



World Organisation
for Animal Health



WOAH Standards Facilitating Safe International Trade Commodity: Poultry Meat

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MINISTRY OF
AGRICULTURE
AND LIVESTOCK
DEVELOPMENT



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Poultry Meat Food Safety and Safe International Trade

Antimicrobial Resistance (AMR), Responsible Antimicrobial Use (AMU), Veterinary Drug Residues, Codex Alimentarius Standards and HACCP Across the Poultry Value Chain

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Why Poultry Meat Food Safety Matters

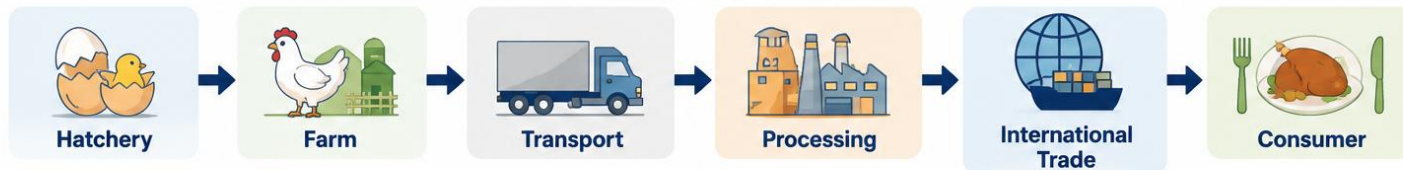
Global Growth

Food Security

International Trade

One Health Impact

THE POULTRY VALUE CHAIN



Animal Health



Food Safety



Consumer Confidence



Safe Trade

WHY IS THIS IMPORTANT?



GLOBAL FOOD SECURITY

Poultry provides affordable, high-quality protein for billions of people.



ECONOMIC GROWTH & LIVELIHOODS

Supports jobs, incomes, and economic development across the value chain.



INTERNATIONAL TRADE

Poultry meat is one of the most traded animal-source foods globally.



PUBLIC HEALTH PROTECTION

Safe food prevents disease and reduces the burden on health systems.



CONSUMER CONFIDENCE

Safe products build trust and sustain demand in domestic and global markets.

IF FOOD SAFETY FAILS...



FOODBORNE OUTBREAKS

Illness and even death in consumers.



SPREAD OF AMR BACTERIA

Resistance can spread through the food chain and community.



TRADE RESTRICTIONS

Import bans and strict measures limit market access.



ECONOMIC LOSSES

Reduced production, loss of markets and income.



LOSS OF CONSUMER CONFIDENCE

Declining demand and reputation damage.



SAFE POULTRY MEAT IS THE FOUNDATION OF SUSTAINABLE POULTRY PRODUCTION, PUBLIC HEALTH, AND INTERNATIONAL MARKET ACCESS.



Poultry Food Safety Hazards

1. Biological Hazards

Pathogens: *Salmonella* spp., *Campylobacter jejuni*, pathogenic *E. coli*, and *Listeria monocytogenes* originating from farm or processing.

2. Chemical Hazards

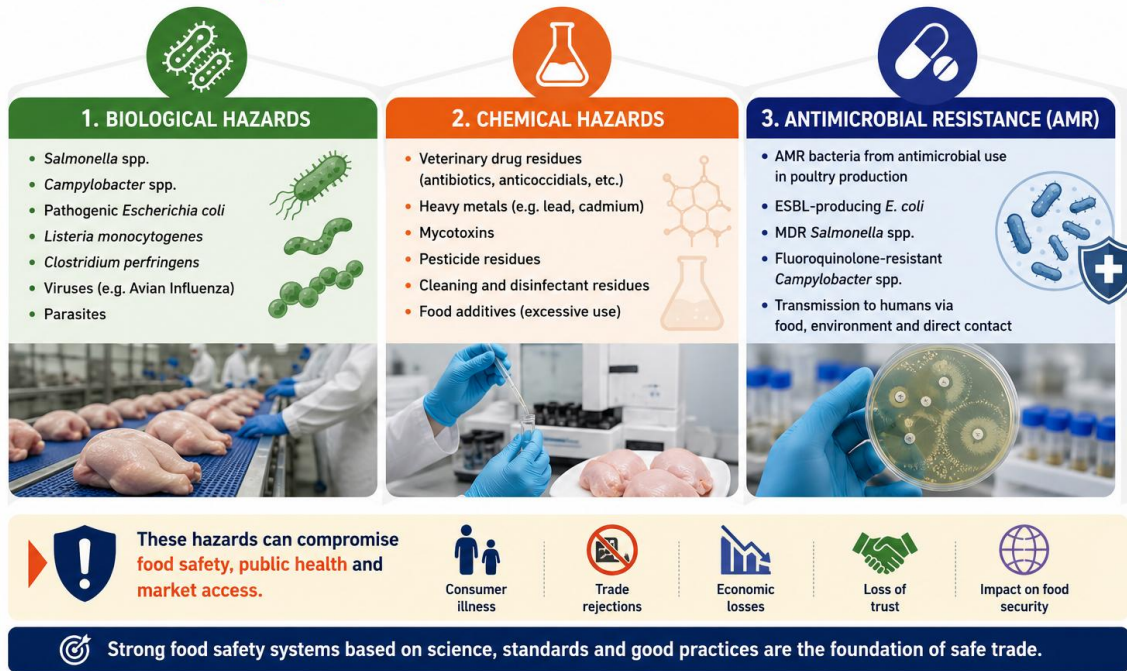
Residues: Veterinary drug residues exceeding Maximum Residue Limits (MRLs), mycotoxins in feed, and sanitizing chemical contaminants.

