

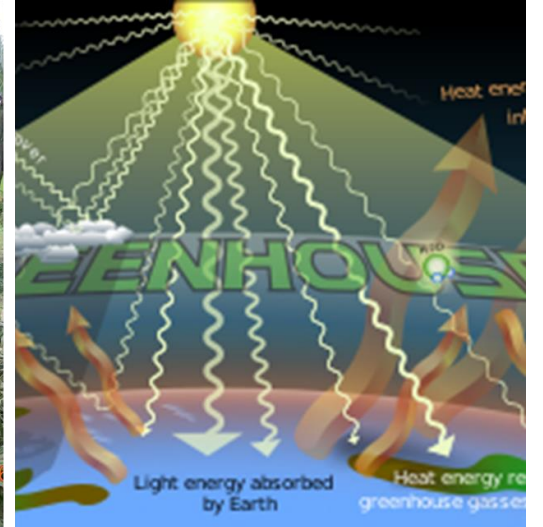
Overview of Current Malaysian Agriculture Landscape and its Challenges

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International Service for the Acquisition of Agribiotech Services

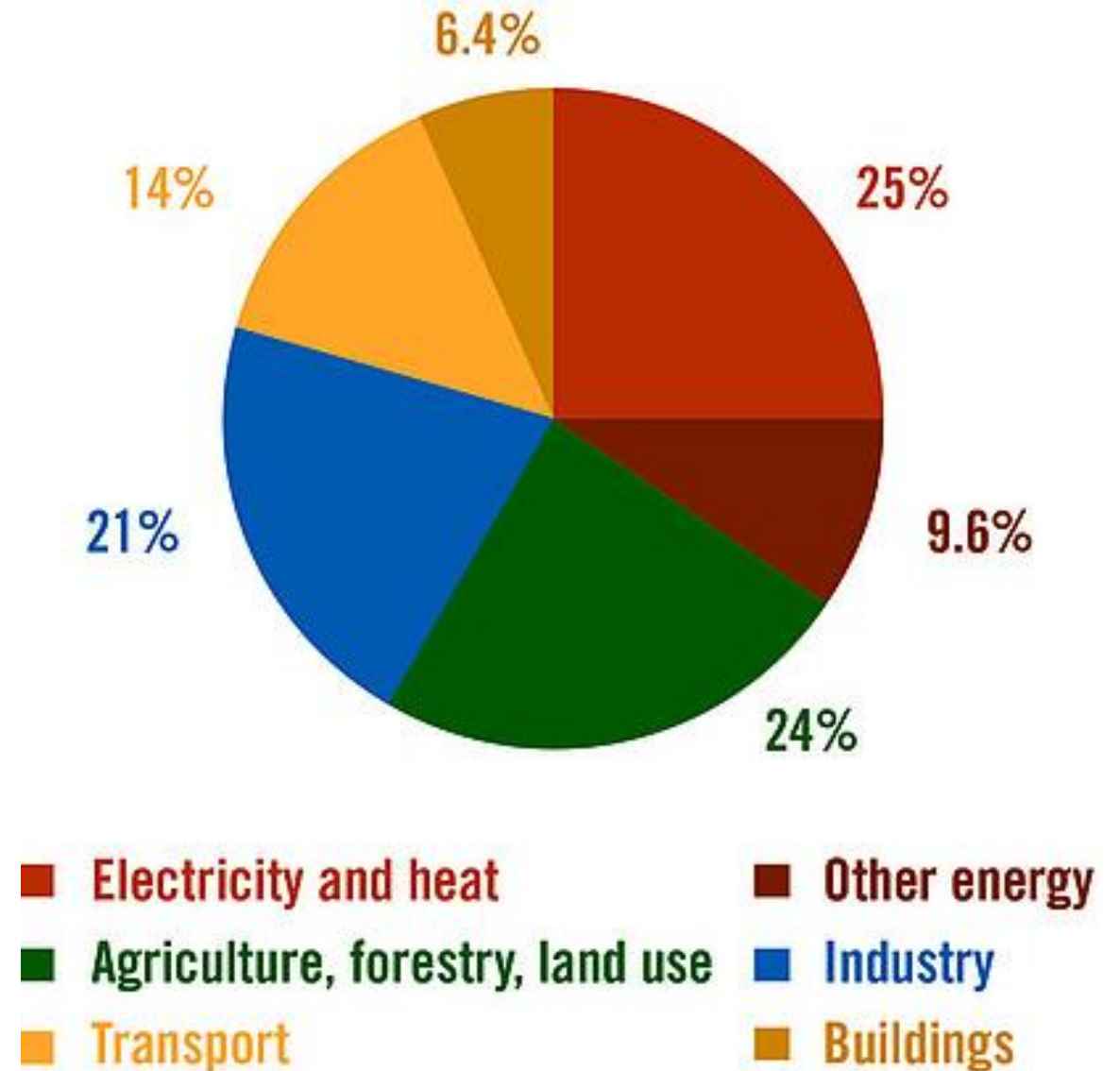




Agriculture

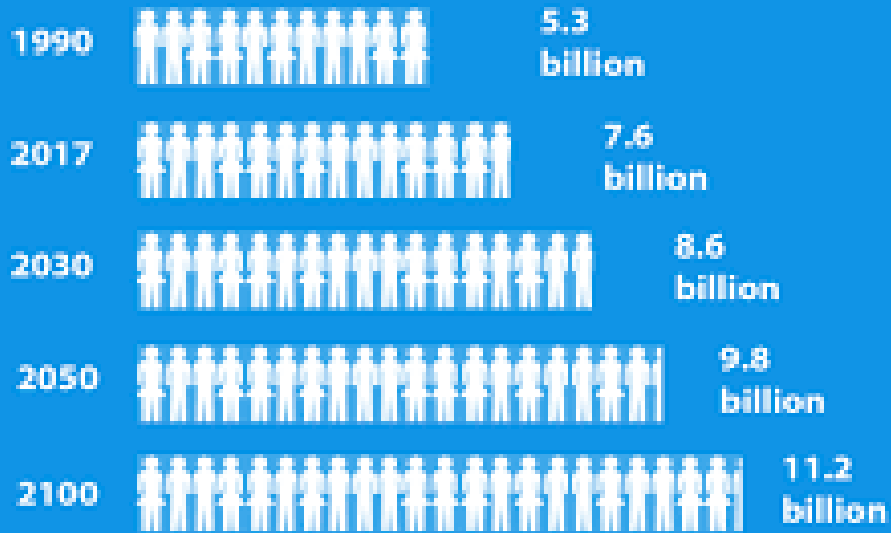
Agriculture

- The 2nd largest greenhouse gas emitter
- 13% of GHG
- CO₂, CH₄, N₂O
- Cattle belching (CH₄)
- Natural and synthetic fertilisers (N₂O)
- Manure management, rice cultivation, field burning of crop residues, and fuel use on farms (CO₂)



World Population

Projected world population until 2100



Source: United Nations Department of Economic and Social Affairs, Population Division, World Population Prospects: The 2017 Revision. Produced by: United Nations Department of Public Information



