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MS ISO 9001:2015

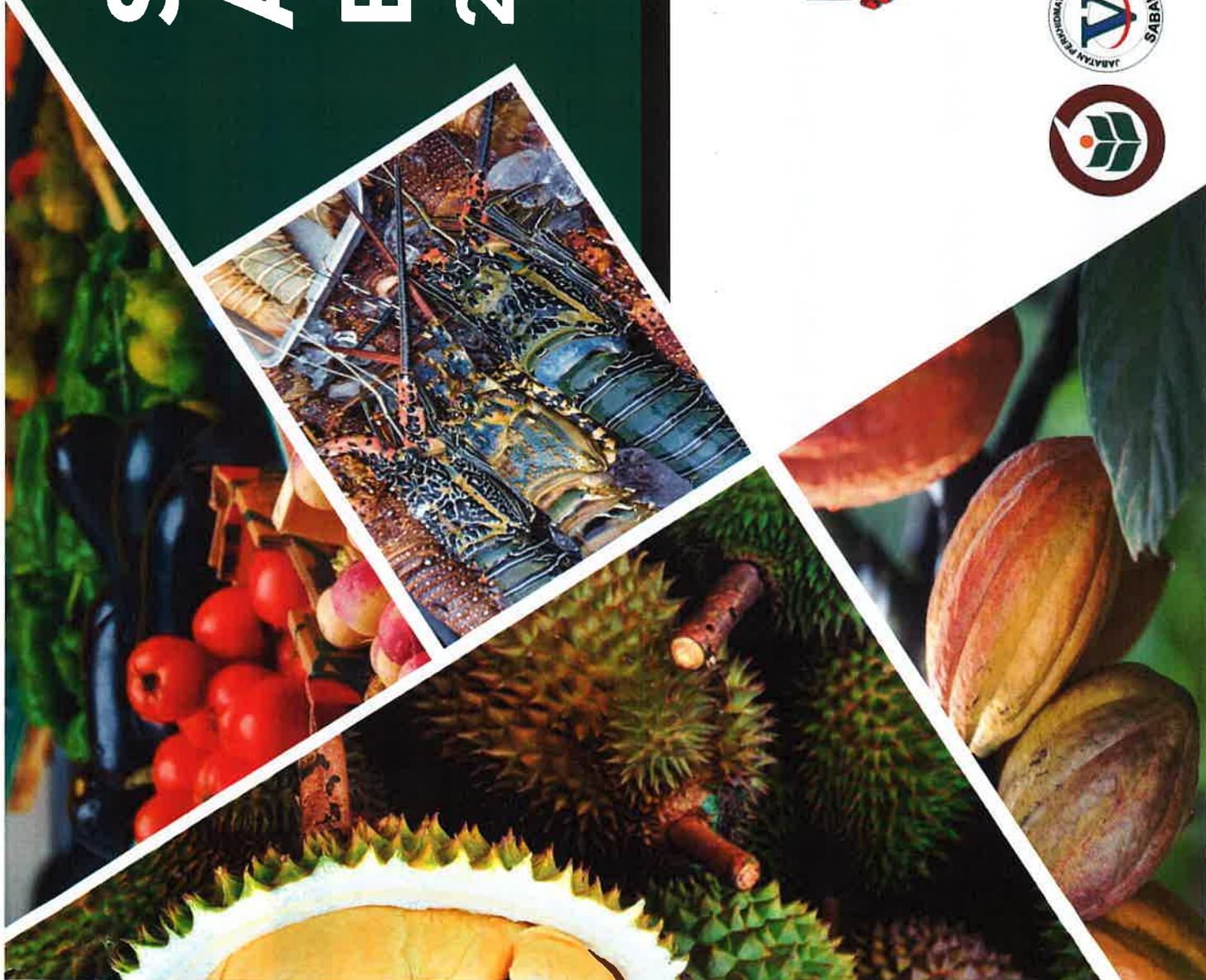
# **LAMPIRAN F**

## **(Organisasi Berpengetahuan)**

- 1. Sabah Agriculture Blueprint 2012-2030**
- 2. Inter Agency Planning Group (IAPG)-  
Jaminan Keselamatan Makanan**
- 3. Inter Agency Planning Group (IAPG)-  
Industri Komoditi**



# SABAH AGRICULTURE BLUEPRINT 2021 - 2030



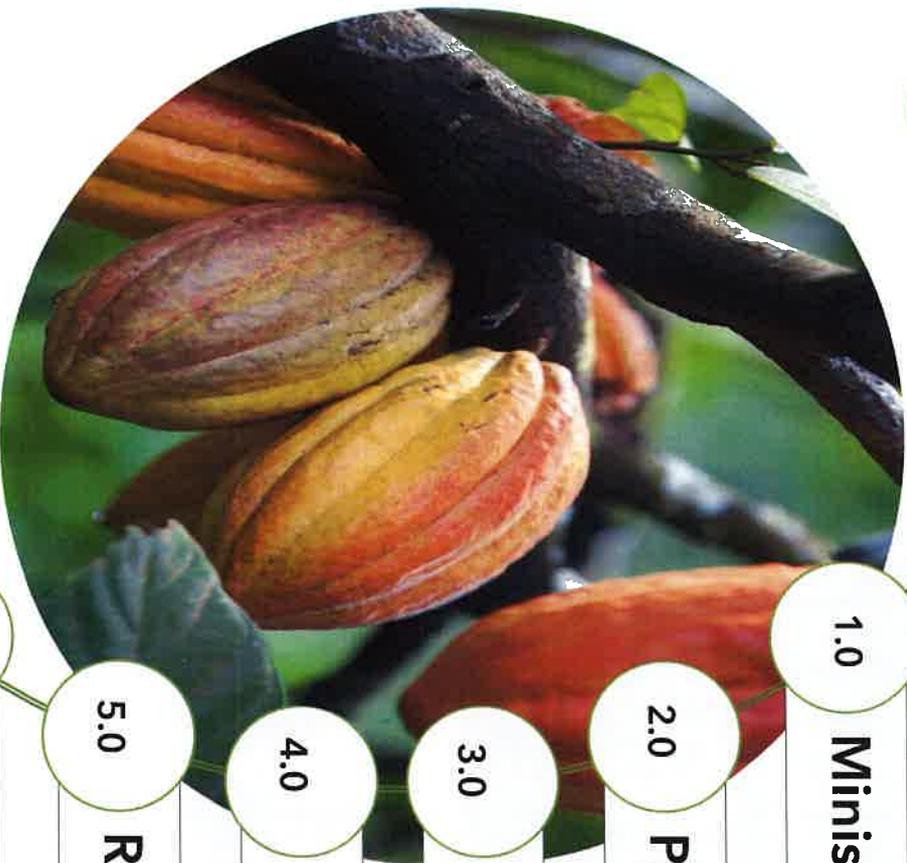
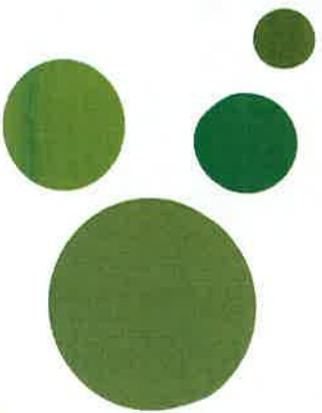
MINISTRY OF  
AGRICULTURE AND FOOD  
INDUSTRY



JULY 2019



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# Ministry of Agriculture and Food Industry (MAFI)

01

## VISION

To lead in the transformation of agriculture sector that are **productive, commercial, and competitive.**

02

## MISSION

To transform the agricultural sector by **increasing productivity, value** (the proportion of Sabah's GDP) and **increased the income** of agpreneurs.

02

## FUNCTIONS

-  • Advice Stakeholders.
-  • Draft Policies.
-  • Plan & Develop Resources.
-  • Manage Data.
-  • Budgeting.
-  • Coordinate Activities & Function of Dept. & Agencies.

