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## COST Action CA20103: **B**iosecurity **E**nhanced **T**hrough **T**raining **E**valuation and **R**aising Awareness

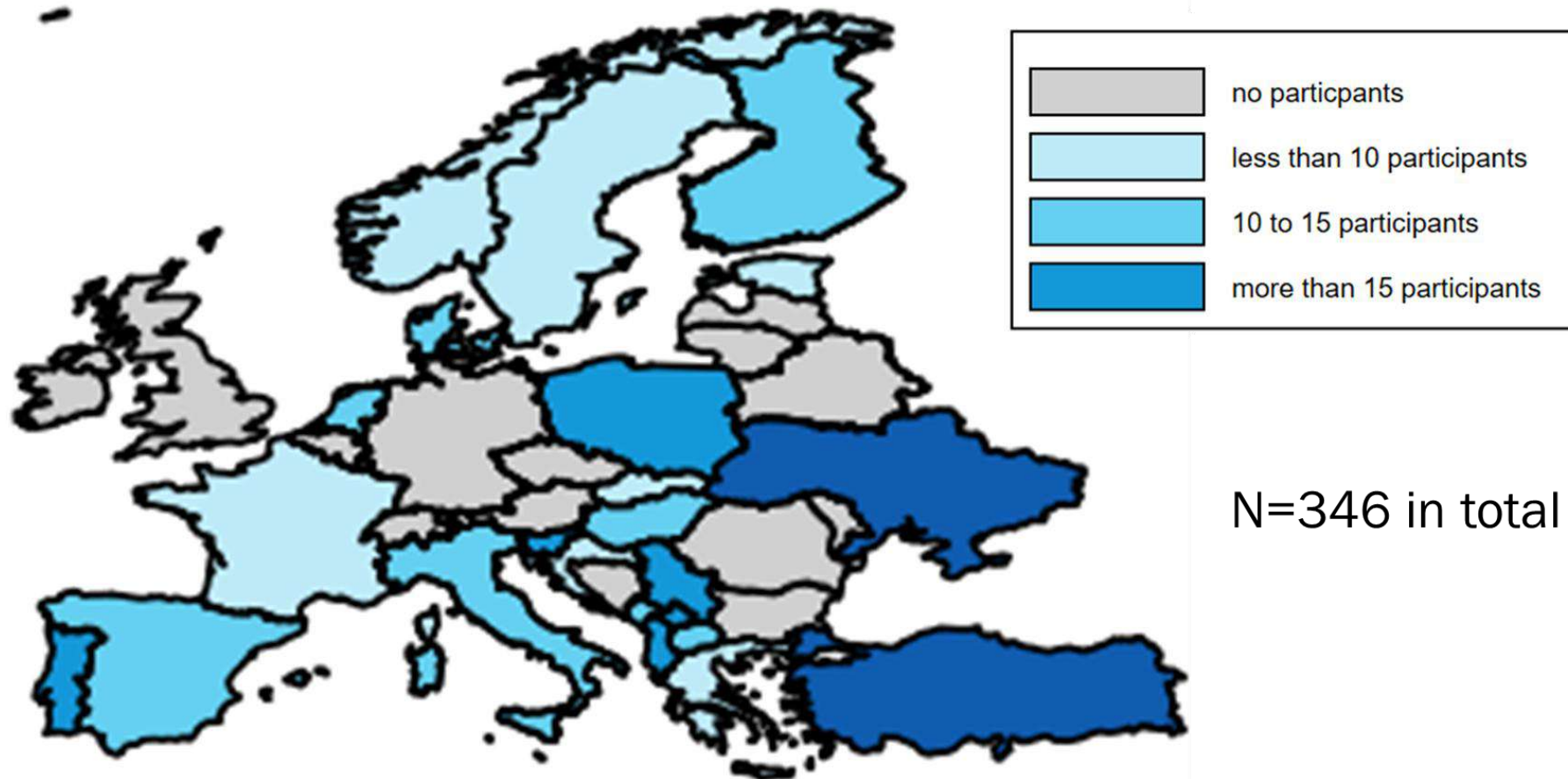
WG1 – Evaluation of biosecurity knowledge, risks and preferred focus in small scale farms

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Fernando Duarte and Jasna Prodanov-Radulović

- Sept '23 Bgrade: discuss the idea to collect information on biosecurity in small scale farms
- Oct '23 – Dec '23: develop the survey + digitalize in the Eusurvey tool
- Feb '24 Padua meeting: discuss the digital survey + create a test panel
- Mar–May '24: test survey in 6 countries and improve the questions
- Jun–Aug '24: translate the survey in 22 languages
- Aug–Dec '24: survey is published and filled
- Sep '24 Kotor: fist results are presented
- Jan '25: final analysis are conducted and

# Results: Origin of participants





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# Grouping variables

Please indicate the number of years of experience you have as a field veterinari

Specie	No. Respondents with knowledge
Cattle	296 (86%)
Pigs	248 (72%)
Poultry	250 (72%)
Small ruminants	276 (80%)

	Freq.	Percent	Cum.
11-20 years	105	31.34	31.34
<10 years	130	38.81	70.15
>20 years	100	29.85	100.00
Total	335	100.00	

area	Freq.	Percent	Cum.
field	106	30.64	30.64
not in field	188	54.34	84.97
partly_field	52	15.03	100.00
Total	346	100.00	



geolocation	Freq.	Percent	Cum.
Balkan	114	32.95	32.95
Central	101	29.19	62.14
Eurasia	37	10.69	72.83
North	49	14.16	86.99
South	45	13.01	100.00
Total	346	100.00	



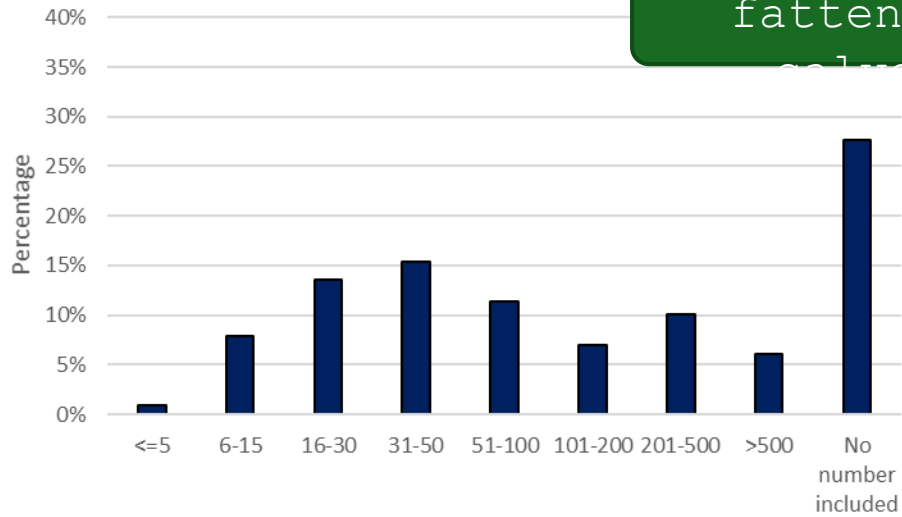
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# Definitions small scale according to vets