28 category rank

AFFORDABILITY

81.7 category score



26 category rank

AVAILABILITY

67.7 category score



42 category rank

QUALITY AND SAFETY

70.6 category score

Food, Choice, Sustainability



In the year **2050** World population will require



70% More food, and



70% Of this food must come from efficiency-improving technology³

Economic Intelligence Unit, 2019

Food security

Questions

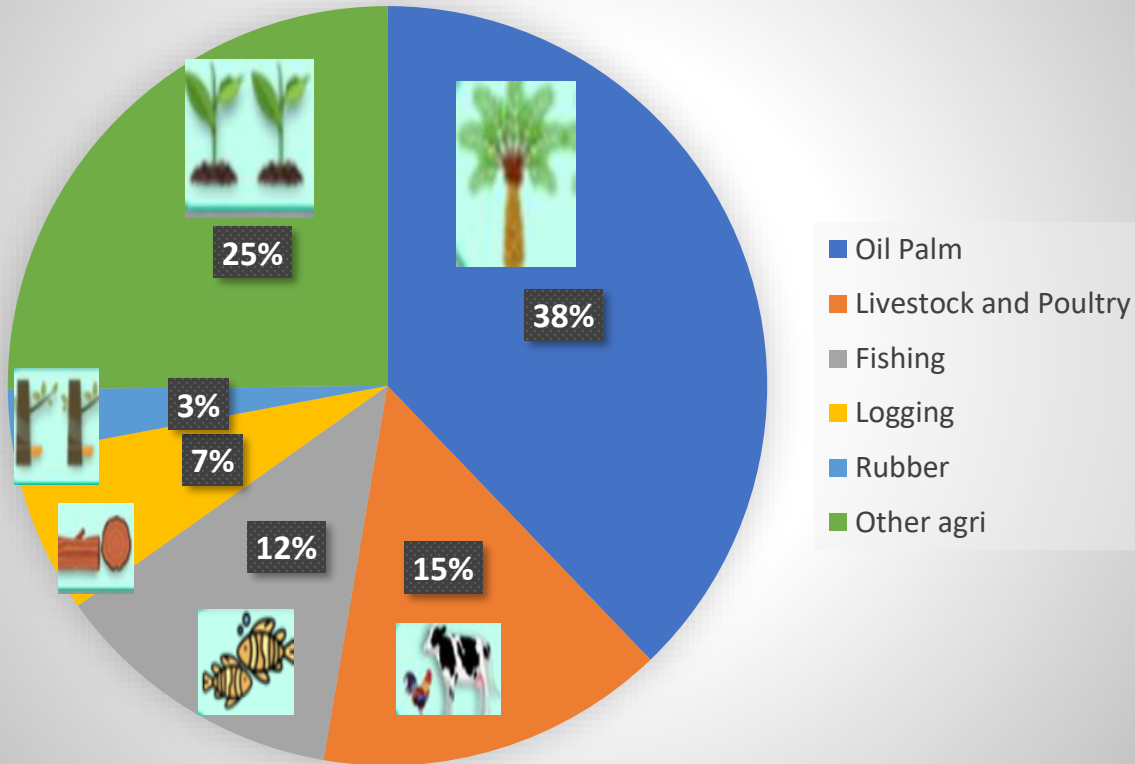
Food security / Food Self-Sufficiency Rate

- How do we strike a balance between import bill/cost/national security?
- Does Ag GDP show the real picture for Malaysia?



Malaysian Agriculture Landscape

GDP: 7.3% (RM99.5 billion/USD25)

