

G. Loris Alborali, Loredana Candela & Pierdaveide Lecchini

G20
ITALIA
2021

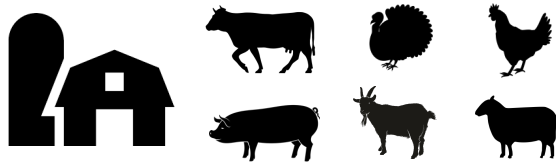
Tackling antimicrobial resistance in Italian farms

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

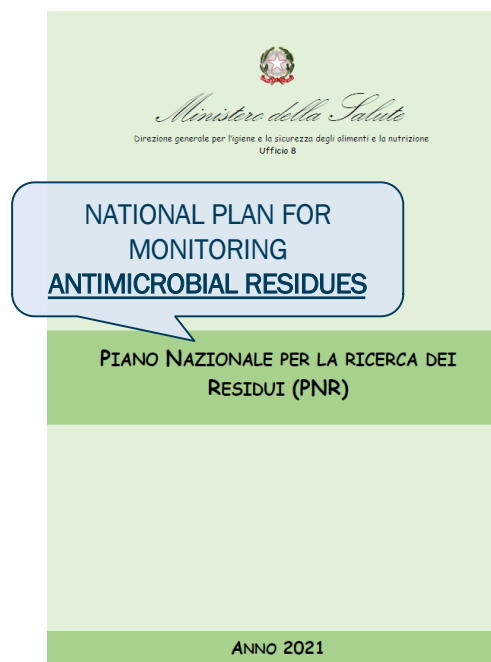


STEWARDSHIP



CURRENT INITIATIVES

Addressing AMR from several perspectives





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

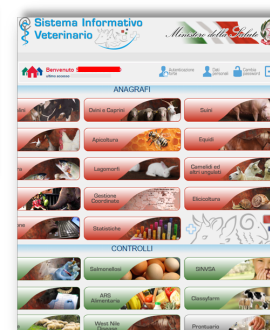
SLAUGHTERHOUSE



ONLY IN SELECTED ONES

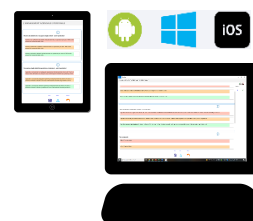
Data Inizio	Data Fine	T. AC Farm	Farm	Prodotto	Allegato	Note	Prescrizione	Proprietario	Detentore	Attività
12-09-2018	12-09-2018	101558	CABRIOTTA				1 ml capo	3	1	8
12-09-2018	12-09-2018	101558	CABRIOTTA				2 ml capo	3	1	8
11-09-2018	11-09-2018	101528	PARQUET				1 dose di 100 mg capo	3	1	8
10-09-2018	11-09-2018	101522	CONTOCULINA LA				1 ml ogni 10 kg peso vivo	3	1	8
10-09-2018	10-09-2018	101517	PROLONC CROCIOLA				1 ml capo	3	1	8
10-09-2018	11-09-2018	101520	CONTOCULINA LA				1 ml ogni 10 kg peso vivo	3	1	8
10-09-2018	10-09-2018	101501	PARQUET				2 ml capo	3	1	8
10-09-2018	10-09-2018	101511	PROLONC CROCIOLA				1 ml capo	3	1	8
08-09-2018	08-09-2018	101568	PIGRO				3 ml capo	3	1	8
07-09-2018	07-09-2018	101551	PROLONC CROCIOLA				2 ml capo	3	1	8

