



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

MALAYSIA COUNTRY REPORT ON BEE AND STINGLESS BEE DISEASE



**OIE Virtual Regional Workshop on Honey Bee Diseases
in Asia and the Pacific**

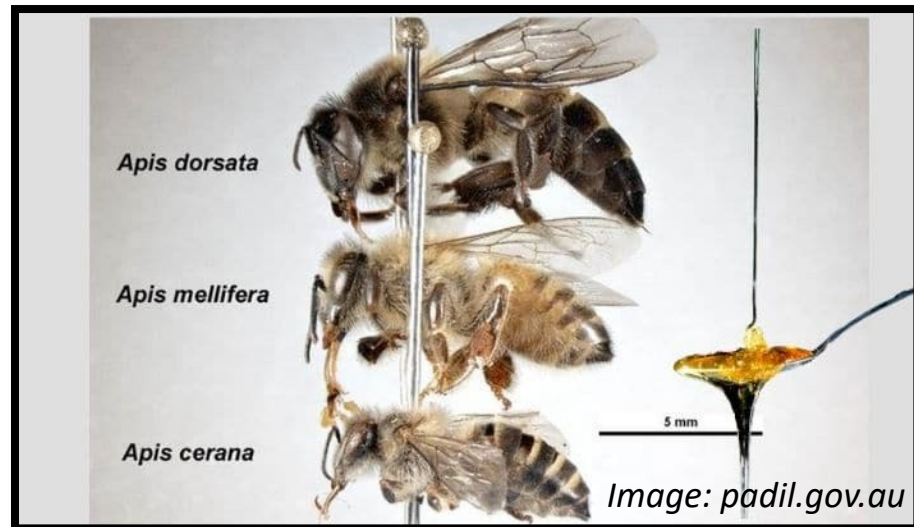
24 August 2021

INTRODUCTION

Stingless bee



- Bee commercially farmed since 1970's
- Since 2015, increase of interest in stingless bee industry
- Decrease of bee farming due to outbreak of *Varroa destructor*
- Beekeeping industry and honey industry in Malaysia - *Apis mellifera*, *Apis cerana* and wild bee (*Apis dorsata*)
- Stingless beekeeping industry - *Geniotrigona thoracica*, *Heterotrigona itama*, *Lepidotrigona terminata* and *Tetragonula leaviceps*
- Important as the pollinators in agriculture industry





LAW AND REGULATION

Act / Regulation / Accreditation	Covers
<ul style="list-style-type: none">• Plant Quarantine Act 1976• Plant Quarantine Regulation 1981	<ul style="list-style-type: none">• Regulate by DOA Malaysia as the NPPO of Malaysia• Import and export of live and specimen of bee species• Control and management of bee pest and disease• General import condition for bee and stingless bee:<ul style="list-style-type: none">▪ Bee (workers, queen) - Import Permit, Phytosanitary Certificate) and PEQ at apiary for pest and disease monitoring▪ Hive and honey comb - Not allowed for importation
<ul style="list-style-type: none">• Feed (Prohibited Antibiotics, Hormones And Other Chemicals) Regulations 2012	Control on usage of antibiotics (when related)





LAW AND REGULATION

Act / Regulation / Accreditation	Covers
<ul style="list-style-type: none">• MS 2679: 2017– Good Agriculture Practice – Farming of bee (tribus Apini) dan stingless bee (tribus Meliponin)• MS 2683:2017 Kelulut (Stingless bee) honey – Specification	<ul style="list-style-type: none">• Standard guidelines for bee and stingless bee farming• To ensure the related activities (farming, production of honey and related products etc.) are safe to the environment, human and the product is safe for consumption• All bee and stingless bee products are lab tested to ensure there is no trace of pesticide residue



BEE KEEPING MANAGEMENT SYSTEM

MALAYSIA MAP

Peninsular Malaysia

Bee – 3,300 colonies

Stingless bee – 37,000 colonies



West Malaysia - (Sarawak, Sabah, Labuan)

