



ANNUAL REPORT 2021



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**Department of Animal Production and Health
Peradeniya**

Sri Lanka

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ANNUAL REPORT – 2021

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PREFACE

Department of Animal Production and Health (DAPH) is the leading technical organization for livestock production under the purview of State Ministry of Livestock, Farm Promotion and Dairy and Egg Related Industries, Ministry of Agriculture. It is the main technical service provider in the country, responsible for ensuring food security of foods of animal origin, the major protein source of a healthy diet. Demand for animal protein is continuously rising up and it is quite challenging to cater for the national demand under current circumstances. In par with the demand DAPH has intensified its functions mainly in providing technical guidance and statutory functions related to livestock sector in the country despite the difficulties created due to Covid 19 pandemic followed by the economic crisis. Upgrading and maintaining a healthy animal population, providing required inputs, quality assurance of animal products, animal feeds and veterinary pharmaceuticals, and research and development are the main functions implemented by different divisions of DAPH with collaboration of provincial DAPHs and other livestock stakeholders. Conducting 17 different development programs, department facilitates for increased production and quality improvements in the sector and thereby to achieve sector goals identified in the Government policy directives particularly. In last year food security is one of the major concerns in the country and our involvements for obtaining required inputs for livestock production especially for animal feed was continued to be demanding. Department was taken various remedial actions and have been participated for various discussions at higher authorities to ensure continuous supply of imported animal feed ingredients to the country under that critical period.

In general, Livestock sector had a slight setback due to the indirect influence of the Covid 19 pandemic and economic crisis in the country. However, there was a slight increase in milk collection comparing to the year 2020. The poultry sector in the country is continued to cater the local demand providing chicken meat and eggs. Even though with various difficulties like import restrictions, non-availability of USD for importation, continuous depreciation of SLR, reduction of locally produced feed ingredients, there were slight increase in meat and egg production in compared to the year 2020 . Raw material shortage, power cut with current fuel crisis are continued to challenge the growth of the industry which needs to be addressed in year 2022. The growth in Swine and Goat sectors are more or less static and needs more attention in coming years.

This 2021 Annual Report of DAPH highlights the status of livestock sub-sectors and presented the progress of all programs/projects conducted by the department during the year 2021. Most of the livestock sector support services/programs are jointly implemented by the central DAPH and Provincial Departments of Animal Production and Health (PDAPH). Therefore, province-wise performance and the progress have been presented in this report wherever necessary.

I am thankful to all Directors and their staff in the department for extending their fullest cooperation for successful accomplishment of programs planned for the year 2021. Special word of appreciation goes to Dr. S.S.P Silva - Director and the staff of Livestock Planning and Economics Division for taking efforts in compiling and publishing this document.

Dr. (Mrs.) K. A. C. H. A. Kothalawala
Director General

DEPARTMENT OF ANIMAL PRODUCTION AND HEALTH

VISION

Be the premier organization leading the livestock sector towards socio - economic development of Sri Lanka

Mission

Provide technical guidance and support to achieve sustainable development in the livestock sector by maintaining a healthy animal population and enhanced productivity ensuring food safety and contributing to food security.

1. INTRODUCTION

The Department of Animal Production and Health (DAPH) was established under the Ministry of Rural Industrial Development in September 1978. At present DAPH functions under the Ministry of Agriculture, State Ministry of Livestock, Farm Promotion and Dairy and Egg Related Industries.

Most of DAPH's field level functions have been devolved to nine Provincial Departments of Animal Production and Health (PDAPH) headed by the Provincial Directors.

The DAPH provides technical leadership, expertise and back-up services to Provincial Departments of Animal Production and Health (PDAPH) and other stakeholders in livestock industry. The department also implements a range of statutes pertaining to the livestock sector under the provisions of Animals Act, Animal Diseases Act and Animal Feeds Act. A total of 337 Divisional Veterinary Offices are scattered throughout the country to handle delivery services, which are managed by Veterinary Surgeons, under preview of PDAPH. Based on the policy decision taken by the government for expansion of veterinary service, divisional veterinary offices are currently being established at every divisional secretariat level to provide strong service delivery system at grass root level. Similarly, a policy initiative was taken in 2006 to expand veterinary investigation network by establishing a Veterinary Investigation Centre (VIC) at each district level.

Twenty-five (25) VICs have been established at district level by end of 2018.

Objectives of the DAPH

1. To assure an efficient preventive and curative animal health service.
2. To promote optimal utilization of animal genetic resources.
3. To enhance utilization of quality animal feeds and feed resources.
4. To promote growth and development of the animal feed industry.
5. To conduct research and development towards a sustainable livestock industry.
6. To develop technically competent human resources.
7. To ensure efficient and effective information dissemination and technology transfer.
8. To formulate, monitor and evaluate livestock development projects and programs.
9. To assure safety of products of animal origin.
10. To promote and facilitate good animal husbandry practices.
11. To ensure welfare and wellbeing of animals.
12. To ensure efficient management of departmental activities.

The DAPH has eight (08) functional divisions; six (06) technical divisions and two (02) support service divisions. Sub-units of DAPH are mostly located peripherally, functioning under different divisions of the DAPH.

Animal Health Division

Main Responsibility: Surveillance, prevention and control of economically important and emerging animal diseases by implementing suitable control strategies and eradication programs.

Sub Units:

Veterinary Investigation Centers (VICs) located at:

Ampara, Anuradhapura, Badulla, Batticaloa, Chilaw, Matale, Galle, Jaffna, Hambantota, Homagama, Kalutara, Kegalle, Kundasale, Matara, Nuwara-Eliya, Pannala, Polonnaruwa, Ratnapura, Trincomalee, Vavuniya, Welisara, Wariyapola, Monaragala, Mankulam and Kilinochchi.

Animal Breeding Division

Main Responsibility: Development and improvement in livestock genetic and animal feed resources.

Sub Units:

Central Artificial Insemination Station - Kundasale.

Artificial Insemination Centre - Polonnaruwa.

Goat Breeding Stations -Imbulandanda and Thelahera.

Human Resource Development Division

Main Responsibility: Development of human resources through skills development and dissemination of information required for further growth of the livestock sector.

Sub Units:

Institute of Continuing Education for Animal Production and Health - Gannoruwa.

Sri Lanka School of Animal Husbandry-Kundasale and Seepukulama.

Livestock Knowledge Centre, Gatambe.

Livestock Technology Park, Gannoruwa.

Veterinary Research Institute

Main Responsibility: Planning, designing and conducting research for improvement in livestock sector and provide, laboratory services biological products, and expertise to fulfill the needs of livestock industry.

Sub units:

Central Poultry Research Station - Karandagolla.

Animal Virus Laboratory - Polgolla.

Livestock Planning and Economics Division

Main Responsibility: Formulation of livestock development programs/projects, submitting for funds and monitoring and evaluation of the progress of livestock development programs/ projects implemented by the central and provincial DAPH and other related agencies and maintaining the databases in livestock sector.

Veterinary Division

Main Responsibility: Implementation of statutes pertaining to the livestock sector.

Sub units:

Animal Quarantine Stations (Colombo, Katunayake, Hambantota and Mattala)

Administration Division

Main Responsibility: Proper management of human resources and ensure smooth functioning of the Department

Finance Division

Main Responsibility: Efficient and effective management of funds allocated to the Department.

Members of the Directorate

Members of the Directorate in 2021 were as follows:

- Dr. (Mrs.) R. Hettiarachchi - Director General (07.05.2020 – 31.03.2021)
- Dr. (Mrs.) K.A.C.H.A. Kothalawala- Director General (from 01.04.2021)
- Dr. N. Jayaweera - Additional Director General/ Animal Health (from 26.07.2021)
- Dr. (Mrs.) U.L.P. Mangalika - Additional Director General/ Livestock Development (from 26.07.2021)
- Dr. S. S. P. Silva – Additional Director General / Program Planning & International Affairs (from 26.07.2021)
- Dr. (Mrs.) U.L.P. Mangalika – (CUD) Additional Director General/ Veterinary Research (From 14.02.2021)
- Mrs. Geetha Indrani - Additional Director General/ Administration

- Dr. L.W.N. Samaranayaka – Director/ Animal Breeding (23.11.2017 – 25.07.2021)
- Dr. P.G. Senevirathne – Director Actg / Animal Breeding (from 07.10.2021)
- Dr. S. Hettiarachchi – Director/ Animal Health (24.08.2020 – 15.01.2021)
- Dr. L. Epakanda - Director Actg / Animal Health (from 16.01.2021)
- Dr. S.S.P. Silva – Director/ Livestock Planning and Economics (07.06.2018 – 06.10.2021)
- Dr. (Mrs.) P.S. Fernando - Director Actg /Livestock Planning and Economics (from 07.10.2021)
- Dr. (Mrs.) V.R.N. Munasinghe – Director Actg / Veterinary Regulatory Affairs (from 05.05.2020)
- Dr. L.W.N. Samaranayaka -Director Actg / Veterinary Research (18.02.2020 – 06.10.2021)
- Dr. H. Kothalawala- Director Actg / Veterinary Research (from 07.10.2021)
- Dr. A. Liyanagamage – Director Actg / Human Resource Development (from 22.06.2020)
- Mrs. V.P.K. Pilapitiya - Director/Administration
- Mr. D.M. Ekanayake - Chief Accountant.

The Organization structure of the DAPH is shown in *Annexure I*.

2. LIVESTOCK SECTOR REVIEW

2.1. Dairy Sector

The dairy sector has been identified as the priority sector for development among other livestock sub sectors in the country. Cattle and buffalo population in the country in 2021 has been recorded as 1.65 million and 0.49 million respectively (Source: LPE Division, DAPH). Domestic milk production recorded as 436.87 million liters (Source: LPE Division, DAPH). It accounts to 5.3% rise compared to the previous year.

Number of milk chilling centers in the year totaled up to 292. The amount of milk collected by 14 main milk processors in the formal milk market in the year amounted to 245.54 million liters, around 32%, 21.36% and 18.12% of milk collected in the country was from the Central province, North-Central province and the North-Western province respectively.

Average farm-gate price per liter of cow milk in 2021 was around Rs.85.04 and

Rs.104.03 for buffalo milk. Average cost of production of one liter of milk in up country and mid country in 2021 was recorded as Rs.69.30 under intensive management system. (Source: LPE Division, DAPH)

Form of powdered milk out of milk and milk products imported was 81.34% which had more than 1.5 % of fat.

Import of dairy products amounted to 88,481.83 MT in 2021 a decrease of 13.55 % over the corresponding figure of 102,355.53 MT in 2020 (Source: Department of Customs). Out of total dairy products imported into the country in 2021, full cream milk powder amounted to 71,971.99 MT which was a decrease of 18.73% when compared with 88,558.22 MT in the year 2020. On the contrary, import of non-fat milk powder at 11,052.41 MT in 2021 showed an increase of 26.97% from the 2020 import volume of 8,705.06 MT. Total import bill on dairy products reached Rs. 63.09 billion in the year 2021.

The average price including Cost, Insurance and Freight (CIF) prices (LKR) of imported dairy products in 2020 and 2021 were as follows:

	2020 (Rs. /MT)	2021 (Rs. /MT)
Whole milk powder	611,250.30	724,788.37
Skim milk powder	510,822.70	632,656.96

(Source: Department of Customs)

International market prices of whole milk powder and skim milk powder were increased towards the end of the year. Comparison of prices in 2020 and 2021 are as follows:

International market prices of dairy products (2020 - 2021)

Product	Price USD/MT			
	2020 (Avg.)		2021 (Avg.)	
	Jan.	Dec.	Jan.	Dec.
Whole milk powder	3,421	3,350	3,419	4,650
Skim milk powder	2,896	2,644	2,769	3,738

(Source: <https://www.clal.it>)

Total availability of milk and milk products in the country had been 1,085.05 million liters of Liquid Milk Equivalent -LME (domestic production and imports) and the per-capita availability was recorded as 133.15 ml/day in year 2021 that accounted for 48.60 l/year.

2.2. Poultry Sector

Year 2021 could be identified as one of the worst year for the poultry industry. After being affected by the COVID 19 control related trade issues in 2020, poultry industry had to face number of issues which further aggravated the industry status. Lack of foreign currency for importation of inputs and, continuous rise of feed cost affected the production cost and market prices.

2.2.1. Broiler Industry

Three grandparent farms imported 30,052 grandparents DOC within the year. 1,246,695 parent DOC produced by the grandparent hatcheries were sold to 32 broiler parent farms supplying 82% of the local parent bird requirement. The rest of the parent DOC requirement (264,914) was imported from USA. The imported strains were Ross (69%) Indian River

(17%) and Arbor Acres (14%) while local procurement consisted of Cobb (48%) Indian River (24%) and Arbor Acres (28%)

The total procurement of 1,511,609 parent birds resulted in production of 176.94 million broiler chicks recording an 11% increment compared to 159.78 million broiler chick productions in 2020. Out of the total production of DOCs 173.86 (Mn) were able to be sold for broiler meat production. Respectively chicken meat production increased by 9.5% resulting 236.79 ('000MT) in year 2021 compared to 216.16 ('000MT) in 2020.

Average price of a day-old broiler chick was reported as Rs. 100.00 in 2021 ranging from Rs. 82.50 in January to Rs. 118.50 in November. Average selling price of live broiler at Colombo market was recorded as Rs. 523.00/kg with the lowest price of Rs. 428.00/kg in January to the maximum price of Rs. 630.00/kg in December. Fresh chicken meat price at the Colombo market ranged from Rs. 548.00 in January to Rs. 745.00 in December with an average value of Rs. 635.00.

2.2.2. Layer Industry

Parent stock importation had been restricted to a pre agreed quantity for the 4th consecutive year with the consensus of registered layer breeder farms and farmer organizations representing the commercial layers.

Imports of layer parents were recorded as 91,829 in the year 2021. Pullet chick production was recorded as 10.14 million. Average pullet chick price was recorded as Rs. 116.57 and was ranging from Rs. 94.25 in October to 163.25 in February 2021.

Eleven (11) layer breeder farms were in operation during the year. 67% of them were white strains while 33% consisted of brown egg laying strains. Bovans White (29%), Hyline Brown (20%), Lohmann LSL (15%), Dekalb white (15%), Lohmann Brown (8%), H & N Nick (6%), Hyline White (3%), H&N Brown Nick (3%) Bovans Brown (1%) were the layer breeder strains imported. Main importing countries were Brazil (48%), Canada (39%) and USA (13%).

Average retail price of white and brown eggs at Colombo market was recorded as Rs.16.80 and Rs.17.80. White egg price ranged from 13.70 (March) to Rs. 23.50 (December). Brown egg price ranged from Rs. 14.00 (January) to Rs. 25.00 (December). The egg production was increased by 20% to 2,934.55 Mn in 2021.

2.2.3. Poultry Feed Industry

The compounded feed production increased by 5% during the year 2021 amounting to 1,362,603.05 MT. Ninety

four percent (94%) of the total animal feed produced in the country is used for poultry industry. Forty Five (45) registered poultry feed manufacturers were in operation during the year. The commercial poultry feed production in the country was estimated as 1,025,932.54 MT which is 10% increment compared to 933,314.85 MT in year 2020. Total self-mixed poultry feed production has decreased by 11% compared to previous year amounting 258,295.26 MT. It may presume that the self-mixers were facing issues regarding obtaining animal feed raw materials thus tend to use proprietary feed.

2.2.4. Poultry Processing Sector

Sixteen (16) processing establishments and Eight (08) poultry further processing establishments registered under DAPH were in operation during the year 2021. Total value added meat products manufactured by further processing establishments amounted to 11,233.77 MT remaining at the same level as previous year. Out of this production in 2021, a major portion (94%) consisted of chicken meat-based value-added products.

2.2.5. Exports

Export of chicken meat and meat products were recorded as 718.26 MT in the year 2021, a decrease of 51.05 MT from the previous year volume of 769.31 MT. Bulk of the chicken meat and chicken meat products were exported to Maldives and India. Export of table eggs increase by 64% by reaching 4.1 million compared to corresponding figure of 2.5 million in 2020. A total of 0.07 million day-old chicks and 313,200 hatching

eggs were also exported during the year 2021 (Source: AQ Station, Colombo).

2.2.6. Imports

75.01 MT poultry meat and meat products, 22.71 MT egg powder and 51 MT of liquid egg were imported to the country during 2021 (Source: AQ Station, Colombo).

Key data pertaining to the Industry in 2021 are given in Annexure II.

2.3. Swine Sector

Swine sector is one of the main livestock sub-sectors which placed next to the poultry and dairy sectors in Sri Lanka. Around five thousand farmers are engaged in swine farming as their main income generating activity.

Due to the regulation imposed on COVID 19 pandemic, pork production was temporally hampered due to inadequate availability of swill and transport restriction. Animal feed transport also had issues at the initial stage of COVID-19 curfew but it was successfully managed by the department after negotiation with the respective authorities to ensure the input supply required for continues production at the bagging of the year 2021. However, disease control and treatment were continued through provincial departments around the country by respective Veterinary Surgeons attached to the department.

The pork market demand was affected due to prevailed African swine fever pandemic situation in the Asian region

and it also created a hassle to collect swill and other feeding stuff and transport of animals. This situation also threatened the import and export of pork.

Porcine Respiratory and Reproductive Syndrome (PRRS) which was started in latter part of the year 2019 was continued to threaten in year 2021 as well but to a lesser extent. Vaccination against PRRS has been allowed in risk areas

It has been recorded that the pig population was 178,522 in the country and the estimated National pork production was 9.82('000) MT. The cost of production of pork recorded as Rs. 288.00 kg for live weight and 414.96 kg to dressed weight (Source: LPE Division, DAPH). Monthly average retail price of pork was recorded as Rs.831.50 per kg in the year 2021 ranging from Rs.795.93 kg (Minimum) in May to Rs. 881.58 kg (Maximum) in November (Source: HARTI). However, local market price for curry pork was recorded as Rs. 741.00 kg. Total of 67.24 MT of pork and pork products have been imported into the country in 2021 and 19.09 MT of pork and pork products have been exported (Source: Department of Customs). Prices of piglings were recorded as Rs 10,000.00 for naturally bred animals and Rs. 11,000.00 for piglings born by artificial insemination. (Source: NLDB).



Figure 2.1: Monthly average retail price of Pork- 2021 (Source: HARTI)

2.4. Goat sector

Goat farming is concentrated mainly in dry and intermediate zones of the country where about 75% of goat population is distributed. Goat population in 2021 recorded as 758,299 (Source: LPE Division, DAPH) and number goat farms in the country recorded as 82,578 (Source: LPE Division, DAPH). Average cost of production of mutton was Rs. 1,442.18 in year 2021. Average retail price of mutton in the country reported as Rs. 1,988.38/kg in the year 2021 ranging

from Rs. 1,897.28/kg in September to Rs. 2,088.23/kg in December.

