Ministero della Salute

ISTITUTO ZOOPROFILATTICO SPERIMENTALE
DELLA LOMBARDIA E DELL'EMILIA ROMAGNA
"BRUNO UBERTINI"
ENTE SANITARIO DI DIRITTO PUBBLICO

CLASSYFARM

LA NOSTRA ESPERIENZA, LA VOSTRA **SICUREZZA**.

CLASSYFARM

Monitoring and improving the Italian pig production

Francesca Calvetti & G. Loris Alborali

World Organisation for Animal Health
Founded as OIE

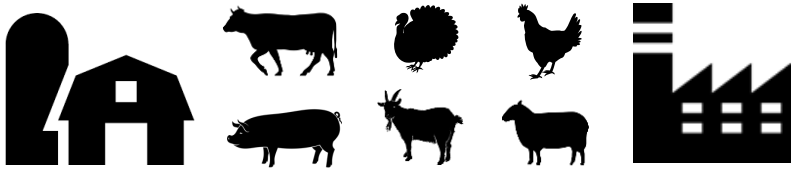
30th Regional Conference – Catania, Italy
3-7 *October* 2022

INTRODUCTION

THE CLASSYFARM INTEGRATED SYSTEM

- → Result of the **collaboration** among **stakeholders** (public, private, academia)
- → Fully available for **pigs**, **bovines** and **poultry** (partially for other e.g. – sheep and goats)
- → **Interactive dashboards** via business intelligence (BI)
- → Major topic & issues in animal production

PHILOSOPHY & AIMS



CLASSYFARM

- ✓ Biosecurity
- ✓ Animal welfare
- ✓ Antimicrobial use (AMU)
- ✓ Antimicrobial resistance (AMR)
- ✓ Slaughterhouse surveillance

MEASURING

↓

BENCHMARKING

↓

STEWARDSHIP

INPUT

ON THE FIELD (VETs)

PRACTITIONER

PUBLIC OFFICER

ASSESSOR

SOON

FARM: WELFARE, BIOSECURITY, AMS

AVAILABLE FOR ALL

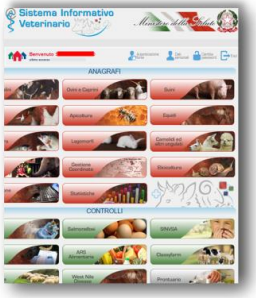
SLAUGHTERHOUSE

ONLY IN SELECTED ONES

LAB: AMR

ELECTRONIC PRESCRIPTIONS SYSTEM

NATIONAL VET DB



OTHER DBs

CLASSYFARM APP & WEBSITE

CLASSYFARM DB

CLASSYFARM

OUTPUT

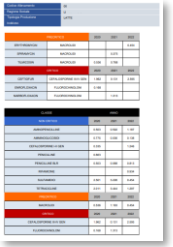
CLASSYFARM DB

INTERACTIVE DASHBOARDS

AREA-LEVEL

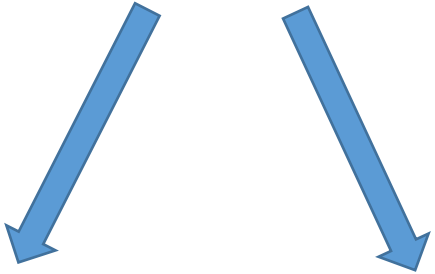
FARM-LEVEL

DOWNLOADABLE REPORTS



Farm categorization based on risk

These information are used also to prioritize official controls



Nation Plan for Animal Welfare

Nation Plan for Medicine surveillance

Why ClassyFarm? Regulation (EU) 2016/429

BIOSICUREZZA

The operator is responsable of application of biosecurity measures, of prudent use of medicines and good practices application

VISITE VETERINARIE

the operator has to ensure regular health veterinary visits to all animals under his own rensponsabili ty

A.S.L.

Autorità Competente

The Competent Authority use all information obtained from the veterinary visits and from surveillance

Ministero della Salute

ISTITUTO ZOOPROFILATTICO SPERIMENTALE
DELLA LOMBARDIA E DELL'EMILIA ROMAGNA
"BRUNO UBERTINI"
ENTE SANITARIO DI DIRITTO PUBBLICO

CLASSYFARM

LA NOSTRA
ESPERIENZA,
LA VOSTRA
SICUREZZA.