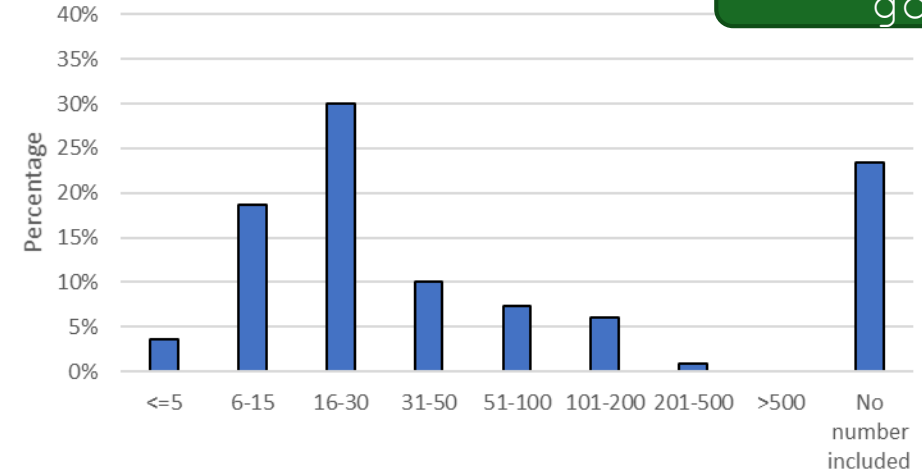
Cattle

<5 cows/  
fattening



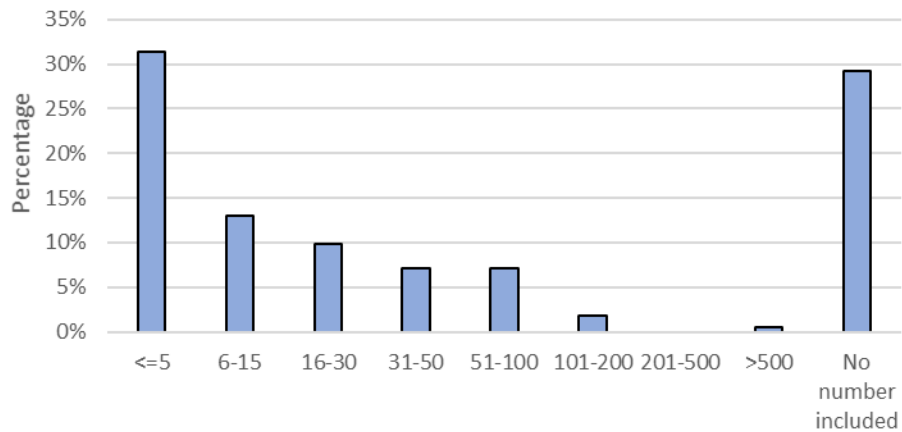
Small ruminants

<20 sheep/  
goats



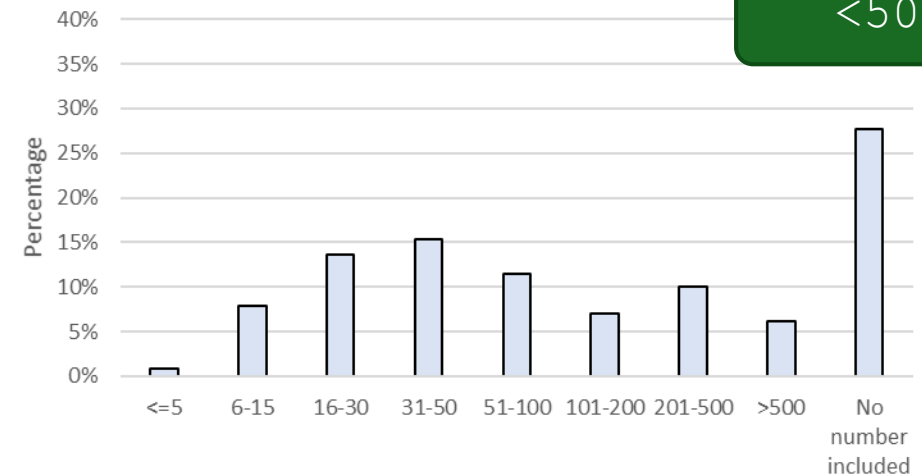
<5 sows/  
fattening pigs

Pigs



Poultry

<50 birds

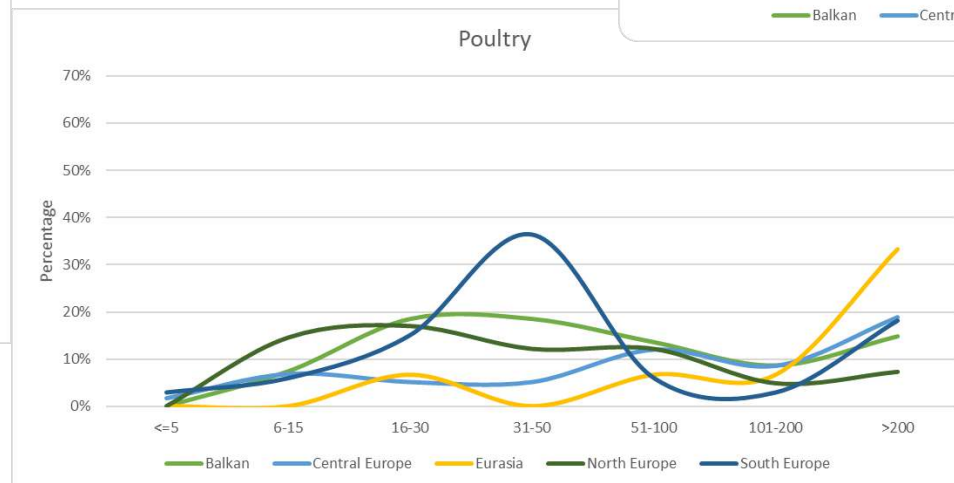
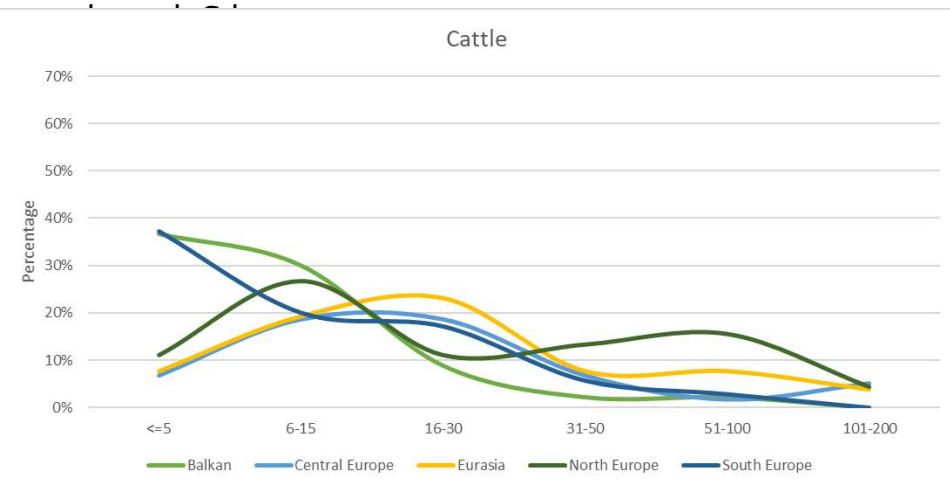