Bee – 10,000 colonies

Stingless bee – 30,300 colonies

- Bee keeping in Malaysia is managed by DOA Malaysia
- Total colony in Malaysia in 2021:
 - Bee – 13,300 colonies
 - Stingless bee – 67,300
- Wild *Apis dorsata* usually found in deep forest
- Related Malaysian Standard for management of bee & stingless bee and honey production:
 - MS 2683:2017 Kelulut (Stingless bee) honey – Specification
 - MS 2679: 2017 Good Agriculture Practice – Farming of Bee (tribus Apini) dan Stingless bee (tribus Meliponin)



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DISEASE SURVEILLANCE SYSTEM & STATUS

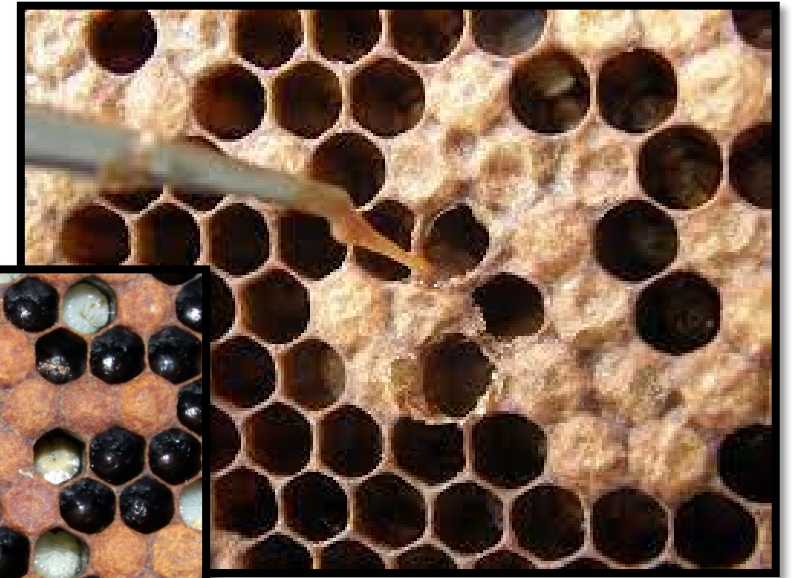
- Pest and disease are monitored by DOA Malaysia
- Pests and diseases monitored are:

A. Bee

- American foulbrood
- European foulbrood
- *Aethina tumida*
- *Varrhooa* spp.

B. Stingless Bee

- Black Soldier Fly - BSF (*Hermetia illucens*)
 - Sap beetle (*Haptoncus luteolus*)
 - *Aethina tumida*
- Data collected every month and reported to the Malaysia's OIE secretariat every 6 month



DISEASE SURVEILLANCE SYSTEM & STATUS



Year 1996 - 1997

- Colony collapse disorder (CCD)
- Effect the whole bee industry in Malaysia
- Multiple caused – pathogen, poor management and highly used pesticides from agriculture activities



Year 1997 - 2008

- *Varroa* spp. outbreak
- Suspected origin from the imported queen
- Honey production decrease



