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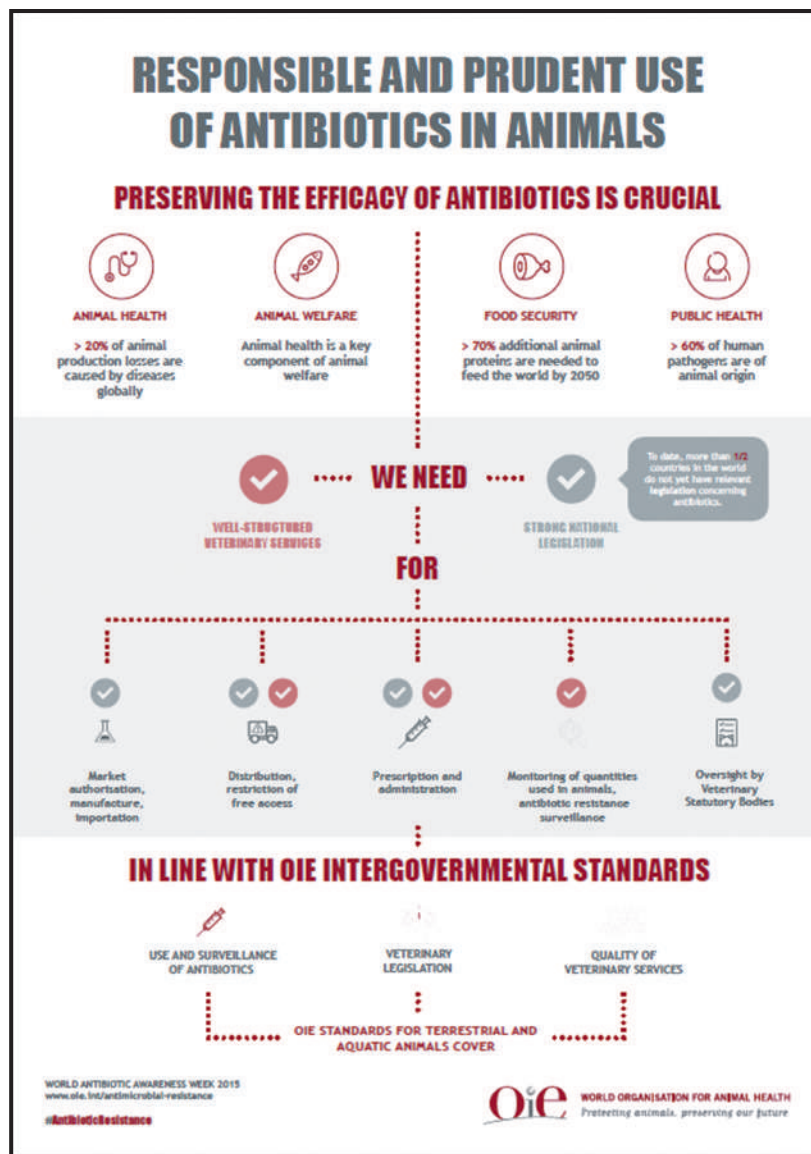
Antimicrobial Resistance

Antimicrobials are essential for human and animal health but inappropriate use of antimicrobials have resulted in antimicrobial resistance (AMR) which has become a major global concern. Infections caused by resistant microorganisms often fail to respond to the standard treatment, resulting in prolonged illness affecting welfare, high cost of treatments, and a greater risk of mortality.

AMR is the ability of a microorganism to multiply or persist in the presence of an increased level of an antimicrobial agent. Adaptation capabilities of microorganisms are linked to their ability for rapid multiplication and the possibility of exchanging genetic materials. Resistance to antimicrobial agents can be natural or acquired but the main concern is the high incidence of emergence of acquired AMR especially in bacteria, all over the world. All antimicrobial use will lead to selection of resistant bacteria but responsible and prudent use is needed to reduce the selection pressure of antimicrobials used in humans, animals and plants. Therefore, human, animal and plant sectors have shared responsibility to minimize emergence and spread of antimicrobial resistance. So "One health" approach has become vital to control antimicrobial resistance.

