



Growing
ideas
through
networks

Food chain information systems – International & Italy

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Content

- Legal basis
- Scope
- EU Survey
- Italy, situation and perspectives



Legal Basis

- Reg. (EC) No. 853/2004 Annex II, Section III, a-h



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Scope

- FCI required for all animals submitted for slaughter.
- The information is intended to assist
 1. the slaughterhouse operator to organise slaughter operations
 2. the official veterinarian (OV) to determine the required inspection procedures





WG2 Farm-level: controls + risk categorization

leader:

Diana Meemken
Freie Univ. Berlin | DE

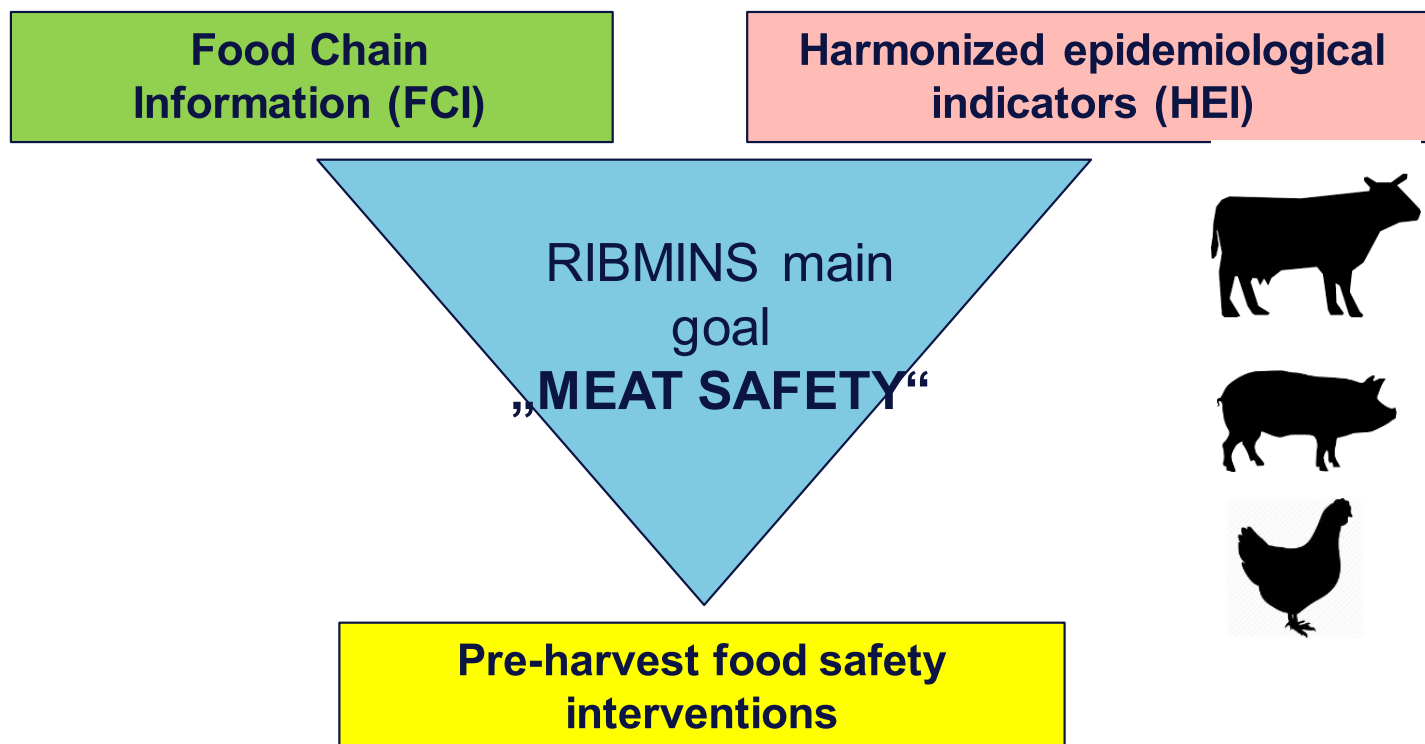


vice-leader:

Truls Nesbakken
Norwegian Univ. of Life Sciences | NO

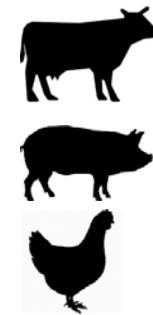


Core topics of WG 2



Present situation concerning FCI & HEIs

- **FCI/HEIs do NOT completely fulfil the intended benefit**
- **Improvements are needed**



Joint questionnaire

- distribution via „National Contact Points“ to official vets and food business operators
 - determination of the status-quo in the EU and other countries
 - development of improvements regarding the content and the application of FCI/HEI
- **aim: appropriate picture from all „RIBMINS countries“ & innovations**

- 6th November 2020-16th December 2020
 - **Distribution via NCPs to official meat inspectors and FBOs**
- 2021: analysing the responds regarding FCIs (= WG2 deliverable in 2/2021)

	broilers	pigs	bovines
No of responses	32	51	58
No of participating countries	13	12	18

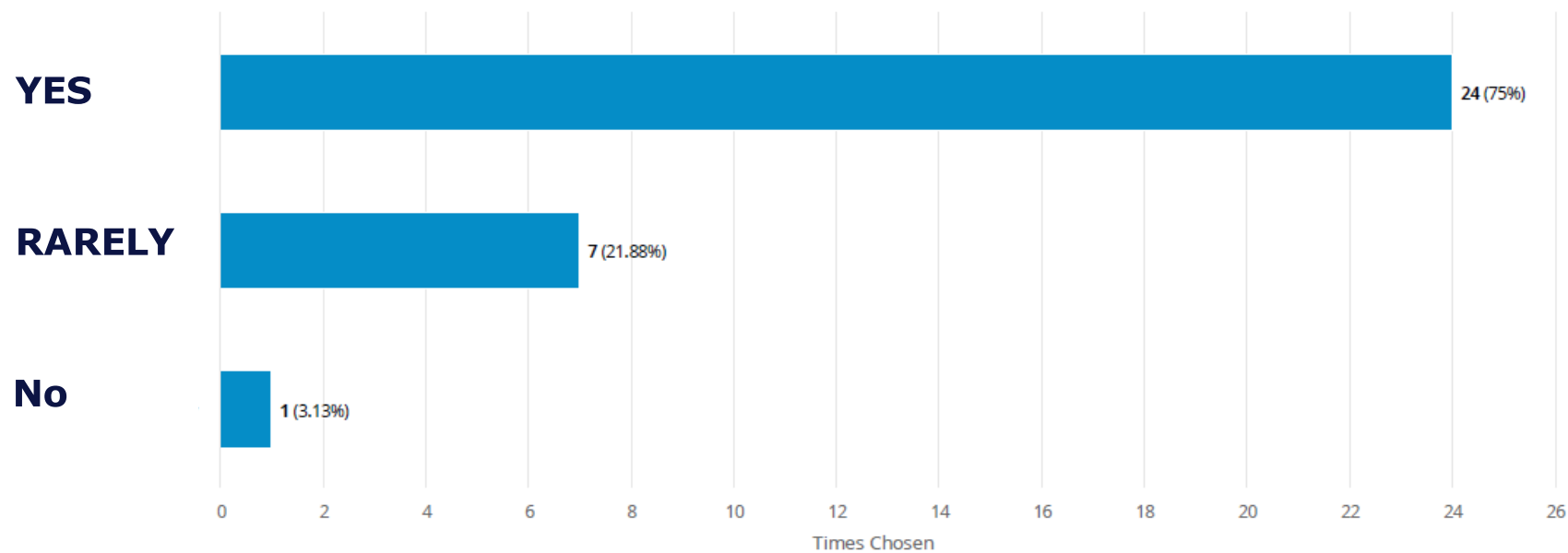
- 2021-2023: writing papers on FCIs and HEIs

