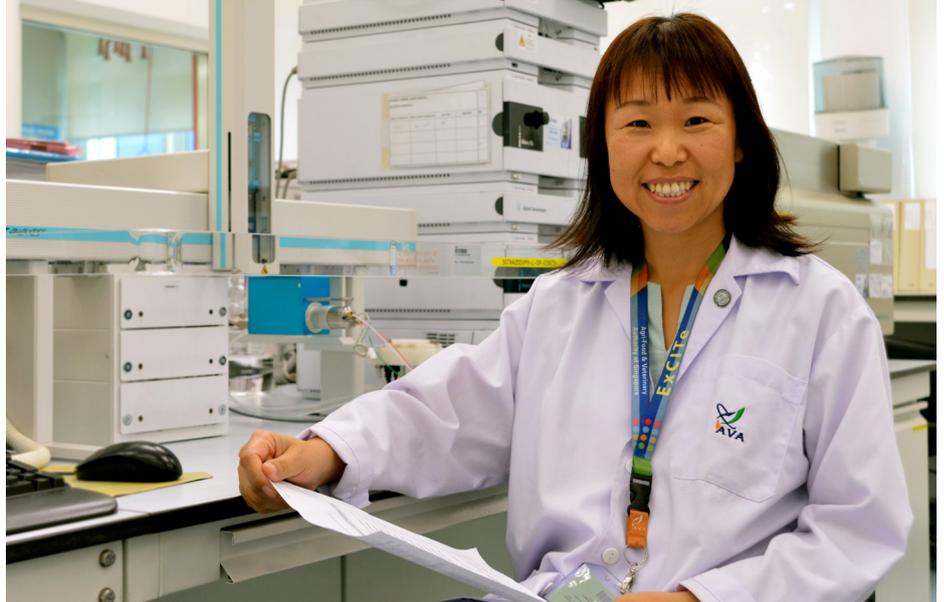
Scan to read more about the meetings and Minister Khaw's opening speech



Scan to view more photos

SAFE FROM HARM

Dr Shen Ping and her team at AVA's Veterinary Public Health Laboratory Chemistry Department keep us safe from harmful residual drugs in food.



Q: What is it do you do at work?

Dr Shen Ping: I lead a team of five analysts in testing for veterinary drug residues in food of animal origin. We also test for substances that are prohibited due to their properties of carcinogenicity, mutagenicity, or endocrine disruption – which, respectively, could cause cancer, mutate genes or interfere with the body's hormone systems.

In addition, we keep a lookout for drugs that may have adverse side effects or may trigger an allergy or antimicrobial resistance (the state where strains of microorganisms have evolved to become more resistant to antibiotics, thus becoming harder to suppress), if overused.

Q: What are the main challenges you face at work and how do you overcome them?

There are more and more uncommon and unanticipated food safety risks emerging worldwide. There have been food scandals of industrial

chemicals being added into food products to give them an attractive appearance. These chemicals could also be fed to animals to promote growth. These fraudulent practices jeopardise food safety and endanger public health.

Other potential consequences include antimicrobial resistance, environmental pollution and outbreaks of plant and animal diseases. Early alert systems for potential food safety issues, as well R&D, international collaboration, innovation on processes and public education are the strategies we have adopted to overcome these challenges.

Q: Share some lesser-known facts about your work.

Some people tend to assume that agricultural chemicals are always very harmful to health, but this is incorrect. In fact, most of the time they only pose a risk if used in excess. When used prudently, agricultural chemicals are actually beneficial as they are crucial in

■ *Dr Shen Ping spends the bulk of her time going through lab test reports to ensure results reflect safe levels of drug residues in food samples.*



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■ Drug reference standards are spiked into meat samples to construct a matrix-matching calibration curve to quantify the levels of drug residues present.

helping to boost the world's food supply.