03

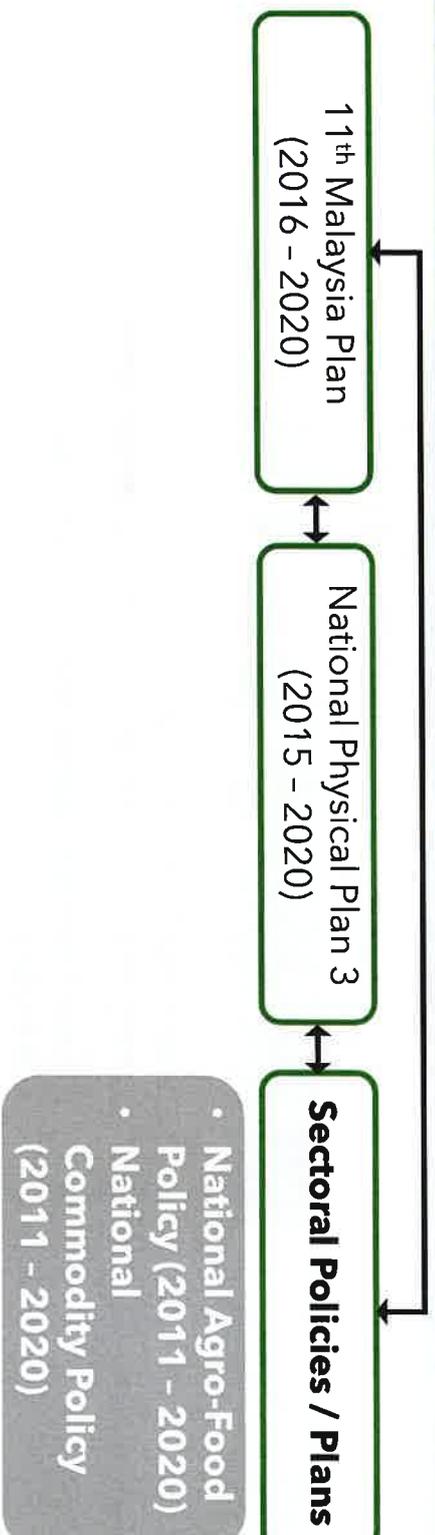
## DEPT. & AGENCIES UNDER MAFI



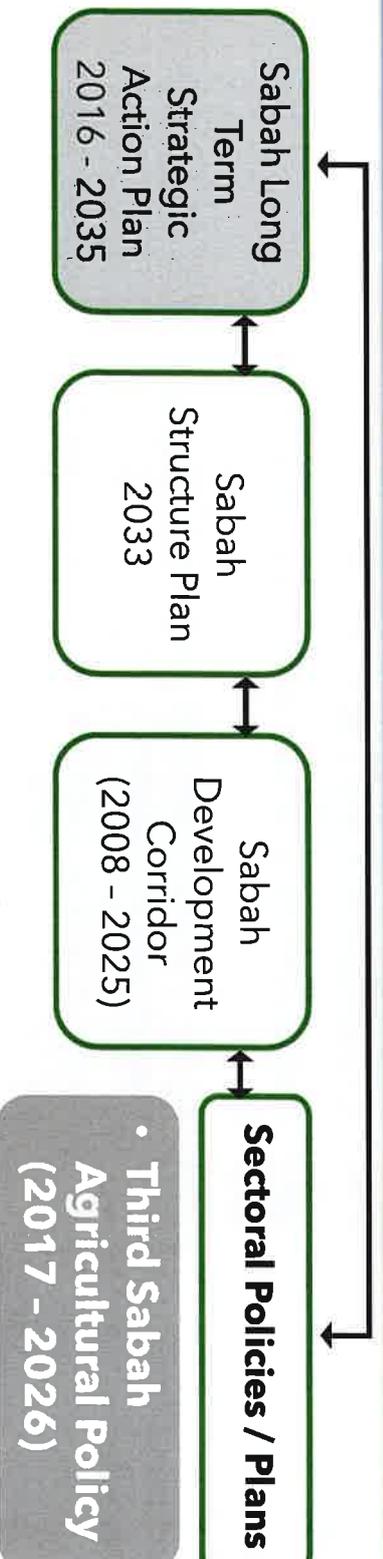
- Technology & innovation; plant materials; training; data dissemination; data management; expertise & consultation; enforcement; commodity dev., agro-tourism.
- Livestock feed production; livestock production; research & dev.; quality assurance & certification.
- Human resource & dev.; assistance & incentives; enforcement; fish health management; quality assurance; red tide & public safety; licensing.
- Irrigation; urban & agriculture drainage; beach & river engineering; water resources management; hydrology & Survey.
- Contract farming; training; fresh food brunch services.
- Rubber( industrial operation); smallholders development & training; group center processing; testing laboratory.
- Small industrial development; fishermen welfare; training; aquaculture & fishery.

# National and State Plans

## LEVEL 1: NATIONAL PLANNING

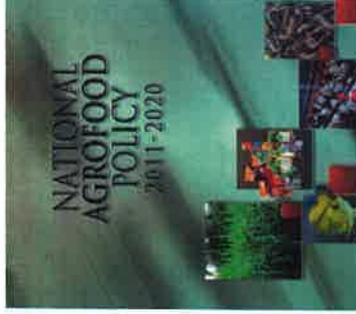


## LEVEL 2: STATE PLANNING



# Existing Plans and Policies on Agriculture at National & State Level

## National



### NATIONAL AGRO-FOOD POLICY (2011 - 2020)

- To address food security & safety to ensure availability, affordability & accessibility;
- To ensure the competitiveness & sustainability of the agrofood industry; and
- To increase the income level of agropreneurs.

## National



### NATIONAL COMMODITY POLICY (2011 - 2020)

- To increase the contribution of plantation industrial commodities to the nation's economy;
- To modernise & transform the commodity industry towards a more competitive & sustainable level;
- To encourage the development of the commodity industry along the value chain;
- To increase the income of operators and smallholders in the commodity industry; &
- To promote Malaysia as the centre of excellence in R&D, technology development & the downstream processing of industrial commodities.

