

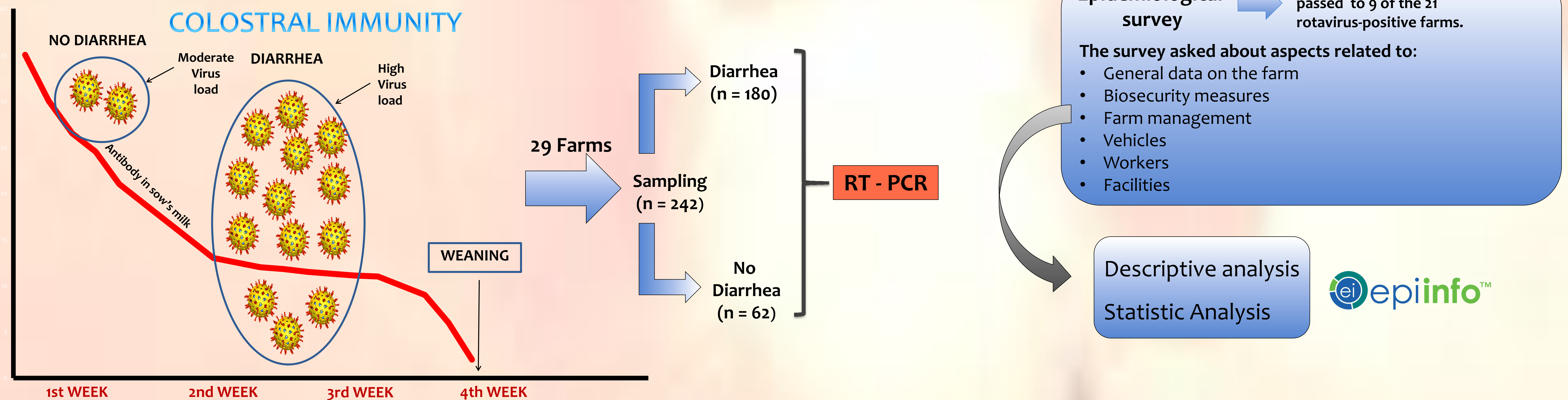
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June 2018.

Final degree project - Faculty of Veterinary Medicine. Introduction and objectives

Introduction and objectives

Porcine Rotavirus causes a large number of diarrheas in pigs specially in suckling piglets. It has high resistance in the environment and generates an economic and productive impact to the farms. The objective of this study was to determine the prevalence of Rotavirus in farms of Catalonia and to relate the importance of biosecurity measures and the management established in them.

Material and Methods



Results and Discussion

D I A R R H E A	ROTAVIRUS			
		Positive	Negative	TOTAL
	Positive	91	89	180
	Negative	16	46	62
	TOTAL	107	135	242

Factor	p-Valor	Chi²	O.R.
Diarrhea x RV	0.00071	11.45	2.93

Relationship among samples with or without diarrhea and rotavirus infection.

Factors	p- Valor	H. Kruskal - Wallis	Means
Adaptation period	0.0396	4.23	<2 months → 26.11%
			>2 months → 64.41%
Sanitary ford	0.0196	5.44	Yes → 29.54%
			No → 69.1%
Farm size	0.8969	0.0168	Big→ 54.73%
			Small→ 56.50%
Vaccination of RV	0.8969	0.0168	No → 55.43%
			Yes → 56.86%

Results of some variables related to the observed prevalence in the farm.

FARMS	Total samples	Positive samples
BARRINA	6	3 (50%)
JETSA	10	3 (30%)
PUJOL	11	4 (36.36%)
CLARET	16	14 (87.5%)
OLIVERS	15	7 (46.67%)
OLIOLA	7	7 (100%)
CABANAS	9	2 (22.22%)
MITJANETA	7	3 (42.86%)
CASTILLA	8	7 (87.5%)

Prevalence of surveyed farms

Discussion

- Samples from animals with diarrhea were more likely of being positive to RV than the samples obtained from animals without diarrhea (O.R. 2.93). On the other hand, some animals with diarrhea were negative to RV, so it is essential to make a broad laboratory diagnosis that includes cases (animals with diarrhea) and controls (without diarrhea) to check the degree of involvement of other pathogens.
- Adaptation periods of less than two months had lower prevalence of RV, compared to those that carry out an adaptation period of more than two months. It could be due to a greater recirculation of virus and reinfections among the animals of the farm that favors the longer they are in the adaptation phase.
- It was determined that farms with presence of sanitary ford had an average prevalence of 29.54%, while farms without sanitary ford had an average prevalence of 69.10%.
- Both farm size and vaccination against RV did not show significant differences on the prevalence of RV in the farms surveyed. No significant differences were found in farm size; could be due to the insufficient sample size.
- On the other hand, vaccination against RV is still very recent, since in Spain this vaccine is not marketed but imported from other countries. That is why, the lack of information and the results of the vaccine against RV can be a limiting factor to determine if its use can influence the prevalence of the virus in the farms surveyed.

Conclusions

1. The prevalence of RV in the total of stool samples in pig farms in Catalonia that presented outbreaks of diarrhea in lactation is 44.2%.
2. Samples of animals with diarrhea are 3 times (OR: 2.93) more likely to be positive to RV than samples obtained from animals without diarrhea.
3. Good biosecurity measures are of great importance in order to reduce the prevalence of the virus in farms. In this way, the risk of entry and spread of pathogens in the farms could be limited.