FAO Action Plan on AMR and AMR eLearning

FAO AMR elearning course: Understanding AMR in food and agriculture

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Addressing antimicrobial resistance (AMR) in agrifood systems; a FAO e-learning introductory course on AMR, 27 April

**AMR DRIVERS**

*Misuse and overuse* of antimicrobials are among the main drivers for the development of AMR.

**FOOD ANIMALS**

73% of all antimicrobials sold are used in animals raised for food.

**ENVIRONMENT**

Residues of antimicrobials used in production may *spread into the environment* contaminating soil and water.

**FOOD**

Global demand for food is estimated to increase *more than 70% by 2050*.

**INTENSIFICATION**

*Intensification of animal and crop* production is increasing the use of antimicrobials.
Addressing antimicrobial resistance (AMR) in agrifood systems; a FAO e-learning introductory course on AMR, 27 April

**Consequences**

**TREATMENT**

AMR is reducing the effectiveness of antimicrobials compromising the treatment of infectious diseases.

**DEATHS**

Recent studies found that AMR caused 1.27 million human deaths in 2019

**10 MILLION**

The death that could reach 10 million per year by 2050.

**100 TRILLION**

The economic impact if the problem is not address could have an impact of about USD 100 trillion.
FAO’s role

FAO plays a key role in supporting governments, producers, traders and other stakeholders to move towards the responsible use of antimicrobials in agriculture, thus helping reduce antimicrobial resistance in agricultural systems.
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FAO Action Plan on AMR

Supporting innovation and resilience in food and agriculture sectors

AMR online learning?

FAO tools, intervention, guidelines
5.1 Country progress with development of a national action plan on AMR

- A: No national action plan.
- B: National action plan under development or plan involves only one sector or industry.
- C: National action plan developed that addresses human health, animal health and other sectors.
- D: Single-sector action plan developed that addresses livestock health plan objectives, with or without operational plan and monitoring arrangements.
- E: Single-sector action plan has funding sources identified, is being implemented and has monitoring in place.

Source: Tripartite AMR country self-assessment survey data.

Fig. 21 Responses on good management and hygiene practices in the animal production sector, 2019–2020

- A: No systematic efforts to improve good production practices.
- B: Some activities in place to develop and promote good production practices.
- C: National plan agreed to ensure good production practices in line with international standards (e.g., OIE Terrestrial and Aquatic Codes, Codex Alimentarius). Nationally agreed guidance for good production practices developed, adapted for implementation at local level and field production level.
- D: National implementation of plan to ensure good production practices and national guidance published and disseminated.
- E: Implementation of the national plan is monitored periodically.

Source: Tripartite AMR country self-assessment survey data.
• FAO Progressive Management Pathway for AMR (FAO-PMP-AMR) *(12 countries)*
• Tool for Situation Analysis of AMR Risks in the food and agriculture sectors *(13 countries)*
• Assessment Tool for Laboratories and AMR Surveillance Systems (FAO-ATLASS) *(28 countries)*
• Legal methodology to analyze AMR-relevant legislation in the food and agriculture sectors *(22 countries)*
Field interventions enabling good practices and prudent AMU

- **Stakeholder assessments**
  (farmers, feed industry, agrovets, animal health workers) using various, mix-methods and knowledge, attitudes, and practices surveys across livestock systems

- **Participatory interventions**
  Farmer Field Schools, Behaviour Change Community of Practice

- **One Health approaches for antimicrobial stewardship** among veterinarians and medical doctors
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Understanding AMR in food and agriculture

overview of antimicrobial resistance (AMR)

Explains the role of the food and agriculture sector, and the impact of AMR on agrifood systems

Describes how FAO is contributing to tackle AMR.
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**Course structure**

The course consists of 5 lessons:

- **Lesson 1** - What is antimicrobial resistance and why is it a global public health challenge
- **Lesson 2** - Antimicrobial resistance in the context of One Health
- **Lesson 3** - The role of food and agriculture stakeholders in antimicrobial resistance
- **Lesson 4** - How can antimicrobial resistance be contained and its impacts minimized in food and agriculture
- **Lesson 5** - The role and current initiatives of FAO in tackling antimicrobial resistance
How would it benefit audience?

Target audience

- producers and wholesale and retail distributors of antimicrobials;
- extension and veterinary services, epidemiologists, laboratory personnel and academia, including students; and
- government officials, policy-makers, food safety officers and the private sector.

Digital certificate

- Employment
- Education
Course development process

- **Subject matter experts**
  - FAO CJWZ
  - UK Defra (FAO Reference Centre for AMR)

- **Platform**
  - FAO elearning academy

- **Technical validation**
  - FAO AMR experts (FAO AMR working group on AMR and Action Plan pillar leads)
  - FAO Reference Centre for AMR
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**Way forward**

- Producing new courses upon the demand

**Awareness & Engagement**
- Development of the targeted awareness product
- Awareness raising, advocacy and behavioural analysis

**Surveillance & Research**
- FAO ATLASS modules for assessor
- AMR data generation and interpretation of AST
- AM Residue monitoring
- Implementation of surveillance guidelines
- Implementation of risk analysis for AMR
- Epidemiology training for AMR/AMU data management

**Best Practice**
- The Codex code of practice
- Guidance on phytosanitary measures
- Agriculture waste management
- Improving management of animal diseases and reducing AMU

**Responsible AMU**
- AM Stewardship
- Application of voluntary guidelines for responsible AMU
- Practical recommendations for prudent AMU

**Governance & Resources**
- AMR legislation
- Building the economic case for prudent AMU
- FAO-PMP-AMR
- AMR and One Health
Way forward

- Keep developing elearning framework further to provide elearning service

- AMR elearning webpage to find all the AMR courses

- Create community to share the experience across the regions
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THE VLCS ARE LEARNING HUBS BASED IN SEVEN FAO REGIONS/SUBREGIONS

1

VLCS PROVIDE BROAD AND QUALITY VIRTUAL TRAINING TO PROFESSIONALS AROUND THE WORLD

2

TRAININGS SUPPORT ONE HEALTH CAPACITY DEVELOPMENT, THE AGENDA 2030 AND THE SUSTAINABLE DEVELOPMENT GOALS (SDGS)

3

VLCS TRAIN LARGER AUDIENCES AT LOW COST

• REACH PEOPLE IN REMOTE LOCATIONS

• PROVIDE MOBILE FIRST SOLUTIONS
Thank you!

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Protecting people, animals, and the environment every day

Drawings: FAO/Chiara Caproni