WG2

Joint questionnaire: Examples of results

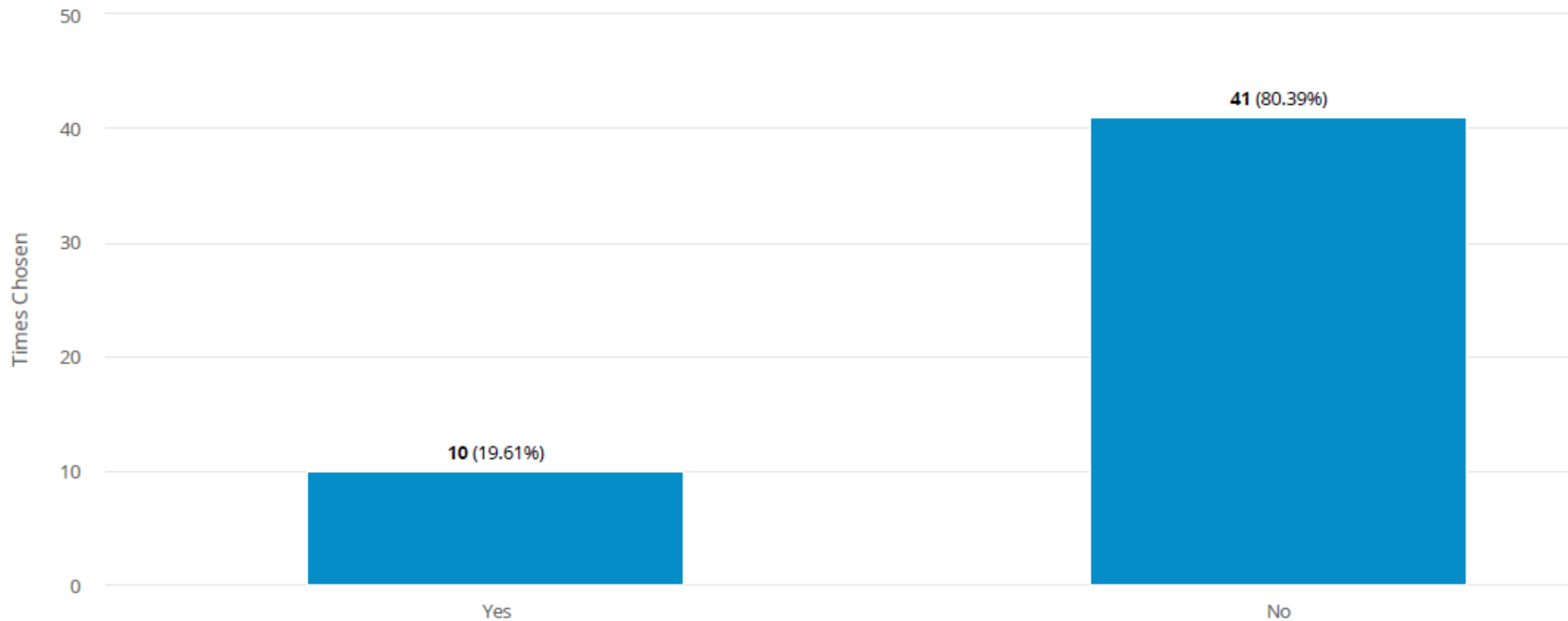
B.18 Does the FCI help you in decision-making regarding food safety?

Number of responses: 32



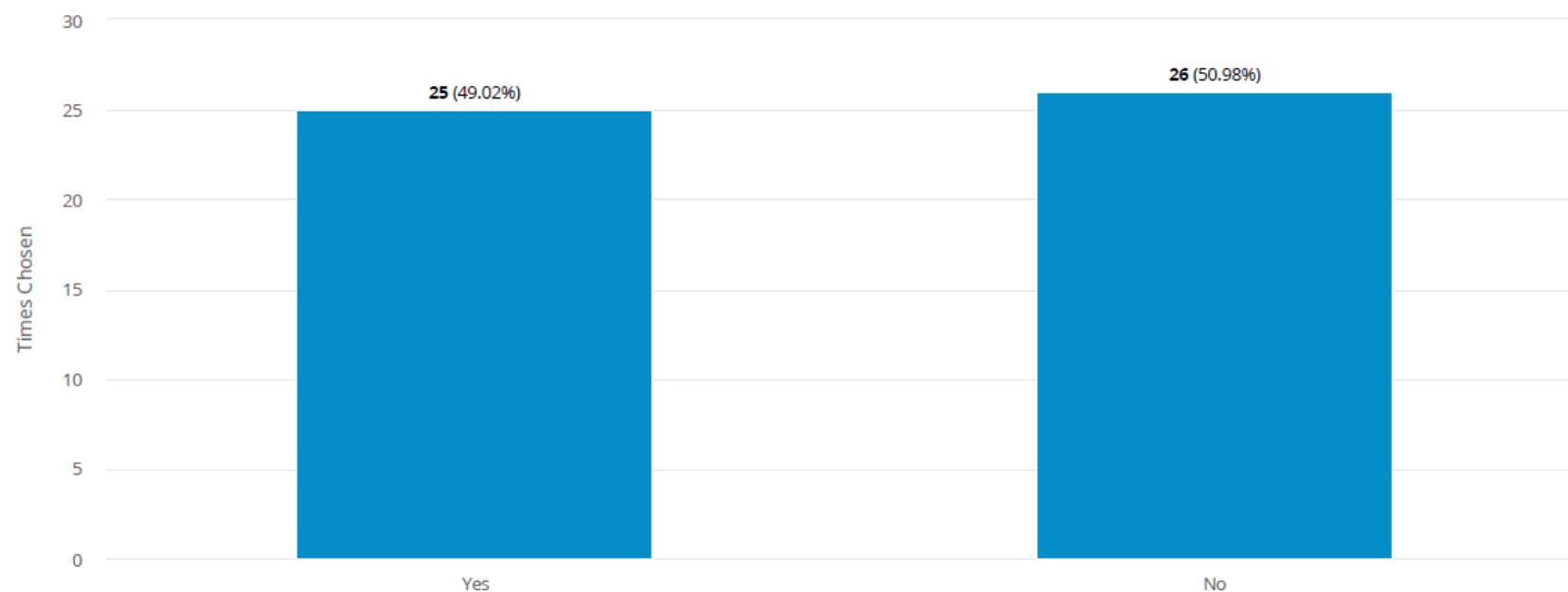
B.2 Do you have access to mortality rate data representing the fattening period?

Number of responses: 51



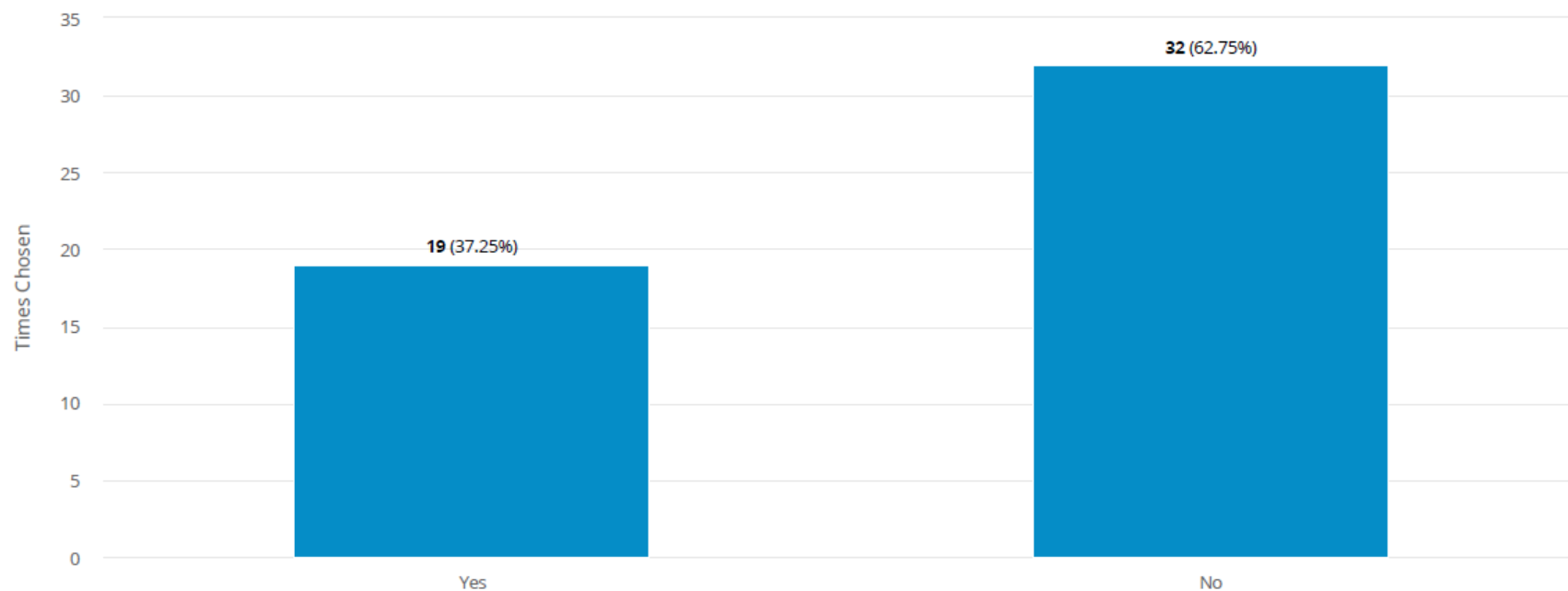
B.4 Do you have access to data regarding the treatments with a withdrawal period during the fattening period (i.e. treatments with veterinary products with a withdrawal period > 0 days)?

