The organisation of the Department of Veterinary Services in Malaysia

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Summary
The Department of Veterinary Services (DVS) in Malaysia was established in 1888 as an agency to control exotic and domestic animal diseases. Over the years, the structure and functions of the organisation have evolved to meet the growing demand for veterinary services. The responsibilities of the Veterinary Services are enshrined in the Constitution of Malaysia.

The current organisation of the DVS is structured to achieve the following objectives:
– to prevent, control and eradicate animal and zoonotic diseases
– to facilitate the growth and development of a strong animal industry
– to ensure that animal products for human consumption are wholesome, clean, safe and suitable to be consumed
– to facilitate the growth and development of the animal feed industry
– to ensure the welfare and well-being of all animals.

To meet these objectives the DVS has nine different divisions, as follows: Planning and Evaluation, Epidemiology and Veterinary Medicine, Veterinary Public Health, Research and Development, Industry Development, Production and Development of Genetic Resources, Human Resource Development (HRD), Enforcement, and Administration.

The development of the animal industry is managed through national development policies, including the Third National Agriculture Policy. The basis for current programmes for disease control and animal industry development is the Eighth Development Plan (2001-2005). Over the period of this Plan, Malaysia will address the need for sanitary and phytosanitary measures by developing specific programmes covering all fields of the animal industry. This is just one way in which Malaysia is meeting the challenges of the increased liberalisation of trade created by the World Trade Organization and the Association of Southeast Asian Nations Free Trade Area. The development of the industry is focused on the major commodities, namely, beef, mutton, poultry meat, eggs, pork and milk. Other commodities receive support if it is considered economically viable. All support services are being strengthened, particularly the HRD division. The organisation and functions of the DVS are constantly being reviewed in accordance with changes in the animal industry and the nature of the services in demand.

Keywords
Introduction

The Department of Veterinary Services (DVS) is responsible for providing veterinary services that support the development and growth of all sectors of the animal industry, particularly the production of food. The services provided cover animal health, veterinary public health, development of the animal industry, development of genetic resources, veterinary research, human resource development (HRD) and the enforcement of laws and regulations.

History

The earliest historical record on Government Veterinary Services in Malaysia was found in a report of the Penang Administration dated 1888 (6). The report mentioned L. Burghope as the veterinary surgeon attached to the veterinary branch of the Medical Department. He was assisted by a veterinary inspector, a graduate from India, who was the first Asian veterinary officer in Malaysia. They were kept rather busy because animal diseases were rampant, imports were numerous and facilities were non-existent. A few years later, veterinary surgeons of British origin were appointed in the other states, namely: Perak (1895), Selangor (1900), Negeri Sembilan (1906) and Pahang (1913). Some states only had veterinary inspectors at first, e.g. Kedah (1907), Johore (1910) and Kelantan (1928). His Highness Tunku Abu Bakar, a Member of the Royal College of Veterinary Surgeons and a member of the Johore Royal family, was appointed as the veterinary surgeon of Johore in 1918. He was the first veterinary surgeon from Malaysia to qualify in England and he later became the Chief Animal Husbandry Officer by the time he retired in 1953.

In 1905, the Veterinary Police Force (VPF) was formed with three sergeants, four corporals and twenty-eight constables. They were under the authority of a veterinary surgeon in matters of work, and the Chief of Police in matters of discipline. The VPF functioned as the ‘eyes’ and ‘ears’ of the DVS and proved to be of immense value in detecting and limiting animal diseases. The VPF expanded to cover all states and continued to operate for the next fifty years. As epidemics were gradually eliminated, the need for the uniform police unit was reduced and, in 1955, this unit was replaced by veterinary attendants who were given a wider range of duties.

Prior to 1930, Veterinary Services were the responsibility of the Chief Medical Officer and the headquarters were in Singapore. In 1934, a separate Veterinary Department was established and the headquarters were moved to Kuala Lumpur under a Director of Veterinary Research and a Veterinary Advisor, until the Second World War in 1942. During the Japanese occupation, little was provided in the way of veterinary services because all the British officers were captured or had left the country.

After the war, the Veterinary Services were re-established in 1946, with the creation of positions for a Director, Deputy Director, Chief Animal Husbandry Officer and Senior Research Officer. In 1957, the country attained independence from the United Kingdom and the local veterinary surgeons assumed the key positions in the DVS. A major policy alignment within the Ministry of Agriculture and Co-operatives in 1962 had given the Veterinary Department responsibilities in animal production in addition to animal health. In 1982, the closure of the Livestock Development Corporation meant that the additional responsibilities of abattoir and animal farm management were part of the remit of the DVS.

Provisions of the Federal constitution

Malaysia is a democratic federation of thirteen states and two federal territories. The country comprises West Malaysia (Peninsular Malaysia) and East Malaysia (the states of Sabah and Sarawak in the northern part of Borneo). Paragraph 4 of List 3 (concurrent list) of Items 74 and 77 in schedule 9 of the Federal Constitution, which was adopted upon independence in 1957, relates to animal production, prevention of cruelty to animals, the provision of Veterinary Services and animal quarantine (4). This means that these responsibilities are shared by both the Federal and State governments.

