

LA NOSTRA  
ESPERIENZA,  
LA VOSTRA  
SICUREZZA.



## Antimicrobial consumption and stewardship in food producing animals: the Italian strategy





# THE ITALIAN STRATEGY

## CLASSYFARM

The ClassyFarm system general aim is to **categorize farms** according to their potential risk in terms of:

- **Biosecurity**
- **Animal welfare**
- **Antimicrobials (AMU & AMR)**
- **Slaughterhouses (lesions, welfare, etc.)**
- **[WIP] Others (e.g. pharmacosurveillance, feed, etc.)**

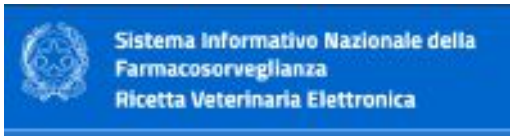




# CLASSIFYFARM



Data sources



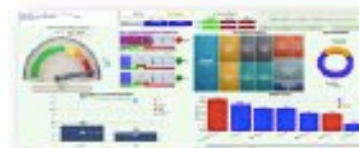
Data extraction (CSV) for further analyses





# CLASSIFYFARM: A TOOL FOR ANTIMICROBIAL STEWARDSHIP

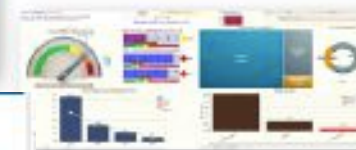
## 1. AMU



→ Available for **bovine**, **pigs**, and **poultry** (both by *age group* and *biomass*)

→ Dashboards for **other species under development** (priority depending on AMR risk)

## 2. AMR at farm level



## 3. PHARMACOSURVEILLANCE





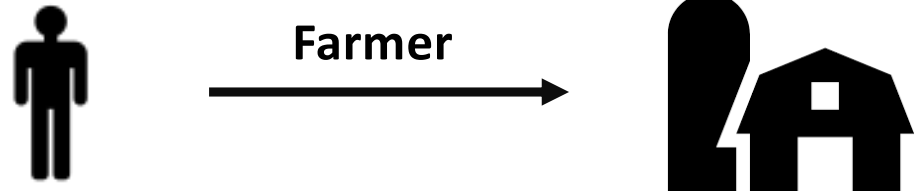
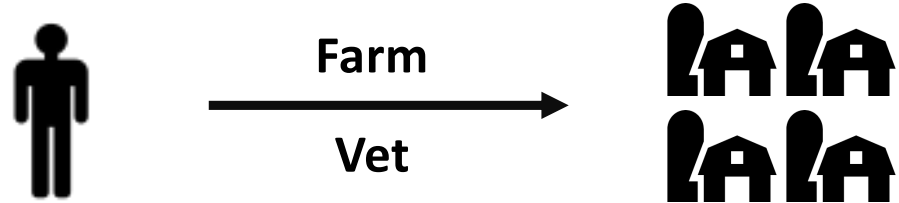
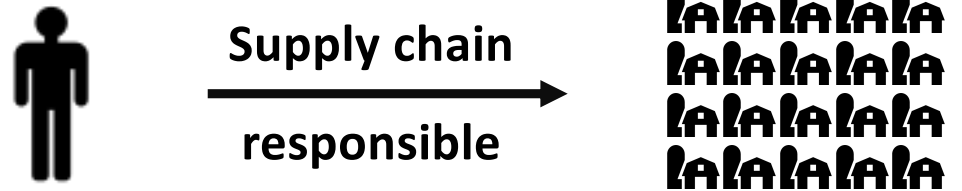
# CLASSYFARM



## Users (public sector)



## Users (private sector)





# 1 ANTIMICROBIAL USE (AMU)



«DDDAit» (*Defined Daily Dose Animal for Italy*)

# DDD



- **Indicator** of drug consumption in **human** for **decades**
- Already **effectively** used for **animal** production (e.g. Belgium, Denmark, the Netherlands)
- AMU estimated considering a **national metric** (DDDAit)