Number of responses: 51



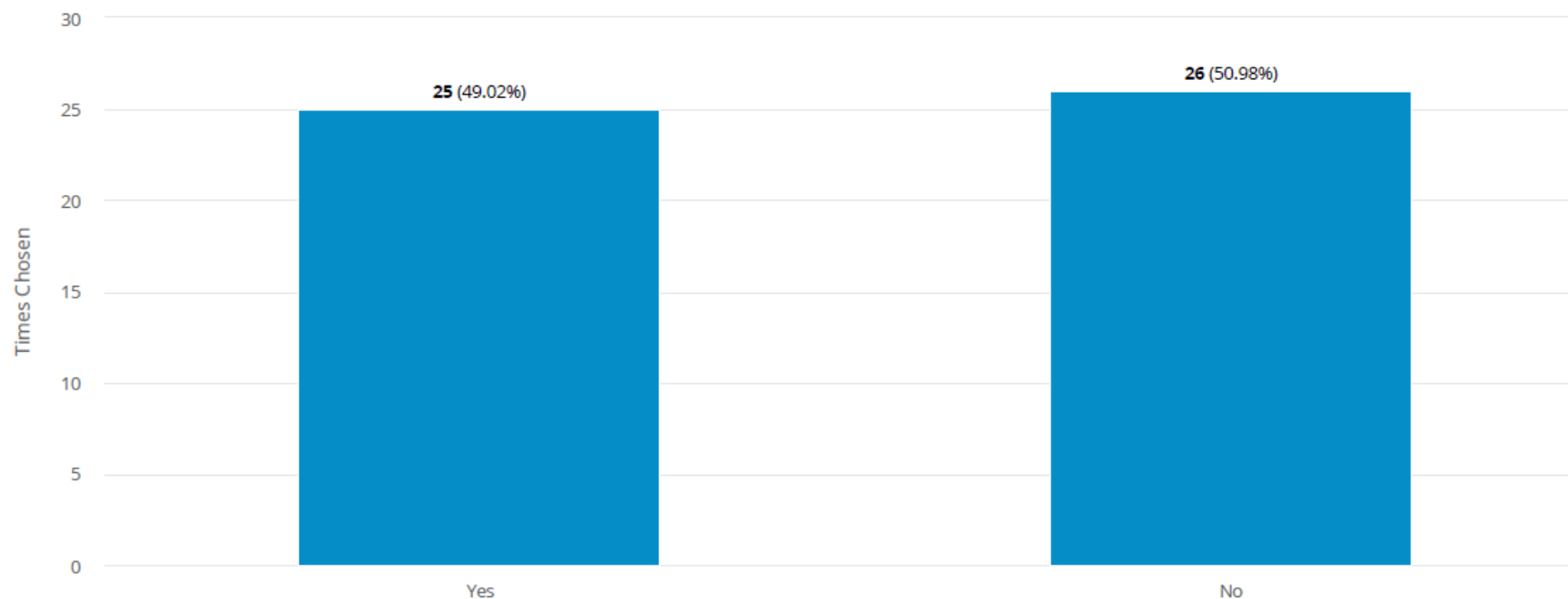
B.5 Do you have access to any data regarding veterinary medicinal products that have been applied to the pigs apart from antibiotics?

Number of responses: 51



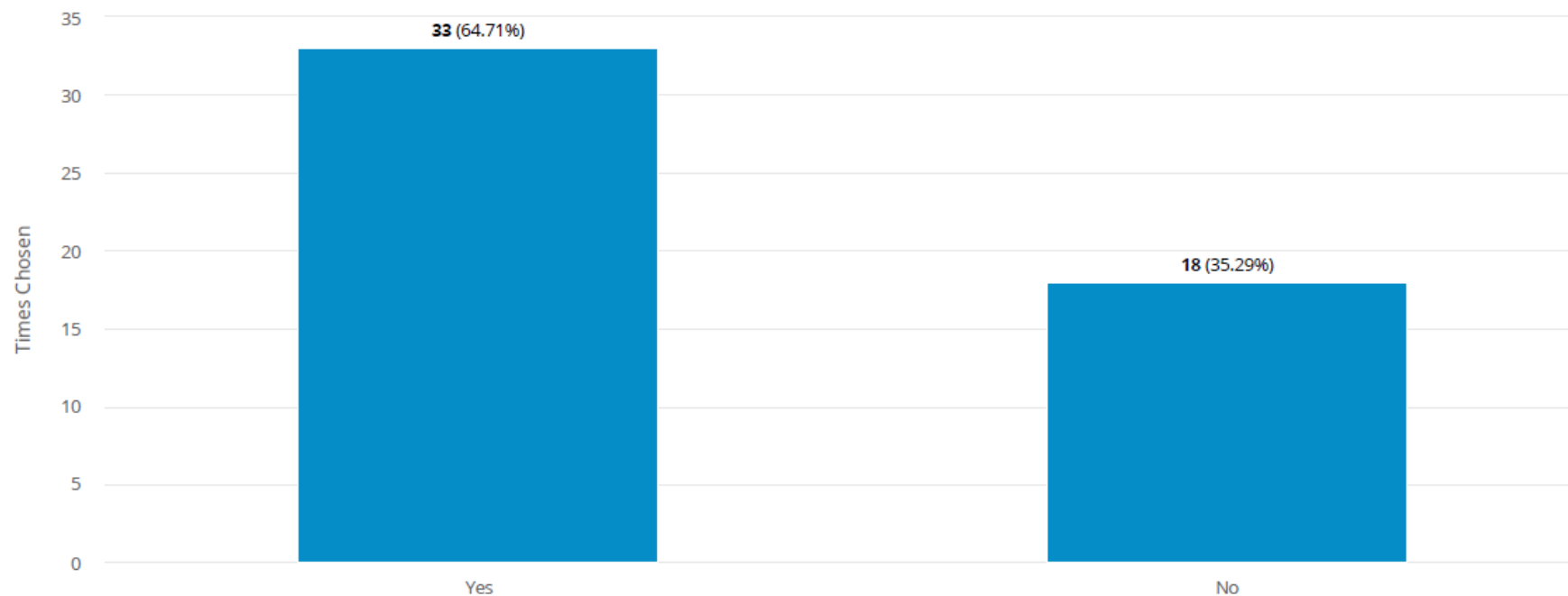
B.7 Do you have access to any data from the private veterinarian regarding the animal health status?