3. AMR Hazards

Resistant Genes: Selection pressure from misuse of antimicrobials resulting in resistant bacteria transmitted via food chain.

Three Pillars of Poultry Food Safety Hazards

Hazards can enter at any point of the value chain and affect consumer health and trade



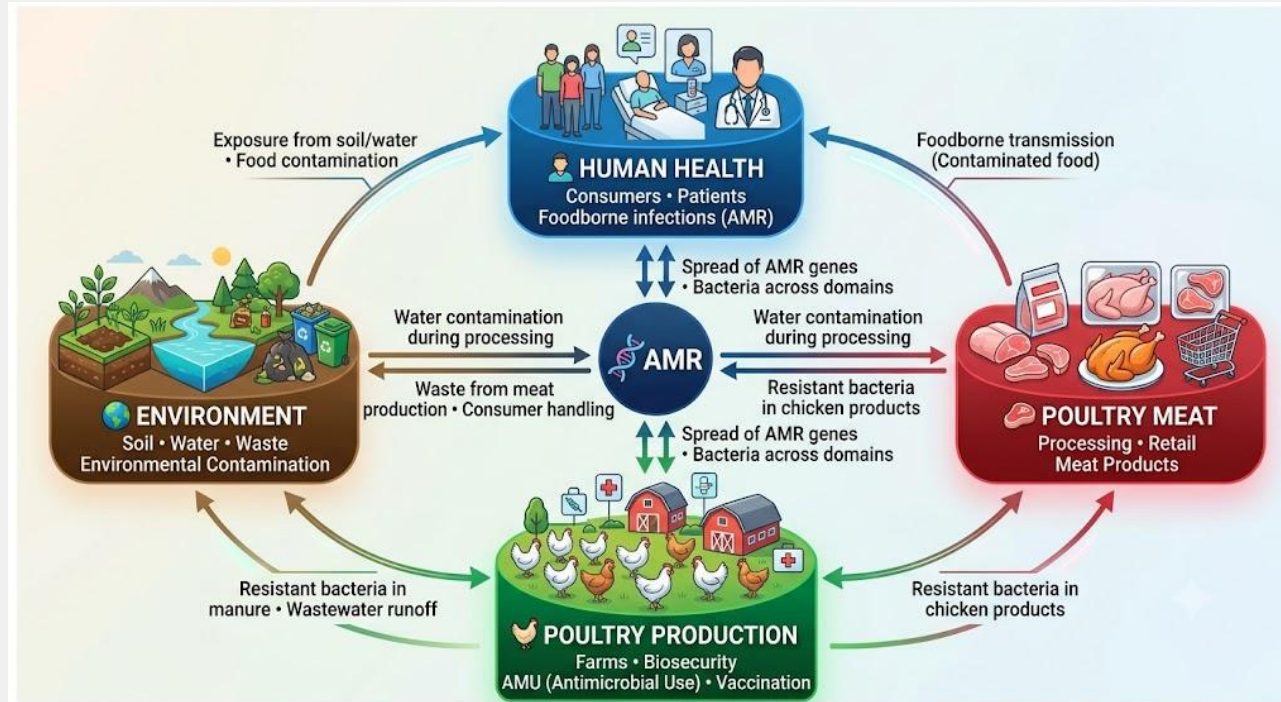
Understanding AMR in Poultry Production

 **Selection Pressure:** Sub-therapeutic antimicrobial use accelerates survival of resistant bacteria strains.

 **Transmission Pathways:** Horizontal gene transfer in poultry gut, water, litter, and abattoir contact surfaces.

 **One Health Dynamics:** Spread between poultry, farm workers, environment, and end consumers.

 **Trade Rejections:** Detections of resistant pathogens trigger trade bans and loss of export market status.



Responsible Antimicrobial Use (AMU)

✓ Recommended Practices

Mandatory professional veterinary oversight & prescription.