A total of 880,590 kg of mutton had been imported into the country during the year 2021. While 15kg had been exported (Source: Department of Customs). Change of average retail prices of mutton is shown below. (Figure2.2)

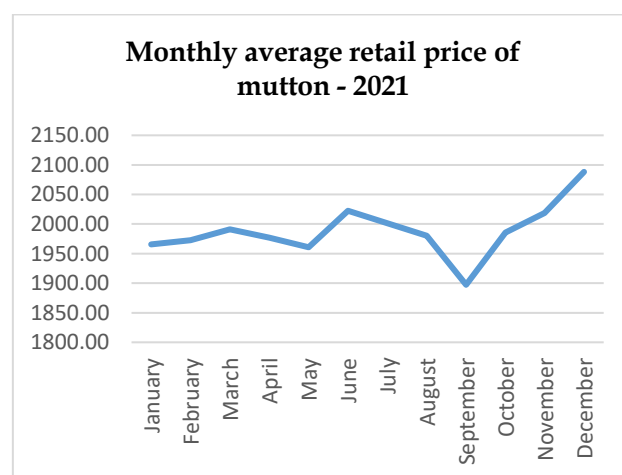


Figure 2.2: Monthly average retail price of Mutton 2021 (Source: HARTI)

3. ANIMAL HEALTH DIVISION

3.1. Introduction

The animal health division which is one of the six technical divisions in the DAPH is responsible for disease surveillance and control for ensuring required animal health status to development of the livestock industry in the country. The division provided technical leadership and back-up services to prevent entry of exotic diseases and to control and eradicate existing economically important and zoonotic diseases while maintaining animal welfare and ensuring food safety of animal origin.

Animal health division has peripheral units namely Veterinary Investigation Centers (VICs) which are established at district level. Among the 25 administrative districts in Sri Lanka, twenty four of them have already established as functional VICs. Mannar district is still managed by the Vavuniya Veterinary Investigation Center located in the adjoining district. The national level vaccine bank is located at DAPH headquarters for issuing vaccine to field level.

Passive animal disease surveillance is carried out by 337 divisional government veterinary offices island wide. Number of listed diseases are monitored through clinical signs and monthly reported to Animal Health division by the field veterinary surgeons. Information are analyzed and feedback is sent to all provincial

directors and respective field veterinary surgeons quarterly.

The Animal Diseases Act No.59 of 1992 stipulates the actions that have to be taken by different personnel in the event of occurrence of a 'notifiable disease' in the country. The owners are obliged to notify the presence of any suspected case of a 'notifiable disease' to the relevant government veterinary surgeon immediately who in turn will carry out a preliminary investigation. In such a situation, the disease reporting is more active and enhanced by following the stipulated procedure. Immediate reporting in a 'Preliminary Reporting format' followed by 'Weekly Returns' until a period of five weeks after the appearance of last fresh case. This is further supported by the district VICs by performing epidemiological investigation and providing laboratory back-up service for disease diagnosis and confirmation where necessary.

Country status of notifiable diseases is reported biannually to OIE by Animal health division. Disease information are published in World Animal Health Information System (WAHIS). Referred information are collated and managed by the animal health division at national level for decision making.

The Sri Lanka Veterinary Epidemiology Bulletin is prepared quarterly and circulated among the government and private veterinarians and other stakeholders of the livestock industry.

Main Functions of the Division

- National level planning and implementing of animal disease control.
- Monitoring and evaluation of animal diseases status in the country and dissemination of animal health related information locally and internationally.
- Maintenance of vaccine bank, island wide distribution of vaccines and monitoring of livestock vaccination programme.
- Strengthening of veterinary investigation network for improved disease surveillance and laboratory back-up for disease diagnosis.
- Implementation of special programmes for livestock health improvement.
- Planning and implementation of avian influenza surveillance programme and emergency preparedness against emerging, re-emerging and exotic diseases.
- Formulation and implementation of veterinary public health policy in order to effectively control identified zoonotic diseases under 'One Health' concept.

3.2. Animal Disease Situation

3.2.1. Bovine Diseases

a. Haemorrhagic Septicaemia (HS)

Haemorrhagic Septicaemia (HS) is an acute, fatal, septicaemic disease caused by the *Pasteurella multocida* of serotypes B: 2 and E: 2 of the Carter and



Figure: 3.1. HS outbreak at Trincomalee

Heddleston system, corresponding to 6: B and 6: E of Namioka-Carter system.

It is a major disease of cattle (*Bos taurus* and *Bos indicus*) and water buffaloes (*Bubalus bubalis*) occurring as catastrophic epizootics in many Asian and African countries resulting in high morbidity and mortality.

The disease was first confirmed in Sri Lanka in 1955 when it broke out in epidemic proportion killing thousands of buffaloes and cattle. Since then it was named as the most killer disease in domestic large ruminants and outbreaks were encountered in large herds mainly in the dry zone and also in the wet intermediate zone.

Three (03) outbreaks of HS occurred in three veterinary ranges during the year 2021 in North Central province. Laboratory confirmation of disease was made by the Veterinary Research Institute. The cases numbered 40 with 27 deaths as summarized in Table 3.1.

Vaccination is practiced using locally produced alum precipitated and oil

adjuvant vaccines. During the year 2021, all the animals in outbreak areas had been vaccinated against HS by divisional veterinary officers. The key factors in prevention and control of the disease are correct and timely reporting,

accurate and rapid diagnosis, and strategic use of high quality vaccine. Prophylactic vaccination which considered as the major tool in controlling the disease was carried out routinely throughout the year.

Table 3.1: Spatial and Temporal distribution of HS in 2021

No.	District	No. of affected VS ranges	No. of		Month(s) of occurrence
			Cases	Deaths	
1	Polonnaruwa	3	40	27	May, June, December
	All island total	3	40	27	

b. Foot and Mouth Disease (FMD)

FMD is endemic in Sri Lanka and recognized as one of the most economically important disease affecting livestock industry since middle of the nineteenth century. The serotype “O”, topotype ME-SA lineage Ind-2001 and sub lineage “d” of FMD virus has been identified as the only serotype circulating in the country which was confirm by the World Reference Laboratory, Pirbright, UK. Annual mass scale vaccination campaigns have been carried out by Department of Animal Production and Health (DAHP) since 1984.

Epidemiological study on FMD outbreak in last 15 years and comprehensive understanding on previous FMD outbreaks which shows FMD incidence is very high in four provinces namely Northern, Eastern, North Western and North Central provinces and within four provinces 10 district identified as high risk namely Jaffna, Vavuniya, Mullativu, Anuradhapura, Polonnaruwa, Ampara, Tricomale, Batticaloa, Kurunegala and Puttalam and where 70% of total cattle

and buffalo population is present an Island. 10 districts identified as medium risk areas namely Kandy, Matale, Nuwaraeliya, Kegalle, Gampaha, Hambantota, Badulla, Moneragala, Kulutara, Kilinochchi and Mannar. 5 districts identified as low risk, namely Rathnapura, Matara and Galle. Gampaha. Colombo. Bi annual vaccination program should be implemented at High risk and Medium risk districts. Some districts had infected foci/ high risk areas due to illegal cattle movement, illegal slaughter point, and nomadic movement and slaughter houses. Provincial Director and his technical experts, should identified/ map these areas are high risk and to recommended to implement biannual vaccination program too.

FMD was reported in Fifty five (55) veterinary ranges in thirteen (13) districts during the year 2021. The total cases numbered to 3,825 with 364 deaths as depicted in Table 3.2.

The total number of cases recorded in the previous year (2020) was 1,578 with 18 deaths. FMD epidemics in Sri Lanka

always commenced during the north-east monsoon between December and February. This coincides with the seasonal movement of livestock returning to the villages as a part of extensive livestock management practice especially in dry zone.

FMD vaccination is carrying out for the all cattle and buffaloes excluding below 4 months of age calves and pregnant animals. However, a few herds may not get the vaccine if farmers do not like their animals to be vaccinated. Anyhow VS should organize farmer awareness program on importance of vaccination of cattle. Vaccination coverage should be around 80% in high risk areas and should have to maintain herd immunity. All the dairy farmers should have registered in Divisional veterinary surgeons' office and animals should be

identification tags. Recommended to maintained farm register, vaccine register and vaccination register in each Veterinary Surgeon's Office. When farmers requested to transport animal from any VS range, Animal Health certificate should issue only vaccinated animals and it should confirm cross check with farm register and vaccination registration in the VSS office.

Every Veterinary Surgeon's should follow the Animal Act and Animal Disease Act at time of animal transportation activities. The index case of foot and mouth disease (FMD) was encountered during latter part of the year 2019 at Oddusudan veterinary range of Mulathivu district. Mulathivu had been identified as one of the major foci of foot and mouth disease in the country.

Table 3.2: Spatial and temporal distribution of FMD in 2021

No	District	No of affected VS ranges	No of		Months of occurrence
			Cases	Deaths	
1	Anuradhapura	8	374	12	January, February, March, December
2	Polonnaruwa	1	4	0	May
3	Kurunegala	5	308	20	February, March, December
4	Puttalam	7	632	15	January, March, November, December
5	Gampaha	4	50	3	March, April, December
6	Kalutara	1	9	0	October
7	Colombo	2	636	150	December
8	Kandy	6	171	1	March, April, May, December
9	Nuwara Eliya	3	23	1	March, April,
10	Ampara	3	643	4	January, February, December
11	Trincomalee	4	197	4	December
12	Batticaloa	5	638	150	December
13	Badulla	6	140	4	January, February, March
	All Island total	55	3,825	364	

c. Lumpy skin Disease (LSD)

Lumpy Skin Disease (LSD) is a viral disease of cattle and buffalo typically characterized by nodules or lumps on the skin. The main symptoms are visible lumpiness nodular lesions in the skin, fever, loss of appetite, discharge from the eyes and nostrils, rapid decline in milk production, abortions, mastitis and impaired fertility.

The disease is mainly vector born disease transmitted by blood sucking mosquitoes, ticks and flies and rarely by direct contact with infected cows, semen of infected bull, calf through the mother's uterus and milk..

A disease suspected to be Lumpy Skin Disease (LSD) was reported by the Veterinary Investigation Officer of Jaffna

during September 2020. The first reported cases have been in Kopayi and the disease have rapidly spread to neighboring farms and even to the other areas and spread to many parts of the country. Susceptibility much higher in cattle than buffaloes. Other species of livestock have not been affected by this viral disease.

LSD was reported in sixty-one (61) veterinary ranges in twelve (12) districts during the year 2021. The total cases numbered to 8,227 with no deaths as depicted in Table 3.3.

Necessary awareness and advices were given by facility of provincial department of Animal Production and health- all provinces. At present severity of the disease is remarkably reduced.

Table 3.3: Spatial and temporal distribution of LSD in 2021

No	District	No of affected VS ranges	No of		Months of occurrence
			Cases	Deaths	
1	Anuradhapura	3	21	0	January, December
2	Puttalam	1	5	0	July
3	Jaffna	15	3,620	0	January, February
4	Mullativu	2	470	0	January, February
5	Mannar	1	60	0	January
6	Kilinochchi	3	586	0	January
7	Nuwara Eliya	2	28	0	January, March
8	Ampara	7	1,251	0	January
9	Batticaloa	10	1,288	0	January
10	Rathnapura	1	10	0	January
11	Badulla	8	476	0	January
12	Monaragala	8	412	0	January
	All Island total	61	8,227	0	

d. Bovine Brucellosis

Bovine Brucellosis is an economically important disease of cattle and buffaloes which adversely affects their reproduction. It is also zoonotic in nature. Brucellosis has been prevalent in Sri Lanka for several decades and it was introduced to the country from India. It prevalence varies considerably between herds, areas and counties. The disease is endemic in certain parts of Eastern, Northern and North-Central provinces.

A total of 164 cases with 4 deaths were recorded in the country due to brucellosis during the year under review. High incidence of disease was reported in Badulla District (62 cases with 2 deaths) of Uva Province.

In total 3,298 animals have been vaccinated by Veterinary Investigating centers during the year 2021 using the S-19 Brucella vaccine.

e. Bovine Babesiosis

Four thousand four hundred and thirty-six (4,436) cases of Bovine Babesiosis were reported island wide during the year according to the data received from VS offices via master returns. Majority of cases in neat cattle were reported in Uva (909) with the highest in Welimada VS range (166) of Badulla district and North Western provinces (792) with the highest in Pannala VS range (132) of Kurunegala district.

An overall case-fatality rate of 2.63% was reported among neat cattle in the whole island. Monthly distribution of

cases varied from minimum of 238 to maximum of 505 with highest occurrences in first four months of the year.

f. Bovine Tuberculosis (TB)

A total of 44 cases with 01 death were recorded in the country due to Bovine Tuberculosis during the year under review. High incidence of disease was reported in Northern Province.

In the year 2021, 1,122 animals were screened for TB by Veterinary Investigation Centers. Comparative Tuberculin Purified Protein Derivative (PPD) test was used to detect positive animals. The causative organism *Mycobacterium bovis* can cause disease in cattle and other domestic animals and wild animals as well.

Control program on Bovine Tuberculosis has been implemented at national level.

3.2.2. Swine Disease

Porcine Reproductive and Respiratory Syndrom (PRRS)

A total of 655 cases with 219 deaths were recorded in the country due to PRRS disease during the year under review. Majority of cases were found in Central and North Central provinces

Disease investigation were carried out in particular veterinary ranges which revealed feeding of untreated swill, poor or minimum biosecurity practices in

swine farms are the main sources of the virus.

The movements of pigs and swine products from and into the infected areas have been banned. Actions have been taken to issued vaccines under user permit for immediate usage in order to arrest the spread and to protect the animals in high-risk.

3.2.3. Poultry Diseases

Poultry industry has to face various problems, arisen due to prevailing COVID 19 outbreak situation in the country.

Non availability and high cost of feed is the major problem faced by all poultry farmers in the country. Immune system of birds, influenced by nutrition in several ways and nutritional deficiencies can increase the disease susceptibility of birds.

Coccidiosis was the main poultry disease reported by divisional veterinary surgeons in this year 2021 with 204,930 cases and 6,065 deaths. Spatial distribution of the disease indicates its presence in all the districts of the country and majority of cases were found in Northwestern, Northern and Eastern Provinces as usual.

Newcastle Disease (141,996 cases with 4,355 death), Colibacillosis (174,307 cases

with 2,639 deaths) Fowl Pox (79,468 cases with 2,219 death), Infectious Bursal Diseases (40,471 cases with 2,200 deaths) were the other major diseases reported during the year 2021. In addition to that, 6 incidences of Inclusion Body Hepatitis have been reported from VIC Wariyapola throughout the year.

a. Newcastle Disease (ND)

Newcastle disease (ND) was first recognized in Sri Lanka during 1927 and it is an endemic disease among poultry population of Sri Lanka.

Control of Newcastle disease in Sri Lankan Poultry population is mainly focusing on Vaccination. Vaccine is freely issued to small scale and backyard poultry farmers. Total of 5,571,000 ND vaccines were distributed among nine provinces during the year 2021.

Furthermore, most of the commercial operations usually use commercially available imported vaccines.

Outbreaks of Newcastle disease were observed in all the provinces during the year under review. Major outbreaks were reported from North Western and Eastern provinces. A total of 141,996 cases and 4,355 deaths were reported.

Table 3.4: Distribution of Newcastle disease 2021

Province	Cases	Deaths
Central	1,438	278
Eastern	23,787	1,692
North Central	4,132	72
North Western	90,296	669
Northern	17,627	1,225
Sabaragamuwa	2,728	129
Southern	519	67
Uva	608	120
Western	861	103
Total	141,996	4,355

b. Infectious Bursal Disease (IBD)

Total 40,471 cases of Infectious Bursal disease with 2,200 deaths were caused by of the year 2021 in commercial poultry farms as depicted in Table 3.5.

c. Salmonellosis

Salmonellosis in poultry is caused by *Salmonella pullorum* and *Salmonella gallinarum*. 31,931 cases and 899 deaths were reported in the country during the year 2021 as summarized in Table 3.6.

Table 3.5: Distribution of Infectious Bursal Disease - 2021

Province	Cases	Deaths
Central	2	0
Eastern	4,006	220
North Central	5,281	220
North western	18,368	300
Northern	4,114	523
Sabaragamuwa	1,369	149
Southern	1,839	549
Uva	3,378	50
Western	2,119	189
Total	40,471	2,200

Table 3.6: Distribution of Poultry Salmonellosis in Commercial Poultry Farms 2021

Province	Cases	Deaths
Central	1,084	14
Eastern	2,242	121
North Central	3,046	238
North western	9,923	63
Northern	7,490	250
Sabaragamuwa	1,272	8
Southern	36	2
Uva	1,468	77
Western	5,370	126
Total	31,931	899

3.3. Disease control and vaccination programs

3.3.1. Vaccination of Livestock

Preventive vaccination programs have been carried out against economically important major livestock diseases such as Foot and Mouth Disease (FMD), Haemorrhagic Septicaemia (HS) and Black Quarter (BQ) in earmarked locations in the country.

BQ vaccine was produced locally to meet the demand for preventive as well as control vaccination in case of outbreaks. HS oil adjuvant vaccine was produced for mass-scale preventive vaccination and the Alum precipitated

vaccine was produced as an emergency pre requisite to be used in outbreaks. Foot and mouth vaccine (mono-valent, type 'O') was imported from India.

In total 166,254 doses of HS vaccine, 91,780 doses of BQ vaccine and 775,090 doses of Foot and mouth disease vaccine) have been distributed during the period under review as shown in Table 3.7.