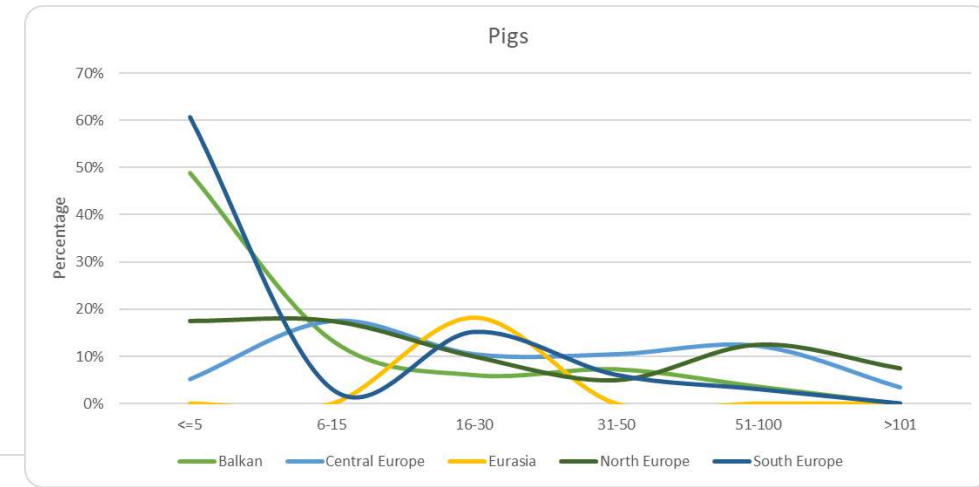
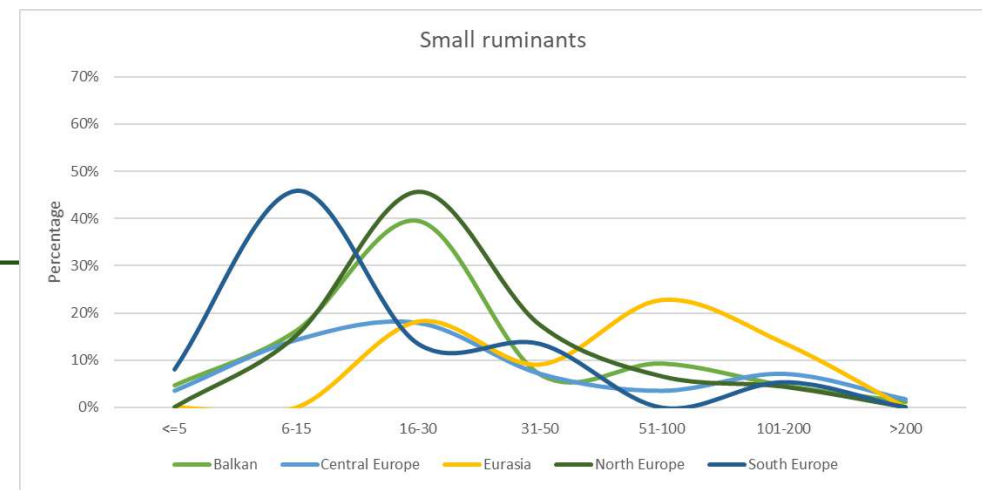




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# Differences in definitions

	Cattle	Pigs	Poultry	Small ruminants
Area of expertise	No	No	No	Yes
Age	Yes	No	No	No
Geolocation Chi2 test, $P < 0.05$ is deemed	Yes	Yes	Yes	Yes