# 1. AMU



## Historical Data Collection

- **Retrospective** (until 2019)
- Recipes and **paper** records
- **Time consuming** process (collection, processing and validation)

## Electronic Prescriptions Data

Mandatory from **May 2019**

Already **active** for AMU “screening”

**Complete** integration expected by the **end of 2020**

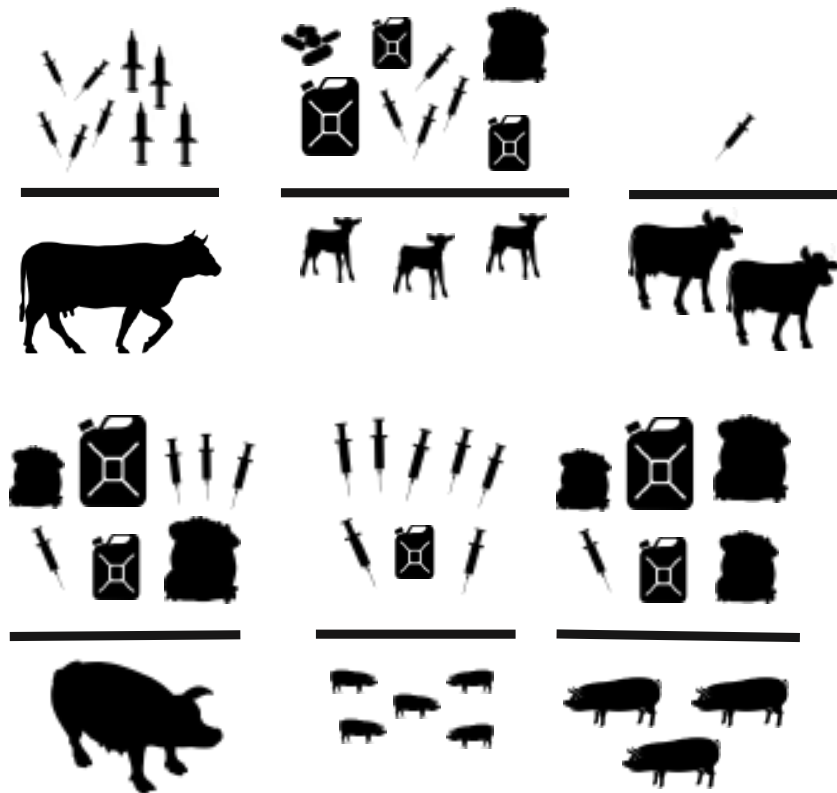




# 1 AMU



## Age group (stewardship)



## Biomass (screening)



pharmacovigilance

OK!









# 1 AMU


## ClassyFarm age groups

SWINE	
	<b>Sows (breeders)</b> Sows and Boars
	<b>Sucklers</b> Born → Weaning (6 kg)
	<b>Weaners</b> 6 kg → 20 – 35 kg
	<b>Finishers</b> 20 – 35 kg → Slaughter (160 – 170 kg)

BOVINE (DAIRY)	
	<b>Calves</b> Born → 6 Months
	<b>Heifers</b> 6 Months → First calving
	<b>Cows</b> First calving → Death

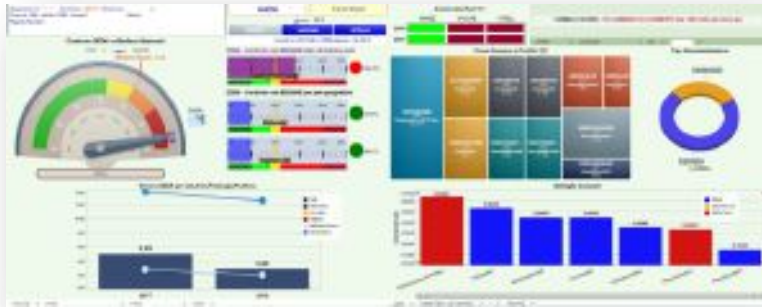
  

AVIAN (MEAT)	
	<b>Broiler</b> Start of cycle → Slaughter
	<b>Tacchini</b> Start of cycle → Slaughter