Number of responses: 51



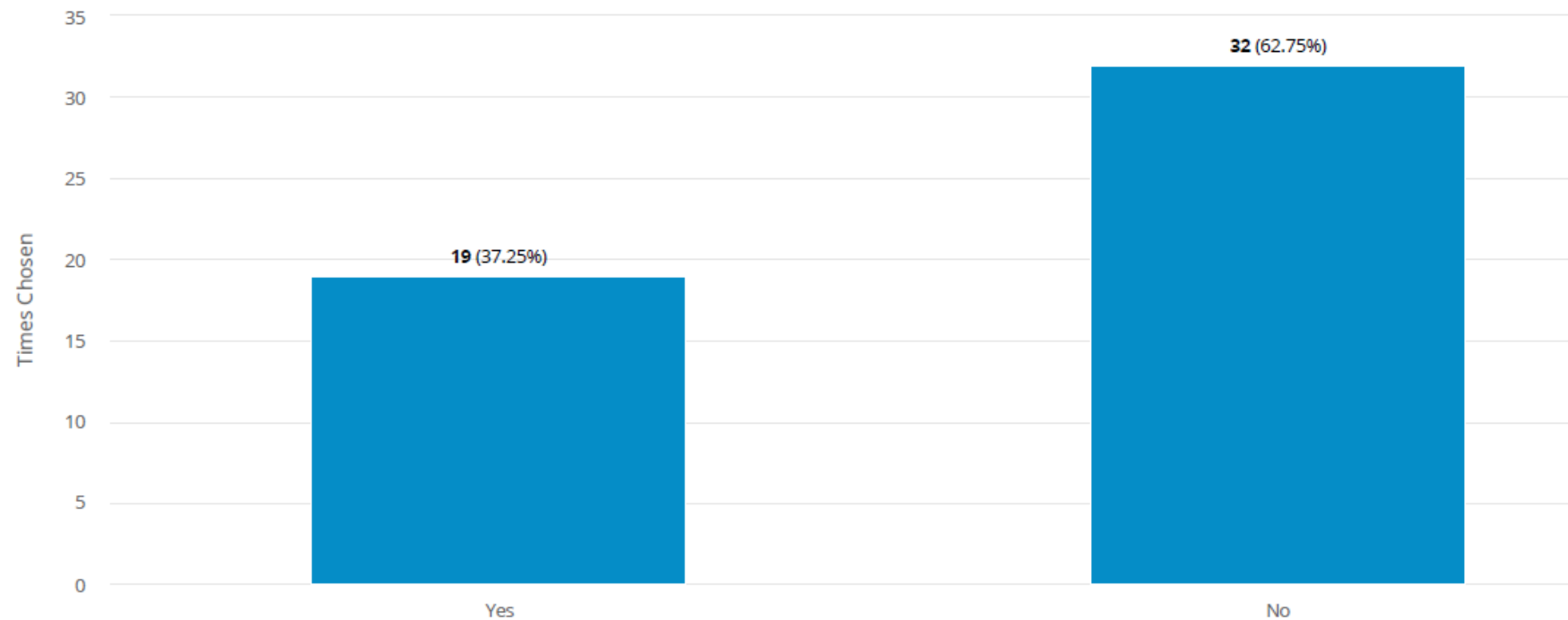
B.9 Do you have access to data from previous a.m. inspections of animals from the same producer?

Number of responses: 51



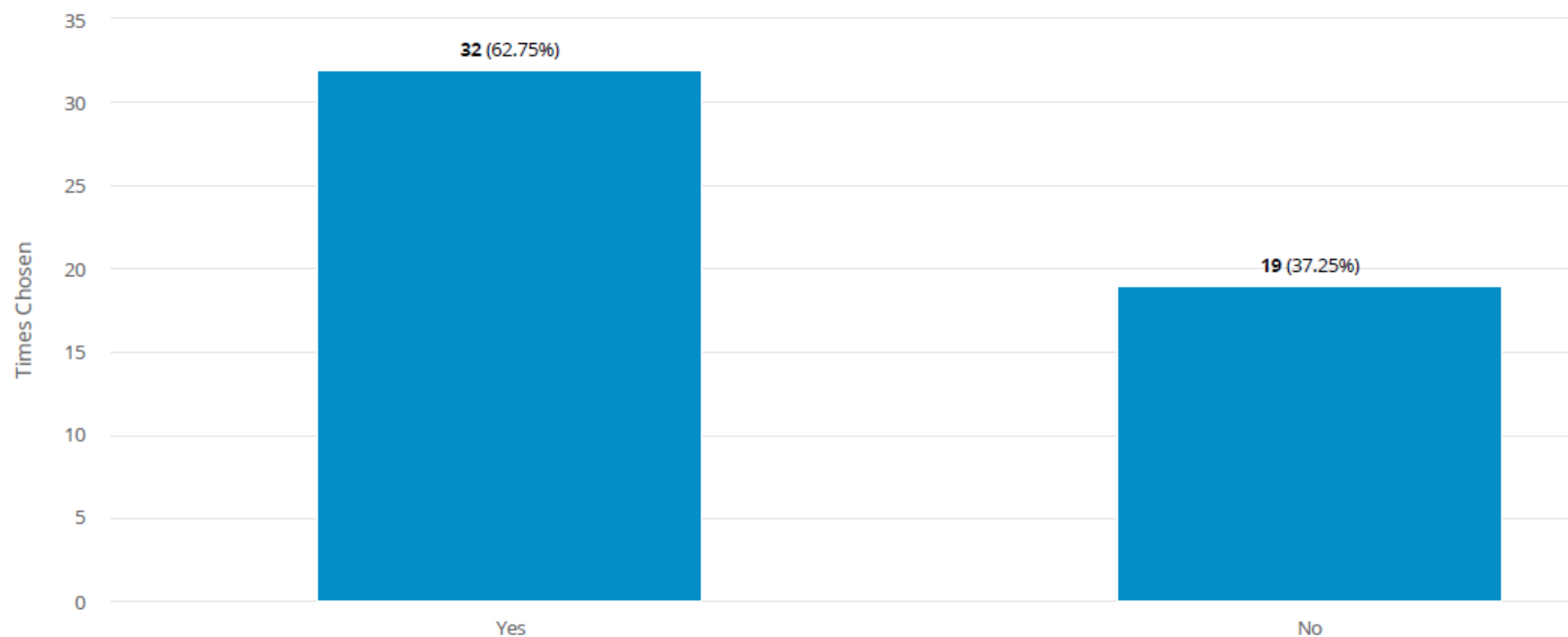
B.11 Do you have access to any data regarding the cleanliness of the animals?

Number of responses: 51



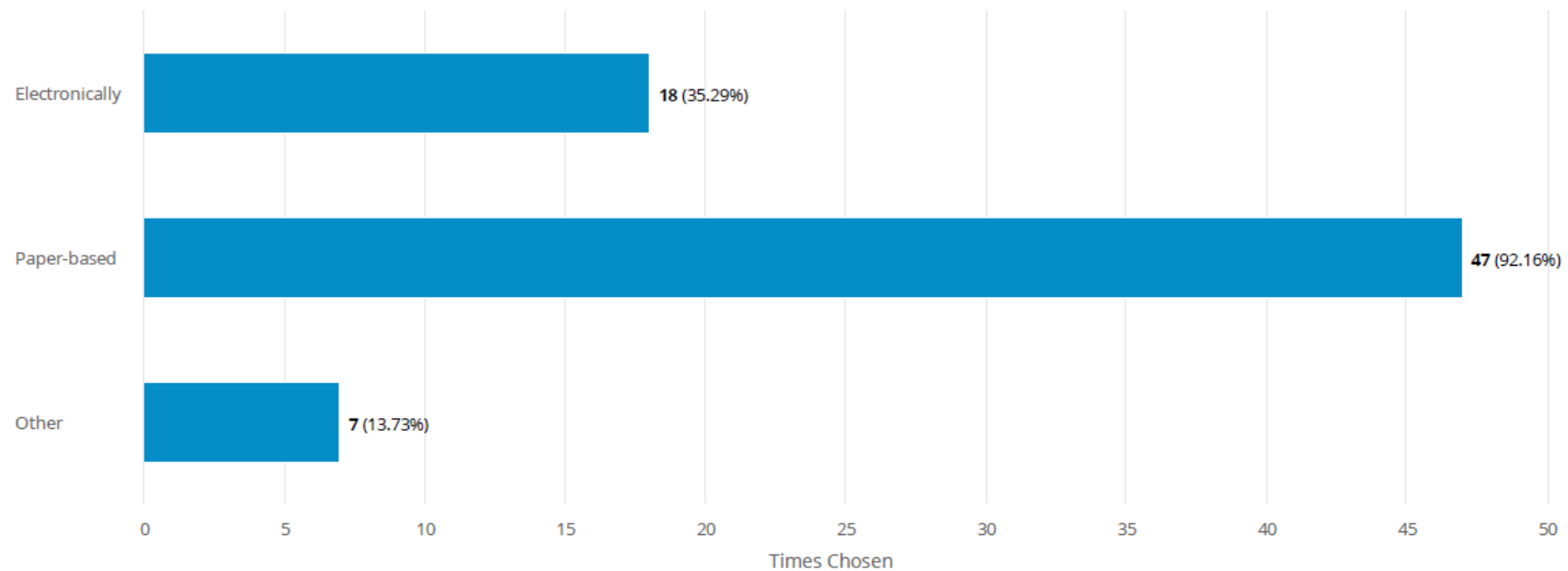
B.12 Do you have access to data from previous p.m. inspections of animals from the same producer?