Use antimicrobials only when justified by clinical assessment and, whenever feasible, supported by appropriate diagnostic testing.

Use of WOAH List of Antimicrobials of Veterinary Importance.

✗ Practices to Avoid

Routine preventative (prophylactic) mass flock treatment.

Use of antimicrobials as growth promoters (AGPs).

Off-label use of Highest Priority Critically Important Antimicrobials (HPClAs).

Five Pillars of Antimicrobial Stewardship



1. Right Diagnosis

Laboratory confirmation and sensitivity testing before treatment.



2. Right Drug

Selecting targeted narrow-spectrum veterinary medicines.



3. Right Dose

Precise weight-based dosing to prevent sub-lethal exposures.



4. Right Duration

Strict adherence to complete course duration guidelines.



5. Right Animal

Targeted flock treatment under strict veterinary surveillance.

Key Pathogens & Trade Implications

Pathogen	Primary Source	Food Safety Impact	Trade Consequence	AMR Concern
<i>Salmonella Enteritidis</i> / <i>Typhimurium</i>	Vertical (hatchery) & horizontal farm vector	Gastroenteritis, systemic illness	Zero-tolerance criteria in export markets; immediate border rejection.	High Multi-drug resistance (MDR) concern across beta-lactams & fluoroquinolones.
<i>Campylobacter jejuni</i>	Poultry gut colonization, cecal rupture at slaughter	Leading cause of bacterial foodborne gastroenteritis	Microbiological Performance Objectives (MPOs) mandated at chilling.	High Escalating resistance to macrolides and fluoroquinolones.
<i>Pathogenic E. coli</i> (STEC)	Fecal contamination during evisceration	Severe hemorrhagic colitis	Carcass rejection and processor audit failures.	High Concerns include extended-spectrum beta-lactamase (ESBL)-producing strains.
<i>Listeria monocytogenes</i>	Post-processing environment, cold chain storage	Invasive listeriosis in vulnerable groups	Recall of ready-to-eat (RTE) poultry shipments.	Moderate Generally susceptible, but emerging resistance observed.

Veterinary Drug Residues & MRLs

MRL

Maximum Residue Limit

-  **Withdrawal Periods:** Mandatory time elapsed between last drug administration and slaughter to allow residue depletion.
-  **Codex Standards:** Internationally established MRLs based on scientific evaluation by JECFA* (FAO/WHO).
-  **Illegal Substances:** Zero-tolerance for banned substances (e.g., chloramphenicol, nitrofurans).
-  **National Residue Control Plans (NRCP):** Mandatory testing for export accreditation.

*MRLs are established by the Codex Alimentarius Commission based on JECFA risk assessments.

Codex Alimentarius & WTO SPS Agreement



Joint FAO/WHO Food Standards

Established in 1963 to protect consumer health and ensure fair practices in food trade through science-based international consensus.



WTO Benchmark Reference

Recognized by the World Trade Organization (WTO) SPS Agreement as the global benchmark standard for food safety harmonization.

Core Codex Texts for Poultry Safety



CXC 1-1969

General Principles of Food Hygiene & HACCP Annex.



CXC 58-2005

Code of Hygienic Practice for Meat (Poultry Slaughter & Processing).



CXC 61-2005

Code of Practice to Minimize and Contain Foodborne AMR.

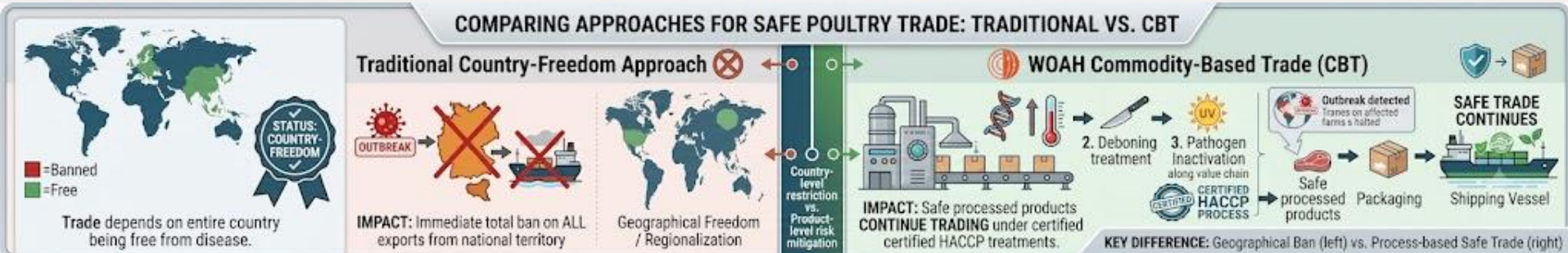


MRL Database

Codex MRLs for Veterinary Drugs in Poultry Tissue.