Table 3.7: Issuing of vaccines to the field in 2021

Province	Number of Vaccine doses			
	FMD	BQ	HS (Oil)	HS (Alum)
Western	52,500			
Central	42,500	165		
Southern	45,000			
NCP	227,780	16,071	24,024	22,902
NWP	84,860	32,175		
Northern	66,360	25,727		
Eastern	130,830	6,996	115,500	3,828
Uva	55,440			
Sabaragamuwa	10,000			
NLDB and Other	59,820	10,646		
Total	775,090	91,780	139,524	26,730

Table 3.8: Province-wise vaccination targets and achievements in 2021

Province	FMD		BQ		HS	
	Target	Achievement	Target	Achievement	Target	Achievement
Western	50,000	44,498				857
Central	50,000	49,184		116		
Southern	10,000	13,749				
NCP	180,000	184,891	15,000	14,446	15,000	11,452
NWP	140,000	20,375	60,000	30,838		
Northern	100,000	34,580	60,000	45,252	10,000	10,016
Eastern	200,000	122,297	45,000	5,776	225,000	104,688
Uva	60,000	55,594				820
Sabaragamuwa	10,000	10,862				2,752
Total	800,000	536,030	180,000	96,428	250,000	130,585

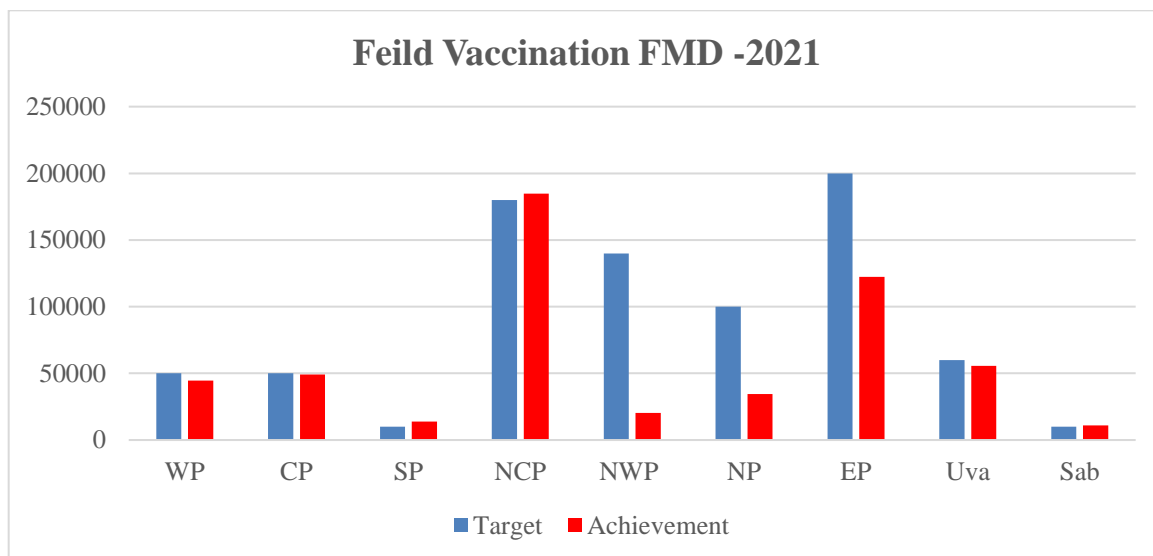


Figure 3.2: FMD Vaccination Progress

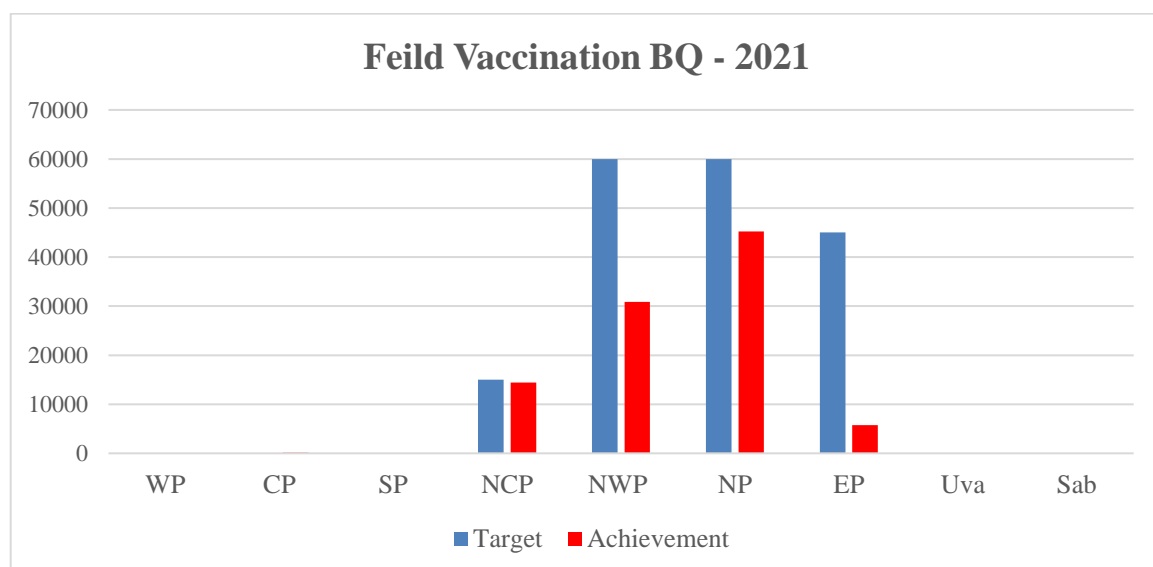


Figure 3.3: BQ Vaccination Progress

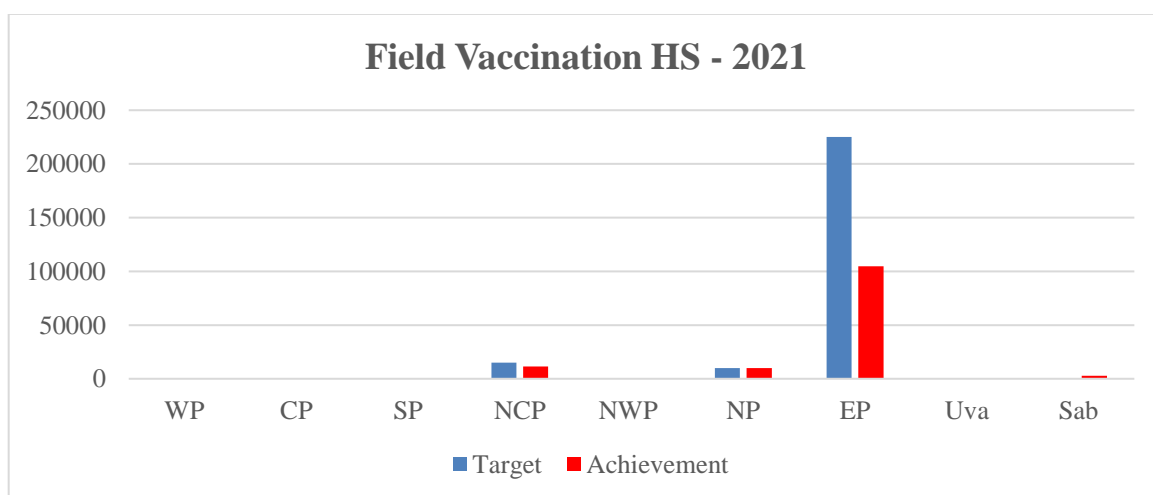


Figure 3.4: HS Vaccination Progress

3.3.2. Vaccination of Poultry

Locally produced Newcastle disease vaccine distributed through the government veterinary surgeons for free issuing to immunize the disease in backyard poultry and small-scale poultry farms. Total 5.57 million doses of vaccines have been distributed to the field veterinary officers and 2.91 million birds have been vaccinated as shown in Table 3.9

Table 3.9: Vaccination against Newcastle diseases using locally produced vaccine

Province	Vaccination
Western	170,866
Central	5,078
Southern	2,500
North Central	94,080
North Western	4,800
Northern	1,358,271
Eastern	1,050,344
Uva	42,875
Sabaragamuwa	20,775
VIC Wariyapola	155,000
VIC Homagama	10,000
VIC Pannala	5,000
Island Total	2,919,589

3.4. Special animal health programmes

3.4.1. Livestock Health Improvement Project

A special project had been initiated in year 2007 in selected dairy farms. Disease status is closely monitored and assistance to improve the animal health was provided through VIOs regularly. The selected farms were identified with geo-reference; a database was developed with all relevant information.

Under this project 916 dairy farms have visited by the veterinary investigation officers during the year 2021. Subsequently 7,428 milking cows have

been subjected to California Mastitis Test (CMT) for early detection of sub clinical mastitis. Moreover, 2,431 liters of teat dip solution and 1,051 liters of CMT Reagents were prepared at VICs and distributed among the famers and relevant divisional veterinary surgeons in order to improve the hygienic practices in these farms. Samples that have shown high positive reactions to CMT have been further tested to identify the causative organisms. Bacterial cultures indicated the presence of Staphylococci, Streptococci, and E. coli species. Udder base vials were issued by the VICs in 2021 for this purpose.

Furthermore, intra mammary preparations comprising the most appropriate antibiotics were prepared at some VICs and supplied for treating of mastitis cases.

3.4.2. Avian Influenza Surveillance Programme

Avian Influenza has not been reported from Sri Lanka and surveillance program is conducted in order to detect the presence of Notifiable Avian Influenza (H5 and H7) since there is a high risk of entering of the disease in to the country.

There are three major components in the Highly Pathogenic Avian Influenza

(HPAI) surveillance program, clinical disease surveillance, sero surveillance and targeted epidemiological surveillance at identified locations.

Sero-surveillance is designed to detect the presence of antibody against HPAI in commercial layers. 2,826 serum samples from 346 sites were collected during the year 2021 and samples were tested using Enzyme Linked Immuno-Sorbant Assay (ELISA). There have been zero-reactors to evidence the presence of Notifiable Avian Influenza.

Epidemiological surveillance was undertaken to monitor the risk of introduction of HPAI through migratory birds. 69 hot spots were identified along 11 coastal districts in the country as high risk areas. Under the epidemiological surveillance, dropping samples of migratory birds (6,846), cloacal swabs backyard (6,431) and serum samples of ducks (712), cloacal swabs from ducks (697), cage swabs from live bird market (13,121), poultry processing plants (2,055), and 203 cloacal swabs from pet bird breeding establishments were collected during the year 2021. All samples were tested at animal virus laboratory of Veterinary Research Institute. Fecal samples and cloacal swabs were subjected to virus isolation by inoculating chicken embryonated eggs. The results were found to be negative for the presence of avian influenza viruses.

3.4.3. Salmonella Control Programme

Salmonellosis is an economically important disease in poultry due to its zoonotic potential, risk of vertical

transmission and production losses. All the poultry breeder farms having either parent birds or grandparent birds have to be maintained in salmonella -free status.

There were 45 registered poultry farms (Broiler-33, Layer -15, Grandparent - 03) with the Department for the year 2021.

Salmonella monitoring program is conducted in all registered poultry breeder farms.

Total of 75 breeder farm visits and 89 hatchery visits were done by Veterinary Investigation Officers during the year. Three breeder farm locations were sero positive for Salmonella and it was less than 1%. All the hatchery samples tested by VIOs are negative for Salmonella species.

3.4.4. Upgrading of Regional (District) Veterinary Laboratories - Kurunegala, Puttalam and Gampaha Districts

Poultry, shrimp and ornamental fish industries in Sri Lanka have shown a phenomenal growth over the recent past. Therefore, Wariyapola, Chilaw and Welisara VICs were selected to be further developed to cater the demand of these industries. Laboratory facilities will be developed to facilitate rapid disease diagnosis, regular screening and surveillance of poultry and fish diseases and quality certification of poultry and fish products.

Upgrading of 3 VICs with the PCR and ELISA diagnostic facilities have completed during 2020. Required high tech laboratory equipment, chemicals,

reagents, glassware and other consumables were procured during 2019, 2020 and 2021.

The three Veterinary Investigation Officers and the relevant staff were trained on PCR and ELISA diagnostic techniques. The molecular diagnostic activities for the White spot disease of Shrimp in VIC Chilaw as well as New Castle Disease and Chicken Anemia Viral disease of poultry in VIC Wariyapola has initiated in 2020 and that of VIC Welisara for the Spring Viremia of carps, Koi Herpes Virus and Megalocytivirus of ornamental fish has initiated in 2021. The proficiency testing of poultry, shrimp and ornamental fish samples for the mentioned diseases are planned to be conducted in 2022 after having a grace period for trial testing.

3.4.5. The project “Mitigation of Disease Risks to Livestock and Humans through Targeted Wildlife Disease Surveillance”

Wildlife co-exists alongside humans and domestic animals. Wildlife populates ecosystems across the planet, whether it be in the seas, or roaming freely across forests and savannahs. Native, invasive, or endangered, each species contributes to the balance of the ecosystem they live in. The health of wildlife is deeply entwined with the health of other animals, the environment and even humans. By protecting wildlife health, we safeguard biodiversity- and invest in a healthier, more sustainable future (OIE). Due to increased global development activities, livestock, people and wildlife have come into closer contact leading pathogen transmission

between wildlife to humans and livestock and vice versa. This multidisciplinary project initiated as a measure to minimize such disease risks and for the early detection and manages adverse impacts of these diseases on human and livestock health

Coordinating Unit and network among partner institutes

The coordinating unit established in the Animal Health Division coordinated the activities with the contact persons nominated and regional coordinating units were established to facilitate field wildlife disease surveillance activities and communication between regional representatives (Veterinary Investigation Officers, Regional Epidemiologists. In order to continuously function the coordinating unit, a virtual meeting was conducted with the relevant focal persons of partner organizations. At the meeting, progress made in 2020 was reviewed and identified the activities to be conducted in 2021. A disease reporting system was developed for captured and free ranging animals and also started a WhatsApp group to share disease information among relevant stakeholders.

Selected VICs (Anuradhapura, Ampara, Dambulla, Homagama, Hambanthota, Maankulam, Rathnapura, Polonnaruwa and Kundasale) were supplied with PPE (gloves, masks) and cool boxes (20L, 33L). VIC Kundasale was provided with a -200C freezer, refrigerator and BSL3 biosafety cabinet and an air conditioner. In addition, VICs attached to wildlife project were visited in the year.

Capacity Building for wildlife disease surveillance

Eight necropsy training workshops were conducted at Randenigala wildlife health center, Aththidiya wildlife health center, FVMAS, VICs Homagama, Chillaw and Kundasale. Field visits for animal disease identification, identification of wildlife species and sample collection was conducted at national parks in Kaudulla, Minneriya, Wilpattu, Udawalawa, and also in Palavi, Karuwalagaswewa, Mannar, Mullaitivu and Jaffna.

Virtual trainings were conducted in collaboration with Canadian Wildlife Health Cooperative on diseases, pathology and necropsy procedures of marine mammals and sea turtles.

Implementation of wildlife diseases surveillance and research

Surveillance program for pathogenic Leptospirosis was continued with the assistance of FVMAS. More than 90 necropsies were carried out on various species of wild animals including marine and terrestrial mammals. Samples were submitted for laboratory diagnosis. Samples were collected for leptospirosis, COVID-19 and rabies.

Fresh fecal samples (1,931) were collected from migratory and resident wild birds at national parks in Kaudulla, Minneriya, Wilpattu, Udawala as well as in Palavi, Karuwalagaswewa, Mannar (Sands, Vengalai, Thallady), Mulativu (Nandikadal), Jaffna (Arali, Karainagar) for HPAI and ND surveillance.

In addition, SOPs were prepared for fish necropsy procedures and sample collection for histopathology.

Animal Health Division staff, participated in necropsy workshops on marine mammals and turtles, organized by MEPA, FVMAS and University of Padova, Italy. Also participated in a meeting organized by the anti-leprosy campaign on mitigating leprosy risk to human from wild primates.

Investigations on mass mortalities of wild animals were carried out.

Deaths of crows and black palm civet in Chillaw VIC range, Torque macaques in Athimale region, Olive ridley sea turtle stranding in different parts of Sri Lanka, COVID-19 investigation in the captive wild animals at the Zoological gardens were key events among others.

3.5. Veterinary investigation services

The first Veterinary Investigation Center in Sri Lanka was set up in Polonnaruwa in 1960s with main objective of providing laboratory back up services to Thamankaduwa farm which was the main Livestock project in the country. The Veterinary Investigation Cadre was introduced in 1974. The main duties of the officer in charge of VIC were carrying out post mortems of animals and diagnosis of disease in livestock in relation to parasitology, mastitis control work and testing for Brucellosis disease by Roes Bengal test (RBPT). The disease diagnostic work was decentralized and regional Veterinary Investigation Centers were set up Matara, Welisara, Polonnaruwa and Jaffna. Later two more VICs were set up at Pannala in 1989 and in Vavuniya in 1992. In 1994 VICC were placed under the Animal Health Division.

The concept of strengthening the laboratory back up for veterinary services by providing veterinary investigation facilities at district level by District Veterinary Investigation Centers (DVICs) was recognized in year 2006. Since then, continuous effort has been taken to set up one VIC for each district. With the establishment of new Veterinary Investigation Centre at Kandy district, the total number of functioning VICs became twenty-five.

At present, VICC Chillaw and Welisara are functioning as specialised laboratories for aquatic animal diseases and VIC Wariyapola functions as the specialised laboratory for poultry diseases. All three VICC has the capacity

of conducting RTPCR tests for disease diagnosis. In addition, 9 VICC namely, Anuradhapura, Pollonnaruwa, Ampara, Homagama, Rrathnapura, Hambanthota, Kundasale, Maankulum, and Dambulla have been improved to conduct wildlife disease surveillance activities and VIC Kundasale is capable of conducting RTPCR.

Year, 2021 has been a difficult year for the VICs to conduct field level activities due to COVID-19 pandemic. However, all the VICs have done a tremendous duty to fulfil their objectives. Veterinary Investigation Centres focused mostly on animal disease investigation in order to support the disease surveillance system in the country and field level investigations were mainly focused on Foot and Mouth Disease, Bovine Black Quarter, Brucellosis, Babesiosis, Theilariasis and Mastitis in cattle and buffaloes; Newcastle Disease, Salmonellosis, Infectious Bursal Disease, Marek's Disease and Coccidiosis in poultry, PRRS outbreaks in Swine are some of the specific disease conditions diagnosed or/and confirmed at District Veterinary Investigation Centers during this period.

Veterinary Investigation Centers played the leading role in immunization of cattle against bovine brucellosis, bovine babesiosis, contagious pustular dermatitis vaccination in goats, mastitis control programme in cattle, salmonella control programme in poultry breeder farms and avian influenza surveillance programme at national level. Detail information on activities performed at Veterinary Investigation Centers during the year 2021 has been shown in Annexure III.

4. ANIMAL BREEDING DIVISION

4.1. Introduction

Animal breeding division is responsible for national level livestock genetic improvement through facilitation of appropriate breeding techniques and logistic support.

Deep frozen semen is produced at Kundasale and Polonnaruwa Artificial Insemination Centers for artificial insemination (AI) of cattle, buffalo and goat. In addition, field AI programs are facilitated by supplying semen of specific genetic merits imported from other sources. Sexed semen is also supplied to the provinces on demand. The national AI program is monitored and centrally assessed by the division. In addition, nutritionally balanced feeding and feed resource utilization for crossbred cattle and buffaloes in provincial level are promoted through supply and facilitation of high yielding planting materials.

Two goat breeding farms located at Thelahera and Imbulandanda maintain nucleous herds of Jamunapari and Boer goats respectively and generally issue stud goats / ,mfor breeding purposes.

Main functions of the division

- Conservation and sustainable utilization of livestock genetic resources.
- Improving the genetic make-up through the use of animal reproductive technologies.
- Enhancing the available feed resource base through the introduction of fodder resources.
- Development of skilled human resources in order to strengthen the animal breeding services.