Functions of the Minister of Agriculture

The functions of the Minister of Agriculture are based on the Federal Minister Orders 1995 PU (A) 203 in the Federal Government Gazette, dated 1 June 1995 (3). These orders list the responsibilities of the Minister as follows:

- animal production, animal products and animal feed
- control, prevention and eradication of animal diseases, quarantine and research
- training for the animal industry
- control of import and export of animals and animal products
- inspection of meat, milk, eggs and slaughterhouses
- improvements in animal production and animal health.

Legislative authority

The following laws reflect the range of functions and responsibilities of the DVS:

- Animal Ordinance 1953
- Veterinary Surgeons Act 1974 (2)
The Animal Ordinance 1953 became the principal legal premise of the activities of the DVS in the areas of import and export of animals and animal products, control and eradication of diseases, prevention of animal cruelty, improvements in animal production and other related activities. The Animal Ordinance is being reviewed and a new Veterinary Act is being developed that will meet current and future legislative requirements and will cover such matters as the proper use of antibiotics and ‘sanitary and phytosanitary (SPS) measures’.

The Animal Ordinance 1953 is applicable to the states in Peninsular Malaysia. The ordinance gives the Chief Minister of each state the authority to act within the state boundaries in matters of disease control. Sabah and Sarawak have separate ordinances, are completely responsible for their own veterinary matters and report separately to the OIE (World organisation for animal health).

The creation of the Malaysian Veterinary Council (MVC), which is the body responsible for the discipline and integrity of the veterinary profession, was based on the provisions of the Veterinary Surgeons’ Act of 1974. The Director General of the DVS is the President of the MVC and is responsible for all Veterinary Services in Malaysia, both public and private.

Organisational structure of the Department of Veterinary Services

The current organisational structure of the DVS was established in 1995 (Fig. 1). The structure will have to be reviewed so that the DVS can meet the challenge of addressing the changing needs of the animal industry. The functions of the different divisions can be seen in Fig. 2.

Vision statement

‘The animal industry becomes a fully integrated commercial sector producing quality food from animal products towards national self-sufficiency and export’ (7).
### Directorate

As head of the Department, the Director General of Veterinary Services is responsible for implementing government policies and managing and administering the department, which includes controlling and supervising finance and personnel. The Director General is assisted by two Deputy Director Generals. The Directorate is responsible to the Secretary General of the Ministry of Agriculture. The Secretary General of the Ministry of Agriculture is responsible to the Chief Secretary, who is head of the Civil Service, who in turn is responsible to the head of the Government, the Prime Minister.

<table>
<thead>
<tr>
<th>Planning and evaluation division</th>
<th>Epidemiology and veterinary medicine division</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analyses and formulates policy and strategies</td>
<td>1. Implements programmes to promote animal health status</td>
</tr>
<tr>
<td>2. Prepares development plans (short and long-term)</td>
<td>2. Prevents, controls and eradicates animal and zoonotic diseases</td>
</tr>
<tr>
<td>3. Monitors and undertakes evaluation (economic benefits and effectiveness)</td>
<td>3. Provides quarantine services</td>
</tr>
<tr>
<td>4. Manages the veterinary information system</td>
<td>4. Provides disease diagnostic services</td>
</tr>
<tr>
<td>5. Manages the international affairs of the DVS</td>
<td>5. Controls the quality and safety of biologics and vaccines</td>
</tr>
<tr>
<td></td>
<td>6. Controls the import and export of animals and animal products</td>
</tr>
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<td></td>
<td>7. Undertakes disease epidemiological investigations</td>
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<table>
<thead>
<tr>
<th>Industry development division</th>
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</thead>
<tbody>
<tr>
<td>1. Monitors the development and performance of the animal industry</td>
<td>1. Monitors the development and performance of the animal industry</td>
</tr>
<tr>
<td>2. Establishes strategies to stimulate the development of the animal industry to promote investments</td>
<td>2. Establishes strategies to stimulate the development of the animal industry to promote investments</td>
</tr>
<tr>
<td>3. Provides expert technical advisory services</td>
<td>3. Provides expert technical advisory services</td>
</tr>
<tr>
<td>4. Monitors the animal feed industry and provides feed analytical services</td>
<td>4. Monitors the animal feed industry and provides feed analytical services</td>
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<table>
<thead>
<tr>
<th>Veterinary public health services</th>
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<tbody>
<tr>
<td>1. Plans and develops abattoirs</td>
<td>1. Plans and develops abattoirs</td>
</tr>
<tr>
<td>2. Tests the hygiene and safety of products of animal origin</td>
<td>2. Tests the hygiene and safety of products of animal origin</td>
</tr>
<tr>
<td>3. Tests and examines products to ensure they meet import and export conditions</td>
<td>3. Tests and examines products to ensure they meet import and export conditions</td>
</tr>
<tr>
<td>4. Monitors and provides accreditation to abattoirs and processing plants</td>
<td>4. Monitors and provides accreditation to abattoirs and processing plants</td>
</tr>
<tr>
<td>5. Controls the quality of meat and animal products</td>
<td>5. Controls the quality of meat and animal products</td>
</tr>
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<table>
<thead>
<tr>
<th>Research and development division</th>
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</thead>
<tbody>
<tr>
<td>1. Undertakes research into new products and technology in animal production and health</td>
<td>1. Undertakes research into new products and technology in animal production and health</td>
</tr>
<tr>
<td>2. Transfers research results and technology to users in the industry</td>
<td>2. Transfers research results and technology to users in the industry</td>
</tr>
<tr>
<td>3. Stimulates private sector participation directly or through joint venture arrangements by sharing research findings</td>
<td>3. Stimulates private sector participation directly or through joint venture arrangements by sharing research findings</td>
</tr>
<tr>
<td>4. Publishes research results and information in journals and elsewhere</td>
<td>4. Publishes research results and information in journals and elsewhere</td>
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<table>
<thead>
<tr>
<th>Production and development of genetic resources division</th>
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</thead>
<tbody>
<tr>
<td>1. Develops and manages animal farms</td>
<td>1. Develops and manages animal farms</td>
</tr>
<tr>
<td>2. Develops and implements breeding programmes</td>
<td>2. Develops and implements breeding programmes</td>
</tr>
<tr>
<td>3. Imports and distributes animals for sale and development programmes</td>
<td>3. Imports and distributes animals for sale and development programmes</td>
</tr>
<tr>
<td>4. Develops technology related to animal breeding and management</td>
<td>4. Develops technology related to animal breeding and management</td>
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</tbody>
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<thead>
<tr>
<th>Human resource development division</th>
<th>Enforcement division</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Formulates training and retraining programmes for officers, staff, farmers and overseas participants</td>
<td>1. Investigates any infringement of DVS laws or regulations (wrong doings) and prosecutes where necessary</td>
</tr>
<tr>
<td>2. Implements training programmes</td>
<td>2. Controls animal slaughter</td>
</tr>
<tr>
<td>3. Evaluates the effectiveness of training programmes</td>
<td>3. Controls the movement of animals and animal products</td>
</tr>
<tr>
<td>4. Selects relevant external training courses and matches them with suitable candidates</td>
<td></td>
</tr>
<tr>
<td>5. Formulates curriculum for courses and service examinations and conducts such examinations</td>
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<table>
<thead>
<tr>
<th>Administration division</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Manages the day-to-day administration (letters and files)</td>
<td>1. Manages the day-to-day administration (letters and files)</td>
</tr>
<tr>
<td>2. Manages staff and personnel – distribution of duties and functions, and transfers</td>
<td>2. Manages staff and personnel – distribution of duties and functions, and transfers</td>
</tr>
<tr>
<td>3. Maintains personnel service records</td>
<td>3. Maintains personnel service records</td>
</tr>
<tr>
<td>4. Manages finance and budgets (staff payroll, tenders, contracts, procurement and accounts)</td>
<td>4. Manages finance and budgets (staff payroll, tenders, contracts, procurement and accounts)</td>
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</tbody>
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<tr>
<th>State Veterinary Services Department</th>
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<tr>
<td>Under the Constitution, the DVS has been established as a separate agency in 12 states. In Sarawak it is a Division under the Department of Agriculture. The Federal Territories of Kuala Lumpur and Labuan are responsible to the Federal Headquarters. Each State DVS is headed by a Director, with District Veterinary Officers at the field implementation level. The State DVS Director is responsible both to the State Administration and the Director General of the DVS on specific policies and activities</td>
<td></td>
</tr>
</tbody>
</table>
Mission statement