ELECTRONIC PRESCRIPTIONS SYSTEM



NATIONAL VET DB

FROM OTHER DBS



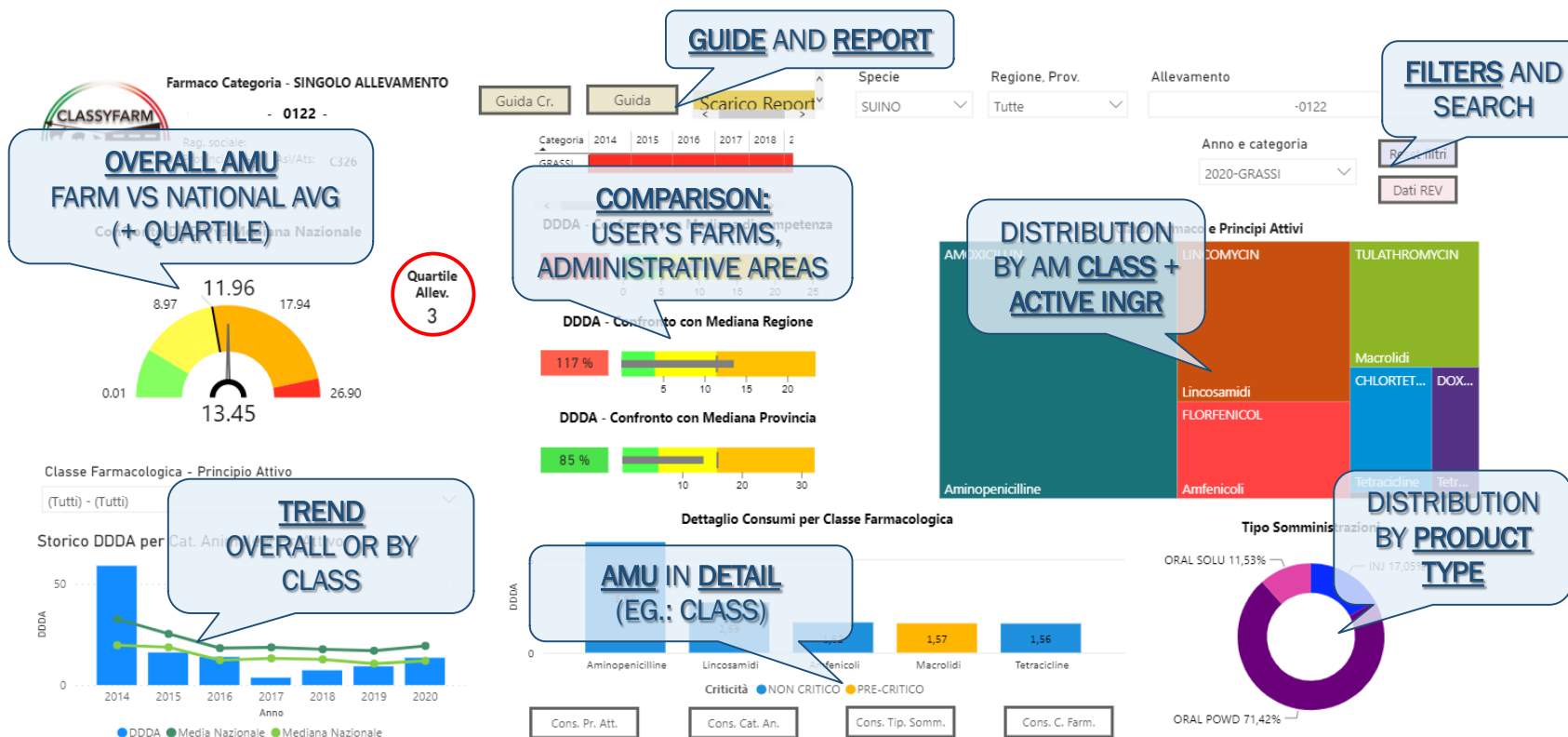
CLASSYFARM APP



CLASSYFARM DB

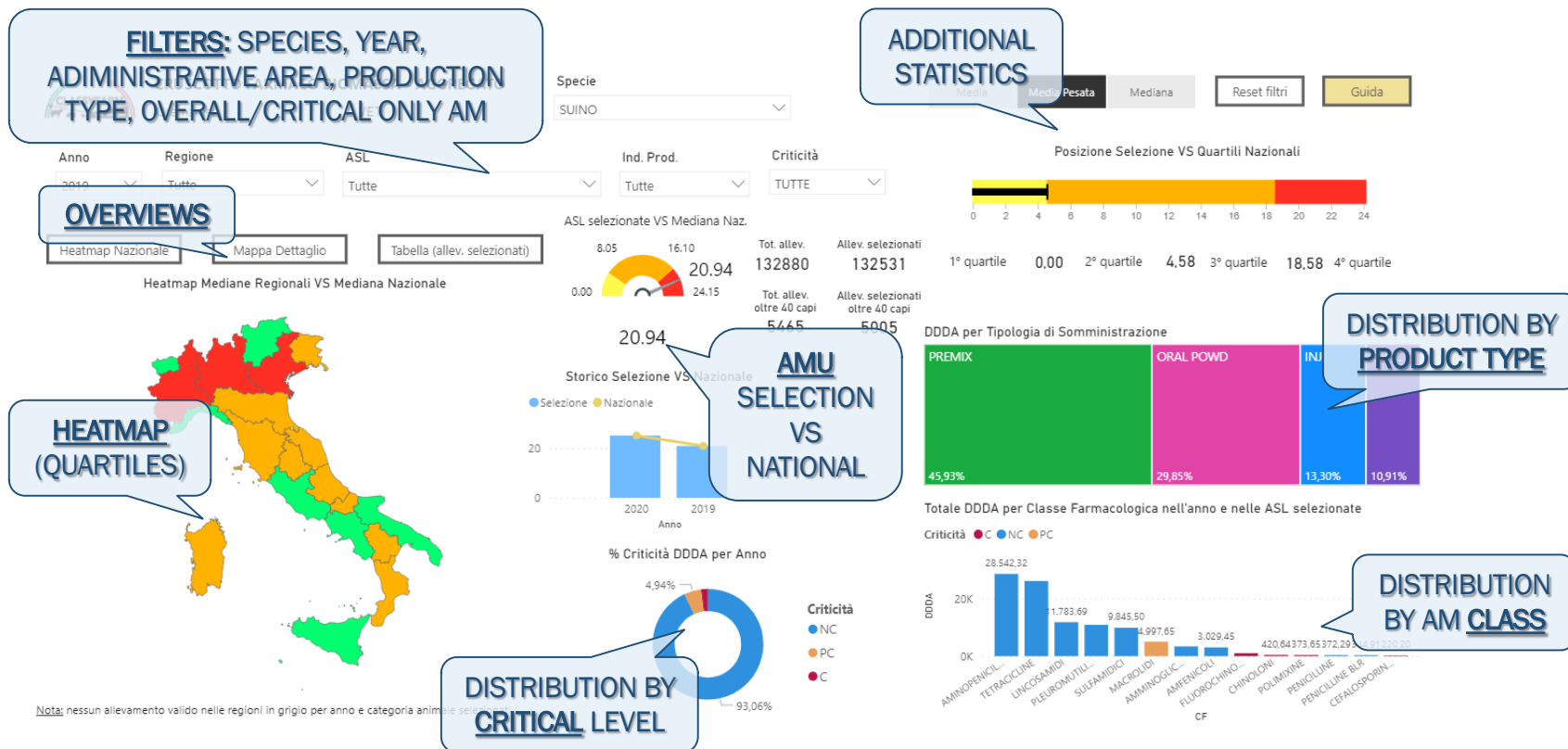
FARM-LEVEL AMU

Measuring & Benchmarking