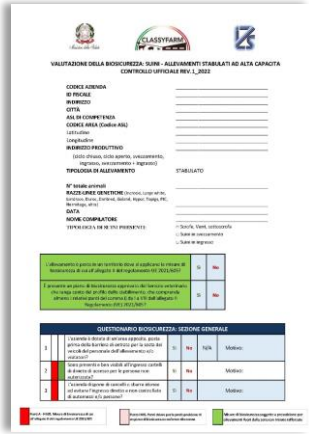
PIG PRODUCTION

Applications of the ClassyFarm system

VIDEO

BIOSECURITY – NATIONAL SURVEYS

1. OFFICIAL NATIONAL SURVEYS



2. FARM NATIONAL SURVEYS

biocheck.ugent

BIOSECURITY – SURVEYS

1. OFFICIAL NATIONAL SURVEYS

PUBLIC OFFICER

- ✓ Recently updated
- ✓ Three question “profiles”
- ✓ Four farm “categories”
- ✓ Specific disease prevention (ASF)

2. FARM NATIONAL SURVEYS

PRACTITIONER

- ✓ Risk-based assessment
- ✓ Extensively used worldwide
- ✓ External & Internal biosecurity
- ✓ General & detailed scoring

BIOSECURITY – OFFICIAL NATIONAL SURVEYS

THREE QUESTION PROFILES

QUESTION PROFILES

- RISK ASSESSMENT

- MINIMUM LEGAL CRITERIA

- EU 2021/605 CRITERIA

SURVEY DESIGN

→ FOUR CHAPTERS

1. *General principles*
2. *Quarantine & reproduction*
3. *Nursery sector*
4. *Fattening sector*

→ DEPENDING ON FARM FEATURES

→ **ASF**-TARGETED QUESTION

BIOSECURITY – OFFICIAL NATIONAL SURVEYS

FOUR FARM CATEGORIES

LARGE/SMALL CUT-OFF X 300

TRADITIONAL FARMS

QUESTION PROFILES

FARM SIZE

LARGE → MAX 81 QUESTIONS

SMALL → MAX 45 QUESTIONS

OUTDOOR FARMS (FENCED)