‘We are committed to the growth of a sound animal industry to supply quality and safe food from animal products for national consumption and exports through the provision of quality veterinary services from motivated, skilled and creative individuals’ (8).

Staff at the Department of Veterinary Services

The total number of staff positions in the Federal DVS is 2,952. They are divided up into the following categories:

a) Senior management: 3
b) Management and professional staff: 181
c) Support staff (technical and non-technical): 2,768.

The management and professional category is made up of officers who have the academic qualifications listed in Table I.

The different categories of support staff (paraveterinarians) are shown in Table II.

Objectives of the Department of Veterinary Services

The objectives of the DVS have been developed over the years since its inception, they are as follows:

– to prevent, control and eradicate animal and zoonotic diseases
– to facilitate the growth and development of a strong animal industry
– to ensure that animal products for human consumption are wholesome, clean, safe and suitable to be consumed
– to facilitate the growth and development of the animal feed industry
– to ensure the welfare and well-being of all animals.

General strategies of implementation

The following general strategies are some of the ways in which the objectives of the DVS can be achieved:

– improving productivity in animal production by using systems of management, animal breeding, feeding and nutrition that use suitable modern technology
– facilitating the participation of small farmers in organised systems of contract farming and umbrella programmes that consolidate management and marketing
– increasing the national animal population through improved breeding and importation
– maximising the use of local resources of animal feed through the development of grazing reserves, small plots of pasture, agro by-products and undergrowth in plantations
– delivering effective Veterinary Services that help the animal industry to develop and make improvements
– delivering effective veterinary public health services so that animal products destined to be consumed meet quality and safety standards and are free from zoonotic pathogens
– creating awareness of animal welfare and ensuring that animals in captivity are properly managed
– providing facilities for training to improve the understanding, knowledge, experience and skills of farmers, entrepreneurs and DVS staff
– improving the infrastructure to enhance and expand delivery of services to industry and small holders

Table I

<table>
<thead>
<tr>
<th>Academic qualifications held by the professional and managerial staff of the Department of Veterinary Services in Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic qualifications</td>
</tr>
<tr>
<td>PhD</td>
</tr>
<tr>
<td>MSc</td>
</tr>
<tr>
<td>MBA</td>
</tr>
<tr>
<td>BVSc</td>
</tr>
<tr>
<td>DVM (Indonesia)</td>
</tr>
<tr>
<td>DVM (UPM, Malaysia)</td>
</tr>
<tr>
<td>BVSc (India-Pakistan)</td>
</tr>
<tr>
<td>BSc</td>
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</table>