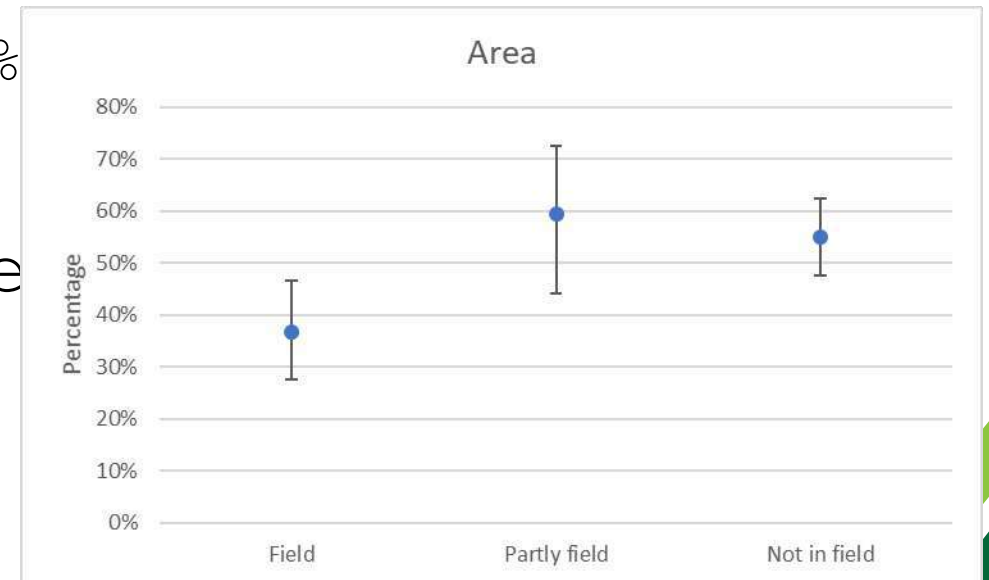
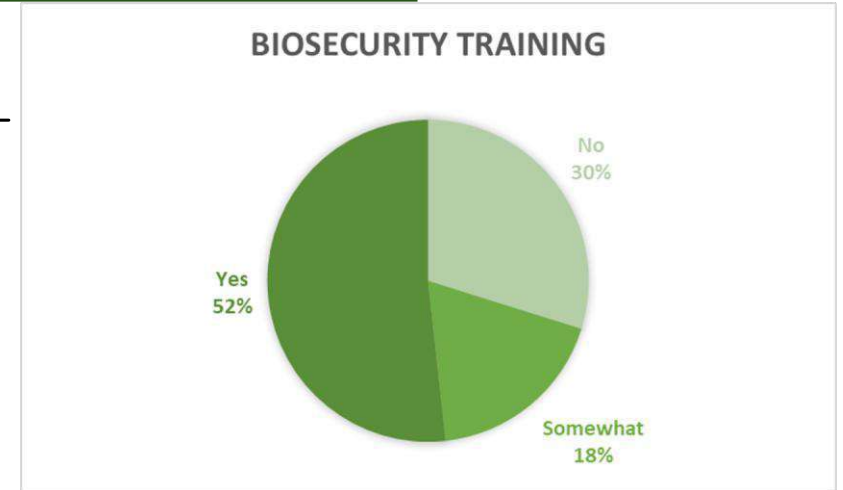


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# Did the vet receive training on biosecurity?



- Sig. differences between experi
  - $\leq 10$  years: 53% (95% CI: 44-62%)
  - 11-20 years: 38% (95% CI: 29-48%)
  - $> 20$  years: 62% (95% CI: 52-72%)
- Sig. differences between geolocations
  - Most often in Southern EU (70%)
- Sig. differences between fie  
non-field vets





# Knowledge of concept of biosecurity

85% of the vets believe that small scale holders hve only limited knowledge on the concept of biosecurity







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# Knowledge

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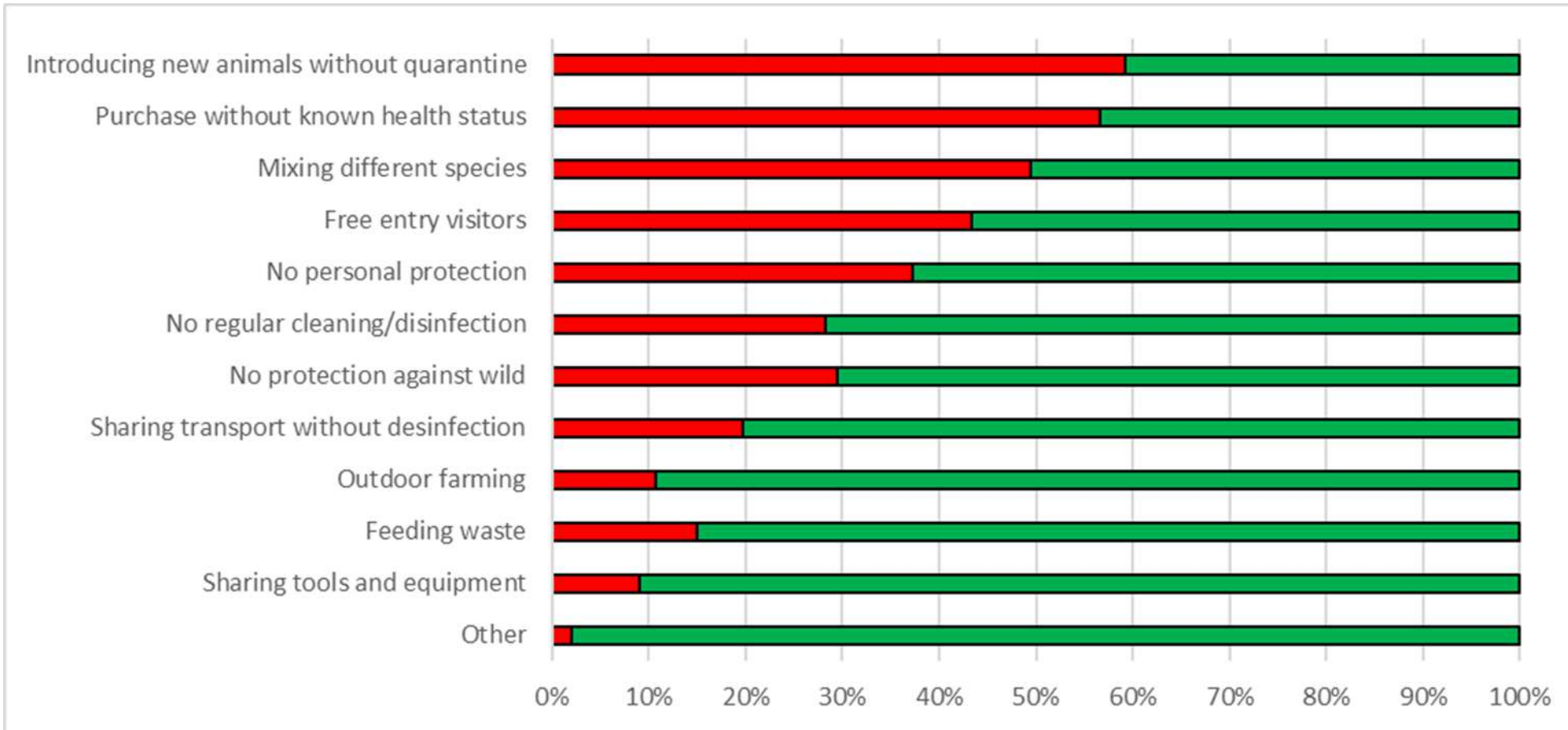
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- No significant association with experience
- Vets that do not work as a field vet believe that farmers have sufficient biosecurity knowledge significantly more often (20% vs. 10%)
- Vets in Eurasia believe that farmers have sufficient biosecurity knowledge significantly more often (49% vs. 23% in Central Europe and less than 10% in other areas)



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# What are (in your opinion) the four most risky behaviors done by ss farmers?