4.2. Special livestock development projects implemented during the year 2021

4.2.1. Livestock Breeding Project (LBP)

Livestock breeding project encompasses facilitate national AI service and natural service, procurement of germplasm, monitor changes in population trends of Animal Genetic Resources (AnGR), upgrading livestock and enhance feed resources production and utilization.

a. Production of semen

Table 4.1: No. of semen doses produced in 2021

Species/Breed	AI Center	
	Kundasale	Polonnaruwa
Jersey	117,893	-
Friesian	271	-
Sahiwalcross	-	32,968
Murrah	-	3,814
Girolanda cross	20,660	13,240
Boer	2,559	-
Jamnapari	17,217	-
Saanan	4,859	-
Total	163,459	50,022

b. Distribution of semen

Table 4.2: Breed-wise distribution of semen -2021

Species	Breed	Locally produced	Imported	Total
Cattle	Jersey	108,890	107	108,997
	Jersey (sexed)	-	204	204
	Friesian	32,373	-	32,373
	Friesian(sexed)	-	70	70
	Sahiwal	852	114	966
Buffalo	Cross	88,039	-	88,039
	Murrah	3,770	132	3,902
Goat	Niliravi	-	-	0
	Jamunapari	4,085	45	4,130
	Saanan	1,220	-	1,220
	Boer	1,852	-	1,852
Total		241,081	672	241,753

c. Artificial insemination service

Artificial Insemination (AI) is the proven and efficient reproduction technique widely practiced in the island. Mainly cattle and less frequently buffaloes and goats are inseminated by the trained field staff of both state and private technicians. The role of the Animal Breeding division is to facilitate and monitor the program. Good quality semen is produced at Artificial Insemination Centers located at Kundasale and Polonnaruwa and distributed to the Veterinary Offices together with the liquid nitrogen which is required to maintain the keeping quality.

Table 4.3: Targets, performance and achievement of AI- 2021(Cattle and Buffaloes)

Province	Target	Performance	Achievement (%)
Central	58,445	49,125	84%
Uva	24,613	20,227	82%
North Central	25,230	21,999	87%
North Western	72,215	42,774	59%
Sabaragamuwa	7,699	5,209	68%
Eastern	14,200	9,280	65%
Northern	37,279	23,851	64%
Southern	15,210	9,575	63%
Western	20,711	14,324	69%
Island Total	275,602	196,364	71%

d. Pregnancy Diagnosis (PD)

Pregnancy Diagnosis (PD) is performed by the range Veterinary Surgeons (VS), usually two months after insemination, manually by per rectal examination to confirm the pregnancy. National achievement in PD during 2021 was 63,591 (48%).

Table 4.4: Province-wise target, performance and achievement of PD- 2021

Province	Target	Performance	Achievement (%)
Central	29,223	11,754	40%
Uva	11,660	8,357	72%
North Central	9,082	4,060	45%
North Western	37,565	14,738	39%
Sabaragamuwa	4,443	2,356	53%
Eastern	8,931	5,230	59%
Northern	12,019	4,682	39%
Southern	9,150	5,745	63%
Western	10,658	6,669	63%
Total	132,731	63,591	48%

e. Calving

Calving resulted due to AI is usually reported by the field staff through the respective veterinary surgeons. Reported national such number of calving was 58,611 (56%).

Table 4.5: Province wise target, performance and achievement of calving - 2021

Province	Target	Performance	Achievement (%)
Central	19,481	14,174	73%
Uva	8,501	7,171	84%
North Central	8,893	5,038	57%
North Western	38,151	16,192	42%
Sabaragamuwa	3,315	1,977	60%
Eastern	5,965	2,220	37%
Northern	10,400	3,871	37%
Southern	4,160	3,575	86%
Western	6,130	4,393	72%
Total	104,996	58,611	56%

f. AI Training

Fresh training and refresher training are conducted by the DAPH to train and refresh both state and private AI technicians as per the requests made by the range veterinary surgeons. All the competent AI technicians are registered and code numbers are issued for easy monitoring purpose.

Table 4.6: Training on AI for field staff and students 2021

Technician Category	No. Trained
LDO (Fresh)	50
Private Tech (Fresh)	14
Total	64

g. Infertility investigations

Infertility cases are attended on request basis and required reproductive hormones are supplied to the provinces. Following reproductive hormones were supplied in the year 2021.

- GnRH - 1,035 Doses
- PGF₂ - 2,475 Doses
- PMSG - 100 Doses

A total of 111 infertility cases were attended by field Veterinary Surgeons in the year 2021.

h. Pedigree and Performance Recording Scheme (PPRS)

The current need is to properly manage the genetic resources within the country, by developing programs to select locally adapted dairy animals with higher genetic merit for the improvement of the productivity of the existing stock to fulfill the domestic requirement of milk in Sri Lanka. The objective of the PPRS (Pedigree and Performance Recording Scheme) project was to determine a cow's genetic merit and then select the top-ranked cows for milk production to inseminate with superior imported semen and produce bulls with higher genetic potential. Bulls with high genetic potential play a crucial role in maximizing production for the next generation. Despite the fact that both the sire and the dam contribute equally to the progeny's inheritance, the sire has more offspring than the

dam, hence the sire has a stronger effect over the herd. As a result, a superior bull might contribute to the herd's improvement. This project evaluate and select the semen donor bulls on the basis of performance of their parents and grandparents, the process is referred to as Pedigree Selection. Pedigree selection is the method of selecting breeding stock based on ancestral productive and reproductive potential and quality.

Accordingly, 21 bull calves have been selected as semen donors from 2015 to 2021 through this project to the Artificial Insemination Centers and their semen is expected to utilize in local AI programs. They were produced using imported semen of Girolanda, Jersey, Sahiwal, and Friesian.

In the year 2021 pedigree and performance records were collected from 2050 milking cows in 467 registered herds in Kurunegala, Anuradhapura and Polonnaruwa districts. 5000 number of feedback reports were sent to farmers which include the herd average, VS range average, district average and province average of per cow milk production, fat % and protein %.

Breeding values for milk production were estimated in 1875 number of milking cows in year 2021. For that 12,000 animals (Cattle and buffalos) were monitored in 650 farms for their pedigree and performance recording. Three (03) number of certified bull calves have been screened and produced during 2021.

Capacity building among farmers on the project was implemented and 50 farmers were participated. In addition, 89 Veterinary Surgeons and Livestock Development Instructors (LDIs), and 32 Recorders were exposed to knowledge update program. In addition, 32 bulls were selected as studs for the natural breeding program in order to enhance the production potential of the extensively managed herd.

i. Pasture development

- Extended to field CO-5 and Sampurna Hybrid Napier varieties which were recently introduced from V.R.I.
- Introduced Mulato - II (*Brachiaria hybrid*) variety.
- Established a mechanism to availability of high yielding fodder varieties' stem cuttings to farmers.
- Established 6Ac. of Hybrid Napier Mother nurseries at GBC- Thelaha, AIC-Polonnaruwa & V.R.I. Research farm- Gannoruwa.
- Developed 05 provincial nurseries at NWP, Uva, Sabaragamuwa, Northern & Southern provinces.
- Established a Model cultivation unit at Gannoruwa to demonstrate high yielding forage varieties.

- Improved 10 Ac. of pasture land and re-established 03 Ac. of Brachairia land at GBC, Imbulandanda.
- Issuing planting materials

Variety	Amount (no.)
CO - 3	5,350
CO - 4	2,050
CO - 5	2,035
Sampoorna	830
Packchong 1	1,260
<i>Brachiaria spp.</i>	1,000

j. Goat development

Division of Animal Breeding maintains two nucleus Goat Breeding farms with high genetic merits of Jamunapari and Boer goat breeds. Main objectives of these two nucleus goat breeder farms are issue breederble goats to the local goat farms for breeding purpose and

- Conducted 02 TOT awareness programmes related to Feed Resources development.

produce semen donor stud goats to the Central Artificial Insemination Centre, Kundasale.

110 Jamunapari goats (105 male goats and 05 female goats) and 14 Boer male goats have been issued from above two nucleus Goat Breeder farms in 2021.

4.2.2. Heifer Calf Rearing (HCR) project

Overall outcome of the project is to optimum utilization of AI born heifer calves to raise them as dairy animals throughout their lifetime. It is an island-wide project and both cash incentives and calf starter feed are provided to the farm owners of such registered heifers to motivate them for appropriate feeding of the heifers.

Table 4.7: Physical achievements of Heifer Calf Rearing project - 2021

Payment of incentives		Unit	Target	Achievement
Farmer incentives	No. registered	No. of calves	14,805	13,804
	2 nd Installment	No. of payments	3,000	1,280
	3 rd installment		2,000	613
	4 th installment		1,000	627
Random monitoring of registered calves			200	90

*Gap between target and achievement is due to covid-19 pandemic situations prevailing in the country.

5. VETERINARY RESEARCH INSTITUTE

5.1. Introduction

Veterinary Research Institute (VRI) is the only national level Research Institute, involved in veterinary research, diagnostic, consultancy, teaching and technology transfer activities in the livestock sector. In view of improving animal health and livestock production in the country a number of innovative livestock products have been developed and produced by the VRI to the farming community and other stakeholders of the industry. On the other hand, diagnostic testing, laboratory and advisory services are carried out by the VRI with the intention of uplifting socioeconomic status of the livestock farming community. Basic and applied researches are conducted in collaboration with various other national and international institutions in order to explore the novel concepts and scientific advancements.

Main functions of the VRI

- Carryout animal production and health research
- Production of veterinary vaccines and other biological.
- Laboratory disease diagnostics and investigation
- Provide analytical facilities
- Provide referral laboratory facilities for the livestock industry and other institutions, both nationally and internationally.
- Provide inputs for dairy, poultry and other livestock sectors
- Provide technology expertise
- Support implementation of regulations and legislative enactments related to livestock sector.

5.2. Products and services

The details of manufactured and issued veterinary products by the VRI in 2021 are as follows.

5.2.1 Products issued

Table 5.1: Vaccines

Vaccine	Production (doses)	Issues (doses)
Hemorrhagic Septicemia (HS) (OA)	139,590	139,590
Hemorrhagic Septicemia (HS) (APV)	26, 730	26,730
Black Quarter (BQ)	150,645	150,645
Tick fever vaccine	0	3,080
Foot & Mouth disease (FMD)	249,320	247,200
Brucella S 19	6,050	10,550
Newcastle Disease (ND Primary)	4,127,600	4,127,600
Newcastle Disease (ND Secondary)	3,292,800	3,292,800

Table 5.2: Diagnostic reagents

Reagent	Quantity issued
FMD transport medium (ml)	2,250
AI transport medium (ml)	7,450
CMT reagent (L)	45
Pullorum antigen (doses)	133,581
RBPT antigen (ml)	300
MRT (ml)	160

Table 5.3: Therapeutic reagents

Reagent	Quantity issued
Teat dip solution (L)	145
Udder infusion (Vials)	13,147

Table 5.4: Starter cultures

Starter culture	Quantity issued
Yoghurt culture (vials)	35
Curd culture (vials)	106

Table 5.5: Chicks issued from Central Poultry Research Station, Karandagolla

Chick type	Number issued
Table eggs	46,735
Embryonated eggs (vaccine production and lab purposes)	26,573
Day old chicks (Backyard poultry)	109,817

5.2.2 Services

Table 5.6: Examination of specimens

Specimen type	No. of samples
Blood smears for parasites	544
Fecal samples for parasites	567
Skin/litter/ticks/intestinal samples for parasites	5
Litter/ bedding samples	43
Skin scrapings	02
Blood samples for disease diagnosis	151
Plasma/blood/serum for Brucellosis, Leptospirosis/Neospora caninum	Brucellosis - 896 Leptospirosis - 627
N. caninum - 485	
Tissue samples for histopathology	3,392
Tissue samples for microbiology	1,440
Milk samples for CMT	87

Specimen type	No. of samples
Milk & poultry samples for ABST	26
Serum samples for viral disease diagnosis	3,357
Tissue samples for viral disease diagnosis	117
Milk samples for disease diagnosis	217
Cloacal/ fecal swabs, egg parts, chicken powder for viral disease diagnosis	16,416
Urine samples for microbiology	16
Tissue samples for microbiology	1,378
Stomach content for microbiology	16
Intestinal samples for microbiology/ parasitology	01
Feed samples for microbiological quality	318
Day old chick samples	71
Fish samples for microbiology, parasites and PCR	1,785
Water samples for microbiology	65
Number of PCR done for ruminant, poultry & other monogastric animals	75
Total bacterial counts performed	321
Other Bacterial Counts (E coli, Salmonella, Coliforms)	139
Seed preparation of bacterial vaccines (no. of batches)	HS- 17 BQ- 10
Quality testing bacterial vaccine harvests (no. of batches)	HS- 16 BQ- 10
Quality testing bacterial vaccine final product (no. of batches)	HS- 07 BQ-09
Seed preparation of viral vaccines (no. of batches)	12
Quality testing of viral vaccines (no. of batches)	23
Quality testing of Tick fever vaccine (no of batches)	2

Table 5.7: Analysis, identification and quality testing of samples

Sample type	No. of samples
Feed samples for proximate nutrient (DM, ash sand, crude protein, crude fat and crude fiber) analysis components and minerals	488
Feed samples, Mineral mixtures and blood samples for mineral (Ca, P, Mg, Cu, Zn, Co, Mn, Na, K) analysis	219
Feed samples for gross energy Analysis	140
Feed and animal origin food samples for total aflatoxin analysis	91
Feed samples for trypsin inhibitor activity analysis	6
Food of animal origin for Furazolidone	30
Feed samples for ADF, NDF analysis	6
Feed samples for non-protein nitrogen analysis	5
Feed samples for Metabolizable energy calculation	23

Sample type	No. of samples
Milk and milk products samples for microbiological quality	497
Milk and milk products samples for compositional quality	168
Species identification using meat, skin and blood samples	75
Soil samples for chemical properties	06
Water samples for chemical properties	11
Plant samples for nitrate, oxalate and soluble carbohydrates	1,287
Silage samples for quality testing	224

Table 5.8: Field and laboratory investigations

Investigation type	No. of investigations
Field disease investigations	30
Postmortems	295
No. of lab disease investigations	668
Field investigation into nutritional problems	11
Ration formulation evaluations	12
Confirmation of contagious / notifiable diseases	28
Field disease investigations	30

Table 5.9: Sample analysis for statutory purposes, quarantine, export certification etc.

Investigation type	No. of investigations
No. of samples handed for statutory purposes	117
No. of food products for microbiological examination	50
No. of court directed Investigations	264
No. of samples for quarantine/ import, export purposes	13,268

Table 5.10: Sample analyzed for notifiable diseases

Investigation type	No. of investigations
No. of samples confirmed for notifiable ruminant animal disease	HS - 4 FMD - 30
No. of samples confirmed for notifiable swine diseases	PRRS - 10

5.3. Clients registered at VRI

Table 5.11: Clients registered at VRI

Place of registration	No. of clients
Coordinating unit	2,560
Central Poultry Research Station (CPRS)	158
Animal Virus Laboratory	483

5.4. Research projects

Research projects conducted during the year are as follows:

01. Title: Introduction of serological vaccine matching technique to assess ability of cross protection of locally produced FMD vaccine against field isolates

Principal Investigator: Dr. H. Kothalawala

Collaborating Scientists: Dr. S. Puvanendiran, Dr. A. Wanninayaka

Duration: 3 years

Status of the project: continued to 2022

02. Title: Characterization of fowl adenoviruses associated with Inclusion Body Hepatitis in chickens in Sri Lanka

Principal Investigator: Dr. S. Puvanendiran

Collaborating Scientists: Dr. H. Kothalawala, Dr. G.I.S. Perera, Dr A. Wanninayaka

Duration: 2 years

Status of the project: continued to 2022

03. Title: Investigation of potential of hybrid fodder and legume varieties as cattle feed

Principal Investigator: Dr. W.M.P.B. Weerasinghe

Collaborating Scientists: Dr. M.W.D.C. Weerathunga

Duration: 3 years

Status of the project: continued to 2022

04. Title: Evaluation of agronomic characters and nutritive values of Napier Hybrid fodder varieties of CO5 and Sampoorana in different harvesting intervals in Yala and Maha seasons.

Principal Investigator: Dr. M.W.D.C. Weerathunga

Collaborating Scientists: Dr. W.M.P.B. Weerasinghe

Duration: 02

Status of the project: Completed

05. Title: Pathogenesis, phenotypic and genotypic characterization of *Eimeria* species in Sri Lankan poultry.

Principal Investigator: Dr. G.I.S. Perera

Collaborating Scientists: Dr. P.S. Fernando, Dr. M.A.R. Priyantha, Dr. N.D.S. Dissanayake, Dr. Padmani Bandara, Dr. Chintana Karunaratne, Dr. K.K. Wijesundara

Duration: 3 years

Status of the project: Continued to 2022

06. Title: Establishment of baseline fatty acid profile of dairy cows under different management systems

Principal Investigator: Dr. U. G. V. S. S. Kumara

Collaborating Scientists: Dr. W. M. P. B. Weerasinghe, Dr. M. W. D. C. Weerathunga

Duration: 01 year

Status of the project: Completed

07. Title: Occurrence of ethanol unstable milk and its relation with physico-chemical characteristics of milk

Principal Investigator: Dr. U.L.P. Mangalika

Collaborating Scientists: Dr. A.P.D.G. Pathirana

Duration: 2 years

Status of the project: Completed

08. Title: Development of strip-based methods for detection of common adulterants in milk

Principal Investigator: Dr. U.L.P. Mangalika

Collaborating Scientists: Dr. A.P.D.G. Pathirana

Duration: 2 years

Status of the project: Completed

09. Title: Relationship among bacterial counts and somatic cell counts in cow, buffalo and goat milk in four provinces of Sri Lanka

Principal Investigator: Dr. A.P.D.G. Pathirana

Collaborating Scientists: Dr. U.L.P. Mangalika

Duration: 3 Years

Status of the project: Completed

- 10. Title:** Correlation of unstable nonacid milk (UNAM) with milk mineral composition, urine pH and body condition score during wet and dry seasons in Central Province
Principal Investigator: Dr. A.P.D.G. Pathirana
Collaborating Scientists: Dr. U.L.P. Mangalika
Duration: 3 Years
Status of the project: continued to 2022
- 11. Title:** Prevalence of extended spectrum beta lactamase producing Klebsiella in dairy products in central and north western provinces of Sri Lanka
Principal Investigator: Dr. A.P.D.G. Pathirana
Collaborating Scientists: Dr. P.S. Fernando, Dr. M.A.R. Priyantha
Duration: 3 Years
Status of the project: continued to 2022
- 12. Title:** Molecular epidemiology and prevalence of pathogenic Theileria species in Goats in dry and intermediate zones of Sri Lanka
Principal Investigator: Dr. PGID Amarasiri
Collaborating Scientists: Dr. N.D.S. Dissanayake, Dr. S.S. Iddamaldeniya
Duration: 3 years
Status of the project: Completed
- 13. Title:** Examine the efficacy of selected probiotics and phytobiotics to replace antibiotics in poultry feed
Principal Investigator: Dr. M.W.C.D. Palliyeguru
Collaborating Scientists: Dr. K.H.D.T.D. Kasagala, Dr. S.S.K. Daluwatta
Duration: 4 years
Status of the project: Continued to 2022
- 14. Title:** Detection of carcinogenic and mutagenic Nitrofurantol metabolites in animal products
Principal Investigator: Dr. S.S.K. Daluwatta
Collaborating Scientists: Dr. M.W.C.D. Palliyeguru
Duration: 2 years
Status of the project: Complete

15. Title: Investigation of Aflatoxin in cow milk and trace back to feed aflatoxin concentrations

Principal Investigator: Dr. S.S.K. Daluwatta

Collaborating Scientists: Dr. M.W.C.D. Palliyeguru

Duration: 2 years

Status of the project: Continued to 2022

16. Title: Characterization of bacterial strains for new control strategies in bovine mastitis

Principal Investigator: Dr. G. A. Gunawardana

Collaborating Scientists: Dr. P. P. Jayasekara

Duration: Two Years

Status of the project: continued to 2022

17. Title: Cattle genotyping for offspring and parent identification

Principal Investigator: Dr. G. A. Gunawardana

Collaborating Scientists: Dr. P. P. Jayasekara

Duration: Three Years

Status of the project: continued to 2022

18. Title: Development of multiplex PCR to detect causative bacteria of bovine mastitis

Principal Investigator: Dr. P. P. Jayasekara

Duration: Two Years

Status of the project: continued to 2022

19. Title: Microbial molecular profiling to determine origin and transmission of Bovine mastitis

Principal Investigator: Dr. P. P. Jayasekara

Collaborating Scientists: Dr. G. A. Gunawardana

Duration: Two Years

Status of the project: Laboratory work completed.