Prudent use of antimicrobials in animals, preserving the efficacy has become crucial not only for animal health but also for animal welfare, food security and public health. Globally more than 20% of production losses are due to diseases.

Therefore, maintaining a healthy animal population is essential to feed the increasing human population. It has been estimated that more than 70% of additional animal proteins are needed for humans by 2050. More than 60% of human pathogens are of animal origin and antimicrobial resistance in animal pathogens can have a significant effect on human health. Therefore, veterinarians have a major role to play in the fight against antimicrobial resistance.



Due to the importance of AMR, World Health Organization (WHO) adopted a Global Action Plan on Antimicrobial resistance this year. This Action Plan proposes the key actions to be implemented in the next five to ten years to ensure treatment of infectious diseases with effective, quality antimicrobial agents. The plan emphasizes the involvement of the World Organization for Animal Health (OIE) by OIE's intergovernmental standards and establishing a global database for antimicrobials used in animals. Further World Antibiotic Week has been declared from 16 November - 22 November 2015, by WHO and OIE with the theme "Antibiotics: Handle with Care" with the objective of increasing the awareness of global antibiotic resistance and to encourage best practices among the general public, health workers and policy makers to avoid further emergence and spread of antibiotic resistance.

Antimicrobial resistance is a complex problem driven by many interconnected factors. Therefore, collaborative action is required to minimize the emergence and spread of antimicrobial resistance and ensure availability of safe and effective antimicrobials in future.

Compiled by : Dr. C.G. Wijesinghe, Registrar, Veterinary Drug Control Authority

2. Status of Livestock Diseases in Third Quarter 2015

2.1 Bovine Diseases

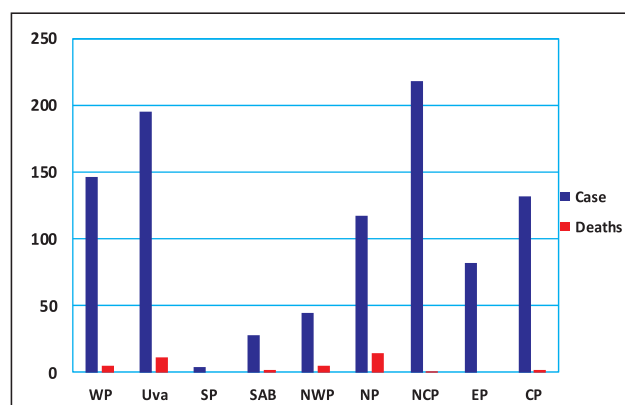
2.1.1 Bovine Babesiosis

In the Third quarter 2015, 966 Bovine Babesia cases were reported from 246 Veterinary ranges islandwide with 40 deaths. 733 pre-immunizations were carried out by VIOs in order to control this disease. Majority of cases were found in Western, North Central and Uva Provinces, whereas the Southern province had very limited outbreaks. Comparison shows an increase from the 781 cases with 37 deaths reported in the third quarter 2014.

Provincial Distribution Third Quarter 2015

Province	Case	Deaths
WP	146	5
Uva	195	11
SP	4	0
SAB	28	2
NWP	44	5
NP	117	14
NCP	218	1
EP	82	0
CP	132	2
Total	966	40

District VICs	Pre-immunizations in 3 rd Quarter 2015
Badulla	200
Dambulla	38
Jaffna	40
Kegalle	160
Kundasale	40
N'Eliya	40
Ratnapura	60
Wariyapola	75
Welisara	80
Total	733



2.1.2 Bovine Brucellosis :

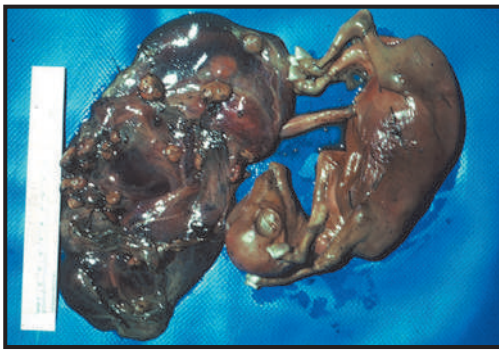
Bovine brucellosis is usually caused by *Brucella abortus*, less frequently by *B. melitensis*, and occasionally by *B. suis*. Infection is widespread globally.