Traditional vs. Commodity-Based Trade

Parameter	Traditional Country-Freedom Approach	WOAH Commodity-Based Trade (CBT)
Core Principle	Trade depends on entire country being free from disease.	Trade depends on specific processing methods that eliminate risk.
Impact of Disease Outbreak	Immediate total ban on all poultry exports from national territory.	Safe processed poultry products continue trading under certified HACCP treatments.
Risk Mitigation	Geographical freedom / Regionalization.	Heat treatment, deboning, pathogen inactivation along value chain.



Seven Principles of HACCP

1

Hazard Analysis

Identify biological & chemical hazards.

2

Determine CCPs

Locate critical process control points.

3

Critical Limits

Establish measurable safety thresholds.

4

Monitoring

Continuous system testing & oversight.

5

Corrective Action

Immediate fixes when limits are exceeded.

6

Verification

Audit and validate system efficacy.

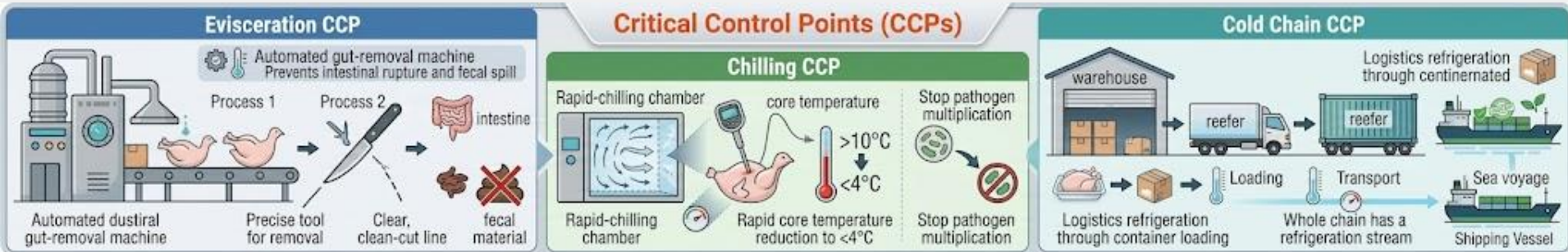
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Documentation

Complete traceability & compliance record-keeping.

Critical Control Points (CCPs)

- ✓ **Evisceration CCP:** Automated gut removal preventing intestinal rupture and fecal spill.
- ❄️ **Chilling CCP:** Rapid core temperature reduction to $<4^{\circ}\text{C}$ stopping pathogen multiplication.
- 🔒 **Cold Chain CCP:** Unbroken logistics refrigeration through export shipping container loading.



Integrating Biosecurity, AMU & HACCP

Farm Level (Pre-Harvest)

Strict biosecurity and antimicrobial stewardship reduce pathogen load and reliance on antibiotics before slaughter.

Processing Level (Post-Harvest)

HACCP controls, carcass washing, chilling, and residue testing prevent cross-contamination for end consumers.

One Health Framework for Safe Trade



Animal Health

WOAH Terrestrial
Code compliance,
vaccination &
surveillance.



Food Safety

Codex hygiene,
HACCP & MRL
residue monitoring.



Public Health

Reduction of AMR
transmission and
foodborne illness.



Safe Trade

Transparent SPS
certification &
commodity-based
trade.

Five Core Take-Home Messages

- ✓ **Shared Responsibility:** Safe international trade begins at the hatchery and extends through the entire value chain.
- ✓ **AMR Prevention:** Responsible AMU under veterinary oversight is critical to preserving antimicrobial efficacy.
- ✓ **Codex Alignment:** Aligning national standards with Codex Alimentarius protects public health and prevents trade disputes.
- ✓ **HACCP & CBT:** Commodity-Based Trade and HACCP enable safe market access even during animal health challenges.
- ✓ **One Health Collaboration:** Multisectoral partnership between Veterinary Services, Health Ministers, and Industry is essential.

Safe international trade begins with healthy poultry. Healthy poultry require responsible antimicrobial use. Responsible antimicrobial use helps reduce AMR and residues. Safe processing, Codex standards, and HACCP protect consumers and facilitate international trade.



Thank You

www.woah.org woah@woah.org



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