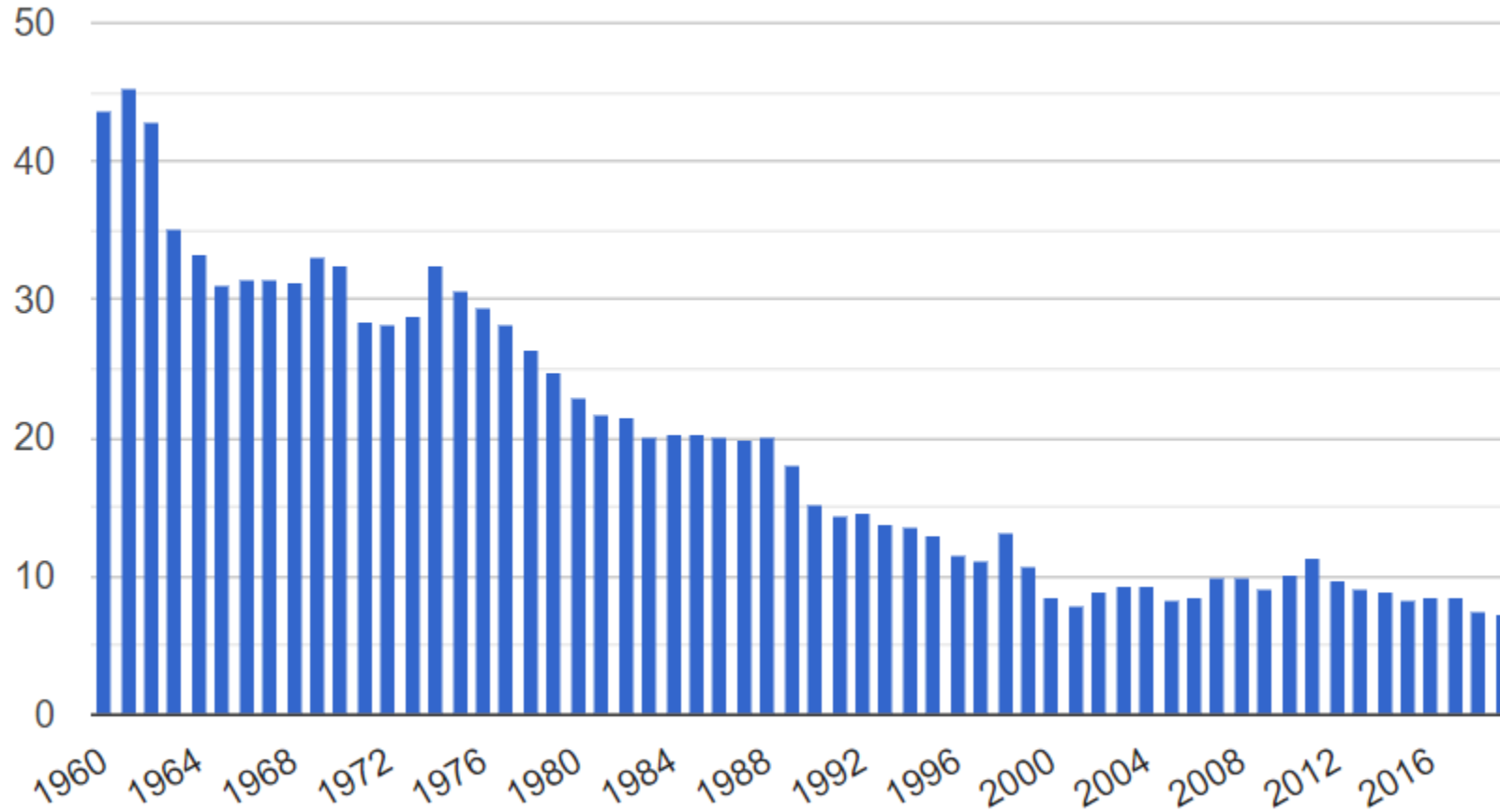


GDP 2018^P : RM1,361.5 billion



Source: Annual Gross Domestic Product 2015-2018

Malaysia - GDP share of agriculture



World average is 10.46 (2019)

Source: GlobalEconomy.com / The World Bank

Employment opportunities

Subsector	Employments	Total wages (2017)
Fisheries	15,690	315 mil
Forestry and logging	26,034	737.3 mil
Crops	368,002	6,125.8 mil
Livestock and poultry	34,805	726.2
Oil palm	1 mil	

- The average age of farmers in Malaysia: 52.9
- Basic primary education - 47.5%
- Secondary education - 42.9%
- Tertiary education - 4%
- No education – 3.5%

Source: Agricultural Economics and Rural Development, New Series, Year VII, no. 2, p. 249–265, 2010

Food self sufficiency

Crop/Product	SSR (%)
Rice	71.4
Cucumber, brinjal, spinach, eggs, long beans, lady fingers, pineapple, cuttle fish, banana, shrimp	103-118
Meat, tuna, crab	93-98
Kembung	83
Coconut	78
Cabbage	42
Chilly	39
Beef and mango	25
Mutton	11

- Net Food importer: 24%
 - Import bill: RM54 mil
 - Export bill: RM35 mil
- (Bank Negara, 2019)

