Global Agenda for Sustainable Livestock

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Towards accurate statistics on antibiotics use in livestock farming: the Uganda experience

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BUILDING TOGETHER SUSTAINABLE LIVESTOCK
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Outline

1. Introduction

2. Definition and Drivers of AMR

3. The LoA between UBOS and FAO

4. Proposed questions

5. Next Steps

Introduction

o   Uganda is a landlocked country lying on the equator in East Africa.

o   It includes a large portion of Lake Victoria, which forms most of its southern border along with Tanzania and Rwanda.

o   It is bordered to the east by Kenya, to the north by South Sudan and to the west by the Democratic Republic of Congo (DRC).

o   It is the tenth most populous country in Africa with a population of over 37 million with 56.7% under the age of 18 years (UBOS, 2015).

o   Over 70% of the labour force is employed in agriculture

o   Progress has been made in reducing national poverty rates from 56% in 1996 to 21% in 2016/17 (UBOS, 2017).

Introduction cont'd

- Globally, livestock are becoming agriculture's most economically important sub-sector, with demand in developing countries for animal foods projected to double over the next 20 years.

- In the developing world, there is a growing trend in the consumption of animal products such as meat especially due to a growing population, urbanization and rising incomes.

- Livestock production constitutes an important subsector of Uganda's agriculture

- Overall, 70.8% of household in Uganda rear livestock (including poultry)

- It contributes about 4.2 per cent of GDP 18.4 per cent of Agricultural GDP and is a source of livelihood to about 5.8 million people in the country (UBOS, 2017).

Introduction cont'd

- In Uganda, the animal meat estimates indicate that cattle beef is the most consumed meat in the country with an average of 6.5kg/person/year (Agriterra, 2012)

- The demand for beef has also steadily been rising within the same period due to increase in per capita income at rate of 4.2%, population growth and high rate of urbanization which stand at 3.0% and 5.4% respectively (UBOS, 2014).

- The need for accurate and reliable statistics for monitoring the sector, needless over emphasize.

Introduction cont'd

- Most of the beef production is the done on extensive production systems mainly located in the cattle corridor Uganda.

- The livestock sector is governed by several policies and regulations including:

  ➢ the national delivery of veterinary services,

  ➢ national veterinary drug policy,

  ➢ national hides, skins and leather policy,

  ➢ animal breeding policy and

  ➢ the animal feeds policy, among others.

The recently enacted Meat Industry development law was instituted to improve production, processing and marketing of meat and meat products.

Definition of AMR

o The term "antimicrobial" with respect to antimicrobial resistance (AMR), refers to any microorganism (bacteria, fungus, parasite or virus) developing resistance to a drug to which it was previously sensitive.

o However, the global focus on antimicrobial resistance, particularly in the field of agriculture, is primarily on antibiotic resistance and usage

o the terms "antimicrobial" and "antibiotic" are often used interchangeably.

Drivers of AMR

o The key driver for antimicrobial resistance in agriculture is the quantity and quality of antimicrobials used in livestock production and aquaculture (Grace, 2015).

o *Other drivers include:*

o **Lack of awareness and concern over antibiotic use:** Despite heightened awareness in high-income countries and recognition that antibiotic resistance is a global problem, the issue is still not on the agenda for most low-income countries.

Drivers of AMR cont'd

o **Lack of information**: Developing countries lack information on the presence and prevalence of AMR in animals and their products and of the health impacts and cost of AMR illness in people and animals.

o **Fake and substandard drugs**: There is much concern over counterfeits and substandard drugs in animal health care, but insufficient data to understand its importance

o **Lack of alternatives to antibiotic use**

o **Poor integration between human and animal health sectors**: At international level, there is good collaboration between WHO, OIE and FAO in the area of AMR. However, in developing countries (and many developed) data on antibiotic use in human health care and in agriculture are not systematically collected or shared.

Towards Accurate Statistics - LoA UBOS/FAO

o The FAO Statistics Division has agreed upon a Letter of Agreement with Uganda Bureau of Statistics on analysing UBOS agricultural datasets, which are representative of Uganda as a whole and of major regions.

o These data, as they also portray agriculture with accuracy, are essential for informed decision-making by livestock decision-makers.

o For example, the analysis of the UBOS data, has indicated that, among other things:

> **14% of Uganda livestock farmers utilize livestock extension services;**
> **22% of Uganda livestock farmers treat their animals when sick.**

LoA UBOS/FAO

○ At the same time, ASL2050 implemented an Expert Elicitation Protocol on zoonotic diseases, which also included some questions on antibiotics use (AMU) in animal agriculture and on antimicrobial resistance in humans.