Clinically, the disease is characterized by one or more of the following signs: abortion, retained placenta, orchitis, epididymitis and rarely arthritis with excretion of the organisms in uterine discharges and in milk. Diagnosis depends on the isolation of *Brucella* from aborted material, udder secretions or from tissues removed at post-mortem. Presumptive diagnosis can be made by assessing specific cell-mediated or serological responses to *Brucella* antigens.

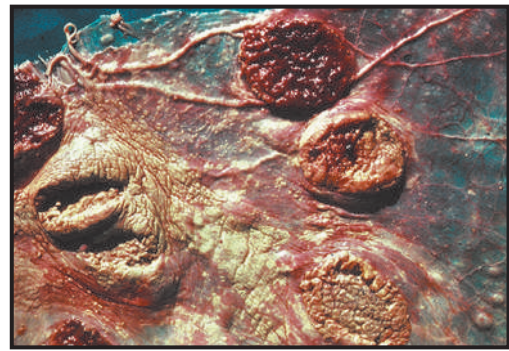
Brucella abortus, *B. melitensis* and *B. suis* are highly pathogenic for humans, and all infected tissues, cultures and potentially contaminated materials must be handled under appropriate containment conditions.

(www.oie.int/fileadmin/Home/fr/Health_standards/tahm/2.04.03_BOVINE_BRUCELLOSIS)

During the third quarter 2015, a total of 89 clinically suspected Brucellosis cases have been reported from six districts. In *Brucella* endemic areas 267 milk samples were subjected to MRT and 311 RBPTs were done among positive herds. 119 samples were sent to VRI for confirmatory diagnosis. According to the VRI information, within the period of third quarter 150 samples were subjected to RBPT and 39 positive reactors were detected. Out of them 13 CFT positive cases were isolated.

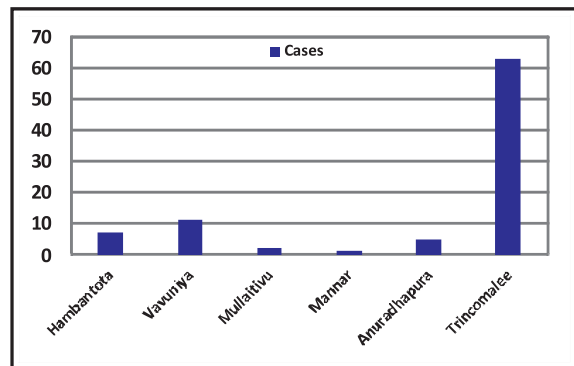


A partially decomposed bovine foetus and placenta



Severe placentitis revealing pale yellow foci in cotyledons and thickening of the intracotyledonary chorioallantois

District	Cases
Hambantota	7
Vavuniya	11
Mullaitivu	2
Mannar	1
Anuradhapura	5
Trincomalee	63
Total	89



2.1.3. Black Quarter

There were twenty cases of Black Quarter with 20% of CFR reported during the third quarter, 2015 in Northern and Eastern Provinces. A total of 47,712 prophylactic vaccinations were carried out islandwide during this period.