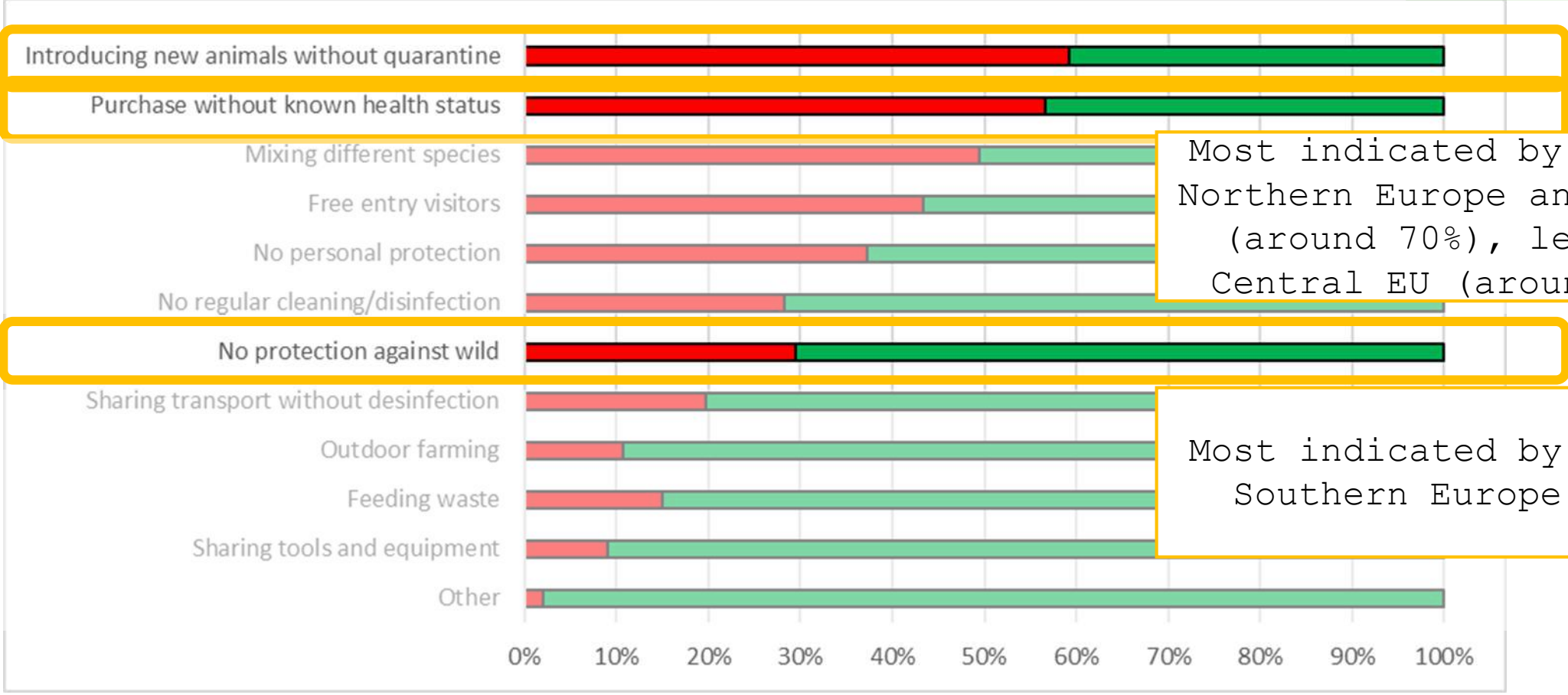




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# What are (in your opinion) the four most risky behaviors done by ss farmers?

No significant difference between experience and type vet



Most indicated by Vets in Northern Europe and Balkan (around 70%), least in Central EU (around 40%)

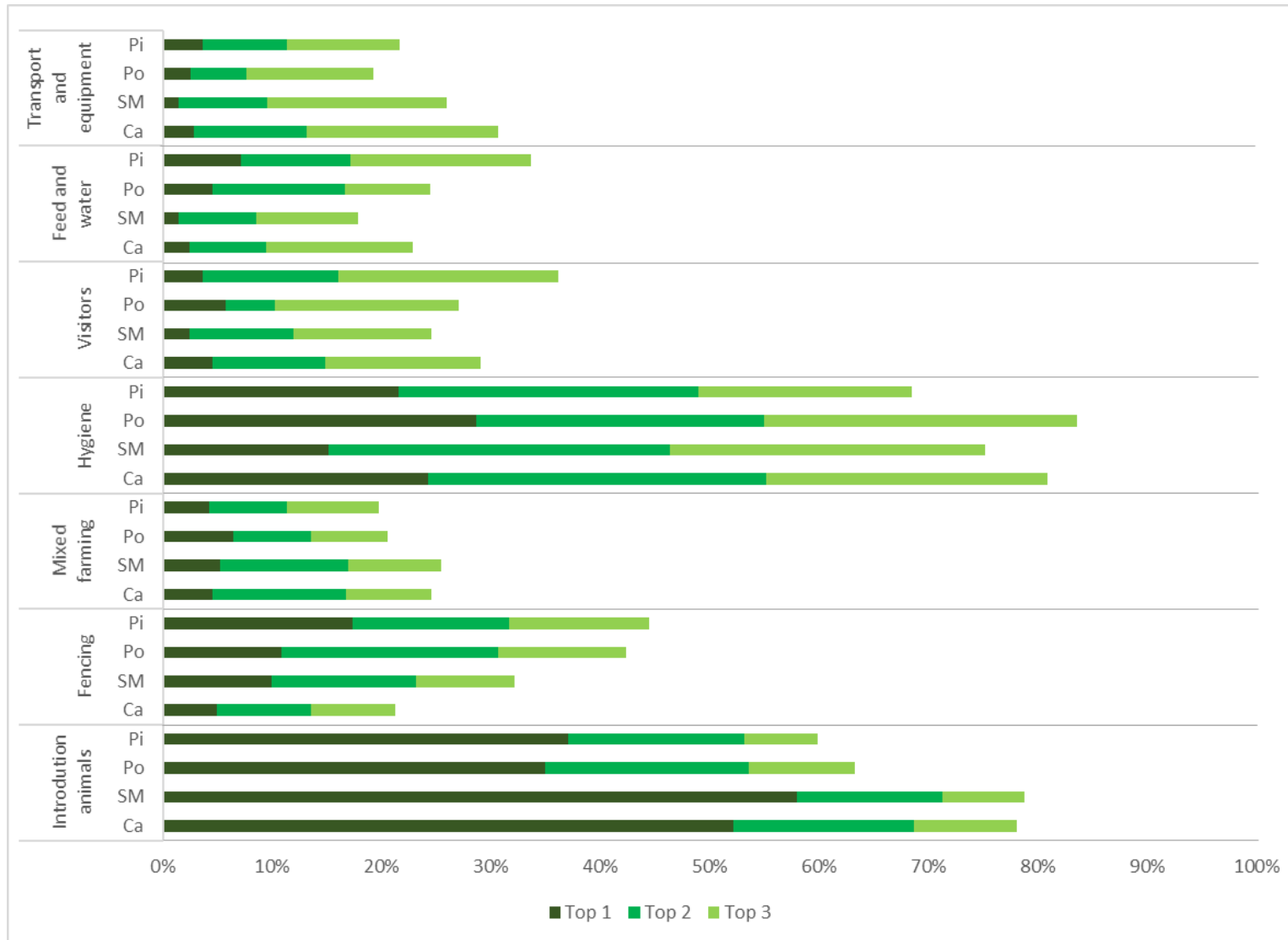
Most indicated by Vets in Southern Europe (51%)