○ Results of the Expert Elicitation Protocol indicate that:

  ➢ **45% of Ugandan poultry farmers use antibiotics;**

  ➢ **62% of Ugandan cattle farmers use antibiotics.**

○ The UBOS and Expert Elicitation Protocol results point to some inconsistency:

  ➢ **22% of farmers treat animals when they are sick;**

  ➢ **14% access extension services and**

  ➢ **yet between 45 and 62 percent use antibiotics.**

LoA UBOS/FAO

o   Indeed, it is implausible to believe that between 20 and 40 percent of farmers use antibiotics for prophylactic purposes.

o   Other available evidence does not clarify things:

- *the Uganda National Academy of Sciences in 2015 published a report on antimicrobial resistance in the country, which bases largely if not only on interviews with experts, such as the ASL2050 expert elicitation protocol.*

o   In addition, this report forms the basis for the Antimicrobial Resistance chapter of the 2018/2022 Uganda One Health Strategy.

o   Overall, it looks like there is a major information gap on antibiotics use in animal agriculture in Uganda, and on antimicrobial resistance more in general.

LoA UBOS/FAO

o   Given the above, ASL2050 agreed to join the FAO Statistics Division to include in the FAO-UBOS Letter of Agreement an activity aimed at:

o   Identifying and proposing questions on antibiotics use (AMU) in animal agriculture to include in UBOS nationally representative surveys,

o   The Uganda National Panel Survey and the Annual Agricultural Survey.

o   The next Uganda National Panel Survey will be administered in 2019, while the Annual Agricultural Survey will be administered starting from September 2018.

o   The inclusion of AMU questions in a nationally representative survey is expected to provide reliable baseline data on farmers' use of antibiotics.

o   Such baseline data will aid Gov't effectively operationalize and monitor the implementation of the One Health Strategy,

LoA UBOS/FAO

o   An UBOS team was in Rome in May as part of the implementation of the FAO-UBOS LoA on agricultural statistics.

o   The team had the opportunity to meet with the ASL2050 HQs team on 15 May 2018 as well as with staff from the FAO Antimicrobial Working Group.

o   During the discussion, it was agreed that a maximum of three to five questions can be included, initially, in current UBOS surveys.

o   However, before being included in larger survey questionnaires, these questions need to be commented on by the members of the ASL2050 Steering Committee and validated by Stakeholders.

Proposed Questions

o **During the stakeholder mapping and validation workshop in Jinja, the ASL2050 Steering Committee and Stakeholders agreed on the questions, to be asked to farmers / farm managers, as outlined below:**

1) **Did you use any of these major medicines called antibiotics for your animals (herd/flock) in the last x months?**

- The reference period is that of the survey in which the questions will be added and varies between 3 to 12 months.

- A list of names / pictures of major antibiotics will be provided to the respondents, on the assumption that many farmers are not sure on the type of medicines are giving to their animals (whether they are antibiotics or not)

2) **What are the main purposes for giving antibiotics to your animals (Herd/Flock?**

- A list of options will be provided to the respondent, e.g. for curative purpose, for growth promotion; etc.

Proposed Questions cont'd

3) **How often did you give antibiotics to your animals (herd/flock) in the last x months?**

- The reference period is that of the survey in which the questions will be added and varies between 3 to 12 months.
- Options will be provided to the respondent, such as one per month; once every three months; etc.

4) **Who did advise you to use mentioned antibiotics & who administers the antibiotics [name of antibiotics]?**

- **Options** will be provided, such as public vet; private vet; NGOs; etc.
- **Option 2**: Farmer, extension worker, Herdsmen, neighbour, Veterinary staff.

Proposed Questions cont'd

5) Have you encountered any problem with prolonged use of [name of antibiotics that is commonly used]?

o They fail to work effectively

o Animal do not recover

o You need to administer more to get results

6) How long do you take to sell/Eat animals & Milk/meat treated with antibiotics?

Commonly Used Antibiotics

S/no	Brand/Trade Name	Active Ingredient	Species used in
1	Oxytet 20%	Oxytetracyline	Cattle , goats and Pigs
2	Tetroxy 20%	Oxytetracyline	Cattle , goats and Pigs
3	Oxytetracycline 10%, 12.5%	Oxytetracyline	Cattle , goats and Pigs
4	Oxystar 10% & 20%	Oxytetracyline	Cattle , goats and Pigs
5	Alamycin 10% & 20%	Oxytetracyline	Cattle , goats and Pigs
6	Hitet 120	Oxytetracyline	Cattle , goats and Pigs
7	Curamycin 125	Oxytetracyline	Cattle , goats and Pigs
8	Norodine	Sulphonamide	Cattle , goats and Pigs

Commonly Used Antibiotics

9	Bipen	Penecillin	Cattle , goats and Pigs
10	Penstrep	Penecillin	Cattle , goats and Pigs
11	Tetracycline Powder	Tetracycline	Poultry
12	Oxyveto 10%	Tetracycline	Poultry
13	Limoxin 20%	Tetracycline	Poultry
14	OTC 20%	Tetracycline	Poultry
15	Oxytravet Powder	Tetracycline	Poultry
16	Amprosulf	Sulphonamide	Poultry

- Have pictures of most of the drugs with the survey team printed for reference

- A few local names of some of the drugs if possible, we could generate them during pretesting sessions.

Next Steps

o Presentation to GASL

o Pre-testing the Questions in September, 2018

o Data collection, processing and analysis and dissemination of findings

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