20. Title: Pathogenesis, phenotypic and genotypic characterization of *Eimeria* species in Sri Lankan poultry.

Principal Investigator: Dr. G.I.S. Perera

Collaborating Scientists: Dr. P.S. Fernando, Dr. M.A.R. Priyantha, Dr. N.D.S. Dissanayake, Dr. Padmani Bandara, Dr. Chintana Karunaratne, Dr. K.K. Wijesundara

Duration: 3 years

Status of the project: Continued to 2022

5.5. Research Publications in 2021

Details in research publications are in *annexure IV*.

5.6. Special Achievements

1.

1. Dr. P. P. Jayasekara, VRO of the Molecular Biology Division won a scholarship from the Australian Government to read for PhD in Veterinary Medicine.

2. The paper "Prevalence of Bovine Tuberculosis among Cattle and Buffaloes in the Central Province of Sri Lanka" In Proceedings of the 33rd Annual Congress of the PGIA, 17 November 2021, University of Peradeniya, Won the best oral presenter award under Pest and disease management in agriculture session and the overall best presenter award/PGIA alumni award of the annual PGIA congress.

3. The paper entitled "Effects of fermented juice of epiphytic lactic acid bacteria (FJLB) on fermentation quality of Maize silage" by M.W.D.C. Weerathunga, U.W.G.D.N. Udagama, M.B.P. Kumara Mahipala and Weerasinghe W.M.P.B. presented at the 73rd Annual convention of the Sri Lanka veterinary association won the best oral presentation award in the animal production sessions.

4. For the first time, genetic information on mitochondrial region of the Sri Lankan Leopard (*Panthera pardus kotiya*) was revealed by the research at Molecular Biology Division and published in data bases allowing global access.

5. In collaboration with North Central Province DAPH, cattle herd testing for A1A2 milk research was continued and new PCR to identify the traits, was developed at the Molecular Biology Division.

6. Initial work to establish a cell culture laboratory in the division of Parasitology was commenced.

7. A PCR technique to detect the parasite *Neospora caninum* from aborted bovine foetal specimens was established in the division of Parasitology.

8. The Animal Breeding Division established the baseline Fatty Acid profiles of milk in three ruminant species; cattle, buffalo and goat in Sri Lanka with special emphasis on the beneficial FAs.



Figure 5.1 Tick fever vaccine issuing at Parasitology Division



Figure 5.2. Cell culture work in Parasitology Division



Figure 5.3. Mineral analysis of feed samples using Atomic Absorption Technique



Figure 5.4. Fiber analysis in Animal Nutrition Division



Figure 5.5. Research in Animal Nutrition Laboratory

6. HUMAN RESOURCE DEVELOPMENT DIVISION

6.1. Introduction

The main responsibility of Human Resource Development (HRD) Division is to develop human resources in order to meet the present and future needs of the livestock sector.

HRD division administers following seven (07) units.

- Institute of Continuing Education for Animal Production and Health (ICEAPH), Gannoruwa, Peradeniya.
- Sri Lanka School of Animal Husbandry (SLSAH), Karandagolla, Kundasale.
- Sri Lanka School of Animal Husbandry (SLSAH), Seepukulama, Anuradhapura.
- The Department library, Gannoruwa, Peradeniya.
- Information communicating unit.
- Livestock Knowledge Center, Getambe/ Hotline.
- Livestock Technology Park.

Main functions of the division

- Training and technology transfer
- Education and career development
- Livestock promotion
- Entrepreneurship development and self-employment support services
- Testing and evaluation

6.2. Training and transfer of technology

6.2.1. Training conducted at ICEAPH

The ICEAPH strives to conduct year-round training programs, workshops, seminars to upgrade the knowledge and improve the skills of the officers of this department and personnel of other organizations who are involved in the livestock industry activities.

Details of trainings conducted during 2021 at ICEAPH are shown in Table 6.1 and Table 6.2. respectively.

Table 6.1. Details of training conducted at ICEAPH

Category	No. of programs planned	No. of programs conducted	
		(online)	(on ground)
AP&H service officers	13	14	2
Research Assistant, Livestock Development Officers/ Instructors	08	2	3
Development officers	03	1	3
Management Service Officers	01	0	1
Others	01	0	1
Total	26	17	10

Table 6.2. Progress of training conducted at ICEAPH

Item	Target	Achievement
Number of trainees/ participants	712	1,128
Number of training man days	1,402	3,356

6.2.2. Special training conducted during the year

Table 6.3. Special trainings conducted during the year 2021

Name of the program	Number of participants	Man days
Webinar on Lumpy Skin Disease	200	200
Induction Training for newly recruiting AP&H Officers	35	1390

Sri Lanka reported an exotic disease Lumpy Skin Disease at the end of 2020. An awareness program was conducted with the fullest cooperation of World Animal Organization (OIE).

Considering the Covid -19 situation, Induction training for newly recruiting AP&H Officers was conducted online on every Tuesdays and Thursdays for 3 hours from Aug, to Dec. 16. 2021.

Table 6.4. Facilitated Meetings/ Programs by ICEAPH

Category	No. of programs online	No. of programs on ground
	Meetings	46
Programs	42	10

6.2.3. Training at Sri Lanka School of Animal Husbandry (SLSAH), Seppukulama

Five programs on milk processing were conducted for farmers. One program on basic animal husbandry

was conducted for trainee nurses in Nursing Training School in Anuradhapura. Five-day practical training was provided for students of Uwa Wellassa University.

Apart from that, NVQ level 3 six-month training has been conducted for the 150 trainees in the National Work force (*Jathika Shrama Balakaya*).

6.3. Educational and career development

6.3.1. Sri Lanka School of Animal Husbandry (SLSAH) Karandagolla, Kundasale

Existing batch (34 students) of the Higher National Diploma in Livestock Production Technology course (2019 - 2021) will be continued their studies till year 2023. They have completed 1st year 2nd semester in 2021.

6.3.2. Sri Lanka School of Animal Husbandry (SLSAH) Seppukulama, Anuradhapura

Infrastructure and other necessary facilities in the SLSAH were improved in 2021 to commence the Higher National Diploma in Livestock Production Technology (NVQ 5,6) course in March 2022, spending approximately Rs 19 million.

About 1.5 acres of fodder sorghum, CO3 and Pachong grasses were cultivated to increase the feed availability of the school farm.



Figure 6.1: Diploma Ceremony-2021

6.3.3. Internship training for veterinary graduates

One (01) internship program was conducted and completed in the year 2020. Details of this program are given below.

Batch Number	No. of Internees
DAPH/HRD/ICE/INT/2020	62 (02.09.2020 - 02.03.2021)
DAPH/HRD/ICE/INT/2021	87 (01.07.2021 - 31.12.2021)

6.3.4. Foreign training

No officers in the Department have gone for overseas training in the year 2021.

6.3.5. Support for Post Graduate Training

During the year 2021, Post graduate fellowship programs and other training supported by HRD Division are given in Annexure V.

6.4. Examinations

HRD division is responsible for conducting examinations for officers in the Department. Details of examinations conducted by DAPH in 2020 are given in Annexure VI.

6.5. Information Dissemination and Publications

6.5.1. Publications in 2020

a. New prints

Booklet	00
Leaflets	13

b. Reprints in 2020

Leaflets	01
Booklets	10

6.5.2. Sale of publications in 2020

No. of booklets/leaflets	50,431
No. of photographs (10" x 12")	16
No. of CD's	85

6.5.3. Mass media activities

The division continued broadcasting/ telecasting/ publishing programs and articles in various TV channels/ radio stations and newspapers.

Details are given in Table 6.5.

Table 6.5. Mass media activities in 2021

Type of media	No. of programs (planned)	TV/ Radio channel/ News paper	No. of Telecasts/Broadcasts/Releases
TV	Sinhala - 02	ITN /SLRC	02
Radio	Sinhala- 25	SLBC - Colombo - Sathwa Rawayaya	25
		SLBC - Kadurata FM - 20 Sathwa Govipola	20
		Krushi FM WEB Radio - 24	16
	Tamil- 05	Niraivalam	05
Paper articles		News paper	01
News releases	12	All media	10
Press Conferences			01

6.5.4. Exhibitions

Table 6.5: Exhibitions conducted / participated in 2021

Exhibitions were not conducted by the Department in 2021 due to the COVID 19 pandemic.

6.6. Entrepreneurship development and self - employment support services

Table 6.6. Details of entrepreneurship development and self - employment support trainings 2021

Topic	Venue	No. of Programs	No. of Participants
Small Scale Milk Processing Training	Seepukulama	05	93

Follow up technical training programs 2021

One follow up training program on milk processing was conducted at Seepukulama Animal Husbandry Training Center for 23 participants.

6.7. The department library

The Department library continued serving as the national level library for livestock industry related fields and veterinary science.

- Purchase of local and foreign library books and journals: 46
- Acquisition of print and non-print library materials related to the livestock and other allied subject areas: 100% complete

6.8. The Departmental hotline service

The DAPH maintains a hotline service (Tel: 081-2388463) to facilitate stakeholder needs.

Table 6.7. Activities done by hotline service in 2021

	Activity	Target	Cumulative Progress
01	Registration of clients (on request)	On request	1,423
02	Provision of technical guidance		1,392
03	Non-technical guidance		31
04	Coordination with other institution		695
05	Direct / Postal advisory		54
06	Telephone advisory		1,369
07	No. of questions answered		16,279
08	Follow up service to evaluate customer satisfaction		142
09	No. of clients visited to booklets and direct advisory		343
10	Leaflets issued free of charge		29,173

6.9. Livestock Technology Park

Table 6.8. Livestock Technology Park - details of performance in 2021

Project / Program	Activity	Expanded activities	Progress at the end of year	
Establishment of livestock technology park	Demonstrate model livestock units to the public	Facilitation of visitors	1,099	
	Conduct demonstration sessions	Pasture & Fodder demonstration sessions for University Students	04	
	Development and maintenance of different units of the Livestock Technology Park	Reestablishment of pasture & fodder unit adding new plants		100%
		Renovation of animal units (Rabbit Unit, Goat Unit and turkey Unit)		100%
		Establishment of fence around the sheep & goat unit		100%
		Purchase of birds for poultry unit		100%
	Development of Infrastructure facilities	Renovation of office, care taker's room and water pump house		100%
		Renovation of electric poles and gates		100%

7. LIVESTOCK PLANNING AND ECONOMICS DIVISION

7.1. Introduction

The Livestock Planning and Economics (LPE) Division is responsible for planning, monitoring and evaluation of livestock development programs and activities implemented by the department to support development of the livestock sector in Sri Lanka. LPE division also maintains the national level database to collect and compile livestock statistics and data which are accessible to the public and to policy makers, researches, university students. The data processing unit is responsible for data entry, analysis and preparation of reports/ documents to the relevant authorities.

Main functions of the division

- Identification and formulation of livestock development programs and projects.
- Monitoring, evaluation and economic analysis of livestock development programs and projects of the department.
- Conduct economic studies to assess feasibility and viability of livestock development programs and projects.
- Periodic review of livestock industry and identify issues that need to be addressed for policy formulation.
- Management of livestock data base at National level.

- Coordinate livestock development programs with provincial DAPH and other state institutions and organizations.
- Coordinate implementation of e-government policy in the department.

7.2. Identification and designing of livestock development programs and projects

LPE division is responsible for identification and formulation of livestock development projects and forwarding them to funding agencies. Funding could either be through the National budget or foreign donor agencies.

7.2.1. Projects for the National Budget - 2021

Eight (08) new project proposals for the year 2022 were formulated in collaboration with respective divisions. These project proposals were forwarded to relevant authorities during the year 2021.

Furthermore, 17 on-going projects of the DAPH for continuation for coming years were reviewed; proposals forwarded and necessary approvals were obtained.

7.3. Monitoring, evaluation and economic analysis of livestock development programs and projects

7.3.1. Physical and financial progress review of departmental programs

a. Action plan and progress

Action plan 2021 of DAPH was implemented successfully even in COVID - 19 outbreak. The physical and financial progress was monitored and reported monthly on the basis of thrust area. At the end of 2021, action plan for physical and financial progress review of the DAPH was prepared for the year 2022 considering the budget allocation.

Capital expenditure utilization of the DAPH was 62.05% in 2021 which was lower than the previous year (79.47%) The progress of recurrent fund utilization was 95.71% in 2021, which was higher than the corresponding figure of 95.19% in the year 2020. The details are given in *Chapter 10*, under the Finance division.

b. Progress review meetings of the department

Physical and financial progress of departmental programs is reviewed at progress review meetings represented by respective directors and relevant officers of divisions. LPE division organised and facilitated to conduct such reviews throughout the year.

7.3.2. Monitoring of animal production, health and extension activities in provincial DAPH

a. Monitoring through master returns

Activities of provincial DAPH are monitored through master returns submitted monthly by divisional veterinary surgeons in the country. Data were processed and analysis reports were prepared and communicated to provincial DAPH as well as all divisions of the DAPH and the Ministry as well.

Analysis of selected data is given in *Annexure VII*. Data on animal health activities are given separately under section on animal health division.

7.4. Review of livestock industries and management of livestock database at national level

Availability of reliable statistics is one of the main pre-requisites for any planning and monitoring pertaining to the livestock sector. This is also one of the main responsibilities of the LPE division.

7.4.1. Data collection, compilation and management

Data collection systems have been further improved during the year. Data on livestock population, production, prices, imports and exports etc. were collected on industry basis. The analyzed data are preserved in electronic livestock statistics databases.

Ten-year livestock data has been updated.

a. Milk collection

Data were collected from leading milk processing organizations in the formal milk marketing in the year 2021. Total milk collection by 14 key organizations was 245.55 million liters. Central Province, North Central Province and the North Western Province contributed for this total as 32%, 21% and 18% respectively. District-wise milk collection data for the year 2021 is given in *Annexure VIII*.

b. Import and export of animals / animal products and feed ingredients

Quantities and the value of import of animals, animal products and feed ingredients in 2021 was obtained from Sri Lanka Customs and analyzed. Quantities of dairy products, meat and meat products imported into the country in 2021 is totaled 88,481.83 MT and 1,040.19 MT with the value of Rs.63.09 billion and Rs.647.18 million respectively. Imported quantity of dairy products and meat products have been decreased during the year 2021 when compared with the year 2020.

Total of 1,610.32 MT of milk and milk products and 828.99 MT of meat and meat products have been exported to other countries during year 2021.

c. Data bank

LPE division maintains the National databank containing all livestock data, statistics and related documents, reports, and bulletins which can be used by DAPH and other state officers, students from university and other educational institutes, and private entrepreneurs.

d. Dissemination of data/ statistics

Important livestock statistics collected from various organizations, other divisions of DAPH, regional veterinarians, private companies, farms, etc., by division of LPE, are analyzed, compiled and published on website as Poultry Forecast 2021, Livestock Statistical Bulletin, Dairy bulletin, Livestock Information Bulletin and Livestock outlook for the year 2020. It was disseminated to all the relevant organizations and other stakeholders in 2021.

e. Sector reviews

Poultry industry monitoring

A poultry industry monitoring committee was established in the department to monitor the poultry industry in Sri Lanka in year 2012. This committee is consisted of industry representatives and officers from the department as well. Department of Agriculture is also representing the meeting to facilitate and overcome the issues related to poultry industry. This committee was chaired by the Director General of the Department.

Four committee meeting was conducted during the year 2021. Main committee meeting was supplemented by another four (4) stakeholder meetings. As it was not possible to hold physical meetings due to health regulations most of the industry coordination activities were done by using virtual platforms.

7.5. Coordination of development programs with provincial DAPH and special development projects

Several development programs were jointly implemented by the national and provincial DAPH and technical back-up services and inputs were mostly provided by the national DAPH.

7.5.1. Provincial director's meetings

LPE division organizes and coordinates Provincial Directors' meetings to review on-going livestock development programs and to discuss on administrative and financial matters. Two (02) such meetings were held during the year 2021.

7.5.2. Special livestock development projects

a. Improvement of veterinary service delivery system of field veterinary offices

A project to improve services of provincial veterinary offices was commenced in year 2008 aiming at improving infrastructure facilities of veterinary offices.

Renovation works at DAPH were carried out under this projects since allocation for the year 2021 was not sufficient to construct new Veterinary Surgeon office.

b. Programme to mitigate environment issues pertaining to livestock industry

Since the environmental issues are one of the constraints which hinder the development of the Livestock sectors in Sri Lanka, it has been given the priority in year 2021 too; also the technical backup system which was established has been given positive results. Following activities were conducted and implemented by Livestock Planning and Economics Division of the Department in year 2021.

Based on the nature of the environmental problems reported, other organizations, institutions and relevant officers were informed and coordinated. Furthermore, follow-up activities of the issues were addressed.