AREA-LEVEL AMU

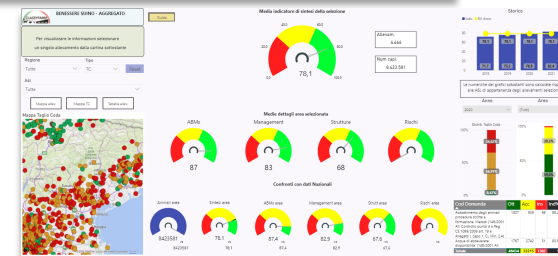
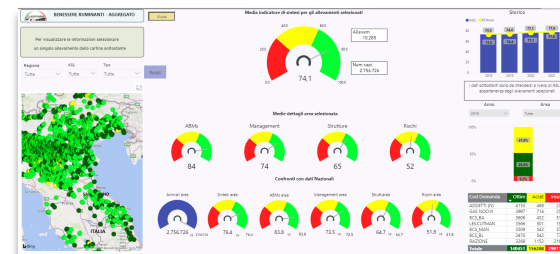
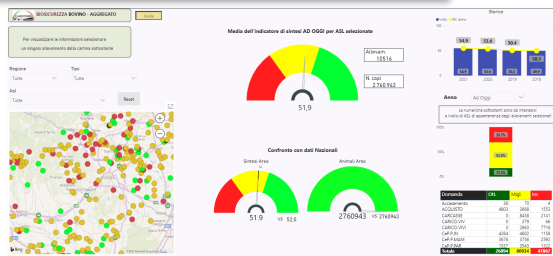
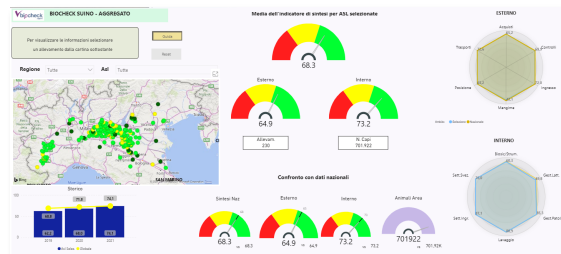
Measuring & Benchmarking