Year 2016-2019

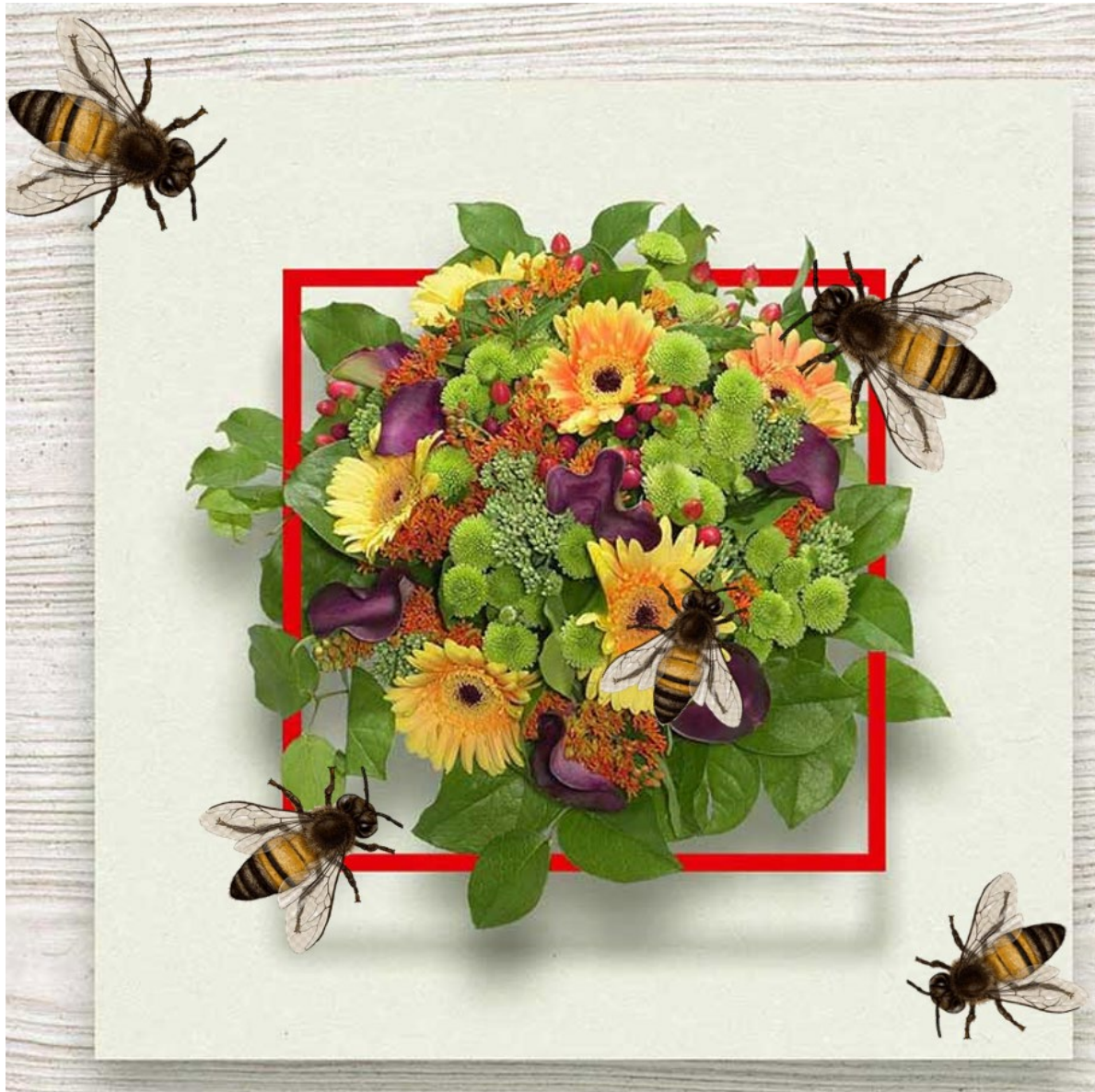
- Black soldier fly outbreak
- Extreme weather - high temperature and a lot of rain
- Farm sanitation; nearby BSF farming
- More than 2,600 hives effected



ACHIEVEMENT & CHALLENGES

- ❑ **Laboratory – optimization on molecular testing**
- ❑ **Expertise:**
 - **Surveyor – only via visual inspection**
 - **Capacity building - bee pest and disease (diagnostic & management)**
- ❑ **Climate change and extreme weather – results in changes of environment, pest and disease invasion**
- ❑ **Surveillance and monitoring programme**
 - **only in the commercial farm**
 - **yet to conduct National bee disease surveillance programme**
- ❑ **Excessive and unnecessary used of harmful chemical pesticide**
 - **Increase stakeholder and public awareness**





THANK YOU

- ✓ *DOA MALAYSIA*
- ✓ *MARDI*
- ✓ *DVS MALAYSIA*