## State

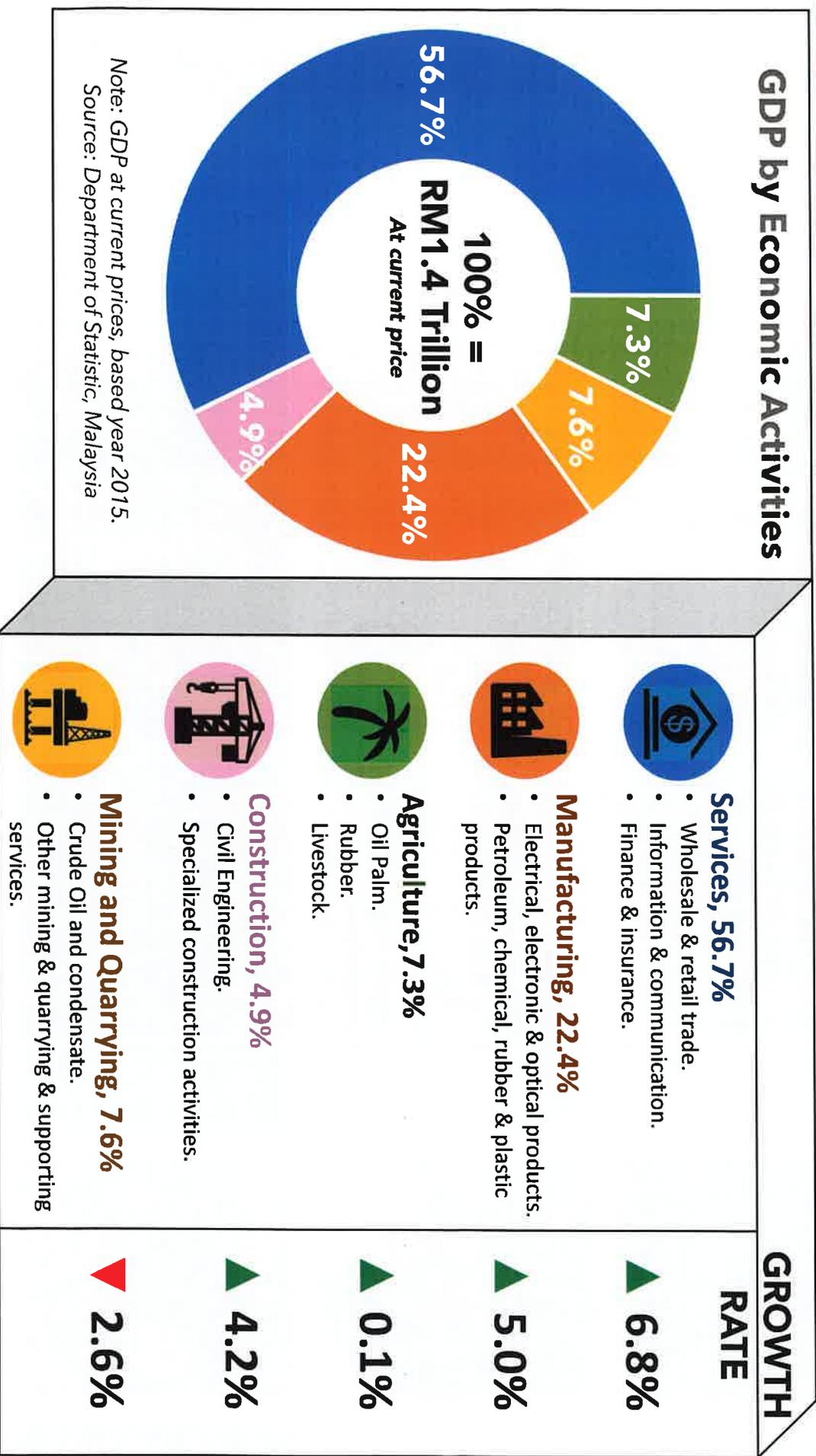


### THIRD SABAH AGRICULTURAL POLICY (2017 - 2026)

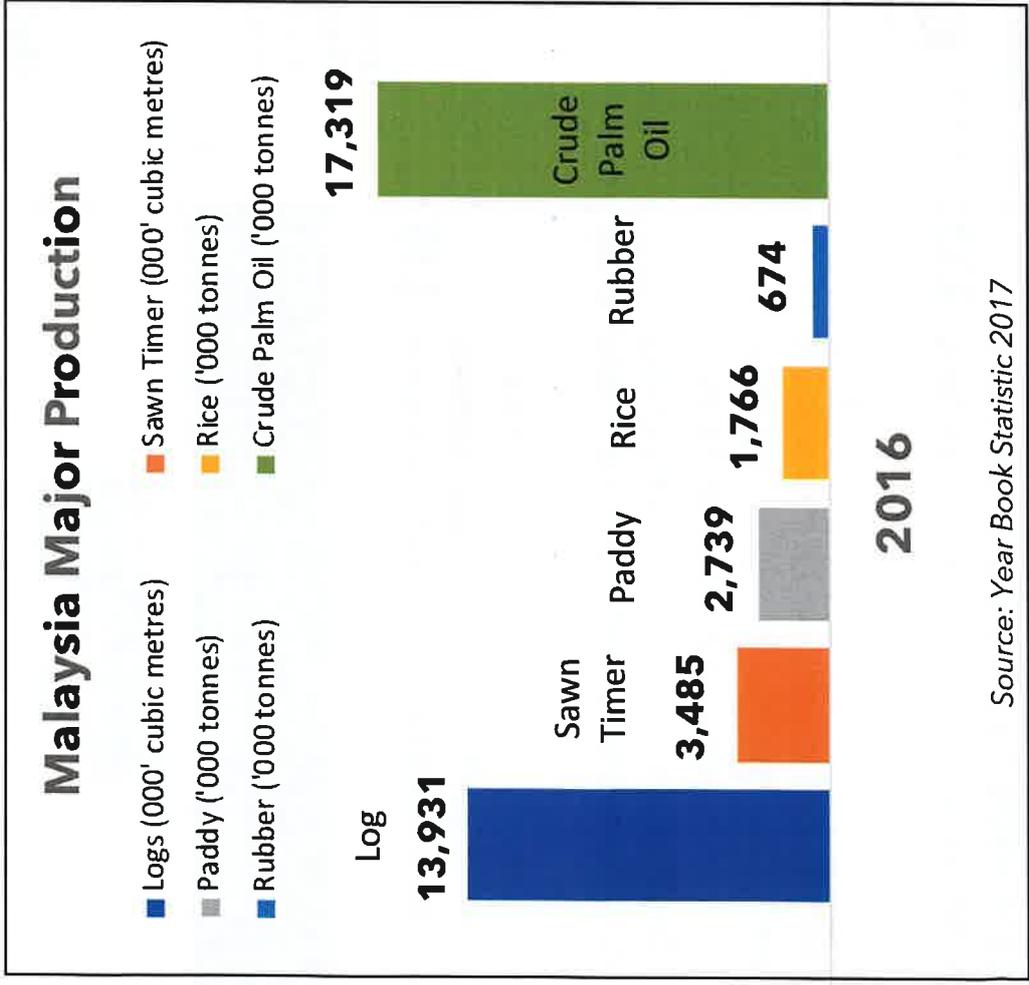
- To enhance food security by achieving a minimum production growth rate of 3 percent SSL annually for food crops, livestock and fisheries products, thus increasing farmers'/producers' income to RM4,000 per month per household;
- To strengthen productivity growth and competitiveness for nine Key Focus Agricultural Areas;
- To ensure long-term economic resources and environmental sustainability of food crops, fisheries, livestock, industrial and other economic crops including agrotourism.

# Malaysia's GDP Value at RM1.4 Trillion in 2018

- Agriculture sector contributed 7.3% (approximately RM 105 Billion) to Malaysia GDP.
- Underpinned mainly by a strong recovery in the oil palm and rubber subsectors.
- Food related sub sectors i.e. livestock performed well driven by stronger domestic demand.



# Malaysia is the Second Largest Palm Oil Producer in the World



## PALM OIL

Malaysia is ranks **SECOND** in palm oil production after Indonesia with its overall production accounting for **39% of the global production** while its exports account for **around 44%**.

(Source: <https://www.worldatlas.com>) 2016



## RUBBER

Malaysia ranks **THIRD** as the largest producing countries after Thailand and Indonesia. Shared about **10% of the total world production**.

(source: <https://www.worldatlas.com>) 2019

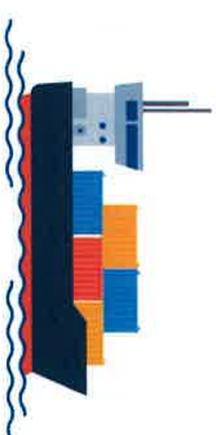
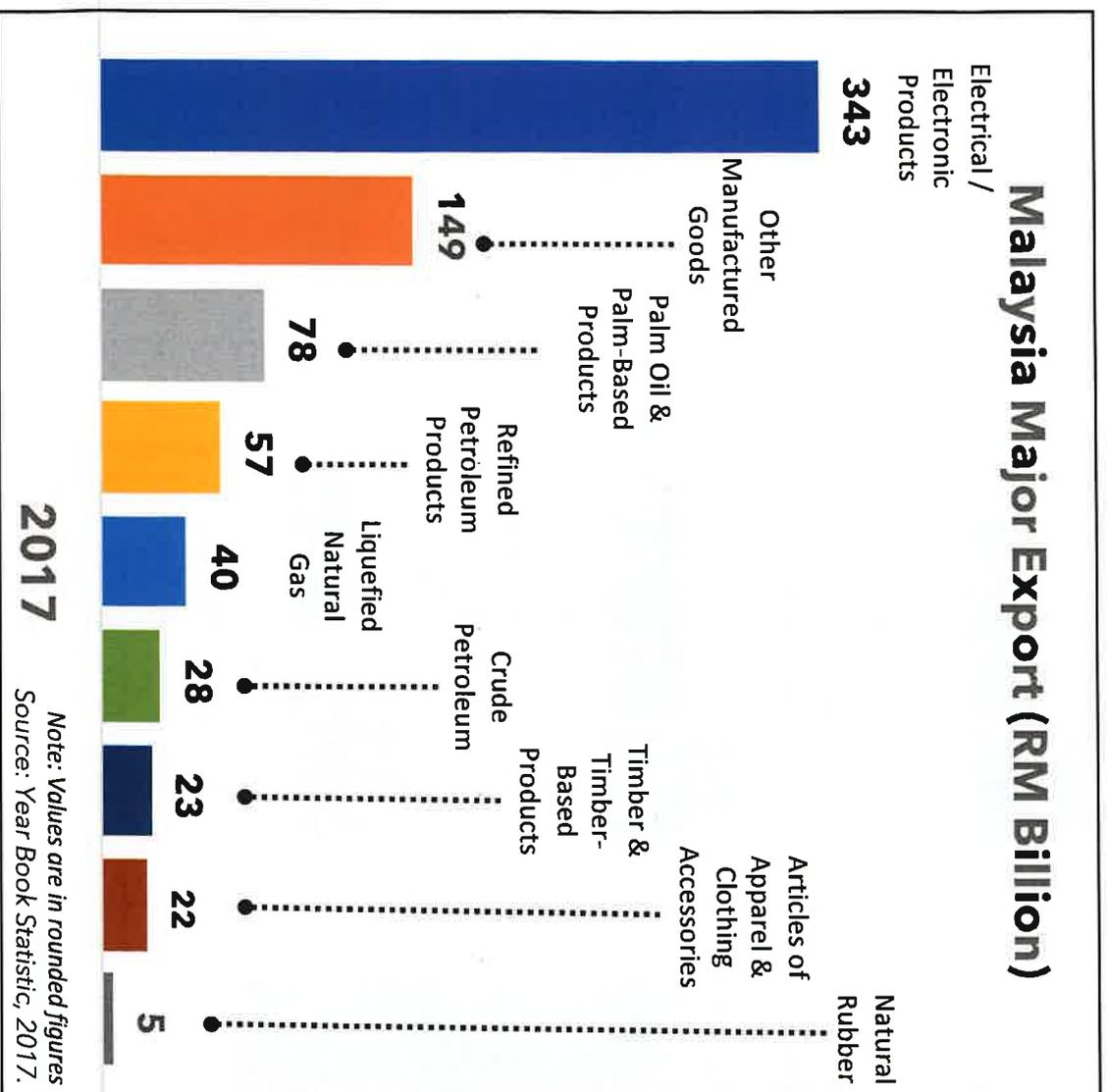


## RICE

Malaysia consumed **2.7 MILLION** tonnes of rice in 2016. Of the amount consumed, **65% (1.76 million tonnes) was produced locally**, while the rest was imported primarily from Thailand, Vietnam & Pakistan.

(source: *Khazanah Research Institute, 2019*)

# Malaysia Shipped RM745 Billion Worth of Goods Around the Globe in 2017

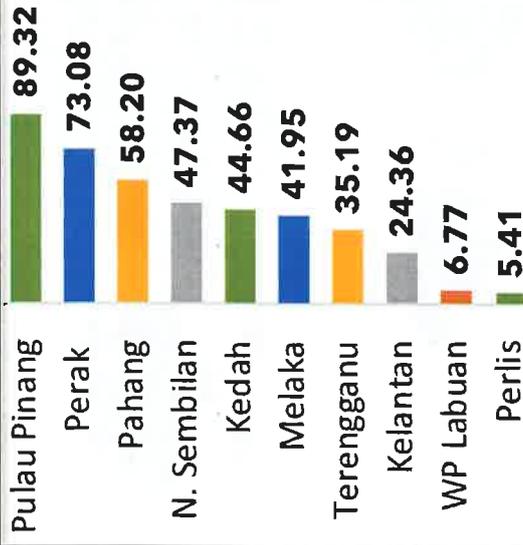


Approximately **11.4%** (RM83 billion) were agriculture produce.

- 01** Electrical / Electronic products is the **number ONE** contributor to Malaysia export (46%).
- 02** Palm oil & palm-based products was the **THIRD** highest contributor to Malaysia's export (contributed 10.5%) after electrical/electronic products (46%) and other manufactured goods and articles (20%).
- 03** Natural rubber ranked **NINTH** for Malaysia major export; totaling **RM5 billion** in 2017.