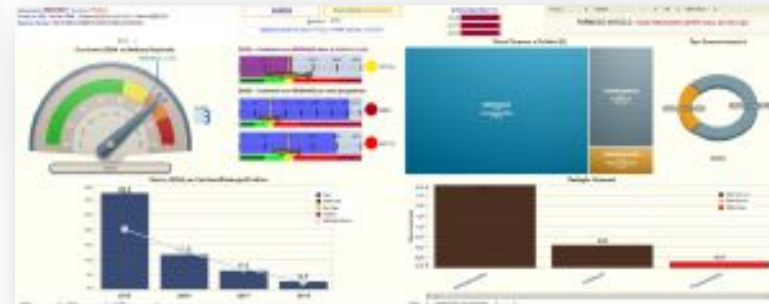


# 1 AMU



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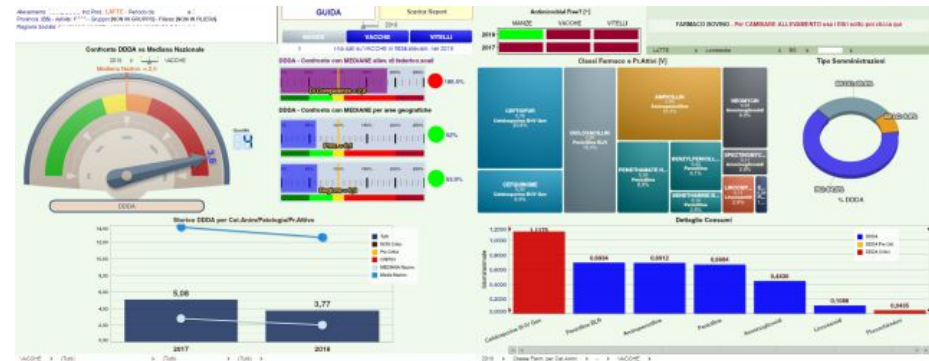
→ Dashboards for **other species under development** (priority depending on AMR risk)





# 1. AMU : DASHBOARDS

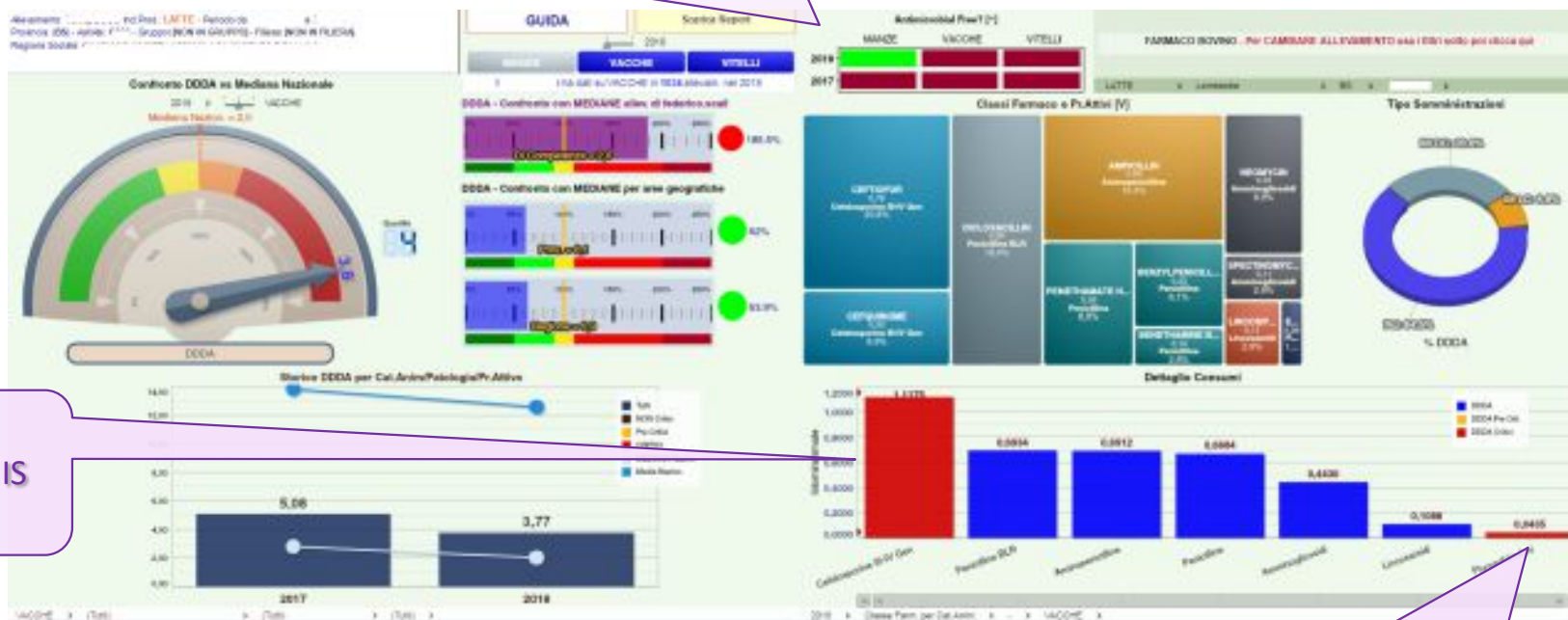
- **AMU at farm level**
  - DDDA by age group
  - DDDA by biomass
  