Table II

<table>
<thead>
<tr>
<th>Categories of support staff at the Department of Veterinary Services in Malaysia</th>
</tr>
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<tr>
<td>Categories of support staff</td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Assistant veterinary officers</td>
</tr>
<tr>
<td>Veterinary assistants</td>
</tr>
<tr>
<td>Veterinary attendants</td>
</tr>
</tbody>
</table>

**Note:**

PhD: Doctor of Philosophy
MSc: Master of Science
MBA: Master of Business Administration
BVSc: Bachelor of Veterinary Science
DVM: Doctor of Veterinary Medicine
UPM: University of Putra, Malaysia
BSc: Bachelor of Science
– improving expertise and effectiveness in the control of pollution and of the effects on the environment of animal farming activities
– ensuring the effective enforcement of regulations.

Clients of the Department of Veterinary Services

The DVS provides services to a range of clients, either directly or indirectly; they include the following groups:
– farmers, entrepreneurs, animal owners and breeders
– animal product processors and abattoir operators
– importers, exporters and traders of animals and animal products
– government agencies and non-governmental organisations
– consumers and the general public.

Policies related to the animal industry

Agriculture and animal production policies have been formulated on the basis of both short-term and long-term national planning and objectives. Long-term strategies are based on the plans that are described below.

Vision 2020

Vision 2020 was launched in 1991. The plan outlines what Malaysia wants to achieve and the strategies by which the country intends to become a developed nation by 2020.

Outline Perspective Plan 3 (2000-2010)

The Outline Perspective Plan 3 (OPP3), which is a ten-year plan, and the Eighth Development Plan, which is a five-year plan contained within the OPP3, have identified services, manufacturing, and agriculture (food production) as the sectors of most importance to economic growth. Strategies and development plans are targeted to achieve growth rates of 3.5% annually.

The Third National Agriculture Policy (1998-2010)

National agriculture policy was revised following the Asian economic recession in 1997. One of the effects of the recession was the devaluation of local currency against the US dollar, which caused the cost of food imports to increase. The Third National Agriculture Policy (NAP3) established targets for improvements in food production, including the production of food of animal origin, as follows:
– to improve the safety of the food supply
– to increase productivity and competitiveness
– to strengthen links between each sector of the food supply chain
– to extend the work of new agricultural activities, such as creating new varieties and establishing commercial farms and grading and packing centres
– to conserve natural resources to ensure sustainable development.

To develop the animal industry the NAP3 focuses on the following objectives:
– to ensure a sufficient supply of poultry meat and eggs for the domestic market and to take advantage of all export opportunities
– to increase the production of beef (cattle and buffalo), mutton (sheep and goat) and milk for the domestic market
– to ensure a sufficient supply of raw materials to meet the requirements of the processing industry
– to continue developing Malaysia as the ‘international halal food hub’ of the region
– to use sustainable production technologies.

The NAP3 makes specific recommendations for transforming the agriculture sector into a modern, commercial and sustainable industry, with the emphasis on higher productivity and the effective use of resources. Improvements must be made so that local demand can be met and quality and safety standards upheld. To help achieve this transformation NAP3 makes the following recommendations:
– the participation of the private sector
– the development of commercial production systems
– the application of technology
– improved communication
– increased competitiveness.

The Eighth Development Plan encourages investments in agriculture and livestock. The federal government provides fiscal incentives and credit programmes. The state governments provide new lands, where available, for commercial production projects. Under the new arrangements the DVS invites the private sector to be involved in the commercial production of all the major livestock commodities, and others where economically viable.
Epidemiology and animal health

The prevention, control and eradication of animal and zoonotic diseases remain the principal activities of the DVS. The development of the animal industry is dependent on the control of diseases to maintain production and productivity levels and ensure the safety of products for public consumption. As a member of the World Trade Organization (WTO) and the Association of Southeast Asian Nations (ASEAN) Free Trade Area, Malaysia is subject to the terms of the ASEAN Common Effective Preferential Tariff and the following WTO Agreements: the Agreement on Agriculture, the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) (5, 9, 11, 10). Compliance with these agreements requires the industry to be competitive in both local and export markets. The DVS focuses on those activities which help maintain a disease-free status, namely: disease surveillance, control and eradication.

The SPS measures that a country implements have become extremely important when marketing animals and animal products abroad, and the DVS has a crucial role to play in this by maintaining the disease-free status of Malaysia. Disease surveillance programmes and disease risk analysis systems are continually upgraded. Quarantine and import and export services are provided to supervise the entry of animal and animal products into the country, and international border patrols control the spread of exotic diseases. Products of animal origin are inspected and tested at entry points and processing plants.

The National SPS Plan covers the activities of the livestock industry. There are nine major programmes to be implemented in the 2001-2005 period, they are as follows:

– National Disease Control and Surveillance
– Improvement of Livestock Production System
– Import Policy and Risk Reduction
– Emergency Response System
– Poultry Health Program
– Pathogen and Residue Reduction Program
– Ruminant Health Services
– Swine Health Services
– Strengthening of the DVS

There are five Regional Veterinary Laboratories in Peninsular Malaysia which provide diagnostic services, disease monitoring services and various tests on samples of sera and organs relating to animal diseases of zoonotic importance.