# Summary top 5 biosecurity measures

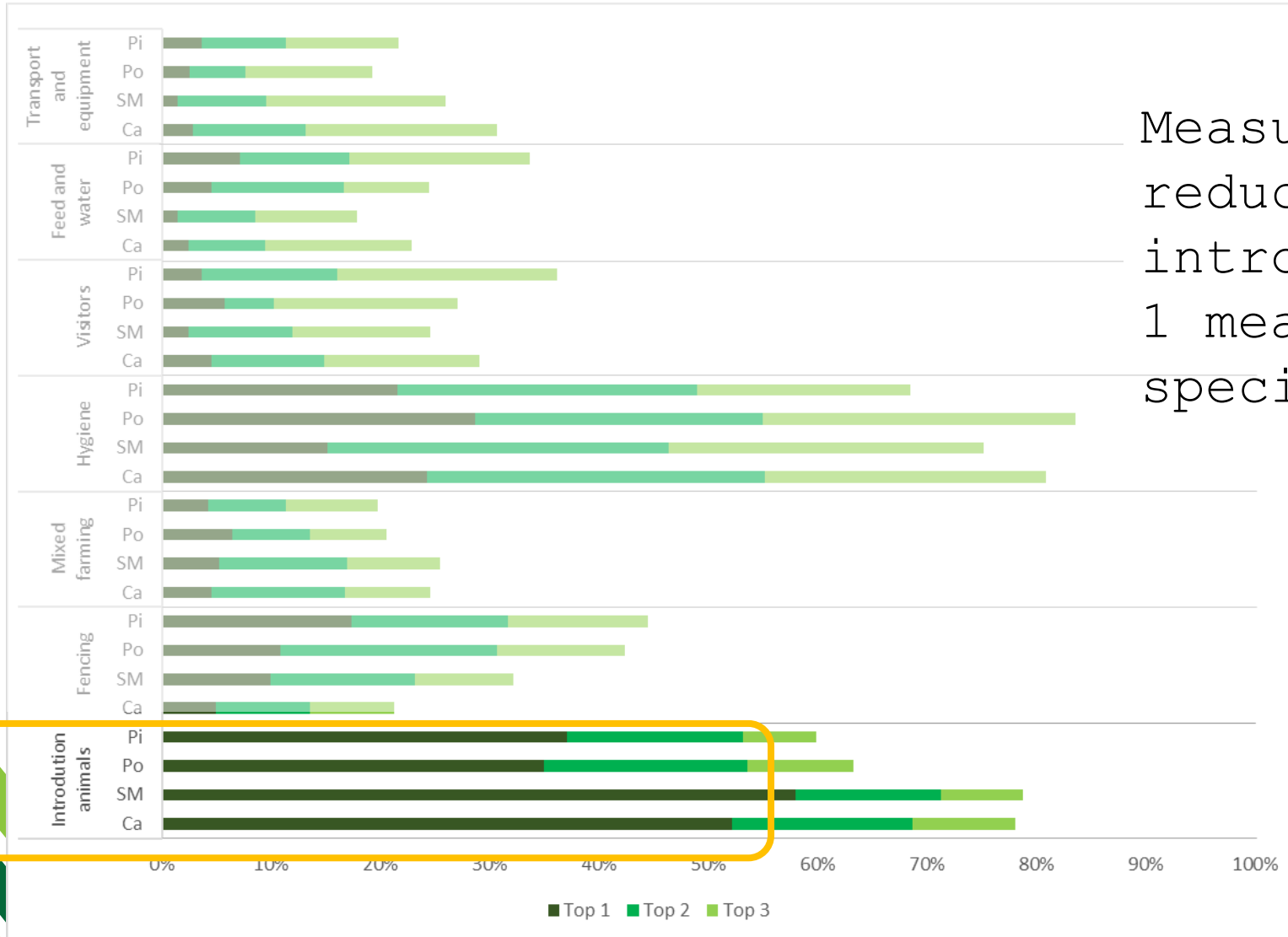
	Poultry	Small ruminants	Cattle	Pigs
<b>Complete fencing around the animal perimeter</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>2</b>
No shared equipment and materials	1	x	x	x
Separation of different species	x	5	4	x
Washing hands after handling the animals	5	x	x	5
<b>Carcass management</b>	<b>4</b>	<b>1</b>	<b>2</b> ★	<b>1</b>
<b>Biosecurity related to purchase and feed is implemented</b>	<b>3</b>	<b>2</b> ★	<b>3</b>	<b>3</b>
No introduction of animals in previous month	x	x	5	x
Separate clothes when contacting animals	x	5	x	4
Separate boots when being in contact with different species	x	3	x	x

No association with experience & working area. Sometimes differences between geolocations

# Most important biosecurity measures for SS according to vets



# Most important biosecurity measures for SS according to vets



Measures related to reduced risk when introducing animals: top 1 measure for all four species.