Activity related to printing of the revised version of the Environmental friendly livestock farming guidelines books (03 copies) was initiated in collaboration with Central Environment Authority.

Joint field visits were organized with respective technical experts from relevant institutions, along with the respective Veterinary Surgeons and provided necessary guidance and advised them to overcome the issues prevailed. The joint visits were

participated by officers from Central Environmental Authority, Ministry of Health, Local government and Sri Lanka Police etc. Environmental Impact Assessments on large scaled Dairy farm establishments, conducted by Central Environmental Authority (Central Province) was represented and three (03) such assessments were done.

7.6. Publications

The division compiled following publications/reports during the year 2021.

- Action Plan DAPH -2021
- Action Plan 2021- LPE Division
- Annual Report -2020
- Annual Performance report 2020
- Livestock Statistical bulletin 2020
- Poultry Sector Forecast 2021 (2-Online publications)
- Dairy Bulletin 2020
- Livestock Outlook 2020
- Livestock Information Bulletin 2020
- Handbook on Livelihood Development Project Proposals

7.7. Other activities

7.7.1. E -Government program

Livestock Planning and Economics Division (LPE) is responsible to liaise with ICTA and to handle correspondences regarding Lanka Government Network (LGN) and Government Information Centre (GIC). Dr. S. S. P. Silva of the LPE division serves as a Chief Innovative Officer (CIO) for ICTA.

The LPE division holds the responsibility of managing and updating the department website www.daph.gov.lk. Livestock data, statistics, maps, departmental activities and details of each division have been incorporated into the web site. Regular updating of news and the events of the department is a valuable feature in the department web site. The online application service (e-service) for import and export of animals is also an additional service provided by the department web site.

8. VETERINARY REGULATORY AFFAIRS DIVISION

8.1. Introduction

Implementation of statutes made under the provisions of Animals Act, Animal Diseases Act and Animal Feeds Act and amendments of the Acts and regulations pertaining to livestock & poultry sector are handled by the VRA division.

Main functions of the division

- Strengthen animal quarantine management system in Sri Lanka to prevent entry of exotic animal diseases and illegal imports.
- Trade facilitation of import and export of animals and animal products of animal origin and other inputs.
- Quality assurance of processed, further processed poultry meat, frozen fish, animal feed ingredients, veterinary drugs and biological / products.
- Safeguard and protect productive national herd to accomplish a traceability system and to achieve objectives of the master plan.

8.2. Animal quarantine and inspection service

8.2.1. Import of animals and animal products and post-import quarantine activities

Animal quarantine service is one of the essential services provided by the DAPH. It mainly deals with the inspection and quarantine of import and

export of animals, animal products and by-products.

a. Quarantine holdings

In year 2021 one consignment of cattle and 23 shrimp brood stock consignment and Seven (07) pet bird consignment and 45 Day old chicks consignment were subjected to own farm quarantine under the supervision of animal quarantine officers. Fourteen numbers of horses and four (04) pet birds were hold and quarantined at Katunayake and Colombo quarantine stations.

b. Import and quarantine surveillance

Details of imported Animal products and Animal Feed and Veterinary drugs and biological which were subjected to quarantine surveillance in 2021 are given in *Annexure IX*.

c. Sampling of imported poultry (HPAI surveillance program)

Consignments of Day-Old Chicks (DOC) are released to importers under the quarantine surveillance agreement and monitored by the weekly reports sent by the importer. Serum samples and cloacal swabs are taken at the point of entry and during the farm inspections. If the mortality rate exceeds four percent (4%) during the quarantine period, the relevant farms are visited by Animal Quarantine Officers (AQO) immediately

to investigate and to rule out the possibility of HPAI infection.

As part of the active surveillance program carried out against HPAI,

imports were closely monitored clinically and laboratory testing were done during the surveillance period.

Table 8.1: HPAI surveillance program - 2021

No of farm visits	No. of samples dispatch to laboratory	Test results
Animal Quarantine Station - Colombo Pet birds -02 Meat Imports- 02	Fecal Swabs - 35 Samples-02	Negative Negative
Animal Quarantine Station- Katunayake DOC - 46 Pet birds (Holding) - 03	Cloacal Swabs -2792 Salmonella - 330 Serum Samples - 1260 Cloacal Swabs - 72 Salmonella - 03	Negative
Animal Quarantine Station - Mattala Pet birds - 41 (20 batches)	460 swabs Pooled fresh dropping Sample - 164 bottles 825 swabs Blood samples-04 Fecal -01 Pet bird carcass-01	Negative Positive for Salmonella typhimurium

d. Consignment detained / destroyed / re-exported in the year 2021

No consignments of animals and animal products were detained/ destroyed/ re-exported in the year 2021.

8.2.2. Export of animals and animal products

a. International veterinary health certificates for meat

Details of export health certificates issued by the Chief Animal Quarantine Officer (CAQO) in 2021 are given in Table 8.2

Table 8.2: Health certificates issued for exports (2020-2021)

Item	No. of health certificates issued	
	2020	2021
Ornamental fish	3,880	3,141
Dogs	153	67
Cats	68	30
Poultry -DOC	20	23
Hatching eggs	08	12
Pet birds	27	45
Zoo animals	-	-
Elephant	-	-
Rabbit/Rat/Hamsters/G. Pig	-	-
Animal products (meat & meat products)	1,424	2,235
Table eggs	826	988
Animal by-products	97	95
Leather	14	03

b. Exports

Details on consignments of animals and animal products that were subjected to animal quarantine inspections and approved for export in 2021 are given in *Annexure X*.

8.3. Regulatory activities - livestock industry

The VRA division facilitates international trade in animals and animal products through review and recommendations of request for imports.

a. Poultry

The regulatory activities carried out in 2021 in related to poultry industry are given in Table 8.3.

Table 8.3: Regulatory activities carried out in 2021

Activity	Description	Number
New Registration	Registration of new processing centers	00
Renewal of Registration	Renewal of breeder farms	79
	Renewal of hatcheries	50
	Renewal of grandparent farms	03
	Renewal of processing centers	16
	Renewal of further processing centers	08
Facilitation of imports	Issuing pre clearance approvals (No. of consignments)	107
	Revision/ preparation of import health requirements	01

b. Other animals, animal products and animal by products

Regulatory activities carried out during the year 2021 in respect to livestock and livestock products are given below.

Table 8.4: Pre-clearance approvals

Activity	No. of Applications received	Number Approved	Number of animals/ Quantity
1. Live animals			
Pets - Dogs & Cats	455	447	648 Animals
Live Fish	39	39	39 consignments
2. Genetic Material (Semen)			
Cattle	07	07	12,950 Doses
Day Old Chicks	50	50	50 consignments
3. Animal Products			
Meat and Meat Items			
Beef	98	27	134.065 MT
Mutton		35	923.1 MT
Pork		07	162.45 MT
Lamb		27	204.84 MT
Edible Fat/Tallow/Casing		02	02 Consignments
Poultry Meat		19	19 consignments.
Frozen Fish - Bait	48	48	1,803.13 MT
4. Animal by products			
Fur/ Wool/ Hair/ Bristles	62	62	46,441.84 Kg
Leather	90	90	90 Permits
Gelatin	150	150	1,217.482 MT
Feathers	22	22	22 consignments.
5. BSE (Hide Glue, Yoghurt Cultures, Veterinary Equipment)	214	214	214 Consignments

8.4. Veterinary Drug Control Authority

Veterinary Drug Control Authority (VDCA) was promulgated under the provision of the Animal Disease Act No. 59 of 1992 and related regulation. VDCA is responsible for regulating manufacture, import, re-packing, export, marketing and use of veterinary pharmaceutical and biological products to safeguard animal health and thereby the public health aspects as well.

VDCA is also responsible for maintaining marketing authorization, inspection of manufacturers (GMP),

and antimicrobial resistance (AMR) project lead for animal health sector VDCA committee members for the year 2021 and their fields of expertise are as stated below.

01. Dr. (Mrs).Hemali Kothalawala- Chairman
02. Dr. (Mrs) D. D. N. De Silva - Vet. Pharmacology
03. Dr. A. Arulkanthan - Vet. Parasitology
04. Prof. Anil Pushpakumara - Vet. Reproduction
05. Dr. S. Samarakoon - Vet. Clinical Practice

- | | |
|--|---|
| <p>06. Dr. H. Kothalawela - Vet. Microbiology</p> <p>07. Dr. (Mrs) Chamari Palliyaguru- Animal Nutrition</p> <p>08. Dr. W. Samarasinghe - Special member representing Local manufactures</p> | <p>09. Dr. M. D. N. Jayaweera - Registrar (from 01.01.2021 to 06.10.2021) and Dr. (Mrs.) A. P. Wickramasinghe Registrar/C.U.D (from 07.10.2021 to 31.12.2021)</p> |
|--|---|

Four committee meetings of VDCA and fourteen User Permit Panels were conducted. With reference to the pharmaceutical products, a system for monitoring the usage of anesthetics and sedatives was initiated during this year.

a. New products registered in VDCA

New veterinary pharmaceutical and biological products registered in 2021 as follows.

Table 8.5: Imports for free sales

Pharmacological type	Dosage Form	Number Registered
Antibiotics	Injectable	9
	Oral preparations	11
	Topical application	1
	Intramammary infusion	1
	Wound spray	1
Antiparasitic- Ectoparasiticids	Oral	1
Anti - Bloat	Oral	3
Antiprotozoal	Injectable	1
Anticoccidial	Oral	1
Anthelmintic	Oral liquid/Powder	4
	Tablets	1
	Bolus	2
	Topical application	1
Biological Vaccines- Poultry	Oral	4
	Injectable	7
Supplements (Vitamins and minerals) Hormones	Injectable	6
	Injectable	2
Antibacterial/Antifungal Shampoo	Topical application	1
Liver /Appetite stimulant	Oral	1
Anesthetic	Injectable	1
Expectorant	Oral	1
Blue Dye	Tablet	1
Wound Healer	Topical application	1
Potential decontaminant	Tablet	1
Disinfectant (farm use)	Oral	3
Cardiac inodilator	Tablet	1
Herbal Coat cleanser	Topical spray	1
Hormones	Vaginal ovules	1
Herbal Deodorant	Liquid for topical application	1
Total		70

Table 8.6: Local manufacture for free sales

Pharmacological type	Dosage Form	Number registered
Antibiotic	Oral	3
Anthelmintic	Oral	1
	Tablet	1
Anticoccidial	Oral	1
Total		6

a. Invoice approvals

During the year, 716 invoices were approved by VDCA, to import veterinary pharmaceuticals and biological products for the worth of approximately 2,862.32 million Sri Lankan rupees.

b. User permit approvals

Table 8.7: User permit approvals

Species	Pharmacological type	Issued
Poultry	Vaccine	51
Equine	Anti-bloat	01
	NSAID	02
	Sedatives and Analgesic	03
	Anti-inflammatory	01
	Tape	01
	Analgesic	03
Bovine	Anti-parasitic	02
	Topical application	01
Cattle	Vaccine	04
	Vitamin	01
Wild animal	Antisedant	01
	Analgesic	02
	Sedatives	03
Swine	Vaccine	04
Pigeon	Antibiotic	03
	Anthelmintic	02
	Antiparasitic	03
	Acaricide	01
	Anticoccidial	01
Canine/Feline	Sedatives	01
	Analgesic	05
	Anthelmintic	01
	Antidepressant	01
	Antisedant	01
	Antiepileptic	01
	Kidney supplement	01
	Neurological preparation	01

Species	Pharmacological type	Issued
	Ear/Eye Drop	04
Canine	Inodilator	01
Feline	Vaccine	01
Fish	Vaccine	04
For VRI use	Antibiotic	05
Test kits		27
Total		144

8.5. Implementation of Animal Feed Act

With the view of ensuring the quality of available animal feed in local market, the Animal Feed Act No.15 of 1986 and its regulations were implemented to regulate, supervise and control the manufacture, sale, distribution of animal feed and import of animal feed and feed ingredients.

Subsequent amendments for Animal Feeds Act have been carried out and published as Animal Feed Act No.15 of 2016 to further strengthen the activities carried out under the act.

8.5.1 Animal Feed Advisory Committee

Under the provisions of the Animal Feed Act, the Animal Feed Advisory Committee has been established and it comprises with five persons who have technical knowledge and experience in animal nutrition and animal feed, one feed industry representative. Director General of the Department of Animal Production & Health and Registrar (Animal Feed) of the Department who served as Chairmen and Secretary of the committee.

Table 8.8: Newly appointed Animal Feed Advisory Committee

Name	Position of the Committee	Designation
Dr.K.A.C.H.A. Kothalawala	Chairperson	Director General, DAPH
Prof. S.S.E. Ranawana	Member	Animal Nutritionist, Former Professor Wayamba University of Sri Lanka
Prof. J.K. Vidanadachchi	Member	Animal Nutritionist, Professor of Animal science, University of Peradeniya
Prof. Sumith Magamage	Member	Professor of Animal Production, Sabaragamuwa University of Sri Lanka
Dr. W.M.P.B .Weerasinghe	Member	Animal Nutritionist, Veterinary Research Officer, Veterinary Research Institute
Mr. E.D.M. Epasinghe	Member	Scientist, National Aquatic Resources Research & Development Agency
Mr. Mohamad Imitiaz	Member	Animal Feed Industry Representative
Dr. N. Priyankarage	Registrar	Animal Feed Advisory Committee.

8.5.2 Registrations and Renewals

Under the provisions of the animal feed act, all feed manufacturers and feed/feed ingredients/additive importers should be registered. After submission of all necessary documents with relevant application,

comprehensive evaluation of submitted documents and inspection of premises is carried out by appointed authorized officers prior to the registration. After registration licenses are issued and valid for the period of one year.

After submission of respective application with turn over returns at the end of each calendar year, the licenses are renewed.

Table 8.9: Number of Registration of Feed Manufacturers and Importers - 2021

Activity	Total Number	Number registered 2021	Number of Products
Number of Manufacturers	72	95	225
Number of Importers	135	119	518
Total	207	214	743

Table 8.10: Number of Renewals of Feed Manufacturers and Importers - 2021

Activity	Number of Manufacturers / Importers	Number of Products
Number of Manufacturers/ Exporters/ Importers	213	2,854
Number of Importers	138	2,779
Total	351	5,633

8.5.3 Animal Feed Production - 2020 & 2021

Based on turn over returns, animal feed production of registered feed manufacturers was compiled.

Table 8.11: Compound Animal Feed Production by Type - 2020 / 2021

Type of Feed	Quantity 2020 (MT)	Quantity 2021 (MT)
Poultry Feed	933,314.85	1,025,932.54
Cattle Feed	68,303.56	63,121.05
Calf Feed	236.28	1,362.91
Pig Feed	2,321.50	3,360.87
Shrimp/Fish Feed	1,525.35	587.21
Horse Feed	409.64	179.00
Goat Feed	37.60	175.84
Other Feed	1,935.89	1,849.22
Feed production from Registered Manufacturers	1,008,084.67	1,104,307.79
Self-mixed	291,056.90	258,295.26
Total Feed Production	1,299,141.57	1,362,603.05

* Source: TOR -2021 (by Registered Animal feed)

Total animal feed production as well as the total poultry feed production by registered feed manufacturers has increased during the year 2021. The quantity of feed produced by self-mixers (especially poultry feed

producers) has been reduced and the reasons behind the reduction may be the shortage of raw materials for self-mixers and high raw material costs. Therefore, they tend to purchase their required quantity from feed manufacturers.

Table 8.12: Poultry Feed Production by Category - 2020 - 2021

Type of poultry Feed	Quantity 2020 (MT)	Quantity 2021 (MT)
Chick Starter	32,485.65	16,084.93
Layer Grower	58,899.25	45,636.88
Layer	209,979.30	227,480.85
Total Layer Feed	301,364.20	289,202.66
Broiler Booster & Starter	231,936.10	259,350.71
Broiler Finisher & Grower & Withdrawer	328,580.61	405,798.49
Total Broiler Feed	560,516.71	665,149.20
Broiler Breeder	52,199.04	57,511.41
Layer Breeder	19,234.90	14,069.28
Total Breeder Feed	71,433.94	71,580.69
Total Poultry Feed	933,314.85	1,025,932.55

* Source: TOR -2021 (by Registered Animal feed manufacturers)

Vitamin Mineral Premix Production -2021

Based on turn over returns of vitamin and mineral premix manufacturers and exporters, production of vitamin & mineral mixtures were quantified.

Table 8.13: Vitamin and Mineral Premix Production - 2021

Type	Quantity
Vitamin/Mineral Premix for Local Use (Powder) MT	7,739.16
Vitamin/Mineral Premix for Export (Powder) MT	465,823.99
Vitamin/Mineral Premix for Export (Liquid) m ³	261.57

8.5.5. Usage of Raw Materials - 2021

Locally purchased as well as imported raw materials are used for animal production. Details of the raw materials used by the registered feed manufacturers are given in *Annexure XI*. Maize Importation has been limited in 2021 and imported wheat was used as the main energy supplement in poultry feed production.

a. Use of Meat and Bone Meal for Animal Feed Production

With the view of implementing BSE regulations on animal feed production, screening verified and approval was given to import 39,168 MT of Meat and Bone Meal from the countries which were declared as low risk in Bovine Spongiform Encephalopathy by OIE.

8.5.6. Import of Animal Feed

Animal feed such as prawn/shrimp feed, fish feed, bird feed and pet feed (Dog & Cat) have been imported. Prawn/Shrimp and fish feed are used in shrimp and ornamental fish farming while pet food are imported to cater the customer requirement.

Table 8.14: Import of Animal Feed - 2021

Type	Quantity (MT)
Prawn/Shrimp Feed	18,839.25
Fish Feed	6,412.105
Pet Food (Dog & Cat)	2,927.143
Bird Feed	100.49

8.5.7. Export of Animal Feed

Vitamin and Mineral premixes, Vitamin E and other feed additives were manufactured and exported to the south Asian and African countries by nine registered premixing manufacturers.

Table 8.15: Issuance of Veterinary Export Certificates - 2021

Number of Veterinary Export Certificates Issued	Quantity of Vitamin/Mineral and other products exported (MT) as powder	Quantity of Vitamin/Mineral and other products exported (m ³) as liquid
904	465,823.99	261.56

8.6 Animal identification and traceability program

Necessary inputs including 41,950 ear tags, 50,000 Cattle vouchers and fuel to implement the program at field level were provided to the provinces to facilitate implementation of this program. A total of 103,221 cattle were ear tagged during the year 2021

09. ADMINISTRATION DIVISION

9.1. Introduction

The main responsibility of this division is managing staff cadre and supporting employee services to achieve objectives of the Department.