The most important diseases that occurred in 2002 included Newcastle disease, foot and mouth disease and haemorrhagic septicemia. However, the incidences were in specific areas and effective action was taken to keep the outbreaks under control. No cases of tuberculosis, Johnes’ disease or Nipah disease were reported in 2002.

Nipah disease occurred in Malaysia between October 1998 and May 1999 but has now been successfully eradicated. Malaysia declared itself free from this disease as of June 2001, two years after the last clinical case. The virus was a new paramyxovirus, named Nipah virus after the village where it was first identified.

No equine diseases, including equine infectious anaemia, equine influenza (virus jenis A), equine rhinopneumonitis, equine herpes virus, Western equine encephalomyelitis, Eastern equine encephalomyelitis, glanders, strangles, piroplasmosis or surra, have been detected in the last few years. Japanese encephalitis has been detected serologically but no clinical cases have been reported in horses, although vaccination of horses is practiced as a preventive measure.

Similarly, no bovine diseases such as tuberculosis, bovine viral diarrhoea, infectious rhinotraceitis, bovine genital campylobacteriosis or trichomoniasis have been reported in the last year. Bovine tuberculosis, brucellosis and Johnes’ disease are subject to eradication programmes in which positive animals are slaughtered and farmers given compensation.

The most common endemic ovine diseases are brucellosis, sheep pulmonary adenomatosis and caseous lymphadenitis, but they are under control.

Some of the poultry and duck diseases that are present in Malaysia include infectious bursal disease, infectious laryngotracheitis, swollen head syndrome, avian encephalitis, Marek’s disease, duck virus hepatitis, duck virus enteritis and fowl cholera. Malaysia is free from pathogenic avian influenza. An accreditation scheme has been implemented on poultry breeding farms to eliminate pathogenic Salmonella, particularly S. enteritidis, S. typhimurium, S. pullorum and S. gallisepticum.

Swine fever occurs sporadically in most states. There have been no reported cases of Aujeszky’s disease, transmissible gastroenteritis, porcine reproductive and respiratory syndrome, swine erysipelas or actinobacillosis pleuropneumonia in the last twelve months. Brucellosis, atrophic rhinitis and mycoplasma pneumonia have been reported, but the prevalence has been low.

Rabies has remained a cause for concern in the buffer areas bordering Thailand, where dogs are vaccinated to control the disease, although no disease has been reported in the last twelve months. There have been no reports of anthrax, leptospirosis, or listeriosis. The main conditions affecting aquaculture activities are white spot in shrimps and vibriosis.
The current status of the animal industry

The DVS is responsible for the supply of livestock products for consumers and the growth of the local animal industry. The industry has been expanding rapidly over the last few years with the ex-farm value rising from RM5.45 billion (US$1 = RM3.80) in 2000 to RM5.99 billion in 2001. At the end of the Seventh Development Plan (1996-2000), the total value of farm output was RM27.59 billion and the value is expected to reach RM29.71 billion during the period of the Eighth Development Plan (2001-2005).

The animal population in Malaysia in 2000 is summarised in Table III.

Table III
The animal population in Malaysia in 2000

<table>
<thead>
<tr>
<th>Species</th>
<th>Peninsular Malaysia</th>
<th>Sabah</th>
<th>Sarawak</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffaloes</td>
<td>87,948</td>
<td>42,318</td>
<td>11,776</td>
<td>142,042</td>
</tr>
<tr>
<td>Cattle</td>
<td>685,388</td>
<td>40,530</td>
<td>7,974</td>
<td>733,892</td>
</tr>
<tr>
<td>Goats</td>
<td>200,503</td>
<td>27,318</td>
<td>9,292</td>
<td>237,113</td>
</tr>
<tr>
<td>Sheep</td>
<td>134,226</td>
<td>1,720</td>
<td>9,311</td>
<td>145,257</td>
</tr>
<tr>
<td>Pigs</td>
<td>1,391,351</td>
<td>93,400</td>
<td>405,413</td>
<td>1,890,164</td>
</tr>
</tbody>
</table>

Source: Animal census, 2000

The small ruminant population means that there is only limited production of beef, mutton and dairy products and it is necessary to import these products. The animal industry in Malaysia had a deficit of RM3.9 billion in 2001 in comparison with exports of RM1.5 billion in the same year. The deficit is largely the result of the need to import animal feed ingredients and dairy products. The main export products are live poultry and eggs (Table IV).

Table IV
The production and consumption of major livestock commodities and the extent to which Malaysia was self-sufficient in these products in 2001

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Production ('000 MT)</th>
<th>Total consumption ('000 MT)</th>
<th>Percentage sufficiency</th>
<th>Per capita consumption (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry meat</td>
<td>764.06</td>
<td>643.94</td>
<td>118.66</td>
<td>27.68</td>
</tr>
<tr>
<td>Eggs</td>
<td>419.82</td>
<td>396.72</td>
<td>105.82</td>
<td>17.05</td>
</tr>
<tr>
<td>Beef</td>
<td>19.25</td>
<td>113.10</td>
<td>17.02</td>
<td>4.86</td>
</tr>
<tr>
<td>Mutton</td>
<td>0.98</td>
<td>15.63</td>
<td>6.24</td>
<td>0.67</td>
</tr>
<tr>
<td>Pork</td>
<td>168.81</td>
<td>163.56</td>
<td>103.21</td>
<td>7.03</td>
</tr>
<tr>
<td>Milk</td>
<td>32.69</td>
<td>1,082.70</td>
<td>3.02</td>
<td>46.54</td>
</tr>
</tbody>
</table>

MT: metric ton
kg: kilogramme

Source: Department of Veterinary Services, Malaysia, Statistics 2001

The animal industry is expected to continue to grow to meet the increasing demand for animal products. Public demand for more eco-friendly production systems requires that the animal industry be restructured to ensure that the natural environment is preserved.

