



# Use of antibiotics for non-therapeutic purpose in food animal production in Sri Lanka: current status, need for control, measures and initiatives

---

**Nimal Priyankarage** (*BVSc, MPhil, PhD*)

Head (Animal Nutrition)

Veterinary Research Institute

Department of Animal Production & Health

Peradeniya, Sri Lanka.

# Content

---

- Livestock & Poultry Industry of Sri Lanka
- Animal Feed Industry of Sri Lanka
- Animal Feed Regulatory System in Sri Lanka
- Use of Antibiotic Growth Promoters (AGPs) in Sri Lanka
- Measures to reduce AGPs in Livestock & Poultry sector in Sri Lanka

# Livestock & Poultry Industry of Sri Lanka

---

- Livestock rearing is mainly a rural livelihood activity
- Livestock is rapidly growing sector in Sri Lanka
- Livestock sector contributes 1% to National GDP
- Though there is a low contribution to GDP, consumption of livestock products has increased dramatically.

# Livestock & Poultry Industry of Sri Lanka

---

## Dairy Sector

- Small scale dairy farming is predominant
- Extensive & semi intensive farming systems prominent but intensive system is also there

## Poultry sector

- Well developed, self sufficient industry
- Intensive farming system is predominant

## Other Sectors (Swine, Goat etc)

- Also developing

# Per-capita availability of livestock products per year

	2011	2012	2013	2014
Milk & Milk products (l)	43.83	46.18	43.96	45.16
Chicken Meat (Kg)	5.57	6.80	7.09	7.19
Egg (numbers)	81.78	112.10	102.56	107.91

Source: *Livestock Statistical Bulletin, DAPH*

# Livestock Population

	2011	2012	2013	2014
Poultry (mn)	15.41	15.72	16.26	20.08
Cattle (mn)	1.19	1.24	1.27	1.12
Swine	85,461	88,789	89,334	71,838
Goat	396,909	393,816	408,787	312,846

Source: *Livestock Statistical Bulletin, DAPH*

# Animal Feed Industry

---

- Well Developed industry in Sri Lanka
- Majority of feed produced are poultry feed
- Major ingredients used for feed production
  - Energy supplements: Maize, Rice and rice by products (Broken rice, Rice polish/Rice bran)
  - Protein supplements: Soy bean meal, Fish meal, Coconut meal , Sesame meal
  - Mineral supplements: Di calcium Phosphate, Shell grit, Calcite, MBM

# Animal Feed Production ('000 MT)

Type of Feed	2011	2012	2013	2014	2015	% (2015)
Poultry Feed	386.3	363.74	384.87	426.63	528.52	55
Cattle Feed	28.2	14.69	94.33	25.32	30.54	3
Swine Feed	1.7	3.99	2.07	1.47	2.7	0.28
Goat Feed	0.4	0.08	0.003	0.10	0.5	0.05
Other	2.0	4.23	6.67	7.11		
Vitamin Premixers	8.8	0.60	0.30	0.55	0.77	0.08
Self Mixed (mainly poultry feed)	208.8	351.50	384.22	386.00	396.39	41
<b>TOTAL FEED PRODUCTION</b>	<b>636.10</b>	<b>738.82</b>	<b>872.46</b>	<b>847.16</b>	<b>959.29</b>	

Source: *Livestock Statistical Bulletin, DAPH*



# Regulatory system in Sri Lanka

---

- Animal Feed Industry is regulated by Animal Feed Act No.15 of 1986

# Animal Feed Act

---

- Regulate, supervise & control the manufacture, sale & distribution of animal feed
- National Feed advisory committee
- Authorised officers

# Animal Feed Act

---

- Registration of
  - Animal feed manufactures
  - Feed, feed ingredient, feed additive importers
  - Feed, feed ingredient, feed additive distributors
  - Self mixers
- Quality assurance of animal feed & feed ingredients
- Monitor & maintain the standards of animal feed and feed ingredients which has direct influences on safety of animal originated food which is the main public health concerns

# Use of Non-Therapeutic Antibiotics

---

- Used mainly for growth promotion
- Non- Therapeutics Antibiotics or Antibiotic Growth Promoters (AGPs) are highly used in animal feed production in SL
- Low, sub therapeutic levels are add to feed
- Most of the poultry feed formulas (except layer) contain AGPs

# Use of Non-Therapeutic Antibiotics

---

- Earlier there were many AGPs used in Sri Lanka
- However after implementation of feed act in 1996, use of AGPs are regulated
- There are only four (4) AGPs are permitted to use in poultry feeds in SL

# Permitted antibiotic Growth Promoters in Sri Lanka

Permitted AGP	
Bacitracin	Polypeptide
Virginiamycin	Streptogamine
Flavomycin	Complex of antibiotics derived from <i>Streptomyces bambergiensis</i>
Avilamycin	Mixture of oligosaccharides of the Orthosomycin group

# Quantities imported to SL

AGP	2014	2015	2016 (up to June)
Virginiamycin (Kg)	2,500	500	1,450
Bacitracin (Kg)	43,000	47,700	54,400
Flavomycin (Kg)	5000	3000	

Source: *Division of Regulatory Affairs, DAPH*

# Measures to reduce AGPs & Antibiotics in Livestock & Poultry Sector

---

## 1. Preparedness

- Formulated National Action Plan to combat Antimicrobial Resistance in Sri Lanka with the contribution of Ministry of Health, Department of Agriculture, Sri Lanka and WHO



# Measures to reduce AGPs & Antibiotics in Livestock & Poultry Sector

---

## 2. Awareness

- Commenced awareness programs on prudent usage of Antibiotics for therapeutic & non-therapeutic purposes in livestock & poultry industry for Veterinary Surgeons and extension officers of the Department of Animal Production & Health, Sri Lanka
- Plan to conduct awareness programs for all stakeholders and farmers in livestock, poultry and animal feed industries

# Measures to reduce AGPs & Antibiotics in Livestock & Poultry Sector

---

## 3. Surveillance & Research on AMR

- Targeted surveillance on identified bacteria in farm animal sector
- Residue analysis of food of animal origin & inputs (animal feed)

# Measures to reduce AGPs & Antibiotics in Livestock & Poultry Sector

---

## 4. Alternatives

- Conduct research on suitable alternatives to AGPs
- Reformulate feed ration with alternatives and reduce the use of AGPs
- Advise farmers to take suitable actions to reduce the use of therapeutic & non-therapeutic use of antibiotics
  - improve biosecurity
  - adopt proper vaccination programs

# Measures to reduce AGPs & Antibiotics in Livestock & Poultry Sector

---

## 5. Regulations

- Further strengthen the available regulations in Animal Feed Act & Animal Disease Act to reduce the use of antibiotics (both therapeutic & non-therapeutic)
- Gradual reduction of using AGPs in animal feed

Thank You