To the layman, laboratory work sounds very cool because of the way it's portrayed on TV or in movies. In reality, laboratory work requires the scientist to be meticulous, vigilant, and hardworking. Lab scientists must also be prepared to work on weekends and public holidays because food safety issues are unpredictable and cannot wait.

I wouldn't give this job up for anything though. It has shown me all the tremendous achievements humans have made in the areas of food safety and food supply.

Q: What are some notable projects that you are or have been involved in?

I'm involved in the 'Non-target Project', which seeks to establish advanced laboratory testing

capabilities through high-resolution mass spectrometry. This analytical technology enables the rapid screening of large quantities of contaminants in food.

With conventional analytical methods, 'targeted' approaches are employed, where testing is done based on a limited, known list of targets. With such methods, any contaminants outside of the list of targets would be left out. Multiple methods had to be run at the same time if a wide range of 'targeted' tests were required.

The 'Non-target Project' addresses the issues of such a traditional approach, allowing 'unknown' contaminants to be detected quickly and efficiently. This project will further enhance AVA's preparedness for uncommon/unanticipated food safety hazards. With these testing capabilities, early signals of potential food safety risks will be captured so that AVA is able to mitigate impacts and damage at early stages.

Q: What aspects of your work do you find enjoyable or satisfying?

All my friends and visitors from other countries always say that Singapore is a nice place to live in because there is no need to worry about food safety issues. Hearing these comments gives me a great sense of satisfaction!



Scan to watch a short video of Dr. Shen Ping at work

Did You Know?

Some food items carry the claims of 'hormone-free' and 'antibiotic-free', while others don't. Regardless of whether they carry such claims, meat and meat products in Singapore are free from synthetic hormones and harmful antibiotics residues. Here's why:



Approved antibiotics are only permitted for use to treat diseases and prevent infections but NOT for growth promotion in food-producing animals.

Farmers are required to ensure that no antibiotic residues or only trace amounts below the Maximum Residue Levels (MRLs) are present in meat and meat products.

AVA has a strict inspection and testing regime to ensure the safety of imported and locally produced food. If meat and poultry, and their products, are found to contain antibiotic residues exceeding the MRLs, or contain any synthetic hormone growth promoters, the consignment will be rejected at the point of import.



AVA does NOT allow the use of hormones in animals for export of meat to Singapore.



Hormones are banned from use in growing cattle and sheep in many countries.

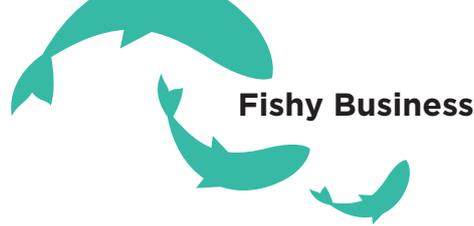


However, all meat and poultry DO contain small amounts of hormones because all animals produce hormones naturally.



Hormones are NOT used in poultry production nowadays to promote growth in poultry.





ALL HANDS ON DECK TO MANAGE PLANKTON BLOOMS

AVA's multi-pronged approach includes strong teamwork within AVA, practical solutions for fish farmers, and inter-agency collaboration.

Local farms account for 10% of Singapore's fish supply. In recent years, this supply and farmers' livelihood have been threatened by plankton bloom, a natural phenomenon that has caused much damage to our farmers' fish stocks. As these potentially devastating blooms have occurred more than once and are likely to reoccur, it is important to stay vigilant and prepared in handling such a crisis. AVA adopts a multi-pronged strategy to help our farmers mitigate the impacts.

A Close Watch and Well-timed Alerts

Within AVA, our team of officers closely monitors the water quality around coastal fish farms. A real-time online water quality monitoring system was built and farmers can access it through their mobile phones. We also created a new colour-coded SMS alert system to provide fish farmers with timely warnings on the different stages of a plankton bloom situation. In the event that an elevated plankton level is detected, AVA sends an alert to farmers so that they can deploy appropriate mitigation actions to save their fish stocks.