The implementation of the NAP3 and the Eighth Development Plan is focusing on the following five major components:
- the production of beef by integrating livestock with plantation crops
- the creation of commercial awareness among farmers
- the establishment of disease-free areas
- the implementation of food quality and safety systems
- the consolidation and strengthening of the delivery of Veterinary Services.

The production programmes concentrate on six major livestock commodities, namely: poultry meat, eggs, beef, mutton, pork and fresh milk.

Poultry meat and eggs are the major source of protein in the diet of Malaysian consumers and they also constitute the cheapest source of animal protein in the country. The production of poultry meat has reached a self-sufficiency level of 118.6%, with a volume of 764.08 thousand tons in 2001. Production is expected to increase at the rate of 5.9% per year to reach a self-sufficiency level of 125.2% by 2010.

The production of eggs has achieved a self-sufficiency level of 106%, with per capita consumption at 17 kg of eggs per year. In 2001, the estimated demand for eggs in Malaysia was 396.72 thousand metric tons and in that same year there were 419.82 metric tons produced. It is projected that egg production will continue to grow at a rate of approximately 4% per year and will achieve a self-sufficiency level of 110% by 2010.

The poultry industry is expected not only to maintain self-sufficiency but to increase production of value-added consumer products for local and export markets. Changing tastes are creating an increasing demand for ready-to-eat convenience products and this will stimulate the food processing industry. To retain consumer loyalty poultry meat and eggs must remain competitively priced.

The ruminant sector of the animal industry is smaller than the poultry sector in terms of quantity and value and is seen to have greater potential for expansion. There are three types of beef production system in Malaysia, namely: the integration of livestock with plantation crops (16.7%), feedlots (21.7%) and traditional systems (61.5%). The traditional production system, which includes smallholder farming, remains the biggest contributor to the beef industry, but commercial production systems, such as integrating livestock with oil palm and rubber plantations, appear to have the greatest potential.
for growth. Feedlotting is another production system that has benefited from commercial activity; beef production has increased from 5,125 metric tons in 2000 to 10,067 metric tons in 2001.

The production of goat meat and mutton currently meets 6.2% of the local demand. This figure is expected to rise to 10.23% in 2010.

Many of the products imported into Malaysia are dairy products. Fresh milk production remains limited and is only able to satisfy 3% of the total demand for milk and dairy products. Per capita consumption of milk in Malaysia is 45.5 litres per year, one of the highest rates of consumption in the region. Future growth of local dairy production will be dependent on the demand for fresh milk but is projected to meet 5.3% of the total demand in 2005.

Pork production was severely affected in 1999 when 1.1 million pigs were culled in an effort to control an outbreak of Nipah virus. Among the effects of the outbreak was a drastic drop in the consumption of pork, which has remained low, at 6.9 kg per capita per year. Consequently, even with a lower population of pigs, local production has managed to meet the demand. Lessons have been learned from the Nipah virus outbreak of 1999. The industry will be restructured with new management criteria to ensure higher standards of bio-security, hygiene and sanitation, waste management and environmental conservation. Pig farming will be done in specific areas located away from towns and villages.

As well as the major commodities already discussed, there is a small section of the animal industry involved in the farming of minor commodities, such as deer, ostrich, rabbits and quail. This ensures that there is a wide variety of food to cater for all consumer tastes.

Sports and other leisure activities that involve animals are becoming more popular in Malaysia. Equestrian sports and horse riding are new to the region but are rapidly gaining a following. Companion animals such as cats and dogs have always been popular but there is now greater interest in the more expensive pedigree breeds and competitions continue to attract new enthusiasts. Since cock-fighting has been made illegal in Malaysia, there has been increased interest in keeping breeds of miniature chicken.

The animal industry is undergoing a process of restructuring. The industry must be able to meet the demand for its products while at the same time preserving the environment by modernising farming methods. More modern methods will improve waste management, which will help to prevent pollution and avoid the problem of flies. Poultry farms are being encouraged to adopt a closed-house system to improve productivity, improve bio-security, and create a more eco-friendly environment. Farms which adopt this system have more opportunity to export their products because it is easier for them to achieve the necessary accreditation.

An accreditation scheme based on Good Animal Husbandry Practice (GAHP) has been introduced and will be implemented in phases on all commercial farms to ensure that quality management systems, as specified by the DVS, are adopted. The final objective is to ensure that all products placed on the market come from farms which have adopted GAHP.

Veterinary Public Health Services

The Veterinary Public Health Services of the DVS support the animal based food industry at abattoirs, poultry processing plants and other food processing plants. A system of accreditation, based on animal health and food safety principles, has been established under the Veterinary Health Mark Scheme. The DVS is responsible for ensuring that animal product processing plants adhere to national hazard analysis and critical control point principles and practices. The plants are placed under the constant supervision of the DVS to ensure compliance with specific practices of quality management and standards of hygiene and sanitation. These plants are permitted to export their products. In 2002, 51 plants were given accreditation.