- **AMU and area**
  - DDDA by age group
  - DDDA by biomass





# 1 AMU – FARM (AGE GROUP)

THE DASHBOARD OF THE FARM CONTAINS INFORMATION, AT AGE GROUP-LEVEL, REGARDING: OVERALL AMU, TRENDS, BENCHMARKING (NATIONAL, REGIONAL, LOCAL, VET LEVELS), DETAILED AMU DATA (CLASSES, ROUTES, REASON OF TREATMENT, ETC.)



AMU BY ACTIVE INGREDIENT, **HPCIA** USE IS HIGHLIGHTED IN **RED**

**MACROLIDES** USE IS HIGHLIGHTED IN **YELLOW**



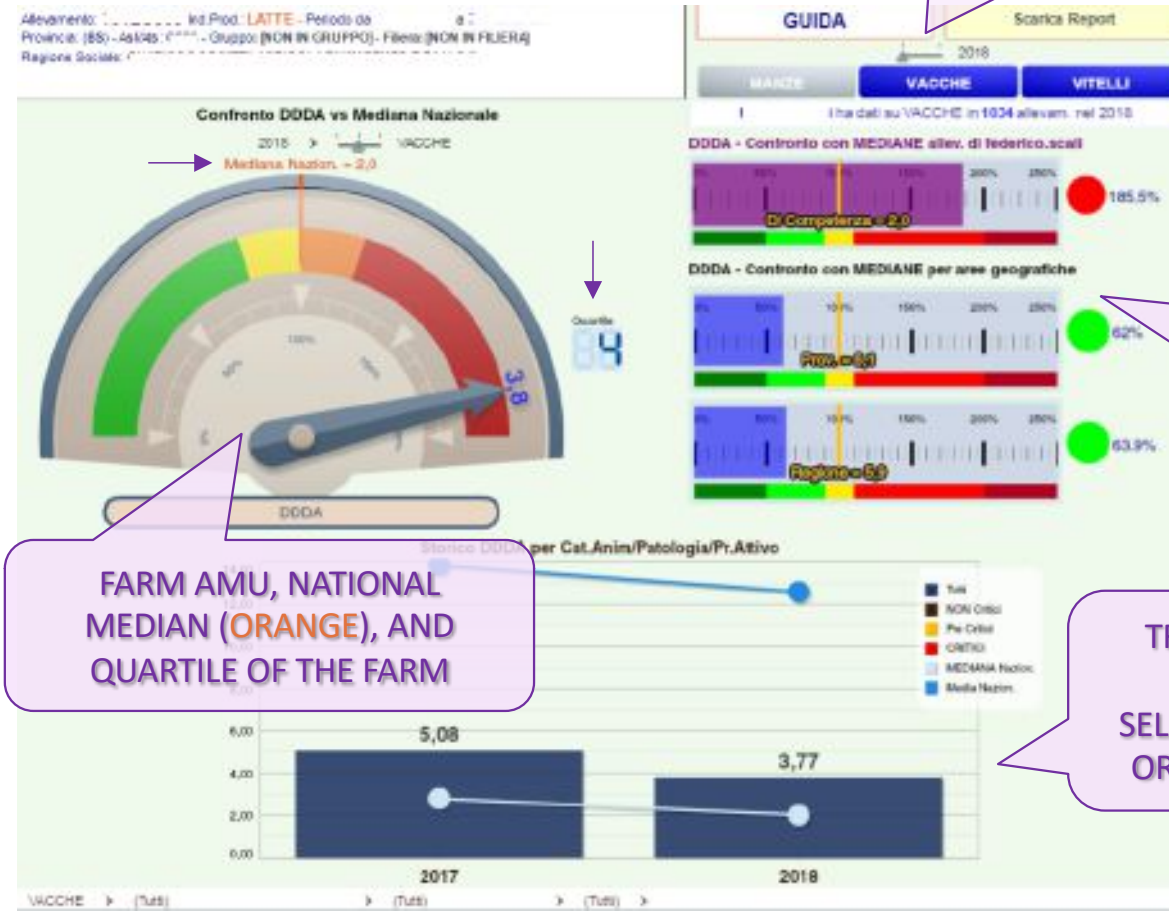


# 1 AMU – FARM (AGE GROUP)

GUIDE AND PDF REPORT

AGE GROUP SELECTION

COMPARISON WITH MEDIANS OF ALL THE VET / FOOD CHAIN FARMS (VIOLET), ADMINISTRATIVE REGION (BLUE), AND LOCAL AREA (BLUE)



FARM AMU, NATIONAL MEDIAN (ORANGE), AND QUARTILE OF THE FARM

TREND AMONG YEARS (ALSO POSSIBLE TO SELECTED A SINGLE CLASS OR ACTIVE INGREDIENT)





# 1 AMU – FARM – AM-FREE

YEARS WITHOUT USE OF ANY ANTIMICROBIAL ARE HIGHLIGHTED IN **GREEN**



# 1. AMU MONITORING : COLISTIN USE IN SWINE

COLISTINA	SCROFE	SOTTOSCROFA	SVEZZATI	GRASSI
2014	1.16	8.25	41.62	0.62
2015	0.66	1.64	41.58	0.87
2016	0.10	1.81	30.42	0.55
2017	0.12	0.26	6.91	0.15
2018	0.01	0.02	0.32	0.01
<b>TREND</b>				
<b>DIFF 14-18</b>	-99.5%	-99.7%	-99.2%	-98.2%



- Values are expressed as days/animal
- values reported here represent a weighted average of the sample
- In all categories the consumption of colistin is decreased to almost zero



