Overview of Poultry and Livestock Production in Malaysia: Challenges and Opportunities

42nd APHCA MEETING AND WORKSHOP 2019

Department Of Veterinary Services Malaysia
Ministry of Agriculture and Agro-based Industry
GROSS DOMESTIC PRODUCTS (GDP) 2018

- **Services** 56.7% RM 771.8 B
- **Construction** 4.9% RM 66.2 B
- **Manufacturing** 22.4% RM 304.8 B
- **Mining & quarrying** 7.6% RM 103.1 B
- **Agriculture** 7.3% RM 99.5 B

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**2018**

- **RM 1.36 TRILLION** (2015=100)

**2018**

- **RM 99.5 B**
- **Commodity 51% RM 50.8 B**
- **Livestock 1.1% RM 14.8 B**
- **Fisheries 0.9% RM 12.4 B**
- **Food Crop 1.6% RM 21.5 B**
- **Agrofood 49% RM 48.7 B**

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**GDP 2018**

- **RM 1.36 TRILLION** (2015=100)
- **RM 99.5 B**
- **RM 48.7 B**
- **RM 99.5 B**
- **RM 103.1 B**
- **RM 66.2 B**
- **RM 304.8 B**
- **RM 771.8 B**

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**2018**

- **RM 99.5 B**
5 Main deficit
Food in 2018

Sugar, Products & Honey
RM-3.2B

Meat & products
RM-3.2B

vegetables
RM-3.3B

Cereals & products
RM-3.4B

Feed
RM-3.9B
Livestock Production & Value of Livestock

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>46,333</td>
<td>47,597</td>
</tr>
<tr>
<td>Mutton</td>
<td>4,400</td>
<td>4,572</td>
</tr>
<tr>
<td>Pork</td>
<td>218,177</td>
<td>217,360</td>
</tr>
<tr>
<td>Poultry</td>
<td>1,664,90</td>
<td>1,707,6</td>
</tr>
<tr>
<td>Egg</td>
<td>770,900</td>
<td>816,900</td>
</tr>
<tr>
<td>Milk (Mil. Litres)</td>
<td>36.6</td>
<td>40.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2017 Value</th>
<th>2018 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>1,528.66</td>
<td>1,618.45</td>
</tr>
<tr>
<td>Mutton</td>
<td>167.58</td>
<td>178.42</td>
</tr>
<tr>
<td>Pork</td>
<td>3,243</td>
<td>3,600</td>
</tr>
<tr>
<td>Poultry</td>
<td>10,883.96</td>
<td>12,046.48</td>
</tr>
<tr>
<td>Egg</td>
<td>5,480</td>
<td>6,232</td>
</tr>
<tr>
<td>Milk</td>
<td>91.53</td>
<td>108.98</td>
</tr>
</tbody>
</table>

RM Million
Per capita consumption & Self sufficiency

**Per capita Consumption**

- Beef: 2014: 0, 2018: 40
- Mutton: 2014: 0, 2018: 5
- Poultry: 2014: 30, 2018: 40
- Milk: 2014: 0, 2018: 5

**Self-sufficiency in livestock products**

- Beef: 2012: 80, 2018: 70
- Mutton: 2012: 90, 2018: 80
- Pork: 2012: 70, 2018: 60
- Poultry: 2012: 80, 2018: 70
- Egg: 2012: 60, 2018: 50
- Milk: 2012: 40, 2018: 30

# Based on population of 40% non-muslim
POULTRY INDUSTRY

01 FEEDMILL

02 PARENT/GRANDPARENT STOCK

03 LAYER/BROILER

04 PROCESSING PLANT

05 CONSUMER TERTIARY PROCESS
POULTRY INDUSTRY STATUS

Grandparent Stock
- 4 Companies
- 10 Farms
- 470,000 birds

Broiler Commercial
- 2676 Farms
- 140.62 million birds

Broiler parent
- 23 Companies
- 106 Farms
- 12 million birds

Layer Commercial
- 301 Farms
- 56.41 million birds

Layer parent
- 5 Companies
- 11 Farms
- 494,500 birds

Ross Cobb

Hisex Brown Lohman Brown

800.89 million DOC
104% SSL

44.35 million pullets
114% SSL

800.89 million DOC
104% SSL

415.82 million DOC
114% SSL
Poultry industry is fully integrated, regulated and serviced by DVS

- **Raw Material**
- **Breeding & Growing**
- **Processing**
- **Distribution & Retail**

**Feed Milling**
- Grand Parent Stock
- Parent Stock
- Farming
- Processing
- 2nd processing
- Distribution
- Retail

All integrators have feedmills

- 4 integrated players control 100% of production
- 10 integrators produce ~70% of DOCs for sale internally and open market
- 13 non-integrators produce ~30% of DOCs

10 integrator owned farms

- Dominated by contract farming by integrators (~70%)
- Independently owned farms (~30%)