QUESTION PROFILES

FARM SIZE

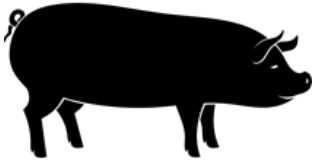
LARGE → MAX 81 QUESTIONS

SMALL → MAX 18 QUESTIONS

ASF OUTBREAK = NOT PRESENT

BIOSECURITY – RESULTS 2021-22

1. OFFICIAL NATIONAL SURVEYS

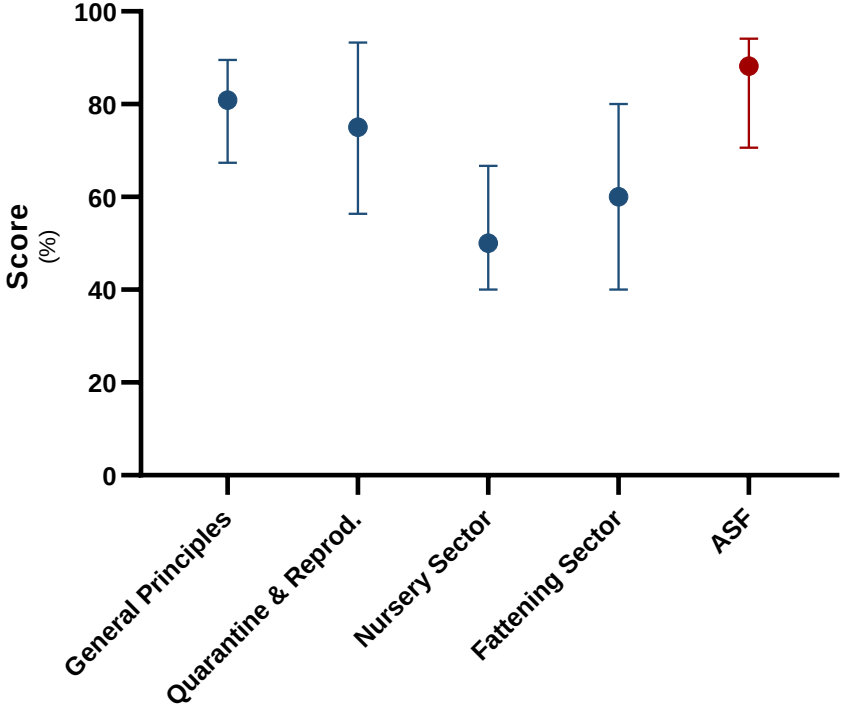


Official National survey

- *≈ 3.200 farms*
- *≈ 2,4 mil pigs*
- *Lorem ipsum*

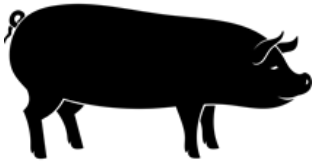
BioCheck.UGhent

- *≈ 600 farms*
- *≈ 1.8 mil pigs*
- *Mostly large farms*



BIOSECURITY – RESULTS

2. FARM NATIONAL SURVEYS



Offcial National survey

- ≈ 3.160 farms
- ≈ 2,4 mil pigs
- Lorem ipsum

BioCheck.UGhent

- ≈ 600 farms
- ≈ 1.8 mil pigs
- Mostly large farms

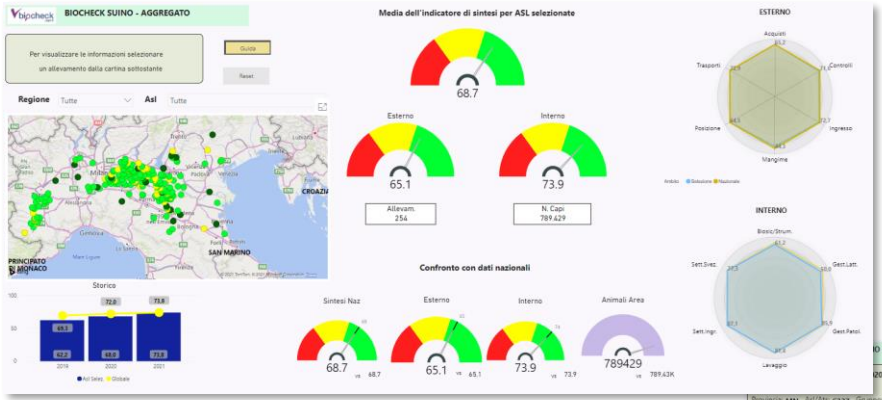
USER PROFILES

> 4,000 REGISTERED USERS

≈ 10 000 FARMS: WELFARE

87,5 % – 99,3 % OF FARMS : DDD

BIOSECURITY – DASHBOARDS



AREA-LEVEL BIOSECURITY

FARM-LEVEL BIOSECURITY

ANIMAL WELFARE

1. OFFCIAL NATIONAL SURVEYS

PUBLIC OFFICER

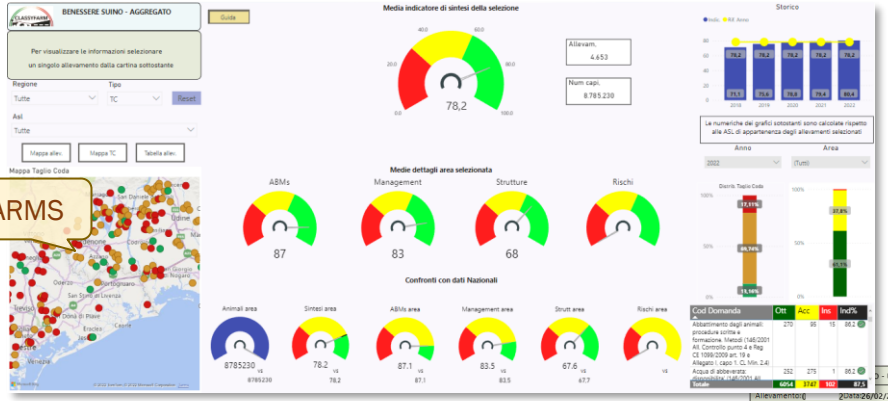
- ✓ Official controls
- ✓ Not only minimum legal criteria
- ✓ Some animal-based measures (*Iceberg indicators*)