Number of responses: 51



B.15 How do you get access to the FCI?

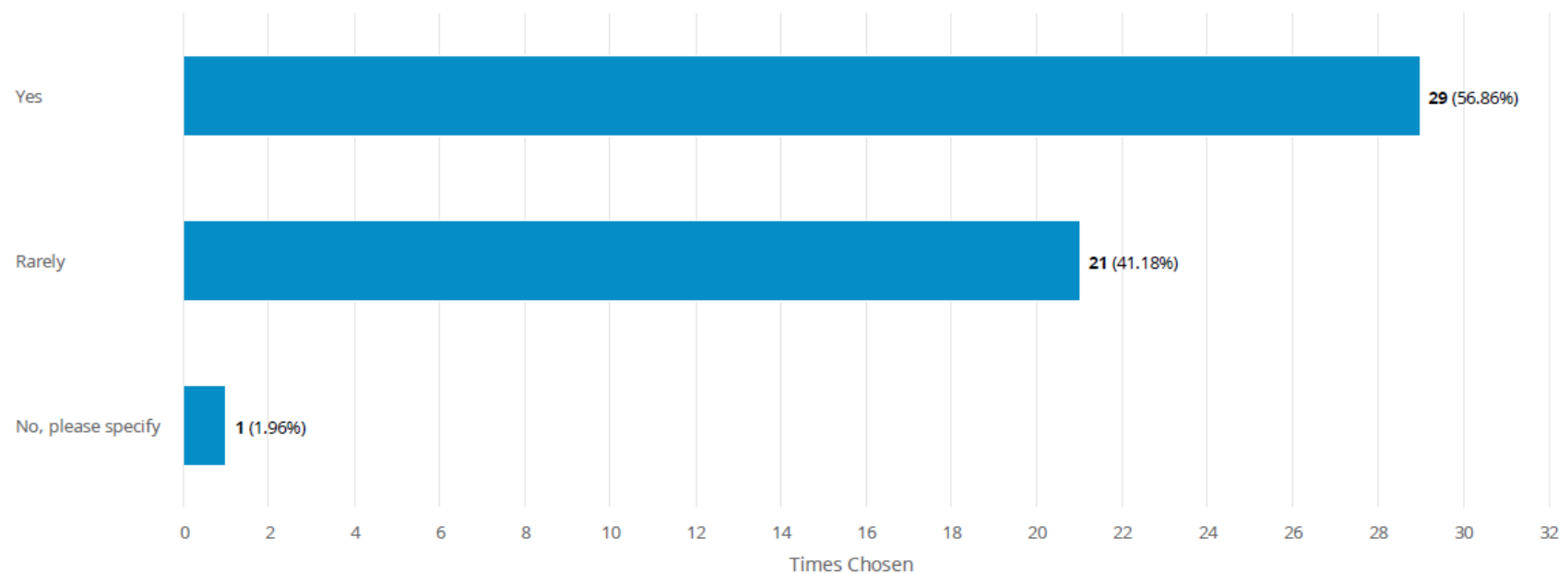
Number of responses: 51



"Other" text answers:

B.18 Does the FCI help you in decision-making regarding food safety?

Number of responses: 51



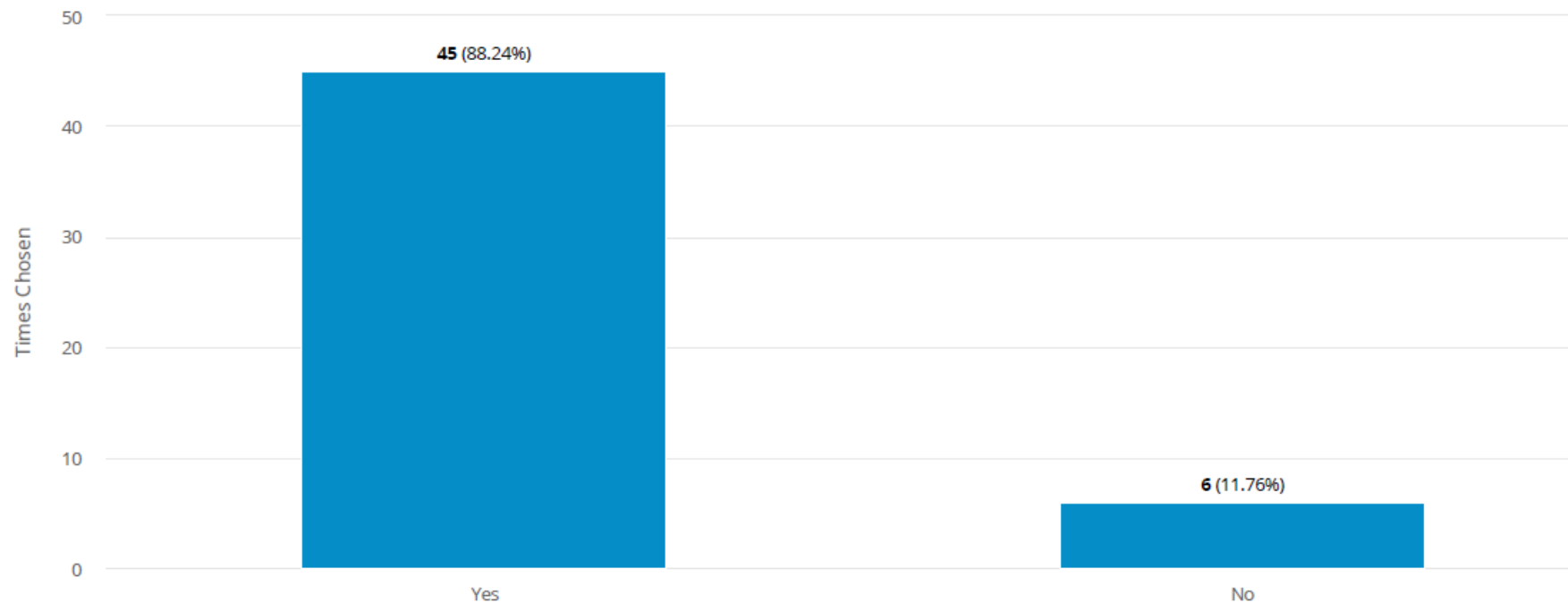
- FCI perceived potentially as very useful