The food processing industry is being developed at the same time as the major livestock commodity industry. The increased production of a variety of value-added consumer products, which is meeting the new demands of local and export markets, is creating a bigger market for livestock products. Convenience foods have become very popular in Malaysia and the country intends to become the ‘international halal food hub’ of the region.

The Veterinary Public Health Laboratory in Petaling Jaya provides laboratory tests and analyses of animal and food products and will be developed into a food industry reference centre for monitoring the quality of food of animal origin. With the development of new laboratory facilities in 2003, the services will expand to meet international requirements and standards for the export of livestock products.

Veterinary research

The DVS is responsible for research into animal diseases and vaccines. The Veterinary Research Institute (VRI) in Ipoh is the main research facility in Malaysia. The research activities of the VRI focus on animal diseases which have economic and zoonotic implications. The VRI also operates as the reference
centre for the regional diagnostic laboratories and provides a link with the international scientific community. The research activities of the VRI can be divided into the following three main categories:

– disease surveys and investigations (epidemiology)
– the development of technology
– product development.

Research and vaccine production are the principal activities. In 2001, the VRI produced the following vaccines:

a) virus vaccines:
– infectious bursal disease
– duck virus enteritis

b) bacteria vaccines:
– duck pasteurellosis
– fowl cholera
– sheep and goats pasteurellosis
– haemorrhagic septicaemia (double adjuvant [DA])
– haemorrhagic septicaemia (alum precipitated)
– salmonella combined (DA)
– infectious coryza
– salmonella antigen.

Development of animal genetic resources

The DVS operates a number of breeding farms for cattle, sheep, goats, deer and poultry, with the objective of producing improved breeds and contributing towards the development of the industry. The use of artificial insemination and embryo transfer in the breeding programmes is intended to further improve the quality and productivity of these animals. The DVS has eight cattle farms, five sheep/goat farms and one deer farm.

The National Institute of Animal Biotechnology located in Jerantut, Pahang, processes bull semen from local cattle and produces frozen embryos. In 2002, the centre produced 8,252 doses of semen and distributed 2,774 doses for use in the breeding programme.

In March 2000, the Production Division of the DVS, Jelai Gemas Farm, Padang Hijau Farm, Air Itam Farm and the National Institute of Animal Biotechnology all received accreditation, under MS ISO 9002: 1994, for their work in the production of ruminant genetic resources.

Enforcement of veterinary regulations

The following animal production and animal disease control activities are subject to specific laws and regulations under the jurisdiction of the DVS:

– import, export and quarantine activities
– animal disease prevention and control
– disease reporting, control and eradication
– prevention of cruelty to animals
– animal conservation
– control of slaughter processes
– privatisation and licensing of abattoirs
– regulating and licensing of pigs and poultry farms
– animal registration
– registration of commercial veterinary vaccines and biologics
– control of pollution from animal sources
– registration and practice of veterinary surgeons.

Human resource development

The basis for the provision of excellent services is the continuous improvement of the skill and competencies of Veterinary Service staff throughout the course of their careers. Changes in technology continue to create changes in animal husbandry and management systems with new standards. The DVS must be able to provide services that meet the needs of the current situation. The HRD division of the DVS operates five training centres where DVS personnel and other animal industry workers can upgrade their knowledge and skills.

The HRD division has the following objectives:

– to increase the number of training staff
– to increase the number of trained personnel within the DVS
– to increase the number of trained farmers, entrepreneurs and animal industry workers.

The HRD division has already done a lot to meet these objectives. In 2001, their training centres hosted 104 courses in animal production and veterinary management for DVS staff and members of the public. DVS personnel were also given the opportunity to participate in international workshops, seminars and training courses. For farmers and entrepreneurs, there were 47 training courses, attended by 1,045 participants, and six seminars designed to improve their skills in specific areas.
New personnel, whether professional or support staff are introduced to the positive work culture and work ethics of the DVS through effective induction courses. Professional staff are given specific courses, relating to the range of skills and professional services provided by the DVS. Support staff are given separate courses relating to their functions within the DVS structure. The induction courses lay the foundation for all future training and are just the beginning of a career-long learning process.

Career enhancement and promotion within the civil service is subject to passing prescribed examinations. The HRD division is responsible for conducting these examinations at regular intervals to provide ample opportunity for the relevant personnel to participate and meet the requirements for advancement within the organisation. In 2001, the DVS conducted three 'special examinations', including one for the accreditation of veterinary graduates, in conjunction with the Malaysian Veterinary Council and the University Putra Malaysia, and seven 'service examinations', i.e. examinations that staff undertake for the purpose of promotion.

Malaysia runs a very active international technical co-operation Programme directed specifically at developing countries. The Malaysian Technical Cooperation Program (MTCP) takes the form of training courses in animal production, veterinary management and laboratory technology. The DVS has conducted the MTCP since 1985 for over 500 veterinary officers from various countries in South America, Africa, Asia and the Pacific. There were eight courses in 2001.

Conclusion

The DVS constantly reviews its organisation and functions in relation to its commitment to meet the changing needs of the animal industry. To cope with the constant changes in technology, scientific advancements in the animal production and food processing industries, and changing consumer preferences, it will be necessary for personnel within the organisation to continually acquire new skills and knowledge. The DVS in Malaysia may bear a resemblance to similar organisations in Asia and other developing countries and the authors hope that it will provide a useful point of reference.