# Sabah is the FIFTH Highest Contributor to Malaysia's GDP in 2017

## GDP Contribution by State (RM Billion)



**Malaysia GDP**  
**RM 1.3 Trillion**  
*(at current price)*

**2017**

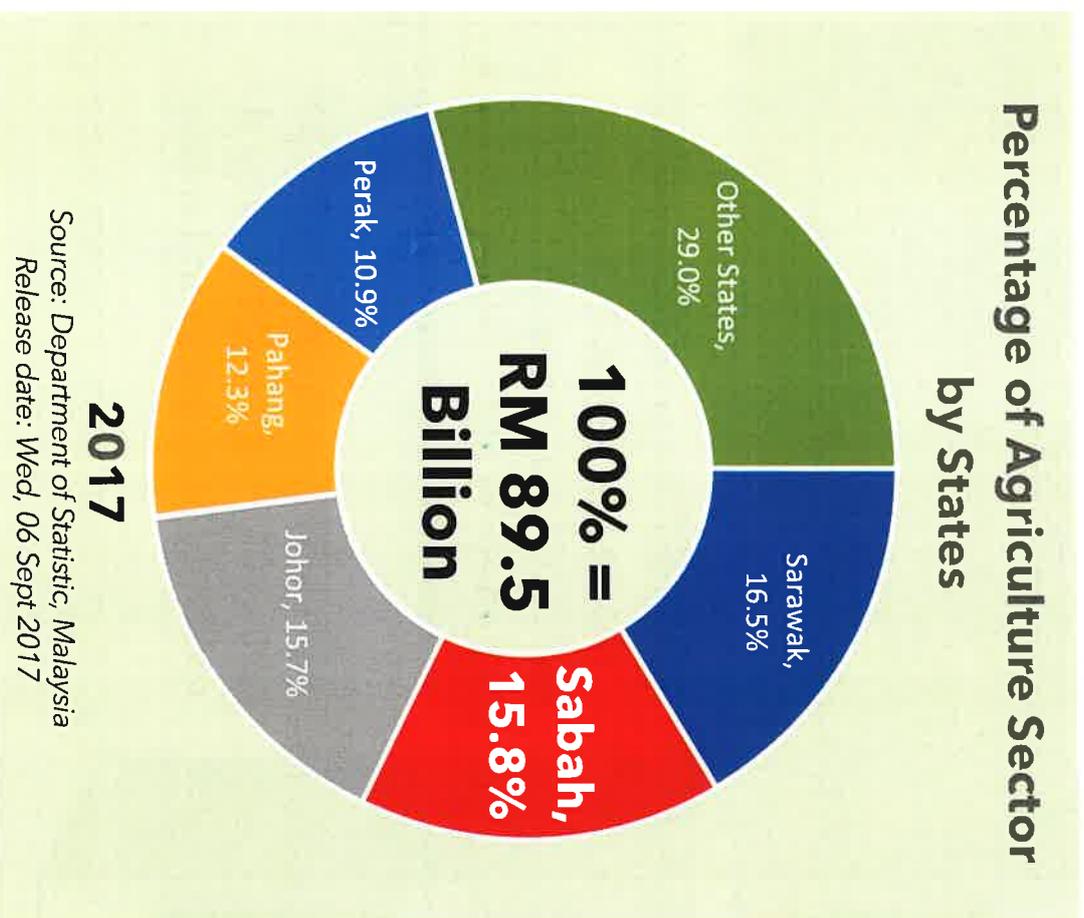
Source: The Performance of State's Economy, 2017  
 (Department of Statistics, Malaysia)

**SABAH** contributed to approximately **6.8%** (**RM92.03 billion**) of total Malaysia's GDP.

Sabah recorded a strong momentum of **8.2 PER CENT (GROWTH)** as compared in 2016 attributed by agriculture, mining & quarrying and manufacturing.

Agriculture escalated to 5.7 per cent (2016: -11.1%) aided by the recovery in oil palm and rubber.

# Sabah was Second Highest Contributor to National Agriculture Sector in 2017



Agriculture sector was **DOMINATED** by Sarawak, **SABAH** and Johor.



Sabah was **SECOND HIGHEST** contributor to National Agriculture GDP after Sarawak which accounted to **15.8% (RM 14 Billion)** in 2017.



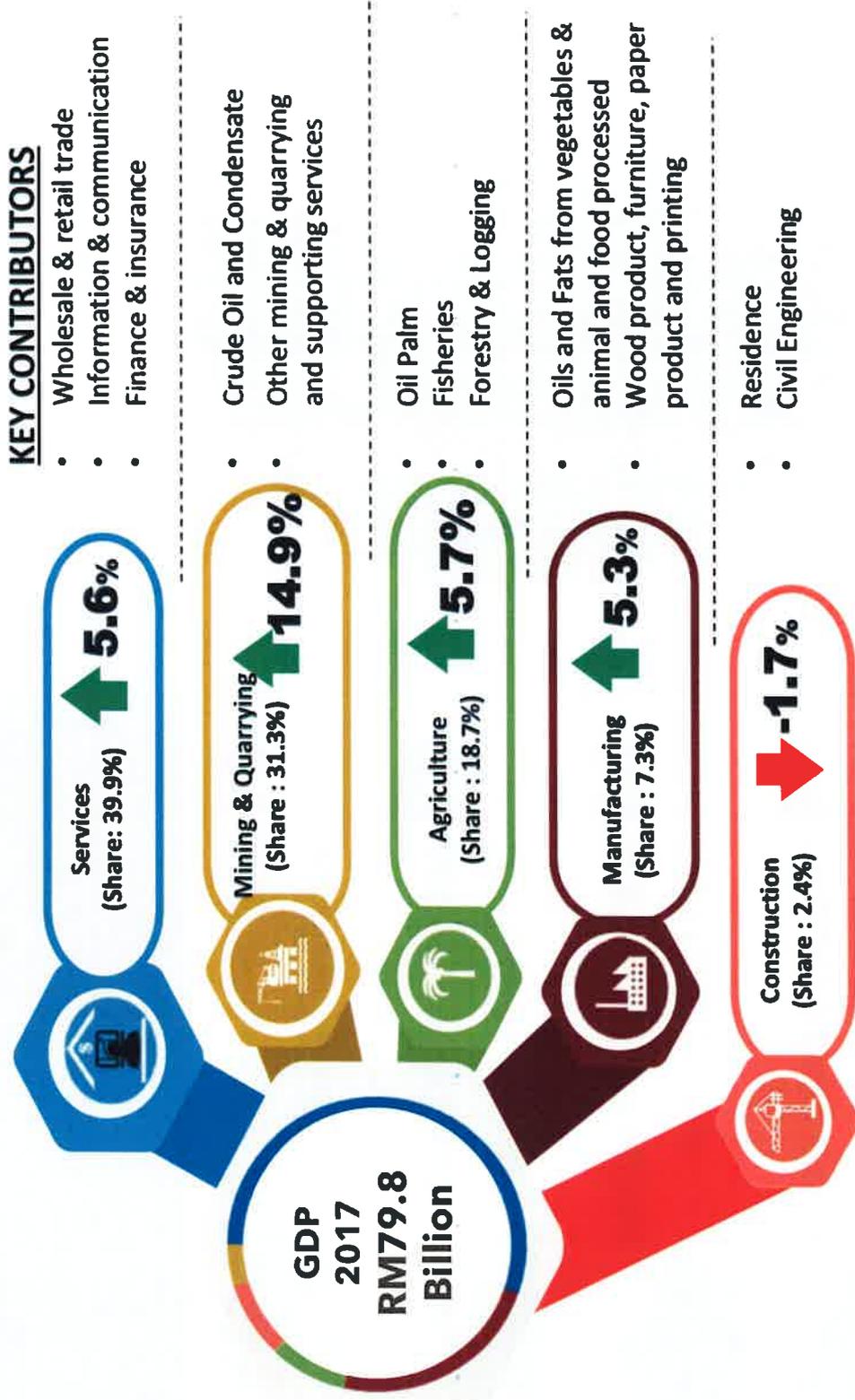
**Key Contributors:**

- Oil Palm
- Fisheries
- Forestry & logging



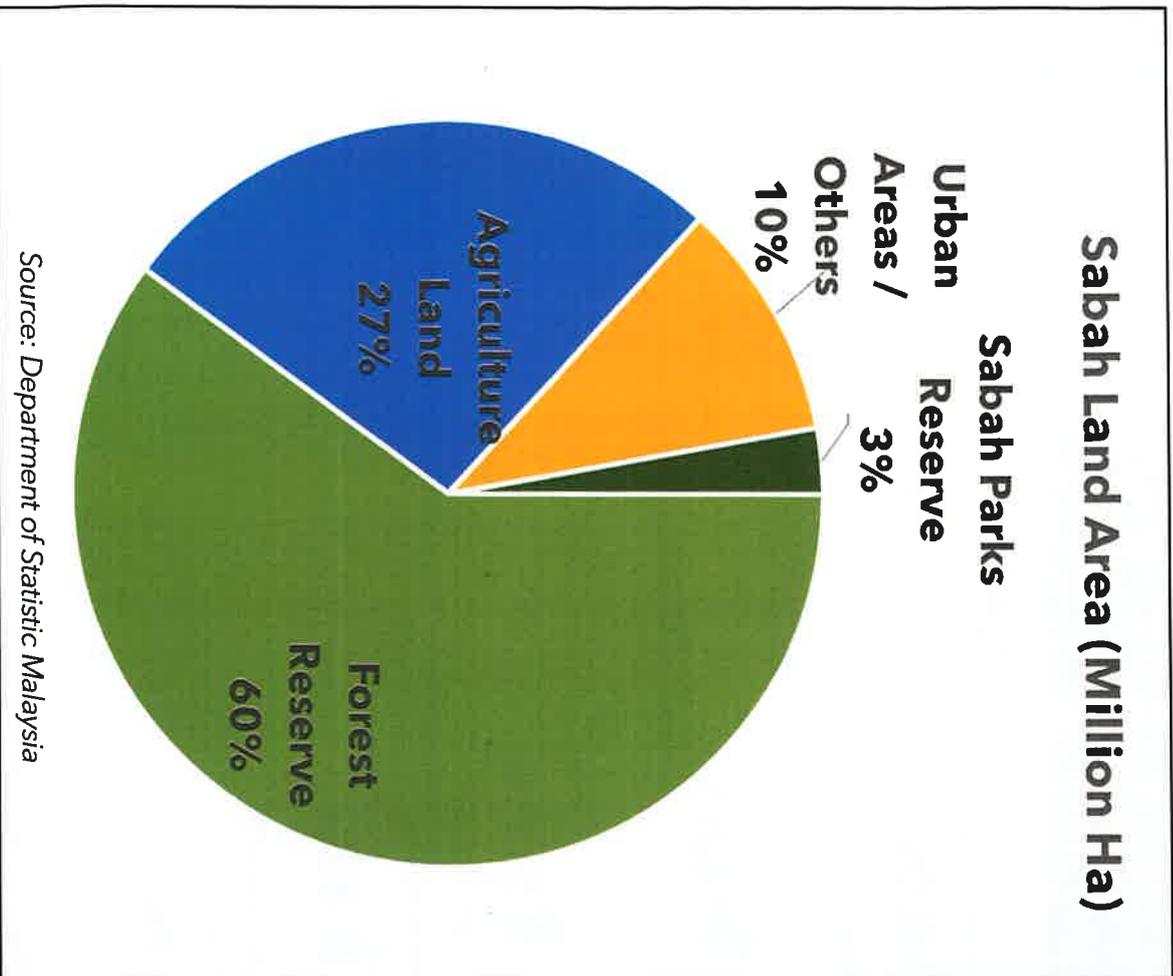
# Sabah's GDP Value at RM79.8 Billion in 2017