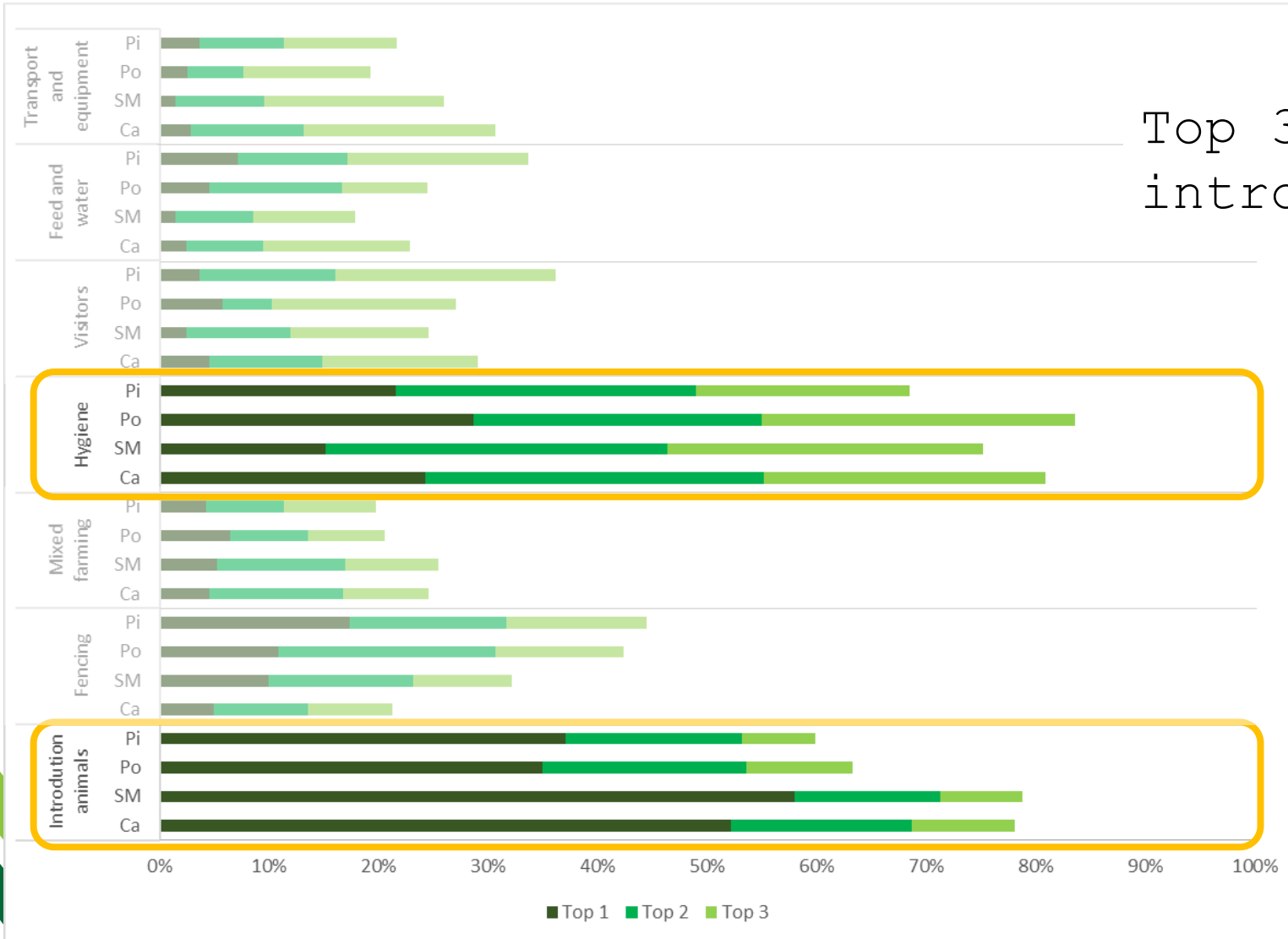
# Specific introduction measures per specie

Indicated as  
most important

- Poultry "Presence and use of quarantine facilities" 13%
- Cattle "Presence and use of quarantine facilities" 18%
- Cattle "Testing for health status before adding" 17%
- Small rum "Testing for health status before adding" 21%
- Small rum "Presence and use of quarantine facilities" 17%



# Most important biosecurity measures for SS according to vets



Top 3: mostly related to introduction and hygiene

# Top 3 hygiene measures per specie

Indicated in Top  
3

important

- Poultry "Disinfection barriers in front of barn"  
27%
- Cattle "Disinfection barriers in front of barn"  
25%
- Small rum "Disinfection barriers in front of barn"  
18%
- Small rum "Use of separate boots"  
14%
- Pigs "Use of separate clothes"  
19%

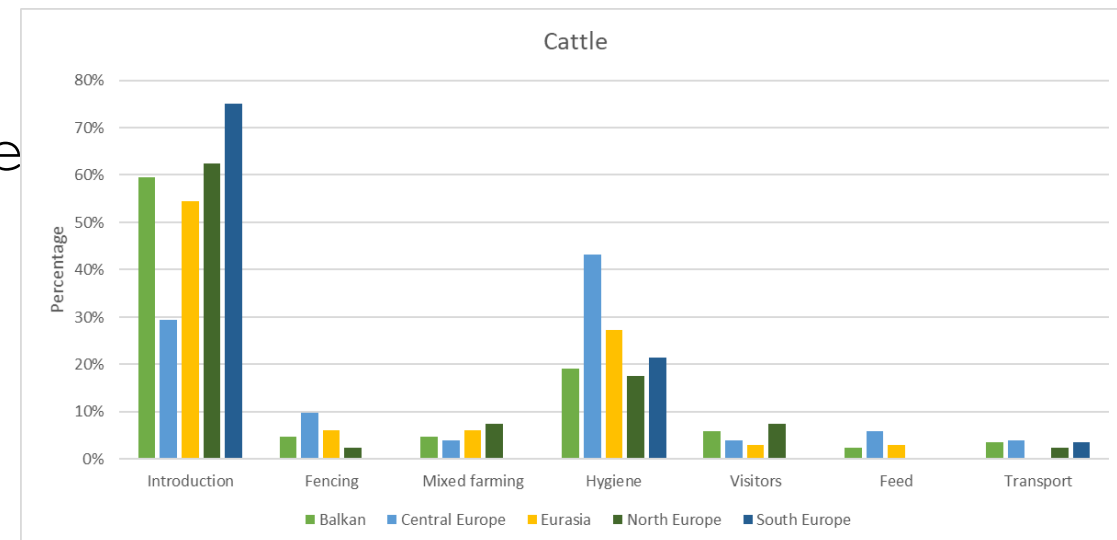
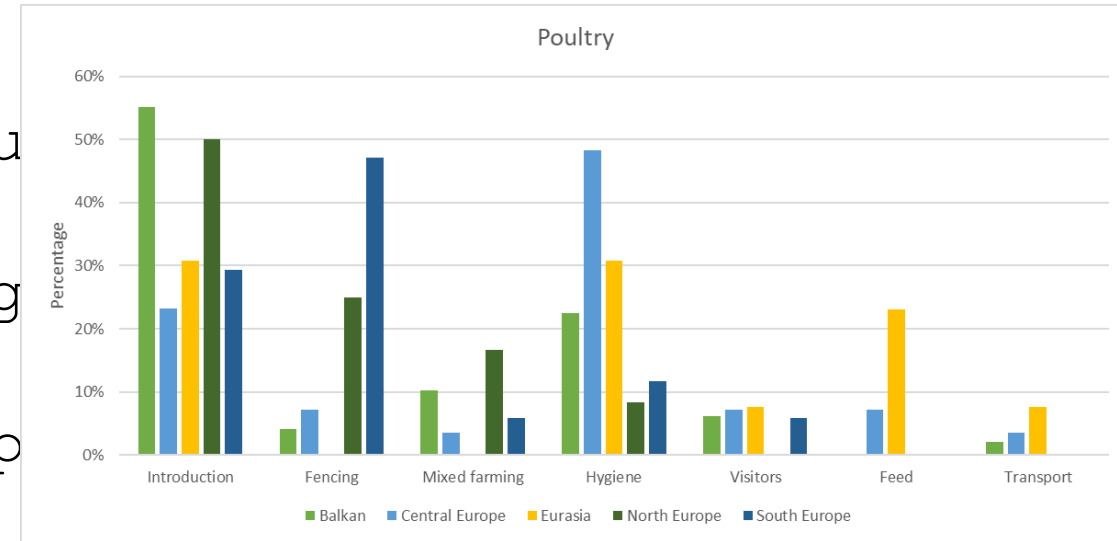