2. FARM NATIONAL SURVEYS

PRACTITIONER

- ✓ Risk-based assessment
- ✓ More Animal-based measures
- ✓ Targeted (*tail-docking*) an general surveys (*extended*)

ANIMAL WELFARE – DASHBOARDS



FARMS

AREA-LEVEL WELFARE

FARM-LEVEL WELFARE

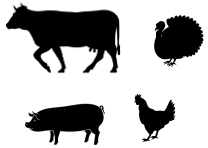
TAIL-DOCKING

- INTACT ONLY
- DOCKED AND INTACT
- DOCKED ONLY

AMU – DATA SOURCES

ANTIMICROBIAL DATA
(NUMERATOR)

ELECTRONIC PRESCRIPTION SYSTEM



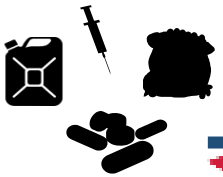
ANIMAL POPUPLATION
(DENOMINATOR)

NATIONAL VETERINARY DATABASE

CLASSYFARM

- ✓ DDD-BASED
- ✓ NEW SYSTEM
  - → *Q2 2019 (**first step**)*
  - → *Q3 2022 (**final step**)*
- ✓ PHARMACOSURVEILLANCE
- ✓ AMS

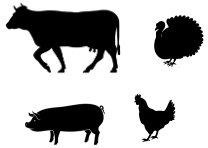
AMU – DATA SOURCES



ANTIMICROBIAL DATA
(NUMERATOR)

ELECTRONIC PRESCRIPTION SYSTEM

IZSAM G.CAPORALE TERAMO



ANIMAL POPUPLATION
(DENOMINATOR)

NATIONAL VETERINARY DATABASE

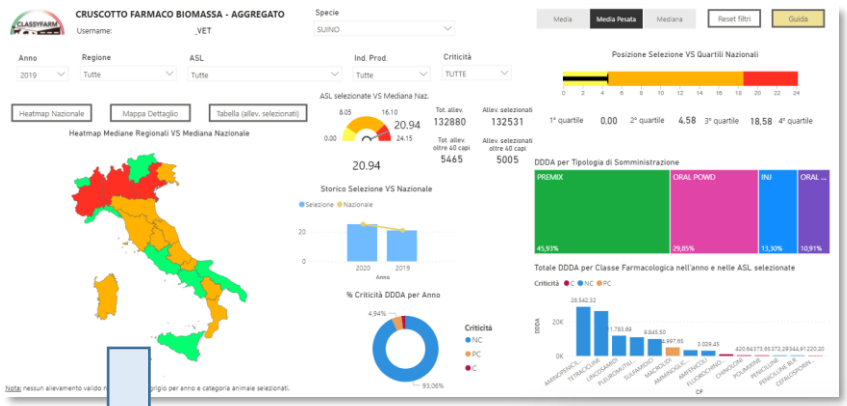
CLASSYFARM

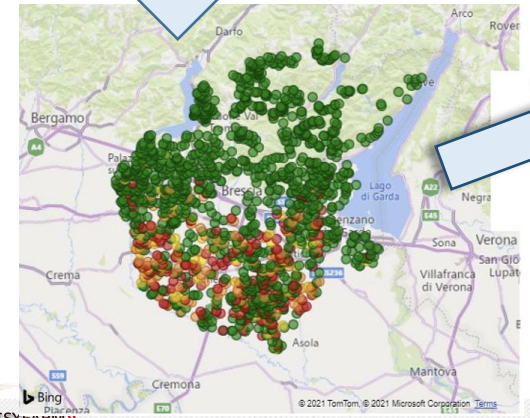
- ✓ DDD-BASED
- ✓ NEW SYSTEM
  - → *Q2 2019 (**first step**)*
  - → *Q3 2022 (**final step**)*
- ✓ PHARMACOSURVEILLANCE
- ✓ AMS