- Agriculture sector contributed to 18.7% (RM 14.9 billion) of the total Sabah Gross Domestic Production in 2017.
- Agriculture production in 2017 increased at 5.7% compared to 2016.
- Key contributors of Agriculture Sector are oil palm, fisheries & logging.



## Sabah Gross Domestic Product by Industries, 2017

# Agriculture occupies 27% of the State in 2016



- Sabah covers a total area of 7.36 MILLION HA.
- Agriculture sector occupies approximately 27% (1.96 MILLION HA).
- 87% of the agriculture land is Palm Oil Plantation.

**01 FOREST RESERVE**  
60.2% (4.43 mil ha)



**02 AGRICULTURE LAND**  
26.6% (1.96 mil ha)



**03 SABAH PARKS RESERVE**  
2.9% (0.21 mil ha)



**04 URBAN AREAS / OTHERS**  
10.3% (0.76 mil ha)



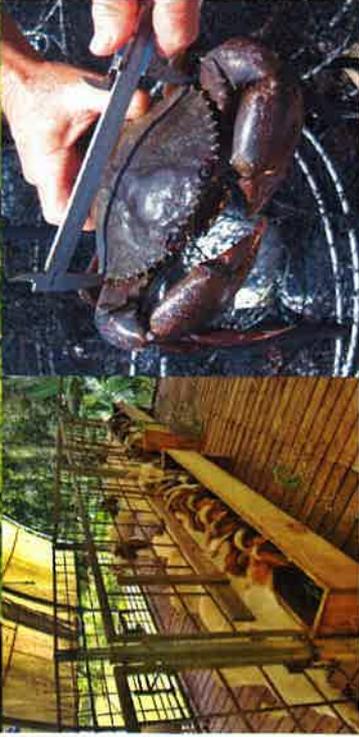
# **Work in Progress..**

- Breakdown of Sabah agriculture production in VALUE.
- Sabah existing land uses.
- Take up land area for agriculture (Land availability).
- Land use by agriculture crops.
- Sabah Agriculture products major export destination.
- Sabah Agriculture import & export.
- Employment in Sabah agriculture sectors.



SABAH AGRICULTURE  
BLUEPRINT (2021 - 2030)  
*Background*

Work in Progress..



**GOAL OF SABAH  
AGRICULTURE BLUEPRINT  
(2020 – 2030)**

**"To achieve sustainable transformation & growth in the agricultural sector, through the participation of young agropreneurs, increasing incomes of farmers, increasing export and food security."**



# OBJECTIVES

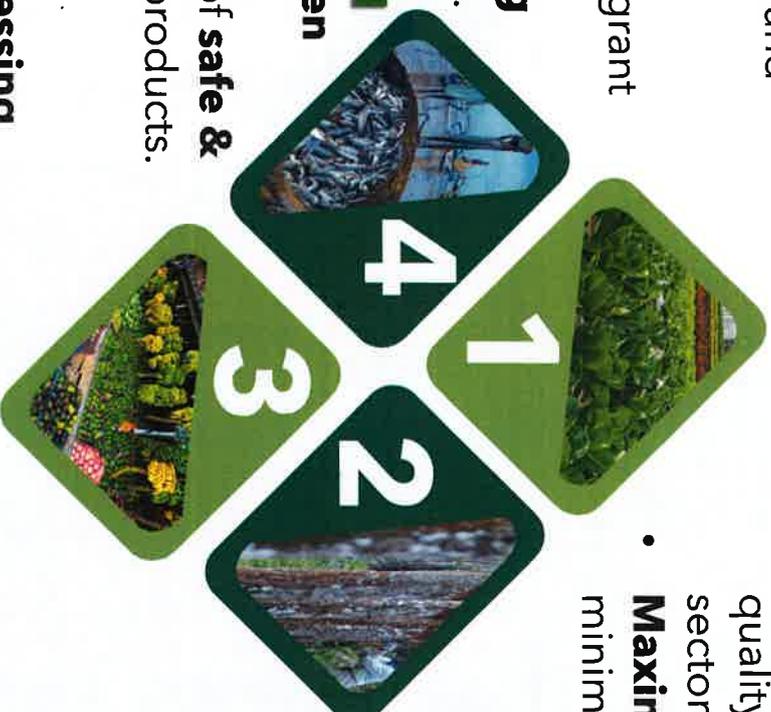
## SABAH AGRICULTURE BLUEPRINT 2021 - 2030

### HUMAN CAPITAL

- **Increase Income** of farmers.
- **Upgrade living standard** and welfare of farmers.
- **Upskilling.**
- **Reduce reliance** on immigrant workers.
- Incentives to attract **young agropreneurs** & investors.

### INNOVATION

- Introduce sustainable **green farming** technology.
- **Brand** Sabah as a leader of **safe & high quality** agricultural products.
- Exploit **agro-tourism** opportunities.
- Widen **downstream processing** opportunities.
- Increase funding on **research & development.**



### PRODUCTION

- **Increase productivity,** quality & profitability in every sector.
- **Maximise exports** & minimize imports.

### SUSTAINABILITY

- **Minimize conflicts** with the environment and wildlife.
- **Protect** the interests of smallholders.
- **Improve** existing infrastructure.
- Increase productive lands & **protect existing farm** lands from encroachment and polluting industries.
- **Maintain data** on agriculture.

# METHODOLOGY

SABAH AGRICULTURE BLUEPRINT 2021 - 2030

**Established POSITION**  
of Agriculture in  
Sabah Vs Nation  
(quantities & value)

**Assess land**  
AVAILABILITY, area,  
SUITABILITY etc.

**Consider national and**  
state **POLICIES** on  
agriculture and related  
sectors.

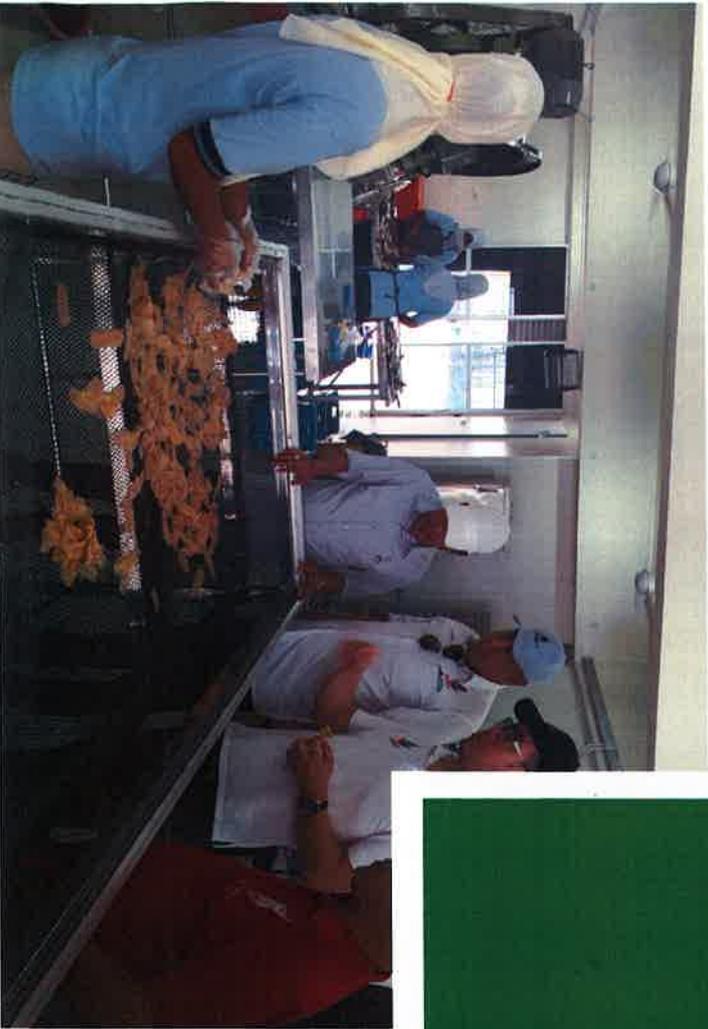
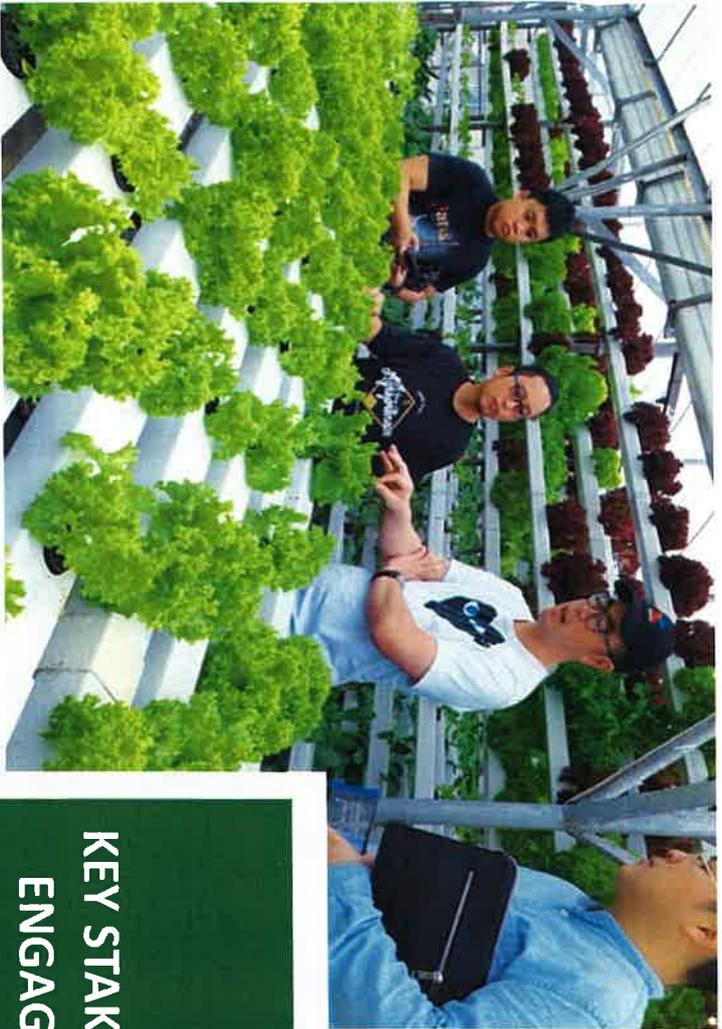
Write **INDIVIDUAL**  
PLANS for each crop.