BUT

- Mostly on paper...
- Missing info

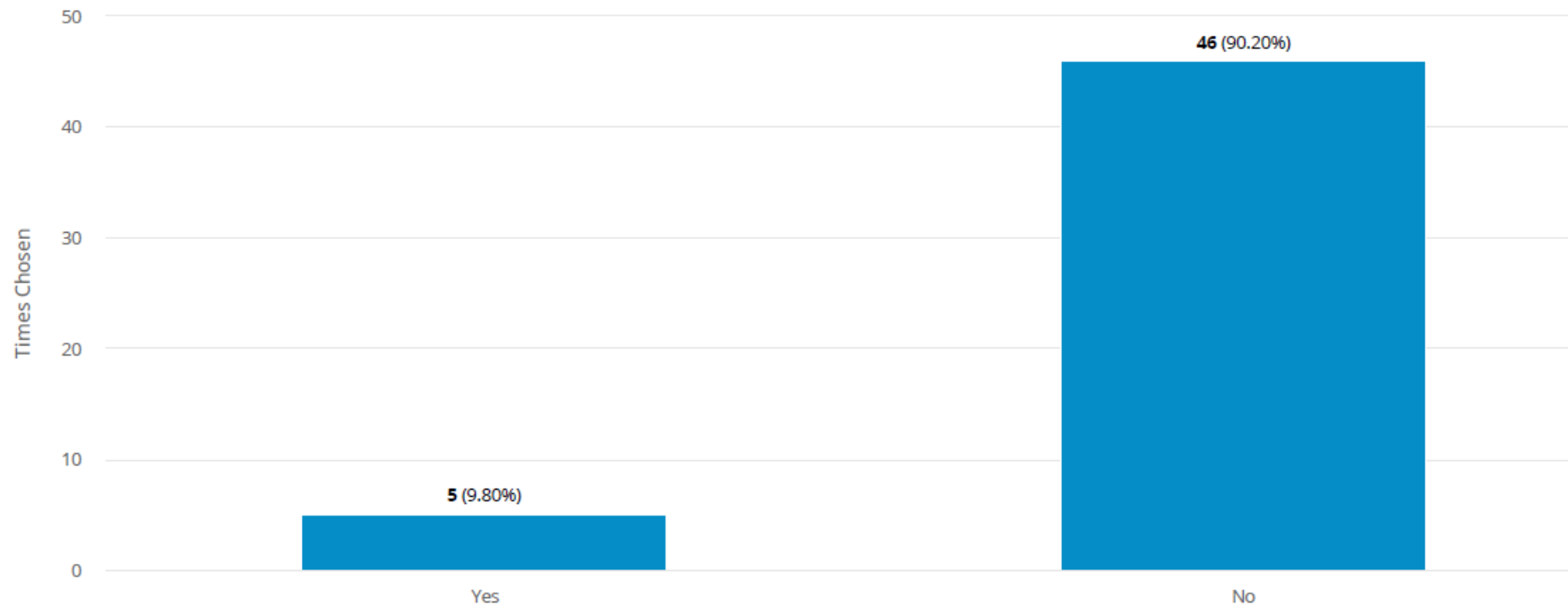
C.1 Are you testing for Salmonella spp.?

Number of responses: 51



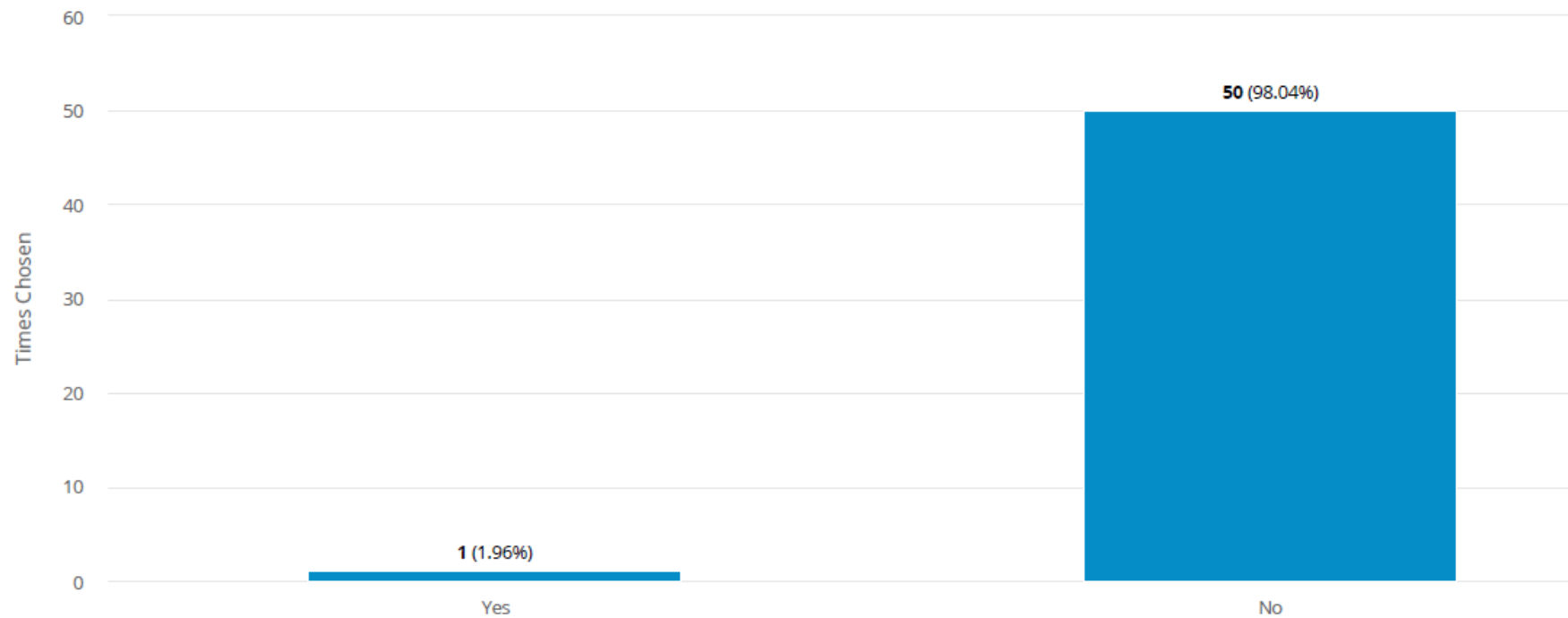
C.2 Are you testing for *Yersinia enterocolitica*?

Number of responses: 51



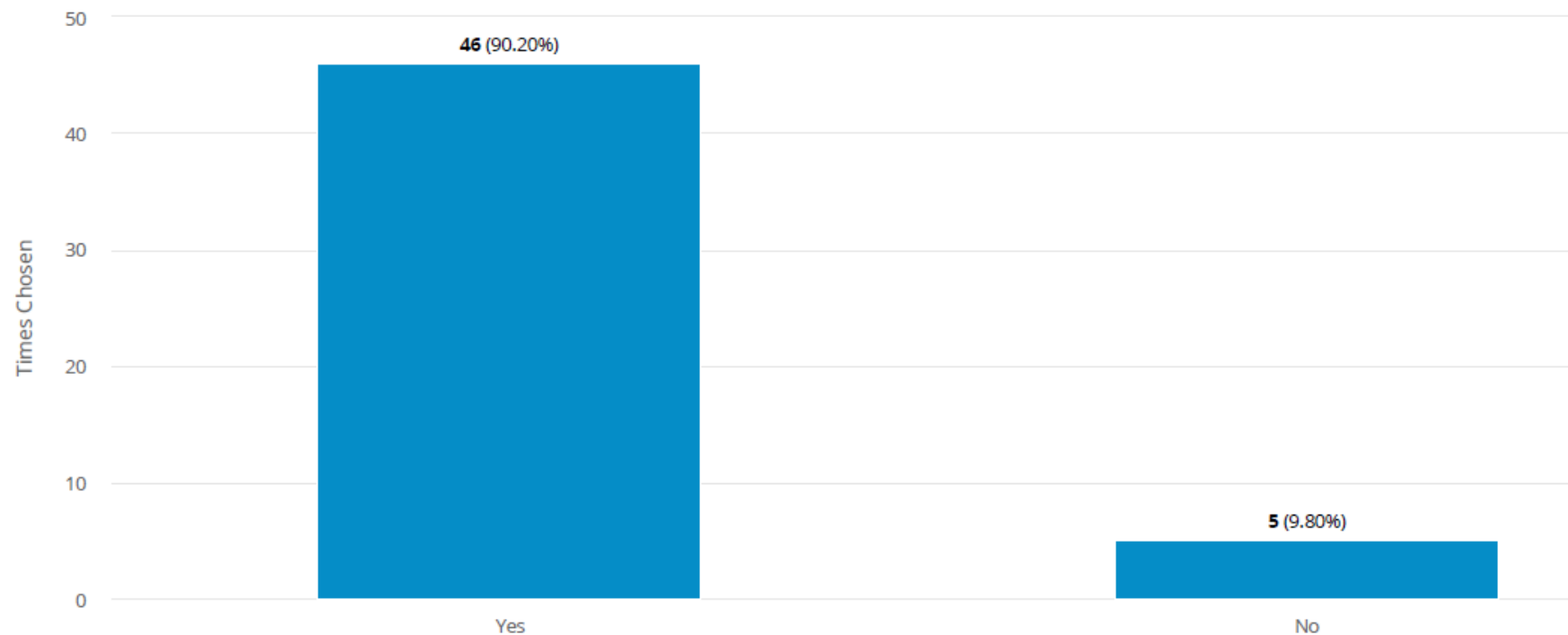
C.3 Are you testing for *Toxoplasma gondii*?