Practical Solutions

Since adverse environmental factors such as plankton blooms cannot be controlled, it is important to have contingency plans in place. These plans need to provide effective solutions that are practical to deploy.

In the event of a plankton bloom, AVA recommends the safe and viable option of using canvases to protect fish stocks. We collaborated with Temasek Polytechnic and the Workforce Development Authority to equip farmers with the knowledge on how to rapidly deploy canvas

Coloured Warnings



Yellow indicates elevated plankton levels with no mortality of farmed fish



Orange indicates there's been some mortality



Red signals widespread of fish mortality

■ Rapid deployment of canvas systems to create a simple closed containment unit, which can be used during plankton blooms to safeguard fish stock.



Continued from p.6



■ On 3 August 2016, Minister for National Development Mr Lawrence Wong presented AVA with the Minister's Award (Team) for the development of a multi-pronged approach to dealing with plankton blooms in Singapore waters.

bags to create a simple closed containment unit, which can be used during plankton blooms to safeguard fish stock.

Besides capacity building, our officers also went the extra mile to follow-up with these farmers to help them tailor their contingency plans to suit their needs. During the last plankton bloom, AVA's field response teams helped farms to deploy canvases and conduct emergency harvests to save market-sized fishes. We also provided fish disposal services to clear dead fishes from the waters.

For longer-term solutions, AVA encourages coastal farmers to adopt the Closed Containment Aquaculture Systems and Recirculating Aquaculture Systems (RAS) as effective and bio-secure indoor fish production methods. For example, AVA worked with Swee Chioh Fishery, a local land-based fish hatchery, to set up a RAS and develop accompanying culture protocols for large-scale indoor seabass larviculture.

In addition, AVA initiated a business matching session for local fish farmers and buyers (importers, caterers, restaurateurs, and retailers). By helping to expand their network of buyers, farmers can have the opportunity to sell more fishes and reduce their stock in anticipation of upcoming plankton blooms.

Whole-of-Government Approach

Besides harming local fish stocks, plankton blooms could also have impacts on other aspects such as marine biodiversity, desalination plant operations, as well as affect members of the public who visit public beaches.

AVA set up an Inter-Agency Plankton Bloom Working Group to ensure close monitoring and timely updates on any signs of plankton blooms. Together with the 10 government organisations, we also co-developed an Inter-agency Management Framework to manage plankton bloom events, including peacetime surveillance. These agencies are: Ministry of National Development, Ministry of the Environment and Water Resources, Ministry of Health, National Environment Agency, National Parks Board, Public Utilities Board, Housing and Development Board, Maritime and Port Authority, JTC Corporation, and Police Coast Guard.

FIRM STANCE AGAINST ILLEGAL IVORY

AVA is committed to curbing illegal ivory trade.

Annually, the international wildlife trade is estimated to be worth billions of dollars, involving a massive amount of plant and animal specimens. Levels of exploitation of some animal and plant species are high. The trade of these species, together with other factors such as habitat loss, could bring them to extinction. As such, we need to safeguard these species from over-exploitation and illegal trade.

Singapore condemns the illegal trade of wildlife and takes a zero-tolerance stance on the use of Singapore as

a conduit to smuggle endangered species and their parts. Singapore is also a member country of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) – an international agreement between governments to ensure that trade in specimens of wild animals and plants does not threaten their survival.

As the CITES authority in Singapore, AVA has in place strong legislative and enforcement measures against the illegal trade of wildlife. To combat illegal trading of elephant ivory in particular, AVA adopts a multi-pronged approach that includes regulation, public education, as well as collaboration with enforcement agencies on intelligence sharing and risk profiling.

For example, on 13 June 2016, AVA crushed 7.9 tonnes of seized ivory, estimated to be worth about S\$13 million. This destruction signifies our firm stance against the illegal trade of ivory. By crushing the ivory, we ensure that it does not re-enter the market.



“The public can help reduce demand by not buying such products. When demand falls, poaching will naturally fall too. AVA will continue to ensure that regulatory measures against illegal wildlife trade are enforced.”