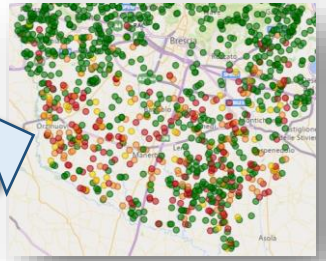
AMU – DASHBOARDS

AREA-LEVEL AMU

FARM-LEVEL AMU







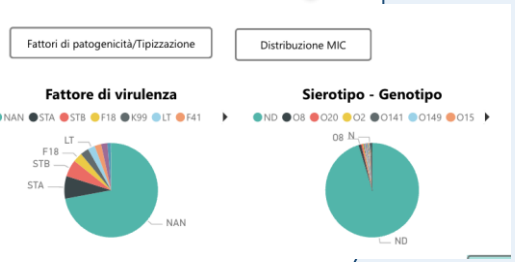
STEWARDSHIP & AMS – FARM-LEVEL

1. AMU - DDD

STEWARDSHIP & AMS – FARM-LEVEL

1. AMU - DDD

2. DIAGNOSTIC TOOLS



VIRULENCE FACTORS
GENOTYPES
MONITORING : PRRSV

VACCINATION
ALTERNATIVES TO AM

BIOSECURITY
WELFARE

STEWARDSHIP & AMS – FARM-LEVEL

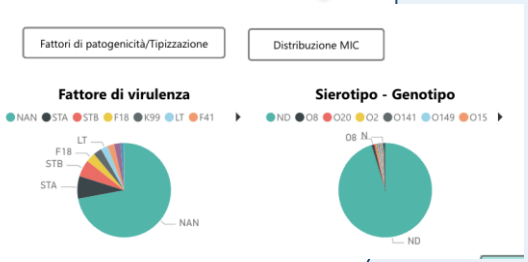
1. AMU - DDD

2. DIAGNOSTIC TOOLS

VIRULENCE FACTORS
GENOTYPES
MONITORING : PRRSV

VACCINATION
ALTERNATIVES TO AM

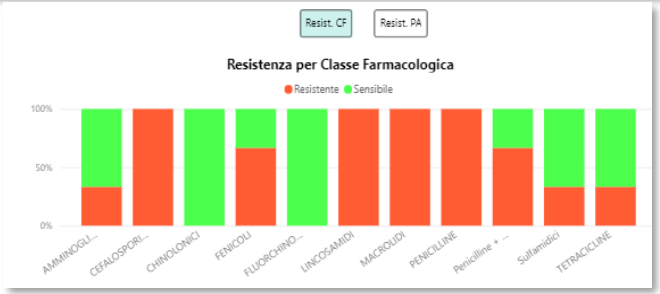
BIOSECURITY
WELFARE



3. ANTIMICROBIAL SUSCEPTIBILITY OF DIFFERENT FARM and AREA SAMPLES - MIC

Resist. CF | Resist. PA

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



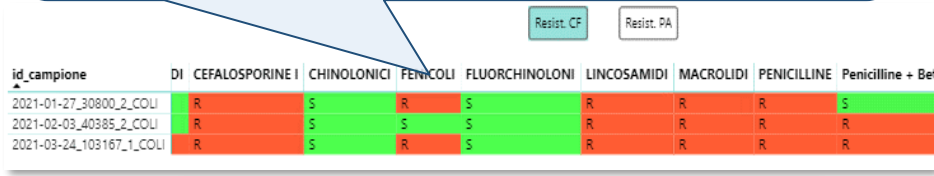
STEWARDSHIP & AMS – FARM-LEVEL

1. AMU - DDD

CRAB
Centro di Referenza Nazionale per l'Antibioticoresistenza

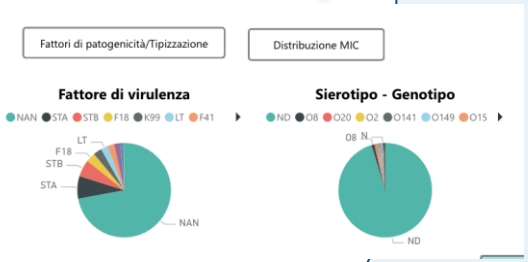
IZS Istituto Zooprofilattico Sperimentale del Lazio e della Toscana *M. Aleand*