**SET TARGET**  
(performance) 2030.

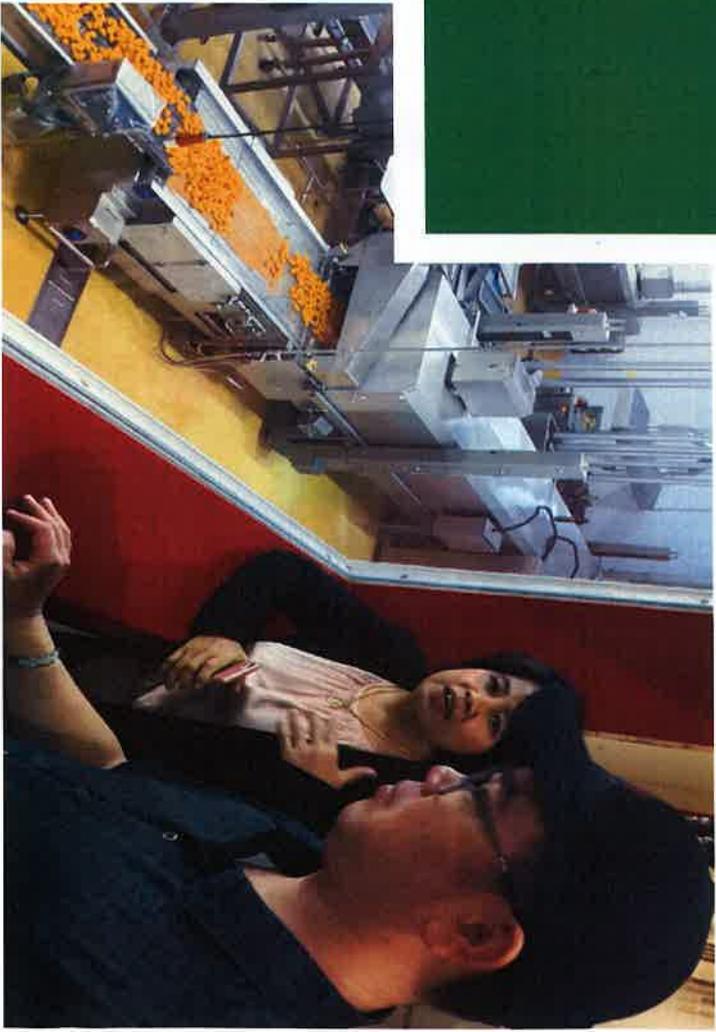
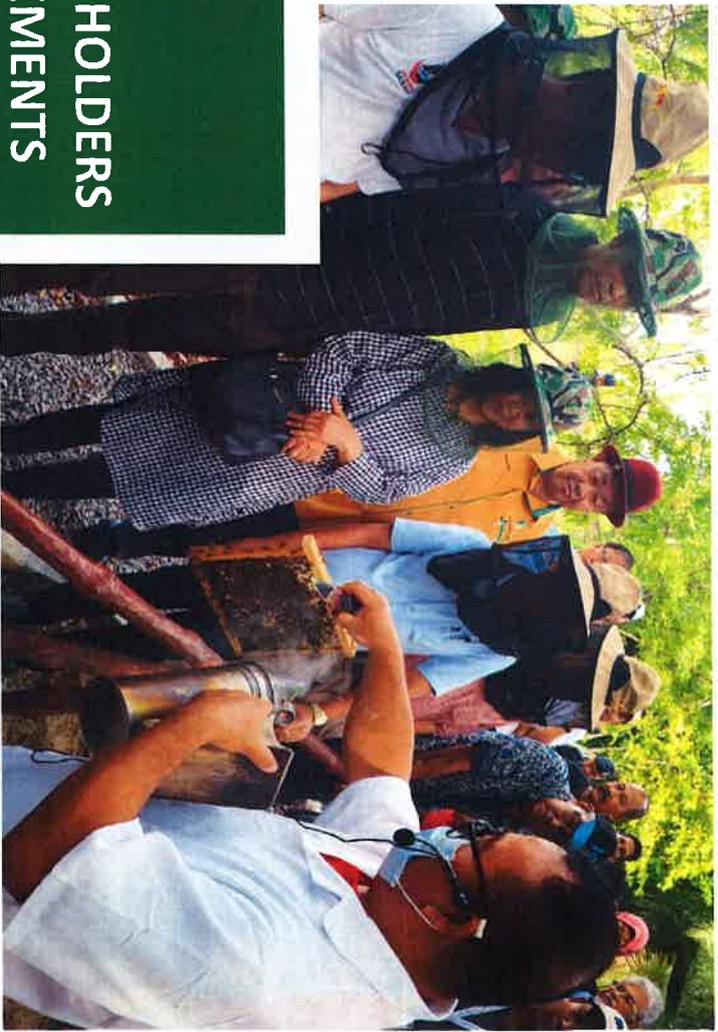
**Allocate crops to**  
SPECIFIC AREA based  
on **COMPARATIVE**  
ADVANTAGE.

**Key stakeholders**  
WORKSHOPS /  
ENGAGEMENTS

**Prepare SABAH**  
AGRICULTURE  
BLUEPRINT **2021 -**  
2030.



**KEY STAKEHOLDERS  
ENGAGEMENTS**





**SERIES OF  
WORKSHOPS**

# PROCESS IN PREPARING INDIVIDUAL PLAN FOR EACH CROP

## SABAH AGRICULTURE BLUEPRINT 2021 - 2030



# METHODS AIMED AT RAISING PRODUCTIVITY & REVENUE FROM AGRICULTURE



Government  
& Private  
Sector  
**Partnering**

**Select Crop  
and Animal  
Species**

Irrigate &  
Adopt Best  
**Soils  
Management  
Techniques**



**Renewal  
Green  
Energy.**



**MAXIMISE AREA &  
PERFORMANCE OF  
AGRICULTURE LAND &  
ANIMAL HUSBANDRY**

**Improve &  
Maximise  
Market  
Opportunities**



**Training &  
Data**

Focus on  
**Organic  
Fertilizers.**



**Agro-tourism**  
- to raise  
awareness  
and revenue

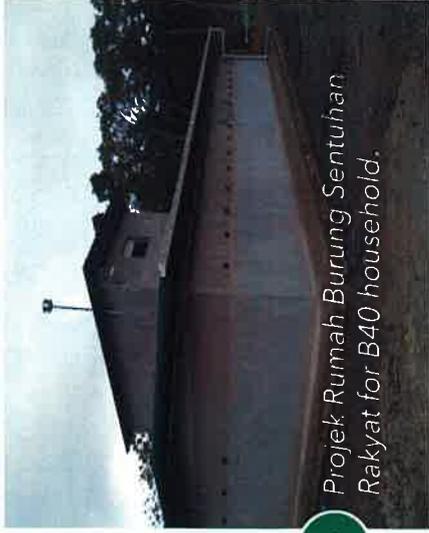




# BIRD'S NEST

An estimated creation of 7,000 job opportunities and estimated return at the value of RM3,924,000,000 before tax.