Integrated players have larger plants

- Non-integrators typically with forms or secondary processors
- Traditional slaughter (DVS to regulate in near future)

Integrator owned distributors

- Integrated players have larger plants (e.g. Ayamas, Farm’s Best, Dinding, Ayam A1)

Integrator owned distributors

- Independent wholesalers

- Independent factories

- Own outlets

- Restaurant

- Modern retail hyper & supermarket

- Wet markets dominate retail

4 integrated players control 100% of production

- Factory Licensing
  - Ingredients monitoring (Feed Act 2009)
- Farming licensing
  - (Farming Enactment) MyGAP
- Farming licensing (Farming Enactment) MyGAP
- Veterinary Health Mark (VHM) Certification
- Veterinary Health Mark (VHM) Certification

DVS
• Malaysia aimed to increase self sufficiency level of beef to 30% by year 2023.

• Aimed on Integration system under oil palm to increase the production and to achieve targeted SSL by year 2023.

INTEGRATION SYSTEM

50,941 farmers
Cattle integration under oil palm plantation

- Cattle integration system with oil palm = **Biological Lawn-mower**
- Low input, using weeds under oil palm plantation as source of feed. Rotational grazing 60 – 90 days
- Plantations = **5,811,145 Ha** (currently used ~ 10% for integration projects)

Cattle integration in oil palm:
Reduced labour cost up to 50% per ha
Reduced pesticide cost 30 - 50%
Increase oil palm fresh bunch yields by 6–30%
(Lam et al. 2009)
DAIRY INDUSTRY

Management system

Intensive

Semi Intensive

Dairy breeds

Mafriwal

Jersey x

Friesien x

856 farmers

28,448 breeders

AIM TO PRODUCED ADDITIONAL 20 MILLION LITER OF MILK THROUGH INCREASING 10,000 BREEDERS IN 5 YEARS

EPP 13

Pilot project Dairy Valleys
PIG INDUSTRY

- Intensive system
- Used of technology, especially for waste treatment
SWIFTLET RANCHING

- Mostly export

Premises = 10,513
<table>
<thead>
<tr>
<th>Nutrition</th>
<th>Source/References</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High nutritional content and Medicinal Benefit (Protein, Carbohydrate, Amino Acids, Vitamins, Minerals and bioactive properties)</td>
<td>Lu et al., 1995; Marcone, 2005; F. Ma &amp; D. Liu, 2012</td>
<td>Contribute to the important of body maintenance and strengthening the immune system</td>
</tr>
<tr>
<td>Sialic Acid</td>
<td>Marcone, 2005; Wang &amp; B. Miller 2003</td>
<td>Contribute to the brain development and learning ability</td>
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<tr>
<td>Epidermal Growth Factor</td>
<td>Ng, Chan &amp; Kong, 1886; Kong et al., 1987; Aswir &amp; Wan Nazaimoon, 2011</td>
<td>Stimulate Cell Growth (Good for cell Proliferation) and healthy Skin</td>
</tr>
<tr>
<td>Anti-inflammatory Properties</td>
<td>Aswir &amp; Wan Nazaimoon, 2011; Vimala et al., 2012; Guo et al., 2006; Yagi et al., 2008</td>
<td>Strengthening the immune system and contribute to the inhibition of Influenza viral infection</td>
</tr>
<tr>
<td>Glycoprotein and other related properties</td>
<td>Matsukawa et al., 2011; Kien-Hui et al., 2012</td>
<td>Protect joint degeneration and a potent chondro-protection against osteoarthritis</td>
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## Issues and Challenges

<table>
<thead>
<tr>
<th>Issues</th>
<th>Poultry</th>
<th>Pig</th>
<th>Swiflet</th>
<th>Beef</th>
<th>Dairy</th>
<th>Goat &amp; Sheep</th>
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<tbody>
<tr>
<td>Diseases</td>
<td>√</td>
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<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td><strong>Feed cost</strong></td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
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<td>Land</td>
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<td>√</td>
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<td>Labour</td>
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<td>√</td>
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<td>√</td>
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<td>Imported Products</td>
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<td></td>
<td></td>
<td>√</td>
<td>√</td>
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<td>Low Productivity</td>
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<tr>
<td>Pollution</td>
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OPPORTUNITIES

• Increase demand for meat and poultry as protein source
• Strong support from government to produce livestock products
• Support to used modern technology in livestock production
• Existing farm and livestock product certification program

Farm certification and Veterinary Health Mark Program
FEED PROGRAMMES

• Palm kernel Cake/Expeller (PKC)
  • By-product of palm oil processing
  • Produced 2.59 million Mt in 2018; more than 90% PKC exported
  • Research on the used for poultry

• Integration in oil palm plantation
  • Making used of weeds under plantation
  • Ratio 1 breeders for 4 ha (oil palm age ≥ 5 years)

• Specific feed program
  • Napier grass
  • Grain corn
  • Sweet corn
THANK YOU
TERIMA KASIH