Main functions of the division

- Attend to establishment matters related to all staff of the Department of Animal Production and Health.
- Handling correspondences regarding implementation of service minutes of technical services of DAPH.
- Attend to matters regarding the pensions/ loans/ quarters/ lands/ Agrahara scheme and legal issues of the department.
- Handling correspondences regarding recruitments, promotions, transfers and appraisals of the staff.
- Office management.

9.2. Present cadre positions of the Department

The present approved cadre positions of divisions (Animal Health, Animal Breeding, Veterinary Research, Human Resource Development, Livestock Planning and Economics, Veterinary Regulatory Affairs, Administration and Finance) of the department amounted to 954 and actual cadre position was 747 (*Project I: 200 Project II: 329 and Project III: 218*)

Details of cadre positions are given in the *Annexure XII*.

9.3. Appointments

Following new appointments were made during the year 2021
 Veterinary Surgeon-35

9.4. Recruitments

Animal Quarantine Officer-06
 Veterinary Investigating Officer-09
 Laboratory Assistant-11

9.5. Promotions

Promotions given during the year are as follows;

Director General - 01
 Additional Director General - 03
 Accountant - 01
 Veterinary Surgeon - 02
 Animal Quarantine Officer - 01
 Veterinary Investigation Officer - 01
 Development Officer - 05
 Management Services officer - 04
 Field Assistant - 20

9.6. Transfers

Assistant Director (Admin) - 01
 Accountant - 01
 Management services officer - 13
 Office employee service - 04
 Veterinary surgeon - 11
 Field assistant - 05

9.7. Retirements

Details of staff members who have retired from the service in 2021 are as follows;

Accountant	01
Director	01
Veterinary Investigation Officer	01
Livestock Promotion Officer	01
Livestock Development officer	02
Office employee service	01
Field Assistant	02

9.8. Resignations

Office employee service -01

9.9. Vacation of Post

Livestock Promotion Officer (Tech) -01

Research Assistant- 01

9.10. Releases from the DAPH on permanent basis

Assistant Director (Admin)-02

Veterinary Surgeon-02

Development officer - 01

Management Services officer-10

Livestock Development Officer-01

Office employee service-01

9.11. Loans Approved

Type of loan	No.	Amount (Rs.)
Distress Loan	95	10,486,525.00
Property Loan	04	37,240,000.00

10. FINANCE DIVISION

10.1. Introduction

The Departmental Head pertaining to the financial activities is 292. The activities of the department were performed under two (02) programs and three (03) projects. Financial allocations and the expenditure summary for the year 2021 are as in *Anneure XIII*.

A sum of Rs. 643.80 million for the recurrent expenditure and Rs. 551.00 million for the capital expenditure was received by the Department for the year 2021, totaling Rs. 1,194.80 million.

10.2. Allocations

a. Departmental Allocations

Head: 292

	Estimated allocation (Rs.)	Supplementary allocation received from the Treasury (Rs.)	Net allocation (Rs.)	Expenditure (Rs.)	Percentage of the expenditure
Recurrent (Rs.)	643,800,000	-	643,800,000	612,473,258	95.13%
Capital (Rs.)	551,000,000	-	551,000,000	391,553,706	71.06%
Total (Rs.)	1,194,800,000	-	1,194,800,000	1,004,026,964	84.03%

Allocations received from other Ministries and Departments

Vote	Allocation (Rs.)	Expenditure (Rs.)	Percentage of the expenditure
427-2-3-8-2202	8,000,000	4,390,200	54.88%

10.3. Public Servants' Advance Account "B"

	Limits of the Annual Estimates (Rs.)	Actual Value (Rs.)
Balance as at 01.01.2021		104,381,709.56
Maximum debit limit	40,000,000.00	22,039,466.27
Minimum credit limit	23,000,000.00	31,153,250.84
Maximum limit of the debit balance	120,000,000.00	
Credits not affecting the limits		
Balance as at 31.12.2021	Balance brought down	95,267,924.99

10.4. General Deposit Account

The balance of the General deposit account of the Department as at 31.12.2021 was Rs. 24,487,857.00

The breakdown of the deposit accounts as follows

6000-0-0-1-0-110	1,251,523.00
6000-0-0-13-0-106	8,682,281.00
6000-0-0-16-0-98	11,208,373.00
6000-0-0-2-0-153	3,345,680.00
Total	24,487,857.00

10.5. Departmental Income

The income collected by the Department for the year 2021 is given in Table 10.1.

Table 10.1: Income collected - 2021

Income Subject No.	Particulars of the income	Total income received * (Rs.)
2002-01-01	Building rent	7,433,348.79
2002-02-99	Loan interest to Public Servants	4,077,073.31
2003-01-00	Departmental sales	151,678.24
2003-02-99	Sundries	1,047,400.00
2003-99-00	Other receipts	49,658,130.55
	Total	62,367,630.89

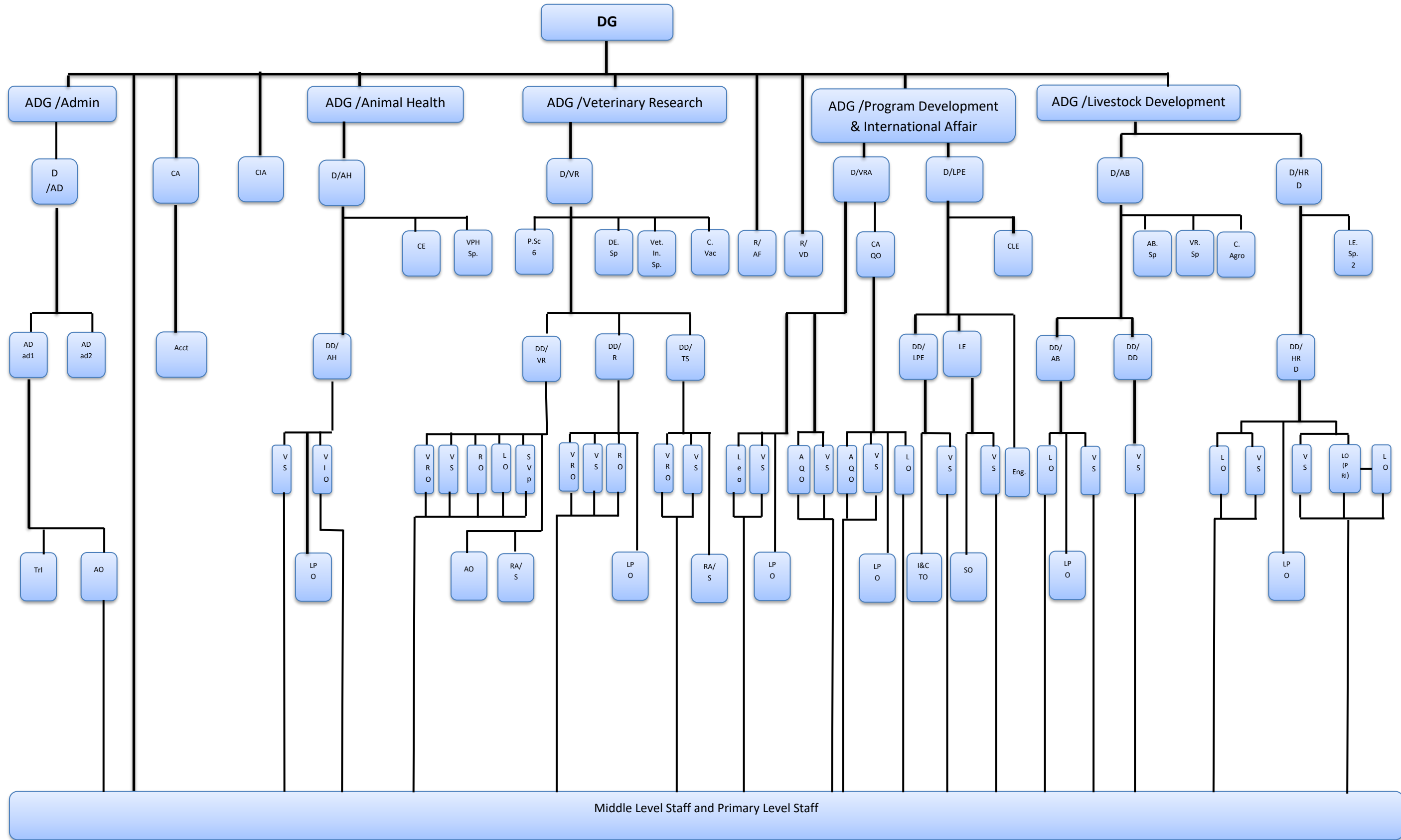
*Revised

Rs. 894.670 million was obtained from the Treasury for the activities of the department and Rs. 62.368 million received as income, miscellaneous revenue and there was no balance.

Annexures

Annex I	Organizational structure of the DAPH
Annex II	Key data on the poultry industry (2020- 2021)
Annex III	Activities performed at veterinary investigation centers 2021
Annex IV	Research publications in 2021
Annex V	Support for Post Graduate Training
Annex VI	Details of examinations conducted in 2021
Annex VII	Provincial activities
Annex VIII	Milk collection by main milk collecting organizations – 2020 /2021
Annex IX	Details of consignments (imports) subjected to quarantine surveillance in 2021
Annex X	Export of animals, animal products and animal by-products 2021
Annex XI	Usage of raw materials by registered animal feed manufactures 2021
Annex XII	Present cadre positions of the Department and staff strength (31.12.2021)
Annex XIII	Financial allocations and the expenditure summary 2021

Organizational Structure



Other Staff: BA , DO, DA, Le.Ass, Pro.Ass., Pro.Ass.Com, TO, Drftm, RA, PMA, LIB, LDO, WR
 Dri, Tra.Ope., LA, Mech, BO, Car, Elec, Ban.Kee, Watc, CatC, MM, GtC, AnC, Grs, O.E.S, Liv.Ass, GL, SL, FA

DG	-Director General – Dept. of Animal Production & Health
ADG	-Additional Director General
D/AD	-Director, Administration
D/VRA	-Director, Veterinary Regulatory Affairs
D/LPE	-Director, Livestock Planning and Economics
D/HRD	-Director, Human Resource Development
D/AB	-Director, Animal Breeding
D/VR	-Director, Veterinary Research
D/AH	-Director, Animal Health
CA	-Chief Accountant
CLE	-Chief Livestock Economist
CE	-Chief Epidemiologist
VPH.Sp.	-Veterinary Public Health Specialist
P.Sc	-Principal Scientist
DE.Sp.	-Dairy Engineering Specialist
Vet.In.Sp.	-Veterinary Investigation Specialist
C.Vac	-Chief Vaccinologist
R/AF	-Registrar/ Animal Feeds
R/VD	-Registrar/ Veterinary Drugs
CAQO	-Chief Animal Quarantine Officer
AB.Sp.	-Animal Breeding Specialist
VR.Sp.	-Veterinary Reproduction Specialist
LE.Sp.	- Livestock Extension Specialist
C.Agro.	-Chief Agronomist
CIA	-Chief Internal Auditor
Acct.	-Accountant

DD/AH	-Deputy Director, Animal Health
DD/VR	-Deputy Director, Veterinary Research
DD/R	- Deputy Director, Research
DD/TS	-Deputy Director, Technical Service
DD/LPE	-Deputy Director, Livestock Planning and Economics
DD/HRD	-Deputy Director, Human resource Development
DD/AB	-Deputy Director, Animal Breeding
DD/DD	-Deputy Director, Dairy Development
LE	-Livestock Economist
AD. Ad	-Assistant Director/ Administration
SVP	-Superintendent of Vaccine Production
AQO	-Animal Quarantine Officer
VRO	-Veterinary Research Officer
VIO	-Veterinary Investigation Officer
VS	-Veterinary Surgeon
LO	-Livestock Officer
RO	-Research Officer
Leo	-Legal Officer
Eng.	-Engineer
AO	-Administrative Officer
RA/S	-Research Assistant/Special
LPO	-Livestock Promotion Officer
Trl	-Translator
I & CTO	-Information & Communication Technical Officer
SO	-Statistical Officer

Other Staff

BA	-Budget Assistant
DO	-Development Officer
DA	-Development Assistant
Le.Ass	-Legal assistant
Pro.Ass.	-Programming Assistant
Pro.Ass.Com	-Programming Assistant (Communication)
TO	-Technical Officer
Drftm	-Draftman
RA	-Research Assistant
PMA	-Public Management Assistant
LIB	-Librarian
LDO	-Livestock Development Officer
WR	-Warden
Dri	-Driver
Tra.Ope.	-Tractor Operator
LA	-Laboratory Assistant
Mech	-Mechanic
BO	-Boiler Operator
Car	-Carpenter
Elec	-Electrician
Ban.Kee.	-Bungalow Keeper
Watc	-Watcher
CatC	-Cattle Caretaker
MM	-Milk Man
GtC	-Goat Caretaker

Grs	-Grass Cutter
O.E.S.	-Office Employment Service
Liv.Ass	- Livestock Assistant
GL	-Garden Laborer
SL	-Sanitary Laborer
FA	-Field Assistant

Annexure II

Key Data on the Poultry Industry (2020-2021)

Activity	2020	2021	Growth (%)
1. Procurement of Grand Parent and Parent stock			
Grand Parent Stock (Broiler)	30,792	30,052	-2.4
Parent Stock ('000)			
Broiler	1,396.70	1,511.60	8.2
Layer	101.70	91.82	-9.7
2. Production of Day - Old Chicks (Mn)			
Broiler	159.78	176.94	10.7
Layer	10.55	10.14	-3.8
3. Production of Poultry Feed (1000 MT)			
	1299.14	1,025.93	-21
4. Export of Poultry Products			
Day- Old Chicks	66,747	97,422	46
Chicken and Chicken Products (MT)	769.31	718.26	-6.6
Table Eggs	2,586,547	4,139,339	60
Hatching Eggs	240,480	313,200	30.2
5. Import of Poultry Products			
Chicken and Chicken products (MT)	157.28	139.86	-11
Egg Products (MT)- Egg Powder/Egg Albumin - Liquid Egg	14.70	22.71	54.4
	18.00	51.00	183.3

Annexure III

Activities Performed at Veterinary Investigation Centers - 2021

Programme	Activity	Target	Achievement	%
1. Disease Investigation in the field	1.1 Field Investigation	590	370	63
	1.2 Sample collection for testing	2,985	2,161	72
	1.3 Investigation Reports	590	300	51
	1.4 Follow-up / further investigation	329	154	47
2. Laboratory Service for disease diagnosis	2.1 Post-mortem examinations			
	- Poultry (No. of birds)	4,545	3,411	75
	- Other Species	427	340	80
	2.2 Testing of samples			
	- Bacteriological (Culture)	4,825	2,587	54
	- ABST	2,615	1,450	55
	- Parasitological - Blood	5,975	5,769	97
	- Fecal Sample	3,525	2,211	63
	- Skin	181	114	63
	- Molicular (PCR)	130	3	02
	2.3 Milk analysis (including PPRS)	12,210	7,398	61
	- CMT on request	6,020	3,641	60
2.4 Samples dispatch for further testing	1,245	988	79	
3. Vaccine Production & Vaccination	3.1 CPD Vaccine (No. of farms)	258	156	60
	3.2 Wart Vaccine (No. of Animals)	710	354	50
4. Supply of lab. Inputs to Veterinary Offices	4.1 CMT reagent (Litre)	526	1,051	100
5. Dairy Farm Health Improvement Project	5.1 New farm registration	75	30	40
	5.2 No. of Total Registered Farm	2,400	1,304	54
	5.3 Farm Visited	2,440	916	38
	5.4 Mastitis screening (CMT)	16,300	7,428	46
	5.5 milk sample testing (ABST)	1,870	785	42
	5.6 No. of sample tested for Helmenthiosis	8,550	3,453	40
	5.7 Teat dip solution issued (L)	4,330	2,431	56
	5.8. Issuing of Udder infusion vials (free issue)			
	Lactating Cow	27,675	4,470	16
Dry Cow	8,160	668	08	
6. Brucellosis control Programme	6.1 Screening dairy herds (MRT)	3,330	2,189	66
	6.2 Animal screening in suspected herds (RBPT)	2,935	1,849	63
	6.3 No. of samples submitted for CFT	645	563	87
	6.4 Vaccination of Animals S19	7,400	3,298	45
7. Salmonella Control Programme	7.1 No of Breeder farm to be monitored	67	111	100
	7.2 No of Breeder farm visits	138	75	54
	7.4 No of hatcheries to be visited	50	49	98
	7.5 No of Hatchery visits	200	89	45
	7.6 No of Hatchery samples tested	14,700	6,874	47
	8.1 No of serum samples	5,190	2,871	55
8. Avian Influenza surveillance programme	8.2 No of dropping samples at Hotspots	10,350	7,116	69
	8.3 No of cloacal swabs (Backyard)	10,830	6,791	63
	8.4 No. of sample (live bird market)	1,530	1,312	86
	8.5 No of Cloacal swabs (pet bird Establishment)	180	203	100
	8.6 No. of Samples (Poultry Processing Establishment)	5,040	2,235	44
	8.7 Duck serum sample	900	727	81
	8.8 No of cloacal swabs (Duck)	900	727	81
	9. No. of Animals Tested for TB	9.1 No. of PPD Tests	2,060	1,122
10. Aquaculture		85	367	100

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Annexure V

Support for Post Graduate Training

Name of the officer		Course/ Programme
01	Dr. L.A.G. Mahanama	MSc in Animal Reproduction
02	Dr. D.M. Gunathilake	Master in Agricultural Economics
03	Dr. A.R. Gangani	MSc in Animal Reproduction
04	R.A.N.N. Ranasinghe	Master of Arts in Applied Economics
05	Dr. D.G. Harshani	MSc in Food Science and Technology

Annexure VI

Details of Examinations Conducted in 2021

No	Name of the exam	Number of applicant	Number of exams
01	Recruitment exam of LDIs for Uva Province	32	01
02	First (1 st) semester repeat examination for 2019/2022 Animal Husbandry Diploma batch in SLSAH- Karandagolla	53	01
03	Second (2 nd) semester examination for 2019/2021 Animal Husbandry Diploma batch in SLSAH- Karandagolla	10	01
04	First (1 st) Efficiency Bar Examination of AP&H Service	29	01
05	Recruitment Exam of Sri Lanka School of Animal Husbandry Students- Seppukulama & Karandagolla	300	01

Provincial Activities

Annexure VII

Progress of Services / Activities of Provincial DAPH - 2021

Dispensary Cases	WP	CP	SP	NP	EP	NWP	NCP	UP	SP	Total
Cattle/ Buffalo	3,415	2,635	4,384	20,344	15,729	18,338	10,778	2,312	2,040	79,975
Goat/ Sheep	3,480	1,372	1,639	34,319	19,068	7,232	2,840	507	1,642	72,099
Pig	1,004	784	321	3,404	7,725	3,346	542	674	534	18,334
Poultry	38,860	40,167	25,391	425,695	138,739	292,225	41,617	37,458	46,039	1,086,191
Pet animal	28,604	13,740	26,159	36,791	3,031	14,751	6,664	2,428	6,389	138,557
Other	1,071	1,178	663	3,934	4,531	1,727	155	100	152	13,511
Total	76,434	59,876	58,557	524,487	188,823	337,619	62,596	43,479	56,796	1,408,667