Black Quarter vaccinations during the third Quarter - 2015

Month	Case	Deaths
July	1	0
Aug	5	2
Sep	14	2
Total	20	4

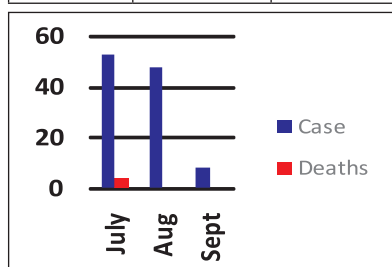
District	Vaccination
Anuradhapura	16312
Polonnaruwa	484
Kurunegala	2750
Puttlam	3779
Jaffna	1333
Kilinochchi	3925
Mannar	5240
Mullaitivu	650
Vavuniya	1030
Ampara	4944
Batticaloa	2593
Trincomalee	4672
Total	47712

2.1.4 Foot and Mouth Disease

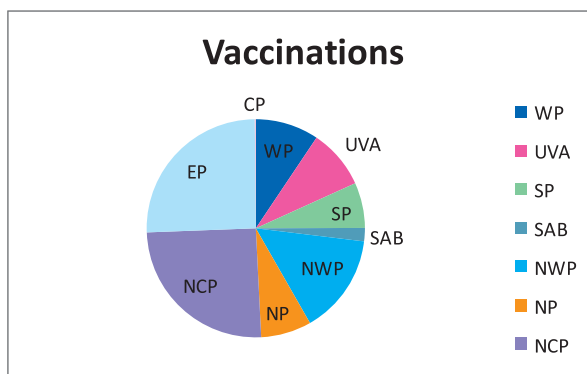
During the third quarter of the year 2015, 109 Foot and Mouth disease cases with 4 deaths have been reported from 12 veterinary ranges in seven provinces. In the 3rd quarter 2014, there had been 12,673 cases with 307 deaths. A rapid decline of the disease prevalence could be observed during the said period due to vaccination Programmes.

Monthly Distribution Third Quarter 2015

Month	Cases	Deaths
July	53	4
Aug	48	0
Sep	8	0
Total	109	4



Province	Vaccinations
WP	33051
UVA	31103
SP	23650
SAB	6928
NWP	52112
NP	26298
NCP	88663
EP	89585
CP	510
Total	351900



2.1.5 Mastitis :

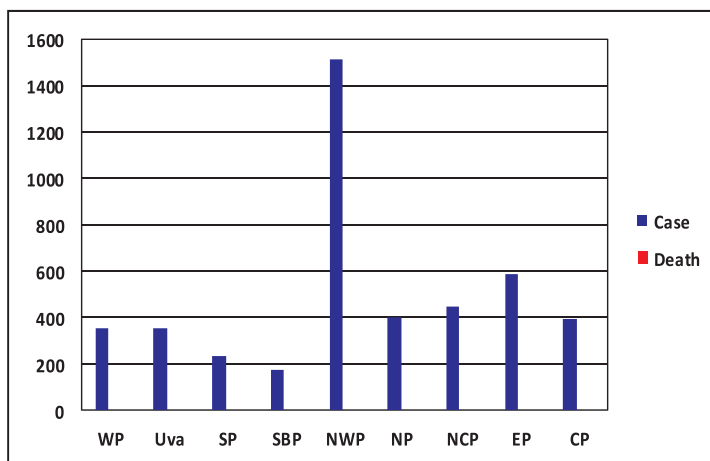
Total Mastitis cases during the third quarter of the year 2015, were 4,454. Majority of cases were found in the North Western Province. In comparison, the third quarter in year 2014 has reported 3,553 cases. 118 liters of CMT reagent and 2,295 liters of teat dip solution have been issued to the field in order to control mastitis. 316 ABST and 3674 CMT screenings were done by VIOs island wide during the same period.

Monthly Distribution Third Quarter 2015

Month	Case	Deaths
July	1312	4
Aug	1739	0
Sept	1403	6
Total	4454	10

Provincial Distribution Third Quarter 2015

Province	Case	Deaths
WP	351	4
Uva	353	2
SP	232	0
SAB	171	0
NWP	1512	0
NP	404	1
NCP	448	0
EP	587	1
CP	396	2
Country Total	4454	10