## PROGRAMS & STRATEGIES 2021 - 2030:



**4** Projek Rumah Burung Sentuhan Rakyat for B40 household.

Earmarked Location	Targeted Factory Unit
Wil. 1 - Beaufort	5
Wil. 2 - K.K.	6
Wil. 3 - Kudat	4
Wil. 4 - Keningau	3
Wil. 5 - Sandakan	7
Wil. 6 - Tawau	6
<b>Total</b>	<b>31 units</b>

- Quality Control:** Ensure the quality of the swiftlet farms & processing factories with accreditation scheme and Malaysian Good Agricultural Practices (myGAP);
- Courses:** Training, guidance and supervision services to the farmers & manufacturers;
- Incentives:** Registered farmers with DVS's certificates & achieved key performance index to be given incentives;
- Projek Rumah Burung Sentuhan Rakyat:** Encourage farmers to follow Good Animal Husbandry Practice (GAHP)'s guidelines via Projek Rumah Burung Sentuhan Rakyat 150 units for B40 household.

## Project Owners:

- Department of Veterinary Services
- Bird's Nest Farmer / Operator

## Key Stakeholders:

- Department of Veterinary Services
- Sabah Wildlife Department
- MAFI

## Total Premises Target by 2021 - 2030

**Total premises** • 4,000 units  
**Production** • 144,000 kg / annual

**Estimated** • RM576,000 @  
**income per** • RM4,000 per kg  
**annual**

## Total Factory Target by 2021 - 2030

**Total factory** • 31 units  
**Production** • 372,000 kg / annual  
**Estimated** • RM3,348,000 @  
**income per** • RM9,000 per kg  
**annual**

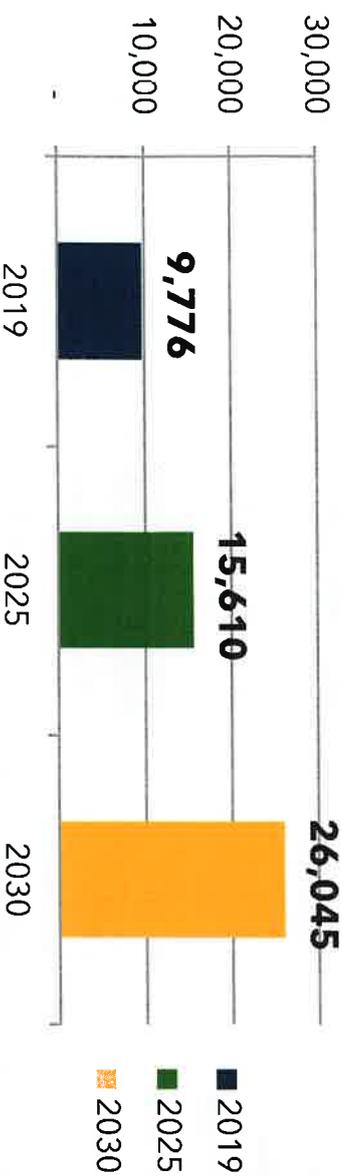
**Budget for Premises** : RM20,000,000  
**Budget for Factory** : RM 1,550,000

# DAIRY CATTLE

11% dairy cattle population growth by 2030 at the rate of 1% growth annually.

## PROGRAMS & STRATEGIES 2021 - 2030:

### DAIRY CATTLE POPULATION



- Strengthening growth:** restructure DVS's facility as breeding and supplementary farm;
- R&D:** collaboration with IPTS, IPTA and R&D institution on disease research;
- Competitiveness:** improve the farming accreditation and certification through Malaysian Good Agricultural Practices (myGAP), and others such as Veterinary Health Mark Logo, Hazard Analysis and Centre of Critical Point, Good Animal Husbandry Practices (GAHP) and Good Manufacturing Practices (GMP);
- Refurbishment:** Modernize milk collection centers.

**Total Estimated Budget : RM885.48 million\***

\*NOTE: both big and small ruminant.



#### Implementer

- DVS
- Dairy Farmer / Manager
- Institut Pengajian Tinggi Awam (IPTA)
- Institut Pengajian Tinggi Swasta (IPTS)
- Research & Development Institution

#### Current - 2019

- Population • 9,776 tails
- Annual production • 10.64 million liters : 1,088 liters per tail @ RM26.59 million milk production value
- SSL • 76.34%

#### Target - 2030

- Population • 26,045 tails
- Annual production • 182.98 million liters : 5,330.75 liters per tail @ RM143.45 million milk production value
- SSL • 212%

# DAIRY CATTLE

11% dairy cattle population growth by 2030 at the rate of 1% growth annually.

## Business Module

	25 tails	50 tails	100 tails
<b>A. Breeder Cow @ RM5,000 per tail</b>	RM 125,000.00	RM 250,000.00	RM 500,000.00
<b>B. Breeder Bull @RM4,000 per tail</b>	1 tail RM 4,000.00	2 tails RM 8,000.00	4 tails RM 16,000.00
<b>C. Farm Construction @ RM300/a.u.</b>	RM 13,125.00	RM 26,250.00	RM 52,500.00
<b>Modal (A+B+C)</b>	RM 142,125.00	RM 284,250.00	RM 568,500.00
<b>Expenses</b>	(RM 49,218.75)	(RM 98,437.50)	(RM 196,875.00)
<b>Gross Profit</b>	RM 186,060.00	RM 372,120.00	RM 744,240.00
<b>Net Profit</b>	RM 136,841.25	RM 273,682.50	RM 547,365.00

**Total Estimated Budget : RM885.48 million\***

\*NOTE: both big and small ruminant.

# BEEF CATTLE

5% beef cattle population growth from Self-Sufficiency Level (SSL) 1% to 10.47% by 2030.

## PROGRAMS & STRATEGIES 2021 - 2030:



- Sustainable practices:** encourage the utilization of the existing livestock feeds by 50% increment within 5 years;
- Mortality:** Improve and upgrade the quarantine and clinic facilities ;
- R&D funds:** 5% of the annual budget to allocate on R&D and breeding innovation;
- Legislation and enforcement:** ensure the farm, slaughterhouse and processing premises comply with the protocols or accreditation standard for the first 5 years by 50%, and another 15% for the following 5 years.

**Total Estimated Budget : RM885.48 million\***

\*NOTE: both big and small ruminant



2

### Implementer

- DVS
- Dairy Farmer / Manager
- Institut Pengajian Tinggi Awam (IPTA)
- Institut Pengajian Tinggi Swasta (IPTS)
- Research & Development Institution

### Current - 2019

- POPULATION** • 30,345 tails
- ANNUAL PRODUCTION** • 209,300 KG : 6.9KG per tail @ RM13.42 million meat production value
- SSL** • 1%

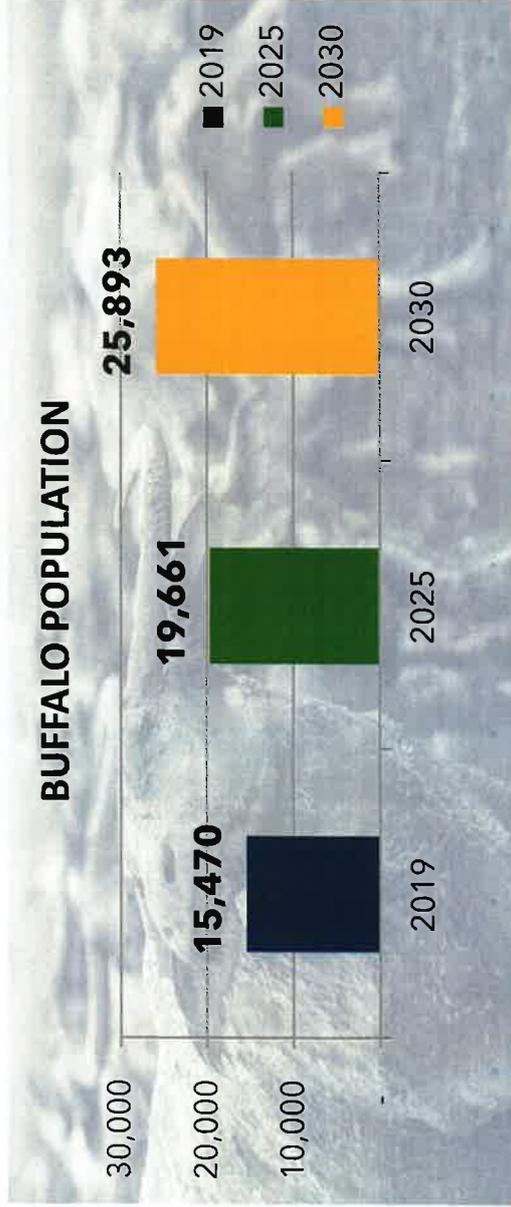
### Target - 2030

- POPULATION** • 46,174 tails
- ANNUAL PRODUCTION** • 1,387,364KG : 30.05KG per tail @ RM48.55 million meat production value
- SSL** • 10.47%

# BUFFALO

7% buffalo population growth from Self-Sufficiency Level (SSL) 9.08% to 10.47% by 2030.

## PROGRAMS & STRATEGIES 2021 - 2030:



### Implementer

- A. DVS
- B. Dairy Farmer / Manager
- C. Institut Pengajian Tinggi Awam (IPTA)
- D. Institut Pengajian Tinggi Swasta (IPTS)
- E. Research & Development Institution

### Current - 2019

<b>Population</b>	• 15,470 tails
<b>Annual production</b>	• 296,590 KG : 19.17KG per tail @ RM5.93 million production value
<b>SSL</b>	• 9.08%

### Target - 2030

<b>Population</b>	• 25,893 tails
<b>Annual production</b>	• 676,040KG : 31.47KG per tail @ RM13.52 million production value
<b>SSL</b>	• 10.47%

1. **Recruitment criteria:** recruit highly skilled, creative and innovative breeders with positive attitude;
2. **Farm specialization:** training courses for various breeder, milkman, vendor and feeder;
3. **Reduced mortality rate:** Improve disease and diagnostic screening capacity;
4. **Infrastructure design:** Layout and infrastructure complies with the quality control and environment.