Number of responses: 51



C.4 Are you testing for *Trichinella* spp.?

Number of responses: 51



- Salmonella and trichinella HEI
- Other pathogens in very few cases

Actual situation in Italy

Animals travel to slaughterhouse with the following documentation:

- FCI (on paper)
- Model 4 (virtualised)
- Certifications for export to third countries (on paper)



FCI in Italy

Food chain information for pigs intended for slaughter

(Reg. (EC) n. 853/04, Annex. II, section III)

Attached to the Model 4 (Italian Institutional Formal document) n. _____

date _____ holding number _____

The undersigned ____ (FBO) _____

declares

a) † that animals referred to Mod. 4 (attached), they come from an accredited/free/officially free holding for the following diseases:

Swine Vesicular Disease †

Aujeszky's Disease †

Trichinellosis

Tuberculosis Bovine/Sheep and goats †

Brucellosis Bovine/Sheep and goats †

Enzootic Bovine Leukosis

more _____



FCI in Italy

b1) † that in the livestock farming of origin no further disease is reported, and having impact on animal health or on meat safety

or rather

b-2) to be aware of the presence in the livestock farming of origin of

† clinical signs of ongoing diseases

† change in the production index (increase of mortality rate, decrease of fertility index, lactation, growing, ecc.) related to the presence of diseases in the livestock farming

† negative laboratory results related to animals of the same species in the last 12 months (specify

_____)

† notification about diseases and other non-compliance detected during inspection at slaughterhouse and related to the supply of animals in the last 12 months (specify _____)

_____)

that could be of concern for meat safety

c) veterinarians that provide zootechnical support in the livestock farming

name _____

address _____ (phone number) _____

Date _____

Signature _____



Model 4 (virtualized)

- Id travelling animals
- Drug administration
- Destination
- Transporter id
- Health certifications (notifiable diseases)



Certifications for export to third countries (PIGS)

GARANZIE SANITARIE – HEALTH WARRANTIES

Visti gli atti d'ufficio e la documentazione presente in azienda (registro aziendale, dichiarazioni di provenienza degli animali), il sottoscritto veterinario Ufficiale attesta che gli animali sopra descritti:

- sono nati e sono stati allevati in Italia (o in un paese dell'Unione Europea) da almeno 90 giorni
 - sono stati importati da _____
 - non sono stati avviati al macello per cause di malattie infettive, zoonosiche, contagiose o parassitarie
 - provengono da una zona non soggetta a denuncia di malattia suina
 - provengono da una regione libera da malattie suine
 - provengono da un allevamento nel quale, negli ultimi 180/90/60 giorni, non è stato evidenziato alcun sintomo (clinico, sierologico o microbiologico) di afta, peste bovina, PSA, PSC e MVS.
- Not at slaughter for eradication purposes
 - Not at slaughter for surveillance purposes
 - Not from restricted areas
 - From region free from List A OIE diseases
 - No signs of FMD, rinderpest, CSF, ASF, VD

Certifications for export to third countries (Pigs)

Il sottoscritto Veterinario Ufficiale dichiara inoltre che:

- l'allevamento di origine è situato in una regione nella quale, negli ultimi 24 mesi, non vi è stata alcuna evidenza di virus MVS. L'allevamento deve essere libero da malattia vescicolare del suino (MVS) effettuati utilizzando solo suini provenienti da allevamenti con un livello capace di individuare il 20% di prevalenza con un test di laboratorio (nei 6 mesi prima della macellazione).

I suini sono nati e sono stati allevati nelle seguenti regioni:

- | | | |
|--|---|---|
| ○ gli animali importati sono stati traspariti e indennizzati dal MAFF giapponese da Afta e CSF. Gli animali allevati in Giappone non hanno mostrato segni di malattia. | <p>FMD (foot and mouth disease)</p> <p>ASF (African swine fever)</p> <p>CSF (classical swine fever)</p> | <p>Paesi riconosciuti per la produzione di vino e, all'arrivo in Giappone</p> |
|--|---|---|

- ASF (African swine fever)
- CSF (classical swine fever)
- RP (Rinderpest)
- Anthrax
- Brucellosis

FMD (foot and mouth disease)
ASF (African swine fever)
CSF (classical swine fever)
RP (Rinderpest)

AUSTRALIA

GIAPPONE

Le matrici sono state allevate e indenne da PSC da almeno 2 anni e nei quali i suini sono nati e sono stati allevati non sono state trovate malattie infettive e brucellosi da almeno 2 anni prima della macellazione. Queste misure di polizia sanitaria negli ultimi 3 mesi.

COREA

- | | | |
|---|--------------------------------------|--|
| ○ I suini provengono da un allevamento
carbonchio ematico, brucellosi, TBC, e
segnalati ufficialmente segni clinici di
oggetto della presente attestazione n | PRRS
TB
Anthrax
Brucellosis | ati notificati casi di
cui non sono stati
uino (PRRS). I suini
/H1N1. |
|---|--------------------------------------|--|

Trichinella
PRRS
TB
Anthrax
Brucellosis
Influenza A/H1N1

CINA

Ideas/opportunities for the future

- Classyfarm project (<http://www.classyfarm.it/>)
- Born for the classification of farm on their risk level
- First driver (risk): antimicrobial consumption



INTRODUCTION



Reducing AMR: an integrated approach

1. Antimicrobial consumption- AMR ↔ Pharmacosurveillance
2. Biosecurity
3. Animal welfare
4. Slaughterhouses



Species

- **Swine** → tests on integrated approach since 2014
- **Bovine** → tests on integrated approach since 2016
- **Poultry** → goal: starting trials in 2018



INTRODUCTION



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Reducing AMR: cooperation & integration

- Collaboration with **Private** and **public** stakeholder is pivotal
- Data collection: **from farm to** information technology (IT)
- Business Intelligence tool (data processing and visualization)





1. AM CONSUMPTION



DDD-based multi-level analysis

- **Shifting** from **paper** prescriptions to an **electronic** system
 - ✓ *Better **integration** among **IT systems** and **DBs***
- Defined daily dose (**DDD**)-based metric
- Farms usages **compared** at different **geographical** levels
- Several detailed assessment available at farm-level
 - ✓ ***Age groups***
 - ✓ ***Active ingredients***
 - ✓ ***And many more...***



2. BIOSECURITY



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Two surveys: National and BioCheck.UGhent®

- Investigations started using a **national** questionnaire **focused** on **diseases** prevention
- recently implemented by Biocheck.Ugent®
 - ✓ ***External biosecurity*** (general & detailed scores)
 - ✓ ***Internal biosecurity*** (general & detailed scores)
- Summarized biosecurity levels **compared** at different **geographical** and farm levels
- **Detailed analysis** of each **single parameter** available



3. WELFARE



Not only laws and regulations

- **Animal welfare** analysis also involves also animal-based measures (**ABMs**)
- Summarised and detailed information on farm performances
- Sector-based surveys by **expert panel**
 - ✓ ***Reproduction*** (sows, boars, sucking piglets)
 - ✓ ***Fattening pigs*** (weaners, finishers)



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4. SLAUGHTERHOUSES



Surveillance and analyses “*after farm*”

- Results of **ante-** and **post-mortem inspections** can also be included and processed using our system
- Lung, skin, tail, gastric scores
- Towards a **standardisation** of collected information
- **Direct connection to slaughterhouses** under development
 - ✓ *Slaughterhouse also as end-user*
 - ✓ *Data collection and analyses speed-up*



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Geographical-based “zooms”