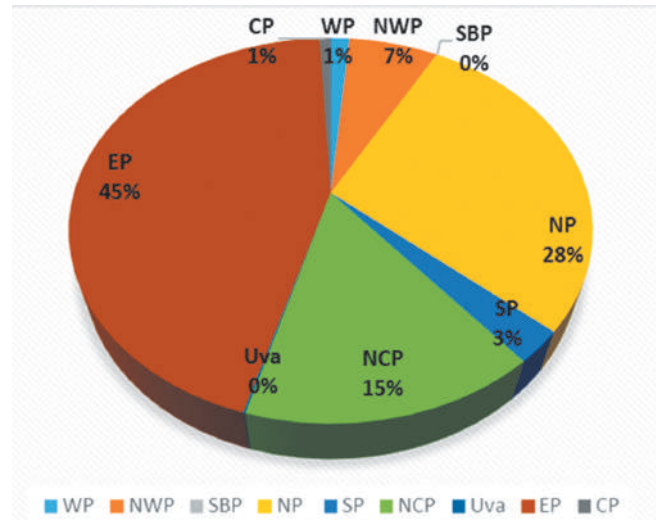
2.2 Caprine Diseases

2.2.1 Contagious Pustular Dermatitis :

In the third quarter 2015, 933 cases of Contagious Pustular Dermatitis have been reported with 5 deaths. Comparison shows an increase from 403 cases with 4 deaths reported in the third Quarter, 2014.

Provincial Distribution Third Quarter 2015

Province	Case	Deaths
WP	13	0
Uva	1	0
SP	25	0
SBP	0	0
NWP	62	0
NP	264	1
NCP	143	1
EP	417	3
CP	8	0
Country Total	933	5



2.3 Rabies :

During the third quarter 2015, 15 rabies cases have been reported from seven provinces. Out of them, 11 are cattle and 4 canine. They were reported from all the provinces except Eastern and Sabaragamuwa. In the third quarter of 2014, 24 livestock and 16 canine rabies cases had been reported from islandwide. This declining tendency may be due to the dog Rabies Elimination programme implemented by Veterinarians following the cabinet decision.

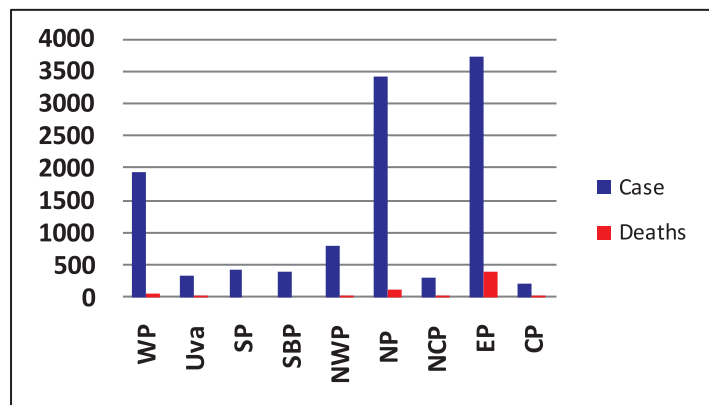
2.4 Poultry Diseases

2.4.1 Fowl Pox :

A total of 11,528 Fowl Pox cases and 603 deaths have been reported during the 3rd quarter 2015 and the majority of cases have been reported from Northern and Eastern provinces. In the year 2014, 12,309 fowl pox cases and 634 deaths had been reported islandwide.

Provincial Distribution Third Quarter 2015

Province	Case	Deaths
WP	1920	46
Uva	327	8
SP	436	3
SBP	394	3
NWP	801	19
NP	3423	111
NCP	289	7
EP	3730	387
CP	208	19
Country Total	11528	603