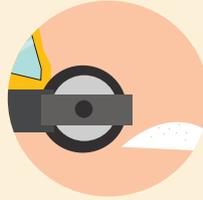
■ (L-R) British High Commissioner, Mr Scott Wightman, AVA CEO Ms Tan Poh Hong, and Senior Minister of State for Home Affairs and National Development, Mr Desmond Lee inspecting the confiscated ivories.

**Ms Tan Poh Hong,
Chief Executive Officer (CEO), AVA**

How the Ivories Were Crushed



1) The ivory tusks were broken into pieces using hydraulic excavators.



3) The ivory was further pulverised by a compact roller.



2) These broken pieces were loaded into a rock crusher and crushed.



4) Pulverised ivory was loaded onto a truck and sent to an incineration plant to be burnt.

AVA's Prevention & Regulatory Efforts



Educating the public, working with web forum administrators on relevant messaging, and engaging stakeholders.



Conducting regular and unannounced checks on retail outlets.

Inspecting CITES shipment.



Conducting regular in-house sharing sessions with partner enforcement agencies to enhance their knowledge on CITES.



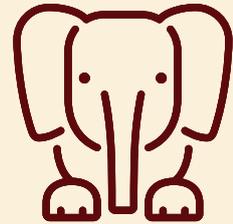
Collaborating with international, regional and national enforcement agencies on border inspections and investigations.



Routine monitoring of retail outlets and online sources for sale of illegal wildlife and wildlife parts/products.



Taking enforcement action and imposing penalties.



Illegal Ivories from 4 Seized Shipments

The destroyed ivories came from 4 consignments seized in:

Jan 2014

3 ivory tusks, 16 ivory bangles, 109 ivory cubes, estimated to be worth S\$65,000 were being smuggled from Africa en route to Laos.

Mar 2014

106 ivory tusks, estimated to be worth S\$2 million, were being smuggled from Uganda en route to Vietnam.

May 2015

Illegal wildlife parts, including 1,783 ivory tusks, estimated to be worth about S\$8 million, were discovered in a shipment bound for Kenya en route to Vietnam.

Dec 2015

Illegal wildlife parts, including 851 ivory tusks, estimated to be worth about S\$3 million, from Nigeria and Democratic of Congo, en route to Laos, were intercepted.

Enforcement actions were taken in all these cases.



Scan to view photos of ivories being crushed



Scan to view the video of ivories being crushed



Scan to read the full media release



UPLISTING OF AFRICAN GREY PARROTS & PANGOLINS

These 2 species will be listed under CITES Appendix I with tighter trade restrictions.

The summit of CITES – 17th meeting of the Conference of the Parties (CoP17) – closed on 4 October 2016, adopting a suite of decisions on regulating legal, sustainable, and traceable trade in wildlife. Notably, the African grey parrot and pangolin have been uplisted from Appendix II to Appendix I*.

African Grey Parrot

With effect from 2 January 2017, import, export/re-export, and transshipment of African grey parrots for commercial purposes will be prohibited. Commercial bird farms may seek CITES registration to breed the species in captivity for commercial exports. Bird shops have been requested to declare the number of African grey parrots that they have imported or acquired.



■ The African Grey Parrot (Photo: L. Miguel Bugallo Sánchez)

As such, bird shops are reminded to maintain proper records. They may sell the pre-Convention birds and are allowed to re-export them for non-commercial purposes only; for example, to overseas zoos.

There has been no illegal trade of African grey parrots in Singapore since 2012.

Pangolin

Pangolins are threatened by habitat loss, poaching, and illegal trade. With the new listing, commercial trade of all African and Asian species of pangolins and their parts and products such as scales and meat are banned.