3. ANTIMICROBIAL SUSCEPTIBILITY OF DIFFERENT FARM and AREA SAMPLES - MIC



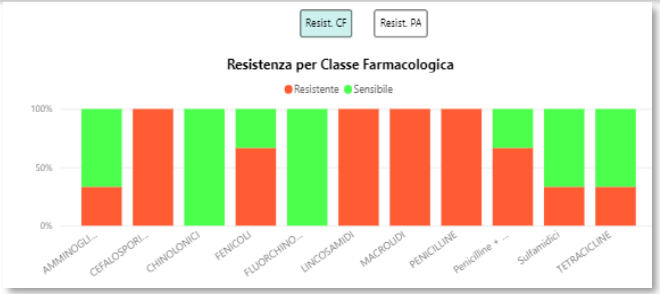
2. DIAGNOSTIC TOOLS

VIRULENCE FACTORS
GENOTYPES
MONITORING : PRRSV



VACCINATION ALTERNATIVES TO AM

BIOSECURITY
WELFARE



STEWARDSHIP & AMS – FARM-LEVEL

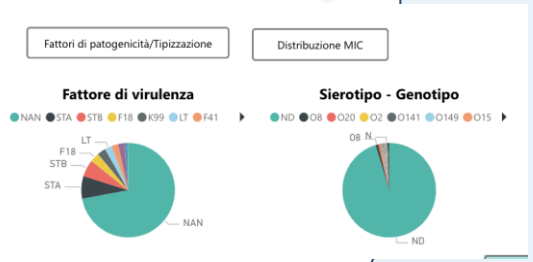
1. AMU - DDD

CRAB
Centro di Referenza Nazionale per l'Antibioticoresistenza

IZS Istituto Zooprofilattico Sperimentale del Lazio e della Toscana M. Aleand

3. ANTIMICROBIAL SUSCEPTIBILITY OF DIFFERENT FARM and AREA SAMPLES - MIC

2. DIAGNOSTIC TOOLS



VIRULENCE FACTORS
GENOTYPES
MONITORING : PRRSV

VACCINATION
ALTERNATIVES TO AM

BIOSECURITY
WELFARE

STEWARDSHIP & AMS – FARM-LEVEL

1. AMU - DDD

CRAB
Centro di Referenza Nazionale per l'Antibioticoresistenza

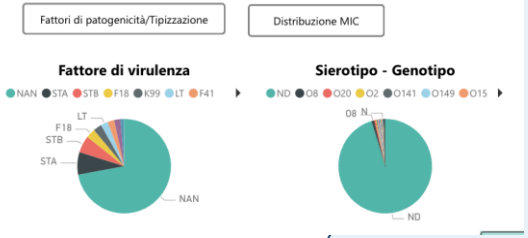
Istituto Zooprofilattico Sperimentale del Lazio e della Toscana *M. Aleand*

3. ANTIMICROBIAL SUSCEPTIBILITY OF DIFFERENT FARM and AREA SAMPLES - MIC

ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELL'UMBRIA E DELLE MARCHE "TOGO ROSATI"

Istituto Zooprofilattico Sperimentale del Piemonte Liguria e Valle d'Aosta

2. DIAGNOSTIC TOOLS



VIRULENCE FACTORS
GENOTYPES
MONITORING : PRRSV

VACCINATION ALTERNATIVES TO AM
BIOSECURITY
WELFARE

Istituto Zooprofilattico Sperimentale della Sicilia - *A. Mirri*

ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELLA SARDEGNA "G. PEGREFFI"

Istituto Zooprofilattico Sperimentale del Mezzogiorno

CLASSYFARM

COLISTIN - PIGS: DDDAit/BIOMASS

MID 2022

0,20 DDDit

1,5 % FARMS

* DATO CALCOLATO SUGLI ALLEVAMENTI CON OLTRE 40 CAPI

≈ 6,6 MILIONI* / SEMESTRE

≈ 4.700* / SEMESTRE

FINAL REMARKS

PUBLIC OFFICER

MONITORING

↓

RISK-BASED CATEGORIZATION

↓

OFFICIAL CONTROLS

HIGH RISK

SELECTED BY LOCAL AUTHORITIES

(*discretional and/or random*)

→ OPTIMIZE SURVEILLANCE

→ IMPROVE ANIMAL FARMING: BIOSECURITY, WELFARE, AMU

→ ETHICAL AND SAFE FOOD PRODUCTION

Ministero della Salute

UNIVERSITÀ DI PARMA

Istituto Zooprofilattico Sperimentale delle Venezie

AND MANY, MANY MORE!

FOR FURTHER INFORMATION YOU CAN CONTACT US AT
INFO@CLASSYFARM.IT

Thank you for your kind attention!