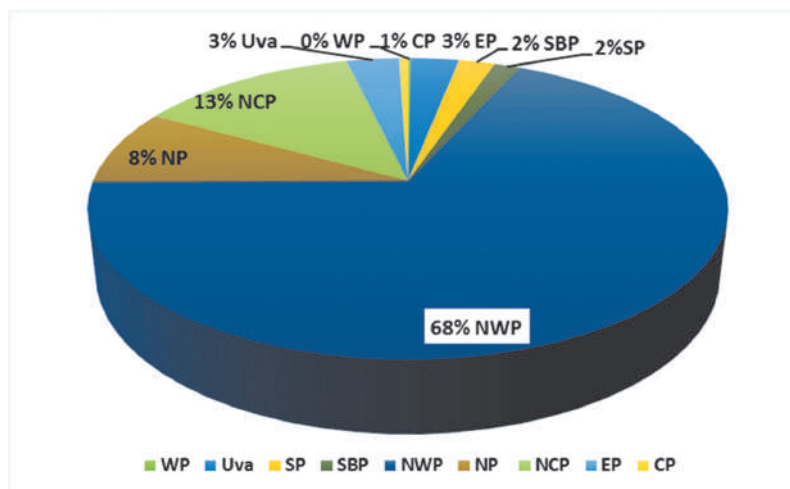


2.4.2 Gumboro Disease :

By the end of the third quarter 2015, 52,911 cases of Gumboro (IBD) with 1,788 deaths have been reported from all provinces. Most of the cases were reported from North Western province. In comparison with the third Quarter 2014, this shows a noticeable decrease from 96,771 cases with 3,479 deaths.

Provincial Distribution Third Quarter 2015

Province	Case	Deaths
WP	78	125
Uva	1560	69
SP	1148	34
SBP	825	12
NWP	36022	597
NP	4312	429
NCP	7000	230
EP	1693	222
CP	273	70
Country Total	52,911	1,788



2.4.3 Newcastle Disease :-

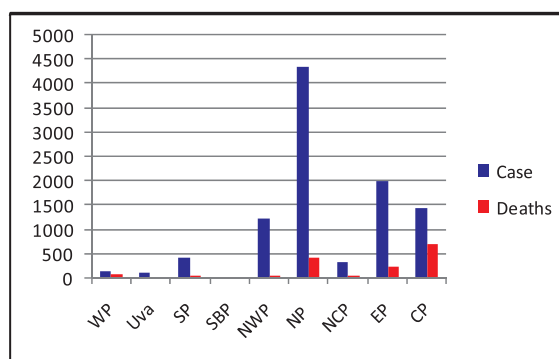
A total of 9,876 cases and 1,518 deaths were reported from all provinces during the third quarter 2015. Comparison shows a higher rate of increase from the 6,785 cases with 1,227 deaths reported in the third Quarter 2014.

Monthly Distribution Third Quarter 2015

Month	Case	Deaths
July	5201	749
Aug	2785	480
Sep	1890	289
Total	9,876	1,518

Provincial Distribution Third Quarter 2015

Province	Case	Deaths
WP	122	74
Uva	107	8
SP	397	30
SBP	2	0
NWP	1200	50
NP	4344	424
NCP	304	28
EP	1985	225
CP	1415	679
Country Total	9,876	1,518



2.5 Swine Diseases

2.5.1 Porcine Reproductive and Respiratory Syndrome :

During the third Quarter of 2015, 17 Porcine Reproductive and Respiratory Syndrome cases have been reported from Western, North Western Provinces.

3. Highly Pathogenic Avian Influenza

3. 1 National HPAI Surveillance Program July-Sep 2015

Se. No.	District	Commercial Poultry		Fresh droppings and cloacal swabs	
		No. Tested Serum Samples	Results	No. tested for AIV*	Results
1	Anuradhapura	-	-	120	Negative
2	Badulla	15	Negative	-	-
3	Chilaw	60	Negative	190	Negative
4	Dambulla	15	Negative	-	-
5	Homagama	103	Negative	252	Negative
6	Jaffna	50	Negative	-	-
7	Kalutara	60	Negative	90	Negative
8	Kegalle	15	Negative	30	Negative
9	Kundasale	90	Negative	70	Negative
10	Pannala	45	Negative	-	-
11	Ratnapura	-	-	27	Negative
12	Trincomalee	30	Negative	-	-
13	Vavuniya	-	-	205	Negative
14	Welisara	15	Negative	390	Negative
	Total	498	Negative	1374	Negative

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