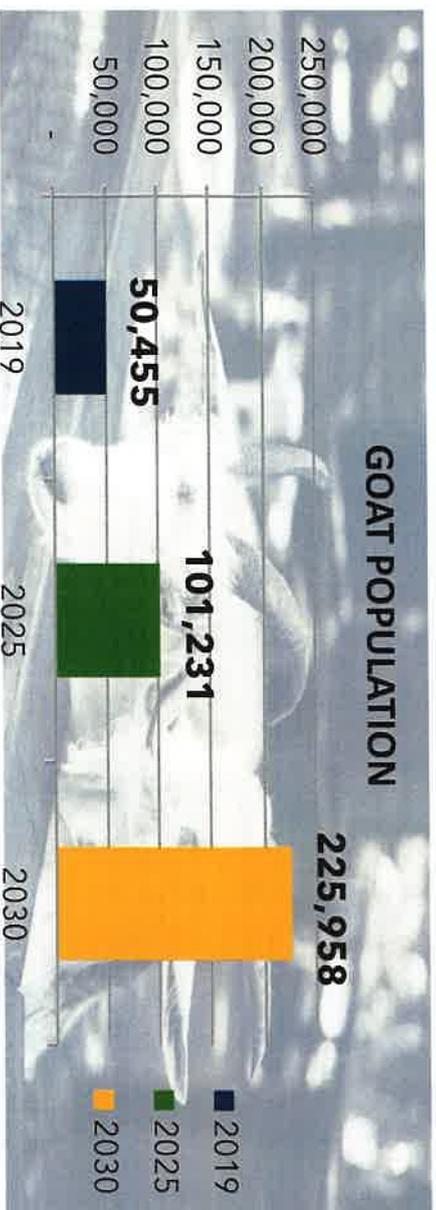
**Total Estimated Budget : RM885.48 million\***

\*NOTE: both big and small ruminant.

# GOAT

19% goat population growth from Self-Sufficiency Level (SSL) 10.22% to 13.56% by 2030.

## PROGRAMS & STRATEGIES 2021 - 2030:



- 2% population growth annually:** increase female sex ratio;
- Systematic data collection and record:** breeding Record and Data System training for breeder;
- Research on breeding disease:** increase R&D and collaboration with IPTA, IPTS and research institution on breeding diseases;
- Importation:** Import superior breeds, tested semen and/or embryo.
- Training courses:** workshops for breeders to learn better breeding techniques and selection criteria of breeder goat.

**Total Estimated Budget : RM885.48 million\***

\*NOTE: both big and small ruminant.



2

### Implementer

- DVS
- Dairy Farmer / Manager
- Institut Pengajian Tinggi Awam (IPTA)
- Institut Pengajian Tinggi Swasta (IPTS)
- Research & Development Institution

### Current - 2019

- Population • 50,455 tails
- Annual production • 146,060 KG : 2.89KG per tail @ RM5.11 million meat production value
- SSL • 10.22%

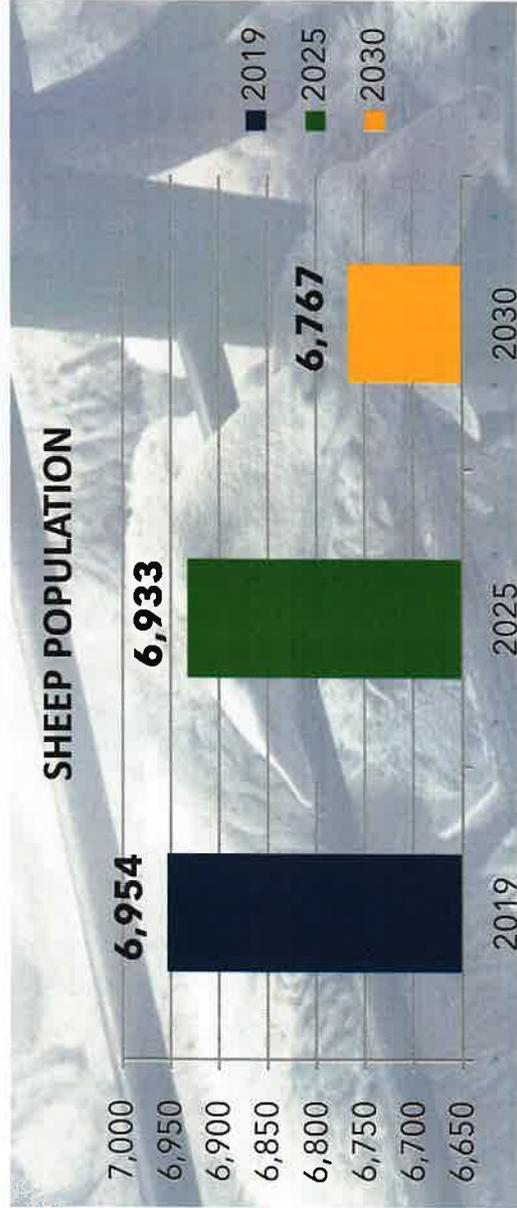
### Target - 2030

- Population • 225,958 tails
- Annual production • 653,710KG : 2.89KG per tail @ RM22.88 million meat production value
- SSL • 13.56%

# SHEEP

-0.63% sheep population growth Self-Sufficiency Level (SSL) 10.22% to 13.56% by 2030

## PROGRAMS & STRATEGIES 2021 - 2030:



### Implementer

- A. DVS
- B. Dairy Farmer / Manager
- C. Institut Pengajian Tinggi Awam (IPTA)
- D. Institut Pengajian Tinggi Swasta (IPTS)
- E. Research & Development Institution

### Current - 2019

Population • 6,954 tails  
 Annual production • 38,340KG : 5.51KG per tail @ RM1.34 million meat production value  
 SSL • 10.22%

### Target - 2030

Population • 7,110 tails  
 Annual production • 17,630KG : 2.61KG per tail @ RM0.764 million meat production value  
 SSL • 13.56%

1. **Farm management:** Training for breeder on farm management and disease;
2. **Reduced mortality rate:** introduce non-conventional disease control and treatment methods such as ethnomedicine and energy medicine;
3. **Sex ratio manipulation:** the use of artificial insemination and semen technology;
4. **Waste utilization:** Utilization of agricultural wastes such as rice stalks, husk, stems and corn cob.

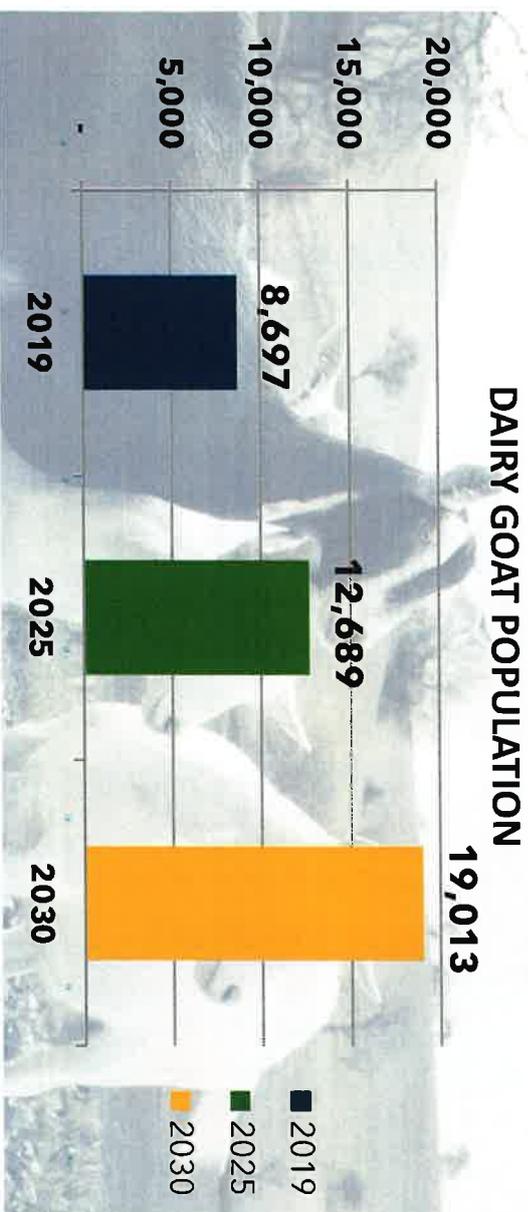
**Total Estimated Budget : RM885.48 million\***

\*NOTE: both big and small ruminant.

# DAIRY GOAT

10% dairy goat population growth from Self-Sufficiency Level (SSL) 77% to 214% by 2030.

PROGRAMS & STRATEGIES 2021 - 2030:



1. Seed replacement management: import superior breeds, tested semen and/or embryo
2. Refurbishment: Modernize milk collection center;
3. Restructure DVS: Restructuring DVS as primary breeder and/or supplementary farm;
4. Graze lands: utilize and develop native graze lands as ruminant's feed farms;
5. Sex ratio manipulation: implement the use of artificial insemination and semen technology.

**Total Estimated Budget : RM885.48 million \***

\*NOTE: both big and small ruminant



5

## Implementer

- A. DVS
- B. Dairy Farmer / Manager
- C. Institut Pengajian Tinggi Awam (IPTA)
- D. Institut Pengajian Tinggi Swasta (IPTS)
- E. Research & Development Institution

## Current - 2019

- Population • 6,954 tails
- Annual production • 325,720 liter : 17.13 liter per tail @ RM19.54 million milk production value
- SSL • 77%

## Target - 2030

- Population • 19,013 tails
- Annual production • 325,720 liter : 17.13 liter per tail @ RM19.54 million milk production value
- SSL • 214%