**CITES Appendix I lists species that are critically endangered and for which international commercial trade is prohibited. CITES Appendix I species may be imported or exported/re-exported for non-commercial purposes such as zoological display. CITES Appendix II lists species that are not necessarily threatened with extinction now but that may become so unless trade is closely controlled. CITES Appendix II species are only allowed to be traded with proper CITES permits.*

The Illegal Trading of Pangolins or its Parts

| Year | 2012 | 2013 | 2014 | 2015 | 2016 (till 30 Sep) |
|--------------|------|------|------|--------------------------|----------------------------|
| No. of cases | 0 | 0 | 0 | 1 | 1 |
| Quantity | 0 | 0 | 0 | 646kg of pangolin scales | 109.9kg of pangolin scales |

AVA BAGS TWO HR EXCELLENCE GOLD AWARDS

AVA received two HR Excellence Awards on 19 October 2016. Our success in introducing work-life programmes, which contribute to our business goals, earned us a gold award in the 'Excellence in Employee Work-Life Balance' category.

In addition, we won a gold award in the 'Excellence in Mature Workforce Practices' category, for developing innovative and effective programmes for employees above 50 years old. The awards were presented by the 'Human Resources' magazine.



AVA'S ANIMAL MANAGEMENT TEAM WINS FOUR MUNICIPAL SERVICES AWARDS

On 30 September 2016, AVA received four Municipal Services Team Awards for providing systemic and citizen-centric improvements to animal-related services through inter-agency collaborations. Minister for Culture, Community and Youth, Ms Grace Fu, who oversees the Municipal Services Office (MSO) presented these awards in recognition of AVA's efforts in:

- Animal rescue services
- Developing protocols for AVA-MSO stray dog analytical study
- Managing crows and egrets at Maju Avenue
- Producing a Municipal Reference Guide



CODE OF ANIMAL WELFARE FOR PET INDUSTRY

The Code of Animal Welfare for the Pet Industry (www.ava.gov.sg/codepetindustry) came into effect on 1 October 2016. The Code comprises minimum standards for animal housing, management, and care that pet businesses must comply with. It also outlines best practices on animal housing, management and care which pet businesses are encouraged to adopt to further raise the standard of animal welfare in Singapore.

The Code was adapted from the draft that was formulated and submitted by the Multi-Stakeholder Collaboration Committee for Animal Welfare. A grace period of six months will be given, until 31 March 2017, for affected businesses to adhere to the new requirements.



Scan to download the easy to understand infographic



Scan to read the full Code



Corporate Cuts

FROM FARM TO COMMUNITY

With coaching from an AVA officer, avid community gardeners of Sembawang GRC and students of Spectra Secondary School grew more than 150kg of fresh vegetables over a span of two months. These home-grown vegetables, such as sweet potato leaves, *xiaobaicai*, *caixin*, *bayam*, *gailan*, radish, and sponge gourds, were served up as part of the luncheon during the GRC's 'From Garden to Plate' event on 7 August 2016. A hearty Halal meal using these vegetables as ingredients was shared with more than 200 residents from low-income families in Sembawang GRC.

In addition to this, AVA continued its Master Grower programme to build up a pool of trained vegetable growers. Fortnightly classes were conducted from 3 September to 8 October 2016. The Master Grower programme targets community garden volunteers or leaders who have a passion to engage and teach their fellow community gardeners on ways to grow vegetables.



HONOURING STALWARTS OF FOOD SAFETY



The annual Food Safety Awards Night gives recognition to outstanding food establishments that have upheld AVA's food safety standards and achieved a consistent 'A' grading in the Food Factory Grading Scheme. This year's event was graced by Minister of State for National Development and Trade & Industry Dr Koh Poh Koon.

Held on 29 July 2016 at Marina Bay Sands, the event honoured a total of 162 recipients. Win Sin (Pte) Ltd garnered the Food Safety Platinum award. Eight silver awards, nine bronze awards, and 144 Certificates of Commendation were also given out. In addition, three Food Safety Partnerships were renewed to recognise their efforts in educating consumers on food safety.



Scan to view more photos from the Food Safety Awards Night

View full list of award recipients at <http://bit.ly/FSARecipients>



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