INTEGRATED STEWARDSHIP

Biosecurity & Animal Welfare



ANIMAL WELFARE

BIOSECURITY



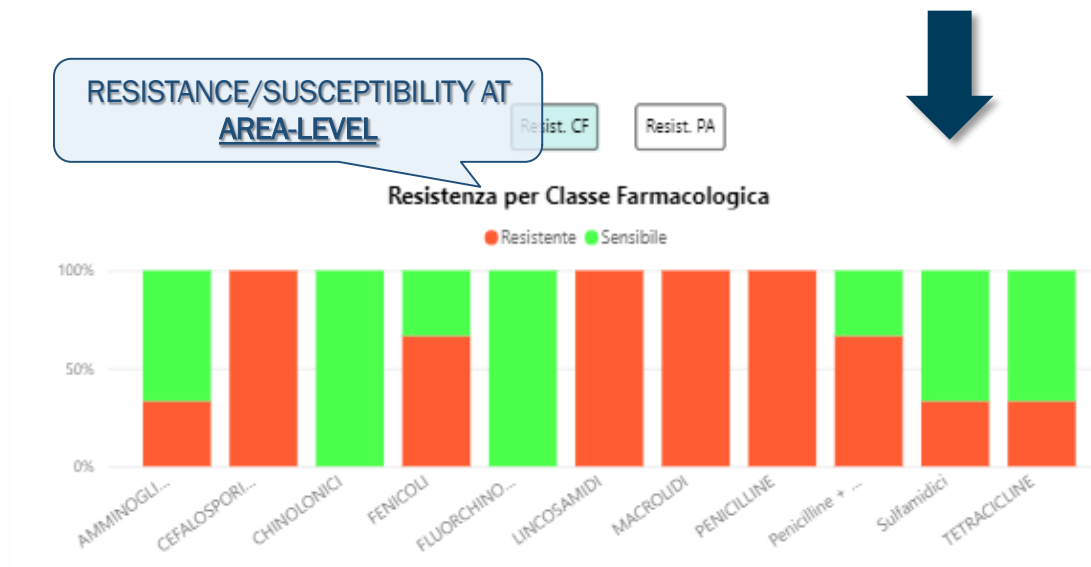
INTEGRATED STEWARDSHIP

AMS & AMR at farm-level

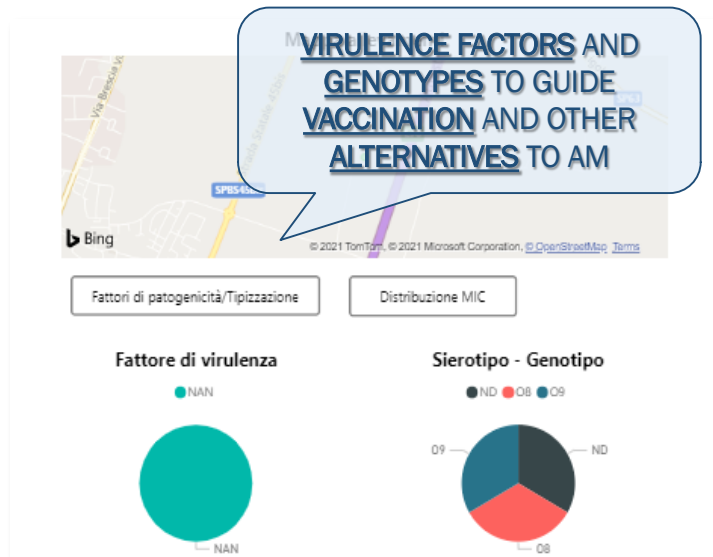
RESISTANCE/SUSCEPTIBILITY OF DIFFERENT FARM SAMPLES

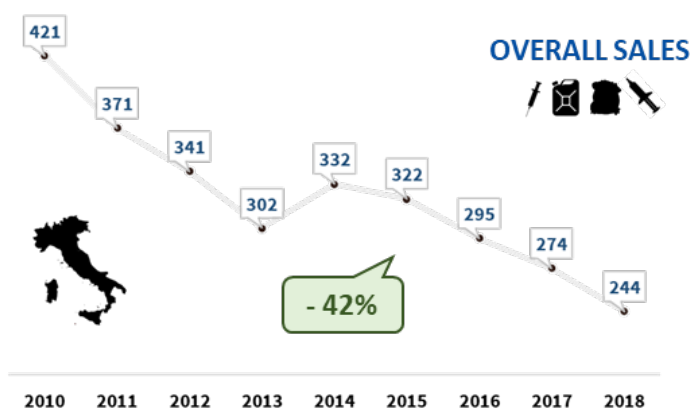
