Tackling antimicrobial resistance in Italian farms

Measuring, Benchmarking & Stewardship
THE ITALIAN STRATEGY
Reducing and rationalising AMU in order to ensure livestock survival

- Improving the management of antimicrobials
- Improving the levels of biosecurity and animal welfare

SUSTAINABILITY

MEASURING
BENCHMARKING
STEWARDSHIP
CURRENT INITIATIVES

Addressing AMR from several perspectives

- **Pharmacosurveillance and Electronic Prescription System**
- **Classyfarm Integrated Monitoring System**
- **National Plan for Monitoring Antimicrobial Residues**
- **Piano Nazionale per la ricerca dei Residui (PNR)**
- **Nacional Plan to Contrast AMR**
- **Extended in 2021**
CURRENT INITIATIVES
The ClassyFarm integrated system

→ Result of the collaboration among stakeholders

→ Fully available for pigs, cattle and poultry (partially for other; e.g. – sheep and goats)

→ Interactive dashboards via business intelligence (BI)

→ Areas of interest
  - AMU/AMR → AMS and pharmacosurveillance
  - Biosecurity
  - Animal Welfare
  - Slaughterhouse data (under trials)
THE CLASSYFARM SYSTEM
Different data sources for an integrated stewardship tool

ON THE FIELD (VETs)
- Practitioner
- Public Officer
- Assessor

FARM: WELFARE, BIOSECURITY, AMS
- Available for all

SLAUGHTERHOUSE
- Only in selected ones

FROM OTHER DBs

ELECTRONIC PRESCRIPTIONS SYSTEM

CLASSYFARM APP

NATIONAL VET DB

CLASSYFARM DB
FARM-LEVEL AMU
Measuring & Benchmarking

OVERALL AMU VS NATIONAL AVG (+ QUARTILE)

TREND OVERALL OR BY CLASS

AMU IN DETAIL (PG./CLASS)

GUIDE AND REPORT

DISTRIBUTION BY PRODUCT + TYPE

FILTERS AND SEARCH

DISTRIBUTION AMU + CLASS + TIME

AMU ADMINISTRATIVE AREAS

OVERALL AMU + C+ QUARTILE vs National Average

DCA: Centri con Mediana Particola
DCA: Uomini con Mediana Regionale

COMPARISON USER'S FARMS, ADMINISTRATIVE AREAS AMU IN DETAIL (EG.: CLASS)

DISTRIBUTION BY PRODUCT + TIME

DISTRIBUTION AMU + CLASS + TIME
# AREA-LEVEL AMU

Measuring & Benchmarking

**Filters:** Species, Year, Administrative Area, Production Type, Overall/Critical Only AM

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**Additional Statistics**

**Heatmap:**
- Heatmap Nacional
- Heatmap Mediana Regionale VS Mediana Nazionale

**Heatmap (Quartiles):**

**Distributions by Product Type:**

**Distributions by AM Class:**

**Additional Statistics:**

**Heatmap Selection vs National:**

**Overview:**
- Tabella (pitch sezionato)

**Note:** Nell'elenco attualmente sono inclusi solo gli ASL con almeno due anni di dati. Ogni record corrisponde ad un ASL specifico e contiene statistiche specifiche per ogni anno e categoria di criticità.

**Overviews:**
- Mappa Dati AMU
- Mappe AMU Selezionate

**Area-level AMU**

Measuring & Benchmarking

07/10/21
INTEGRATED STEWARDSHIP
Biosecurity & Animal Welfare

BIOSECURITY

ANIMAL WELFARE
INTEGRATED STEWARDSHIP

AMS & AMR at farm-level

RESISTANCE/SUSCEPTIBILITY OF DIFFERENT FARM SAMPLES

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RESISTANCE/SUSCEPTIBILITY AT AREA-LEVEL

VIRULENCE FACTORS AND GENOTYPES TO GUIDE VACCINATION AND OTHER ALTERNATIVES TO AM
AMU IN ITALIAN LIVESTOCK

Sales trend: the ESVAC annual report

→ Antimicrobial use (AMU) in Italy: the Good and the Bad
  ✓ Overall sales fell by 42%
  ✓ Colistin sales fell by 93%
  ≈ Sales in other critical antimicrobials have been stable
  × 2nd place for 2018 sales in EEA

→ No data on sales by species or at farm-level
→ Metric with some limitations (sales only, not DDD-based)
AMU IN ITALIAN LIVESTOCK

A positive example: the reduction in avian species

→ Large overall reduction in both broilers (>90%) and turkeys (>80%)

→ Similar reduction for critically important antimicrobials (colistin abandoned in broilers and almost in turkeys)

→ AMU measured in DDD/head (median of Italian farms)

→ Improved several aspect of farming
  ✓ Rational use (do I always need AM?)
  ✓ Management
  ✓ Biosecurity (starting from the hatchery!)

07/10/21
CONCLUSIONS & PROSPECTIVES
Cooperation is the key!

Italy is happy to support any country that would like to implement similar strategies

For further information on ClassyFarm you can contact us at info@classyfarm.it
Thank you for your kind attention!