# 2. AMR – FARM LEVEL



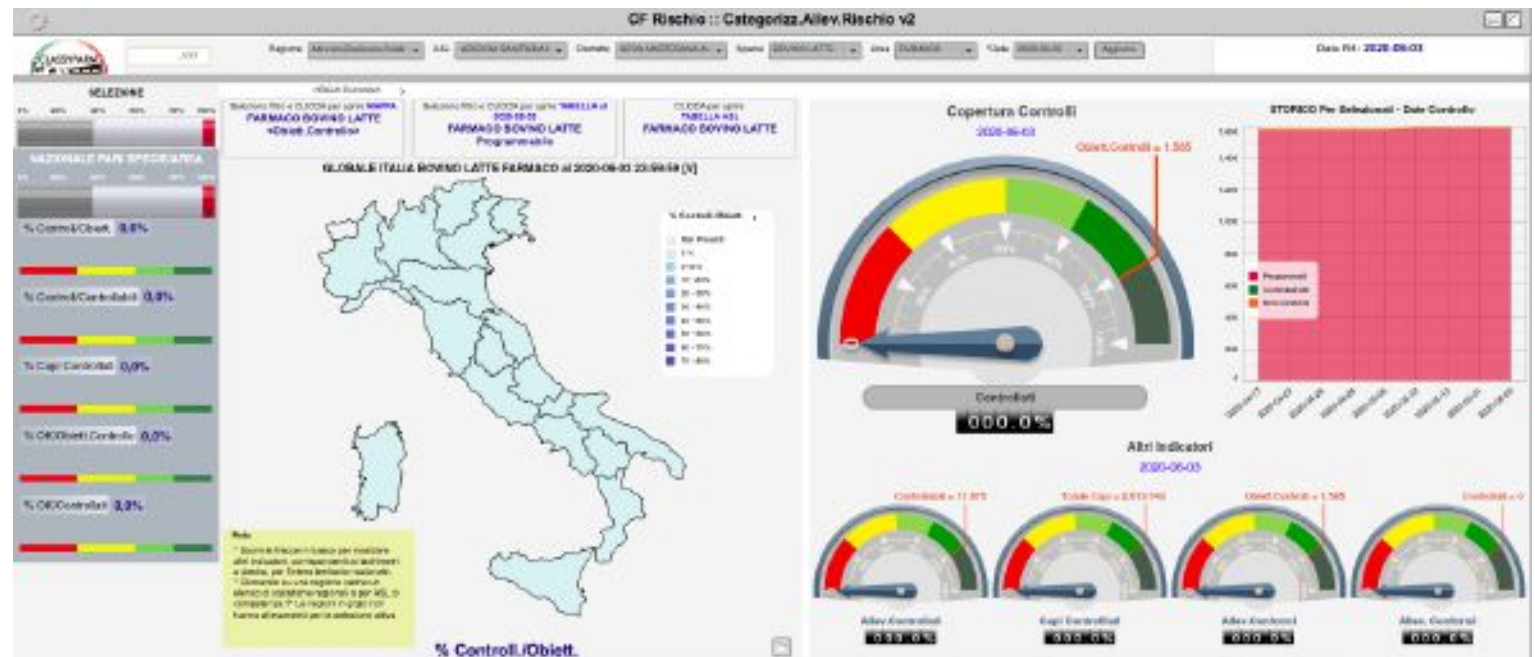




# 3. AMU : PHARMACOSURVEILLANCE IN CLASSYFARM - RISK-BASED SURVEILLANCE



**FINAL GOAL:** MONITORING VETERINARY PUBLIC HEALTH ACCORDING TO RISKS. THIS LAST DASHBOARD WILL SUMMARISE THE RESULTS OF ALL THE INFORMATION COLLECTED USING THE CLASSYFARM SYSTEM. IT PROVIDES A LIST OF FARMS TO BE CONTROLLED DURING THE YEAR SELECTED CONSIDERING THEIR **RISK ON AMU/AMR**, ANIMAL WELFARE AND BIOSECURITY. FURTHERMORE, IT WILL BE POSSIBLE TO FOLLOW THE PROGRESS OF THE OFFICIAL CONTROLS IN EACH GEOGRAPHICAL AREA.





# FURTHER INFORMATION



[classyfarm.it](http://classyfarm.it)



English version  
under construction

 [info@classyfarm.it](mailto:info@classyfarm.it)



Ministero della Salute

Direzione generale della sanità animale e dei farmaci veterinari



UNIVERSITÀ  
DI PARMA

*Thank you for your kind  
attention!*



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