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# Geographical differences: Top 1 measure



- Poultry:
  - In North Europe & Balkan introduction important
  - In central Europe & Eurasia: hygiene important
  - In South Europe fencing most important
- Cattle
  - No significant association between geolocation



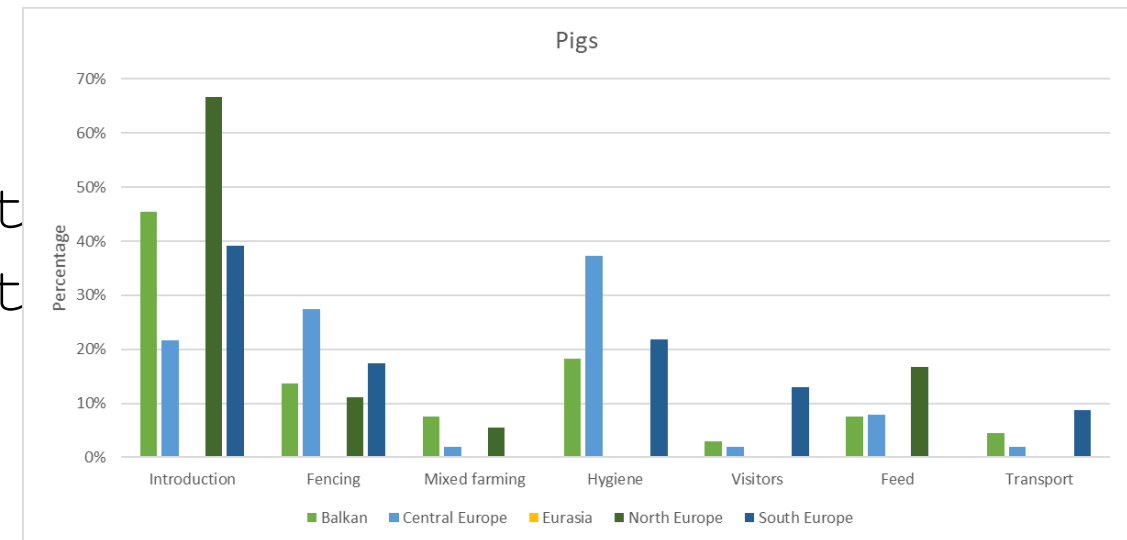
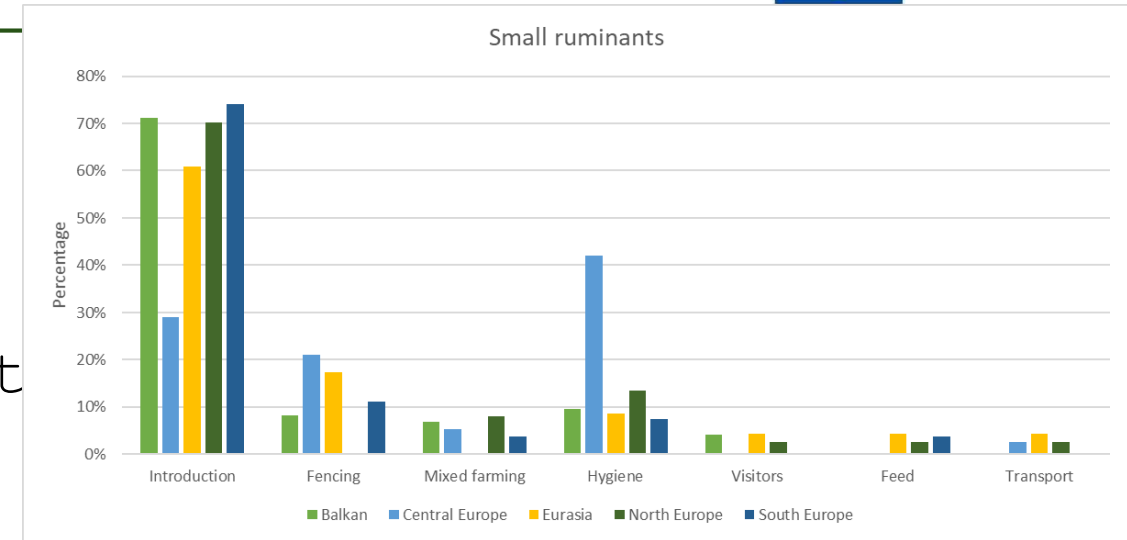


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# Geographical differences: Top 1 measure



- Small ruminants
  - In most areas: focus mainly on animals
  - In central Europe: hygiene most
  
- Pigs:
  - In most areas introduction most
  - In central Europe: hygiene most
  - Varying importance of fencing



- Are there any other aspects we should look at?
- Next steps:
  - Some further discussions with the working group
  - Select most relevant results
  - Write a paper
- Any other questions?



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Thank you for your attention