Field Cases	WP	CP	SP	NP	EP	NWP	NCP	UP	SP	Total
Cattle/ Buffalo	9,194	12,089	12,308	16,903	19,306	24,448	12,975	7,707	5,654	120,584
Goat/ Sheep	7,461	5,752	3,727	14,446	13,743	5,878	4,051	662	2,318	58,038
Pig	3,421	313	741	1,025	3,297	3,353	528	213	654	13,545
Poultry	12,565	3,650	9,007	47,794	68,774	4,213	14,642	52,351	30,578	243,574
Pet animal	11	240	172	457	75	108	2	58	46	1,169
Other	36	1,129	669	23	103	1,353	7	68	31	3,419
Total	32,688	23,173	26,624	80,648	105,298	39,353	32,205	61,059	39,281	440,329

Issue of Health Certificate	WP	CP	SP	NP	EP	NWP	NCP	UP	SP	Total
Cattle/ Buffalo	708	899	713	2,205	1,612	737	1,753	969	317	9,913
Goat/ Sheep	353	727	313	833	1,126	538	779	356	175	5,200
Pig	115	82	77	126	63	66	36	28	100	693
Other	9	11	13	12	8	25	4	189	7	278
Total	1,185	1,719	1,116	3,176	2,809	1,366	2,572	1,542	599	16,084

Milk Collection by Main Milk Collecting Organizations 2020 - 2021

Province	District	Milk Collection Lts.	
		2020	2021
Western	Colombo	1,339,679	1,888,472
	Gampaha	3,419,206	3,391,458
	Kalutara	1,246,130	1,229,302
	Total	6,005,015	6,509,232
Central	Kandy	10,698,180	8,925,295
	Matale	11,910,891	12,658,463
	Nuwara-Eliya	57,293,413	57,172,708
	Total	79,902,484	78,756,466
Southern	Galle	828,950	831,016
	Hambantota	10,587,726	7,754,721
	Matara	832,004	618,307
	Total	12,248,680	9,204,044
North Central	Anuradhapura	40,648,182	42,249,758
	Polonnaruwa	9,162,711	10,201,859
	Total	49,810,893	52,451,617
North Western	Kurunegala	35,352,326	37,496,693
	Puttalam	7,373,782	7,166,153
	Total	42,726,108	44,662,846
Northern	Jaffna	5,276,252	5,099,360
	Kilinochchi	1,978,661	2,387,023
	Mannar	1,103,662	1,637,411
	Mullativu	2,388,470	2,549,903
	Vauniya	3,447,621	3,435,808
	Total	14,194,666	15,109,505
Eastern	Ampara	7,273,432	8,508,452
	Batticaloa	4,482,183	4,409,685
	Trincomalee	2,573,234	5,199,047
	Total	14,328,849	18,117,184
Uva	Badulla	11,378,305	13,314,141
	Moneragala	5,390,225	5,491,088
	Total	16,768,530	18,805,229
Sabaragamuwa	Kegalle	249,138	214,920
	Rathnapura	1,704,021	1,714,047
	Total	1,953,159	1,928,967
		-	
Island Total		237,938,384	245,545,090

* Collection details received from ;

* Milco (Pvt) Ltd.

* Cargills Quality Dairies (Pvt) Ltd.

* Nestle Lanka Ltd.

* Kotmale Dairy Product (Pvt) Ltd.

* Ambewela Products (pvt) Ltd.

* CIC Dairies (Pvt.) Ltd

* Pelwatta Dairy Industries Ltd.

* Polonnaruwa District Milk Cooperative Society

* Pattipola Livestock Co. Ltd.

* Lanka Dairies (pvt) Ltd

* Chello Dairies (Pvt.) Ltd

* Richlife Dairies Ltd.

* Fonterra Brands Lanka (Pvt) Ltd.

*NLDB

Details of Consignments (Imports) Subjected to Quarantine Surveillance in 2021

Type of animal /Animal- product		No. of consignments arrived		Quantity arrived (No. / MT)		No. of consignments inspected	
		2020	2021	2020	2021	2020	2021
1.	DOC - Grand parents	08	08	52,266	51,906	08	08
	- Layer parents	23	19	111,190	99,755	23	19
	- Broiler parents	15	23	186,739	309,967	15	23
2.	Meat - Poultry	13	7	157.024	75.010	13	7
	- Beef	26	21	108.66	58.990	26	21
	- Mutton	30	32	555.77	563.010	30	32
	- Lamb	11	21	85.08	155.179	11	21
	- Pork	06	3	79.25	51.809	06	3
	- Duck	02	2	20.40	3.950	02	2
	- Turkey	02	2	0.67	22.816	02	2
	- Casings	01	05	1.35	4.626	01	05
	-Goat meat pro.	19	06	412.48	126.040	19	06
3.	Meat and bone meal	252	254	34,463.776	37,678.366	252	254
4.	Ornamental fish (marine + fresh water)	150	204	113,894 (nos)	2,248,570 nos/57 boxes	150	204

Details of Consignments (Imports) Subjected to Quarantine Surveillance in 2021

Type of Animal/Animal- product		No. of consignments arrived		Quantity arrived (No./MT)		No. of consignments inspected	
		2020	2021	2020	2021	2020	2021
5.	Cattle	--	01	--	125	--	01
	Zoo animals	--	--	--	--	--	--
	Horses	--	01	--	14	--	01
	Pet birds	09	08	351	1,391	09	08
	Live shrimps	13	24	3,055	17,512	13	24
	Live corals	--	--	--	--	--	--
	Goat	--	--	--	--	--	--
	Crabs	01	--	5,649	--	01	--
	Pigeon	--	02	--	220	--	02
6.	Dogs/Cats	119	360	200	546	119	360
7.	Fish meal	136	84	4,384.24	3,304.36	136	84
8.	Prawn feed	285	403	11,058.51	4,711.46	285	403
9.	Tallow	--	--	--	--	--	--
10.	Gelatin	81	79	930.931	952.990	81	79
11.	Egg powder	05	03	10.60	21.51	05	03
12.	Egg albumin	02	01	4.1	1.2	02	01
	whole liquid egg	01	--	18	--	01	--

Annexure IX cont....

Details of Consignments (Imports) subjected to Quarantine Surveillance in 2021

Type of Animal /Animal- product		No. of consignments arrived		Quantity arrived (No. / MT)		No. of consignments inspected	
		2020	2021	2020	2021	2020	2021
13.	Feather/Skin/Bristle - Other products	54	49	Bristle-49.25 Feather-1.15 Skins-0.11	Bristle-47.62 Feather-0.655 Skins-0.02	54	49
14.	Frozen fish	542	355	17,482.63	13,734.101	542	355
15.	Fish food	137	162	2,724.315	3,838.671	137	162
16.	Leather	127	110	212.548	144	127	110
17.	Feed ingredients (Soya bean meal, Corn meal, Wheat, Maize, Rape seed, Guar meal, Cotton seed meal, Bakery meal, Millet)	1,057	1,427	954,570.99	448,973.627	1,057	1427
18.	Chicken products (chicken powder, chicken essence, chicken extract, chicken soup)	07	06	22.82	6.59	07	06
19.	Pet food	132	150	1,718.951	3,357.23	132	150

Annexure IX cont.

Details of Consignments (Imports) subjected to Quarantine Surveillance in 2021

Type of Animal/Animal- product		No. of consignments arrived		Quantity arrived (No./ MT)		No. of consignments Inspected	
		2020	2021	2020	2021	2020	2021
20.	Vaccines	149	180	7,897,439,325 doses/ 54,063 L/ 213 Mt/ 15,410 tablets/ 500 packs	5,935,309,259 doses/ 2 boxes/ 444 MT/ 54,545 pcs/ 86,800 vials/ 3,760 L/4,600 packs/ 1,870 bottles	149	180
21.	Veterinary drugs	157	182	340.51 Mt/ 12,144 bottles/ 10,100 vials/ 99,482 doses	191.563 MT/ 12325 pcs/ 796,800 ml/ 27,240,000 doses/ 950,300 mg	157	182
22.	Semen	04	02	2,000 doses/ 2,292 nos/ 8,000 units	8,450	04	02
23.	Yoghurt culture	03	04	0.1	0.04	03	04
24.	Test kit	07	13	15 boxes/33 kg/ 203 nos	275	07	13
25.	Veterinary products	15	26	2.59 Mt/ 48 L/ 610 pcs	10.835 MT/ 1,372.5 L/348,800 tab/9266 nos/ 2,600 packs	15	26
26.	Turkey Eggs	-	01	-	120 nos	-	01
27.	Artemia	-	24	-	1,500 cans/ 6.675 MT	-	24
28.	Veterinary Equipment-Nos	-	05	-	1,979 nos	-	05

Export of Animals and Animal Products - 2021

Category		Number/ Quantity (MT)in 2020	Number/ Quantity (MT)in 2021
	Item		
01	Ornamental fish	31,267,684 (tails)	9,166,671 (tails)
02	Dogs (Travelled with owners)	76- nos	58-nos
03	Cats (Travelled with owners)	27- nos	28-nos
04	Poultry -DOC	83,607- nos	99,722- nos
05	Pet birds	9,570- nos	11,711- nos
06	Zoo animals	--	--
07	Animal products-meat and meat products	2,010.453 Mt	1,421.077- MT
08	Table eggs	2,586,547- nos	4,139,339- nos
09	Hatching eggs	240,480- nos	313,200- nos
10	Animal byproducts- Artistic brushes/ dog chews/ elephant dung papers/hat/hat parts/chank Drums Bone grits/ cattle bone and crushed/ dry crab shells/enzymes/ cattle feed/ gelatin/ dried milk sludge/seasoning cubes/Nakla	1,082,408 pieces 30 pcs 85.734 Mt	3,252,605- pieces -- 62.437 Mt
11	Leather	1.72 MT	0.29- MT

Annexure XI

Raw Material Usage -2021

	Raw Material	Locally Purchased Quantity (MT)	Imported Quantity (MT)
A	Cereals		
	<i>Maize</i>	182,479.9	12,930
	<i>Broken Rice</i>	23,554.14	0
	<i>Wheat</i>	8,666.55	244,923.4
	<i>Others</i>	3,097.2	978.69
	Total Cereals	217,797.79	258,832
B	Cereal by Products		
	<i>Rice Polish/Rice Bran</i>	96,490.58	340
	<i>Wheat Bran</i>	86,297.37	0
	<i>Wheat Feed Flour</i>	0	0
	<i>DDGS</i>	7,718.97	17,518.77
	<i>Other</i>	36,716.5	25,966
	Total Cereal by Products	227,223.42	43,824.77
C	Plant Protein Supplement		
	<i>Coconut Meal</i>	7,848.63	350
	<i>Soya Bean Meal</i>	55,583.19	275,792.1
	<i>Other</i>	2,666.23	7,287
	Total Plant Protein Supplement	66,098.05	283,429.1
D	Animal by Products		
	<i>Fish Meal</i>	5,783.05	7,402.95
	<i>Meat & Bone Meal</i>	6,045.74	204,482.5
	<i>Poultry Offal Meal</i>	4,742.42	0
	<i>Poultry Fat</i>	0	3,720
	<i>Other</i>	0	58
	Total Animal by Products	16,571.21	215,663.45
E	Feed Grade Oil		
	<i>Vegetable Oil</i>	1,759.4	257,015.9
	<i>Palm Oil</i>	129.01	0
	Total Feed Grade Oil	1,888.41	257,015.9
F	Vitamin/Mineral Supplements		
	<i>Di Calcium Phosphate</i>	36,159.74	432,959
	<i>Calcium Carbonate</i>	11,059.45	5.78
	<i>Salt</i>	1,727.19	0
	<i>Shell grit</i>	6,313.65	40
	<i>Others</i>	39.17	52.07
	<i>Vitamins & Minerals</i>	547.52	3,425.01
	Total Vitamins & Minerals Supplement	55,846.72	436,481.86

	Raw Material	Locally Purchased Quantity (MT)	Imported Quantity (MT)
G	Urea	7	19
	Urea	7	19
H	Amino Acids		
	<i>DL- Methionine</i>	502.27	3,110.5
	<i>L-Lysine</i>	753.84	3,534.28
	<i>L- Threonine</i>	145.1	1,171.53
	Total Amino Acids	1,401.21	7,816.31
I	Additives		
	<i>Probiotic</i>	44.82	189.58
	<i>Prebiotic</i>	21.38	87.28
	<i>Acidifiers</i>	88.63	168.84
	<i>Toxin Binders</i>	492.28	408.2
	<i>Mold Inhibitors</i>	0	45
	<i>Growth Promoters</i>	33.17	3
	<i>Anticoccidial agents</i>	169.9	81.18
	<i>Exogenous Enzymes</i>	636.25	355.46
	<i>Antioxidant</i>	21.55	0
	<i>Emulsifier</i>	21.04	14.7
	<i>Preservatives</i>	0	60
	<i>Others</i>	985.72	91.93
	Total Additives	2,514.74	1,505.17

Annexure XII

Present Cadre Position of the Department & Staff Strength as at 2021.12.31

S. No	Designation	Approved Cadre	Current			Vacancies
			Project I	Project II	Project III	
1	Director General	1	1	0	0	0
2	Addl. Director General	4	3	0	0	1
3	Addl. Director General (Admin)	1	1	0	0	0
4	Director (Admin)	1	1	0	0	0
5	Chief Accountant	1	1	0	0	0
6	Director	6	0	0	0	6
7	Registrar (Animal Foods)	1	1	0	0	0
8	Registrar (Veterinary Drugs)	1	0	0	0	1
9	Chief Animal Quarantine Officer	1	0	0	0	1
10	Chief Vet. Economics Specialist	1	0	0	0	1
11	Chief Epidemiologist	1	0	0	0	1
12	Principal Scientist	6	0	0	0	6
13	Veterinary Investigation Specialist	1	0	0	0	1
14	Chief Vaccinologist	1	0	0	0	1
15	Livestock Extension Specialist	1	0	0	0	1
16	Vet. Reproductive Specialist	1	0	0	0	1
17	Animal Breeding Specialist	1	0	0	0	1
18	Chief Agronomist	1	0	0	0	1
19	Veterinary Public Health Specialist	1	0	0	0	1
20	Dairy Engineering Specialist	1	0	0	0	1
21	Chief Internal Auditor	1	1	0	0	0
22	Accountant	3	3	0	0	0
23	Deputy/Assistant Director (Admin)	2	1	0	0	1
24	Deputy Directors	8	0	0	0	8
25	Vaccine Production Superintendent	1	0	0	0	1
26	Animal Quarantine Officers	10	9	0	0	1
27	Veterinary Research Officer	24	0	22	0	2
28	Veterinary Investigating officer	26	0	19	0	7
29	Research Officer	5	0	2	0	3
30	Agriculture Economist	1	0	0	0	1
31	Livestock Economist	1	0	0	0	1
32	Livestock Officer	16	1	1	6	8
33	Veterinary Surgeon	61	18	31	17	-5

Present Cadre Position of the Department & Staff Strength as at 2021.12.31

S. No	Designation	Approved Cadre	Current			Vacancies
			Project I	Project II	Project III	
34	Civil Engineer	1	0	0	0	1
35	Legal Officer	1	0	0	0	1
36	Laboratory Scientist	1	0	0	0	1
37	Administrative Officer	3	1	1	0	1
38	Research Assistant	7	0	2	0	5
39	Livestock Promotion Officer	8	0	1	3	4
40	Translator	2	2	0	0	0
41	ICT Officer	1	1	1	0	-1
42	Statistical Officer	1	1	0	0	0
43	Development Officer	116	43	39	28	6
44	Development Assistant	2	1	0	1	0
45	Legal Assistant	2	1	0	0	1
46	Programming Assistant	2	0	1	1	0
47	Programming Assistant (Communication)	1	0	0	1	0
48	Technical Officer	6	3	0	0	3
49	Draftsman	1	1	0	0	0
50	Research Assistant	70	3	60	5	2
51	Librarian	3	0	0	1	2
52	Livestock Development Officer	62	16	9	22	15
53	Management Service Officer	72	39	13	12	8
54	Livestock Development Officer	3	1	0	2	0
55	Warden -female	1	0	0	0	1
56	Warden- male	1	0	0	0	1
57	Driver	76	16	34	17	9
58	Tractor Operator	3	0	1	0	2
59	Laboratory Aide	47	1	29	6	11
60	Mechanic	2	1	1	0	0
61	Boiler Operator	1	0	0	0	1
62	Carpenter	3	0	0	0	3
63	Electrician	1	0	1	0	0
64	Bungalow Keeper	1	0	0	1	0
65	KKS	32	14	7	10	1
66	Garden Laborer	1	0	0	0	1

Present Cadre Position of the Department & Staff Strength as at 2021.12.31

S. No	Designation	Approved Cadre	Current			Vacancies
			Project I	Project II	Project III	
67	Sanitary Laborer	1	0	1	0	0
68	Watcher	3	1	0	2	0
69	Bast Bullock Care-taker	5	0	0	0	5
70	Milk Man	4	0	0	0	4
71	Goat Care-taker	4	0	0	0	4
72	Animal Guardian	12	0	0	0	12
73	Lawn Mower	15	0	0	0	15
74	Animal Control Aide	23	2	6	11	4
75	Field Assistant	161	11	47	72	31
		954	200	329	218	207

Annexure XIII

Financial Allocations and the Expenditure Summary - 2021

	Allocation (Rs. Mn.)	Expenditure (Rs. Mn.)	Balance at 31.12.2021 (Rs. Mn.)	Expenditure as a % of Allocation
Project 1				
Capital Expenditure	62,000,000	49,627,827	12,372,173	80.04%
Recurrent expenditure				
Personal Emoluments	519,500,000	492,111,159	27,388,841	94.72%
Other	124,300,000	120,362,099	3,937,901	96.83%
Total	705,800,000	662,101,086	43,698,914	93.80%
Project 11				
Capital Expenditure	231,000,000	131,154,974	99,845,026	56.78%
Total	231,000,000	131,154,974	99,845,026	56.78%
Project 111				
Capital Expenditure	258,000,000	210,770,905	47,229,095	81.70%
Total	258,000,000	210,770,905	47,229,095	81.70%
Total Capital Expenditure	551,000,000	391,553,706	159,446,294	71.06%
Total Recurrent Expenditure	643,800,000	612,473,258	31,326,742	95.13%
Total Capital & Recurrent Expenditure	1,194,800,000	1,004,026,964	190,773,036	84.03%

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