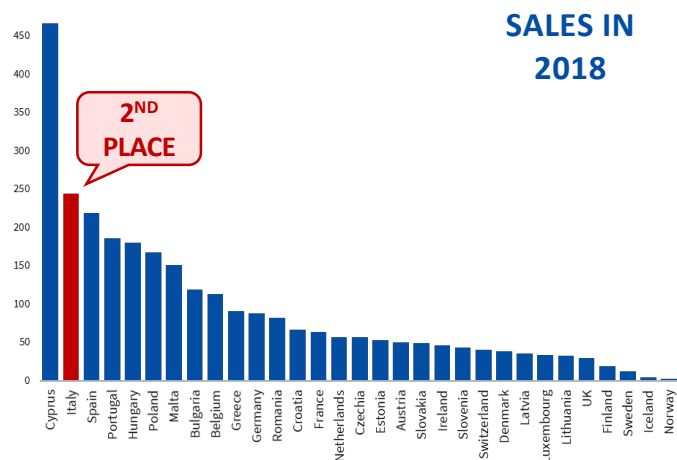
id_campione	DI	CEFALOSPORINE I	CHINOLONICI	FENICOLI	FLUORCHINOLONI	LINCOSAMIDI	MACROLIDI	PENICILLINE	Penicilline + B...
2021-01-27_30800_2_COLI	R	R	S	R	S	R	R	R	S
2021-02-03_40385_2_COLI	R	R	S	S	S	R	R	R	R
2021-03-24_103167_1_COLI	R	R	S	R	S	R	R	R	R