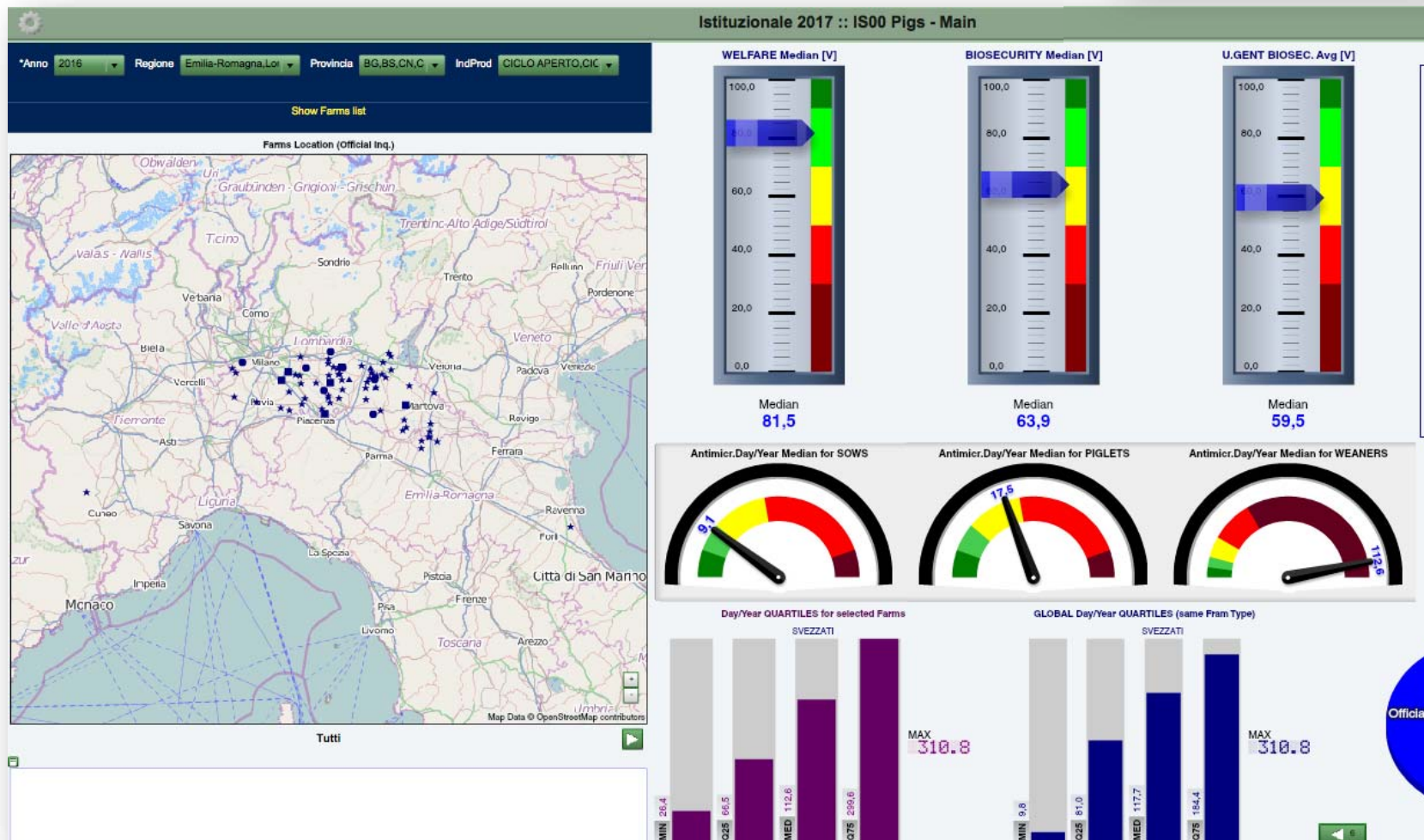
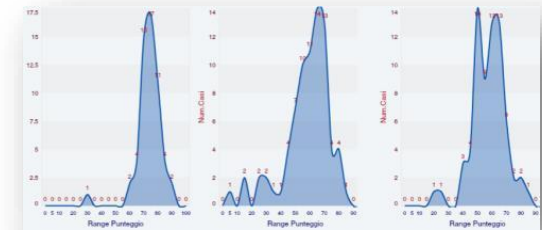
- Farm data aggregable at different level
 - ✓ *National*
 - ✓ *Regional*
 - ✓ *Local*
- **Each selected farm is mapped on the dashboard.**
- **Medians of welfare, biosecurity and antimicrobial consumption**
- **Data distribution** can also be visualised



SURVEILLANCE



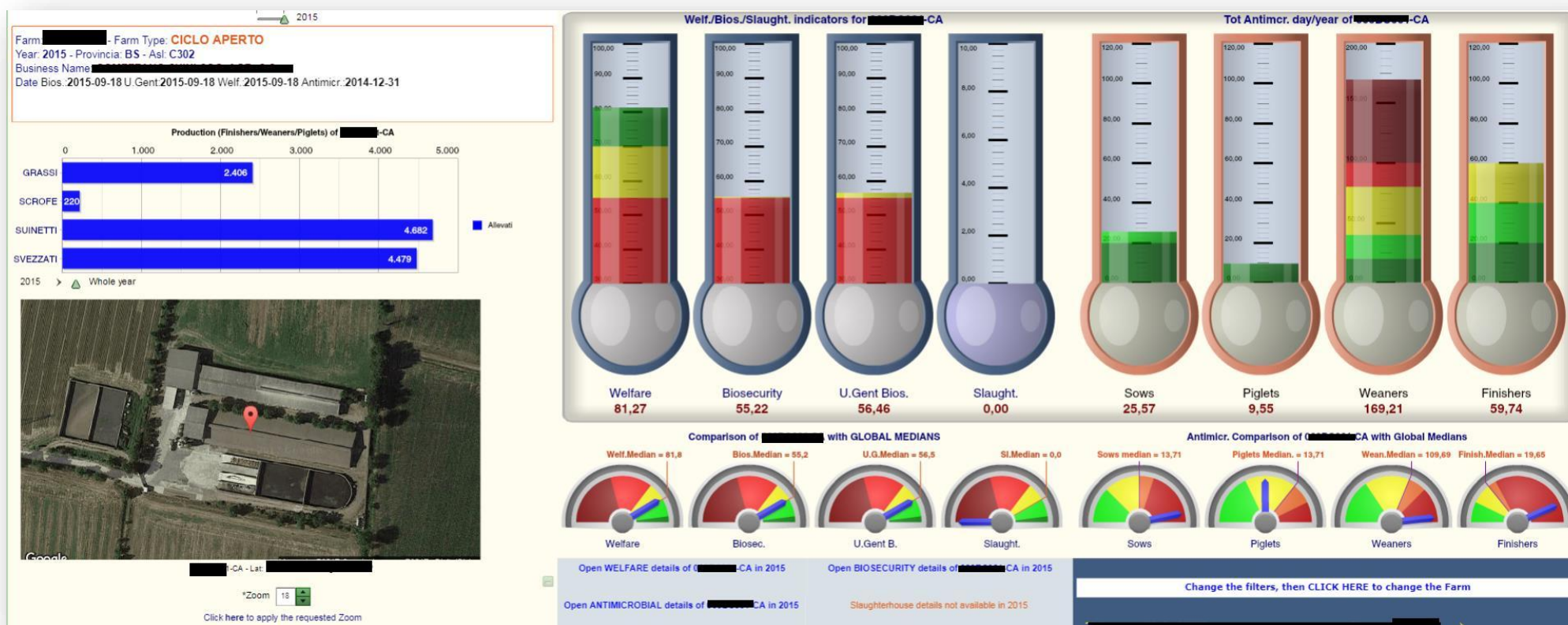
Geographical-based “zooms”





SURVEILLANCE

Farm level “zoom”





Future idea/opportunity



**Develop the system to incorporate
FCI information + HEI**





Future idea/opportunity



CLASSYFARM as FCI

PROs: lots of information, system already present, possibility to integrate all info in one system (no paper)

CONs: cumbersome, too many info, not all targeted for slaughter → choice, some info missing (HEI)