Acknowledgements

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L’organisation du Département des Services vétérinaires de la Malaisie

M.N. Mohd Nor, A.J. Mustapa, M.A. Abu Hassan & K.W. Chang

Résumé

Le département des Services vétérinaires (DSV) de Malaisie fut créé en 1888 en tant qu’agence ayant pour rôle de contrôler les maladies indigènes et exotiques des animaux. Au fil des ans, la structure et les fonctions de l’organisation ont évolué pour s’adapter à la demande croissante de services vétérinaires. Les responsabilités des Services vétérinaires sont ancrées dans la Constitution de la Malaisie.

L’organisation actuelle du DSV est structurée de manière à atteindre les objectifs suivants :
– prévenir, contrôler et éradiquer les maladies animales et les zoonoses,
– faciliter la croissance et le développement d’une industrie animale forte,
– assurer l’intégrité, l’innocuité et la sécurité sanitaire des aliments d’origine animale destinés à la consommation humaine,
– faciliter la croissance et le développement de l’industrie alimentaire animale,
– veiller au bien-être et à la santé de tous les animaux.
Pour atteindre ces objectifs le DSV possède les neuf divisions suivantes : Planification et évaluation, Épidémiologie et médecine vétérinaire, Santé publique vétérinaire, Recherche et développement, Industrie et développement, Production et développement de ressources génétiques, Développement des ressources humaines, Application, et Administration.

Le développement de l’industrie animale est géré par les politiques nationales de développement, notamment la Politique 3 de l’agriculture nationale. Les programmes actuels pour le contrôle des maladies et le développement de l’industrie animale s’appuient sur le Plan huit de développement de Malaisie (2001-2005). Pendant la durée d’application de ce Plan, la Malaisie abordera le besoin de mesures sanitaires et phytosanitaires (SPS) en développant des programmes spécifiques touchant tous les secteurs de l’industrie animale. La Malaisie a choisi cette approche, entre autres, pour faire face aux défis de la libéralisation croissante du commerce créés par l’Organisation mondiale du commerce (OMC) et la Zone de libre-échange de l’Association des nations de l’Asie du Sud-Est. Le développement de l’industrie se concentre sur les produits les plus importants, soit le bœuf, le mouton, la viande de volaille, les œufs, le porc et le lait. Les autres produits ne reçoivent un appui que s’ils sont considérés comme économiquement viables. Tous les services d’appui sont renforcés, particulièrement la division du Développement des ressources humaines.

L’organisation et les fonctions du DSV sont constamment révisées en fonction des changements survenant dans le secteur de l’industrie animale et la nature des services demandés.

Mots-clés

La organización del Departamento de los Servicios Veterinarios de Malasia

M.N. Mohd Nor, A.J. Mustapa, M.A. Abu Hassan & K.W. Chang

Resumen
El Departamento de los Servicios Veterinarios (DSV) de Malasia fue establecido en 1888 como una agencia cuyo papel era controlar las enfermedades endémicas y exóticas de los animales. A lo largo de los años, la estructura y las funciones de la organización evolucionaron para adaptarse a la demanda cada vez más importante de servicios veterinarios. Las responsabilidades de los Servicios Veterinarios están enmarcadas en la Constitución de Malasia. La organización actual del DSV está estructurada para lograr los objetivos siguientes:
– prevenir, controlar y erradicar las enfermedades animales y las zoonosis,
– facilitar el crecimiento y el desarrollo de la industria animal,
– asegurar la integridad, inocuidad y seguridad sanitaria de los alimentos de origen animal para el consumo humano,
– facilitar el crecimiento y el desarrollo de la industria alimentaria para animales,
– asegurar el bienestar y la sanidad de todos los animales.
Para lograr estos objetivos, el DSV cuenta con las nueve divisiones siguientes:

Planificación y Evaluación; Epidemiología y Medicina Veterinaria; Salud Pública; Investigación y Desarrollo; Industria y Desarrollo; Producción y Desarrollo de Recursos Genéticos; Desarrollo de Recursos Humanos; Aplicación; y Administración.

El desarrollo de la industria animal se maneja a través de políticas nacionales de desarrollo, incluyendo la Política 3 de la Agricultura Nacional. Los programas vigentes para controlar las enfermedades y el desarrollo de la industria animal se apoyan en el Plan Ocho de Desarrollo de Malasia (2001-2005). Durante el período de aplicación del Plan, Malasia tratará el problema de las medidas sanitarias y fitosanitarias (MSF) desarrollando programas específicos que tocan todos los sectores de la industria animal. Malasia eligió esta estrategia, entre otras, para enfrentar los desafíos de la liberalización creciente del comercio, creados por la Organización Mundial del Comercio (OMC) y la zona de Libre Comercio de la Asociación de Naciones del Sureste Asiático. El desarrollo de la industria se concentra en los productos siguientes considerados como los más importantes: carne de res, cordero, aves, huevos, cerdo y leche. Solo se apoyan otros productos si están reconocidos como económicamente viables. Se refuerzan todos los servicios de apoyo, particularmente la división de Desarrollo de Recursos Humanos. La organización y las funciones del DSV están constantemente revisadas de acuerdo con los cambios que suceden en el área de la industria animal y la naturaleza de las demandas de servicios.

Palabras clave


References