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%

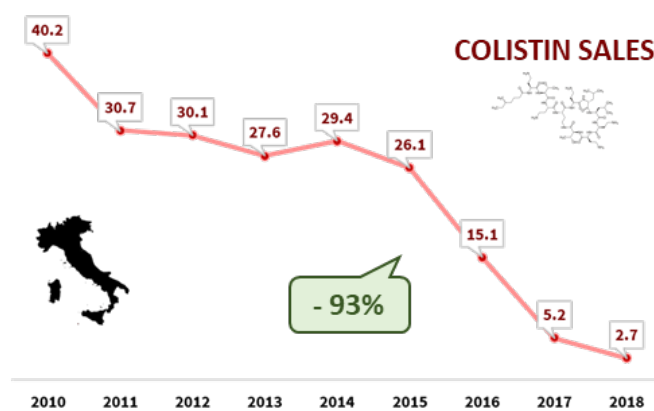
✓ Colistin sales fell by 93%

≈ 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

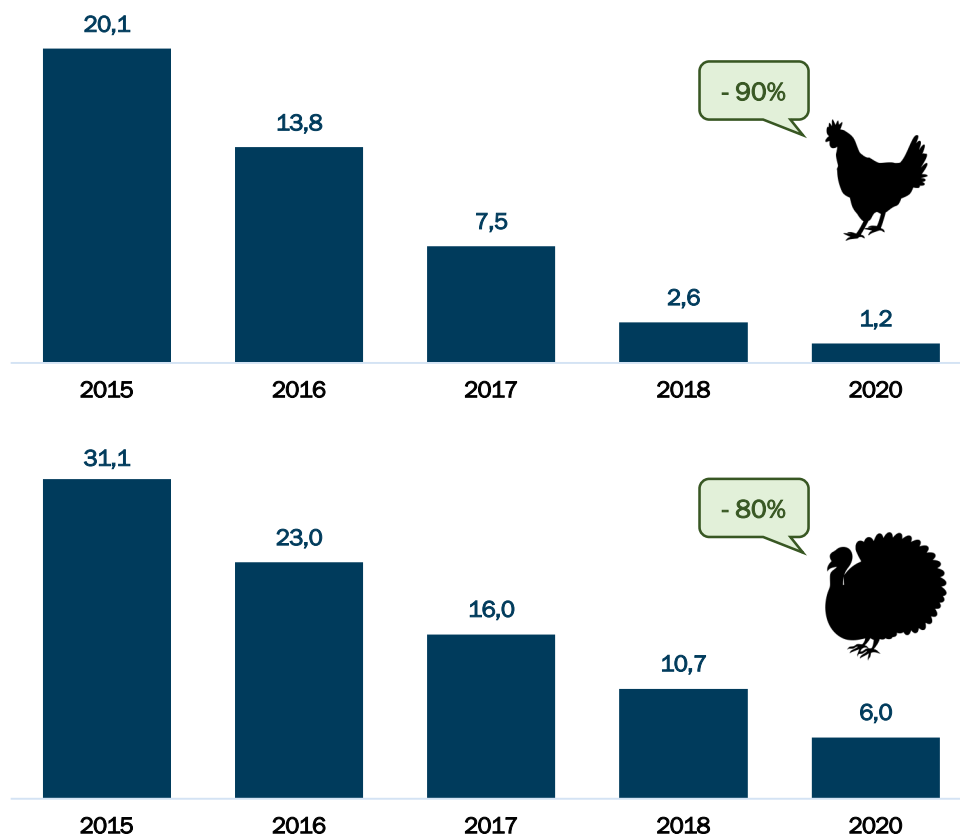
→ Metric with some limitations (sales only, not DDD-based)





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!)



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



mipaaf

ministero delle politiche
agricole alimentari e forestali



Ministero della Salute



**UNIVERSITÀ
DI PARMA**



**AND MANY,
MANY MORE!**

Thank you for your kind attention!