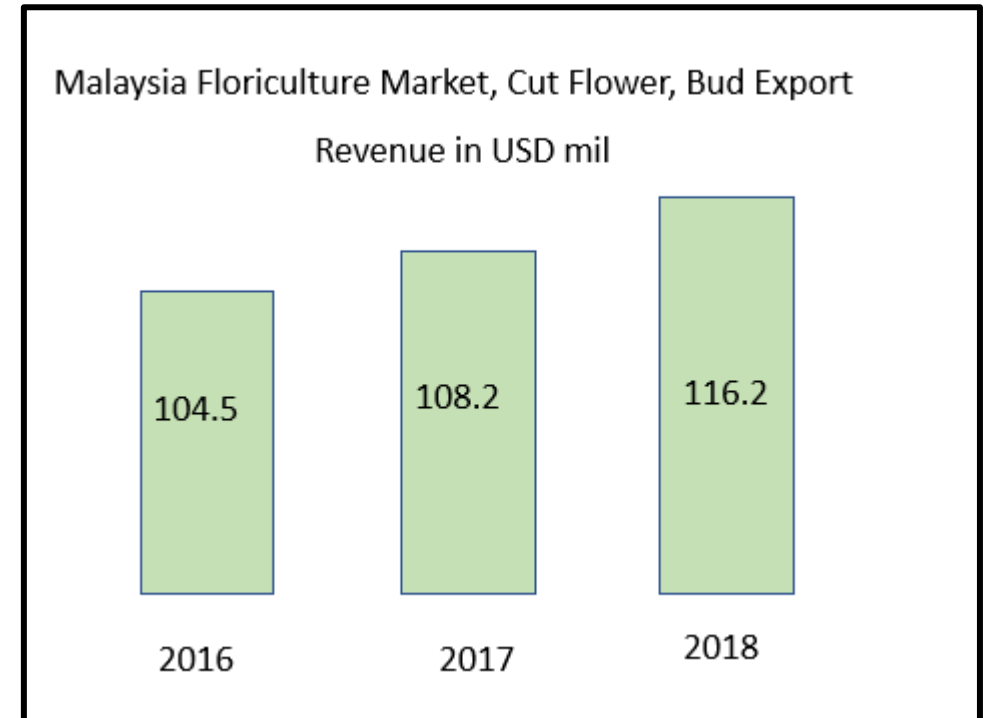
Floriculture

2 main types

Temperate	Exotic
Chrysanthemums (44.7%) Roses (25.8%) Carnation (12.1%)	Orchids Dendrobium (11.17%), Aranda (8.0%), Oncidium (5.01%) and Mokara (3.5%)
Highlands (Cameron Highands, Gua Musang, Ranau)	Hot and humid lowlands
71.46% of total flower export	28.54 of total flower export
Japan, Thailand, Singapore, Australia, and the United Arab Emirates	Singapore, Australia, Japan, and Saudi Arabia

Floriculture - Current challenges

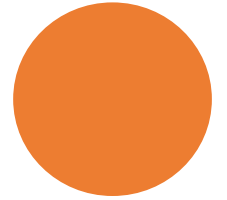
- Competition from Vietnam and Thailand
- No government subsidy or any preferential treatment
- Difficulties in hiring foreign workers
- Export market – high transportation fee, high import tax
- Cheaper Chinese flowers due to government support (local market is protected)



Source: UN Comtrade

Agribiotechnology (Genetic Modification)

- 49.4kg of poultry meat per person in 2020
- Import 4.15 million tonnes of corn in 2019-20



The reasons for low local supply

- Inefficiencies in agricultural productions, distribution networks, overall supply chain
- Land availability (over-reliance on Cameron Highlands, 10% of Peninsula supply)
- Raw inputs, labour, utilities and logistics
- Many layers involving producers, processors, wholesale distributors, retailers and consumers, all of which affect costs and final prices
- The lack of economies of scale (more can be produced at larger scale with lower cost)
- Lower price for imported products
- Sales and service tax (SST) rate on raw materials, components and services

What can be done?

- Manufacturers could be given tax exemptions or applying low tariffs on their imported raw and semi-processed materials for local food production
- More land for agriculture
- Precision agriculture, IoT, drone
- Policies and regulations supporting new technologies – Biosafety regulations
- Vertical or urban farming
- Aquaculture
- Seed industry



Transforming agriculture / Sustainable agriculture

- Land-intensive agriculture
- Labour-intensive
- Natural resource intensive
- Ageing farmers
- Food security

- 3 pillar approach:
 - Environment
 - Economic
 - Social

- Technology-enabled farming
- Reduced environmental footprints
- Agri-innovation
- Policies

Science, technology and innovation provides the sustainable solution

THANK YOU FOR YOUR TIME !

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