

PNPh5.2

Experience with use of local anaesthesia in piglet castration

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- Background
- Aim of the study
- The questionnaires
- Performing of the surveys
 - Veterinarians
 - Pig producers
- Results
- Conclusions



Background

- January 2009 - Piglet castration banned in Norway
- August 2002 - January 2009
 - Castration of piglets - only by veterinarians
 - Use of anaesthesia is mandatory
 - Piglets > 7 days - long term pain relief by injection
- No further specifications
 - Type of anaesthesia?
 - Administration of anaesthesia?
 - Procedures for surgery?
 - + + + + ?



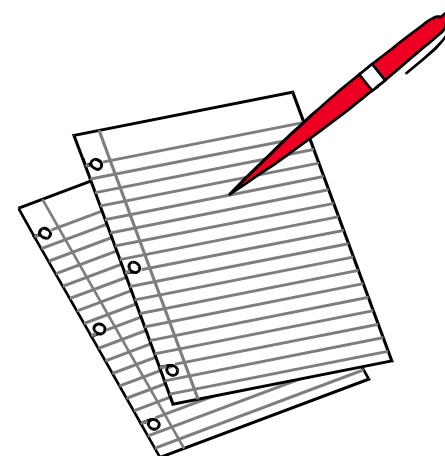
Aim of the study

- To collect information about current practices for castration of piglets
- To evaluate the experience with the current practice, including the occurrence of post-operative complications



Two questionnaires

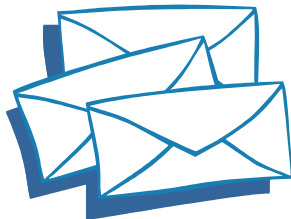
- Producers
 - size and type of production
 - management
- Veterinarians
 - extent of castration practice
 - hygienic routines in connection with castration
 - anaesthetic technique and drug
- Producers and veterinarians
 - effect of anaesthesia
 - post operative complications/deaths
 - over-all evaluation



Performing the surveys

■ Veterinarians

- Information + questionnaires sent by mail to 369 vets
- One reminder



- 287 vets answered
- 26% of these did not perform piglet castration
- 211 completed questionnaires



Performing the surveys

- Pig producers
 - 290 randomly selected producers
 - Information sent by mail
 - Interviewed by phone



- 264 producers (91 %) answered



Results - Current practice

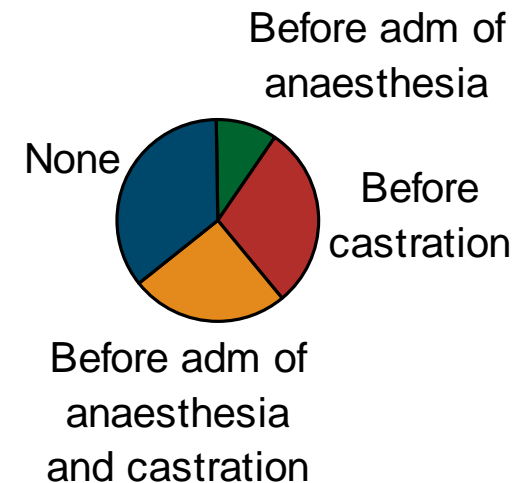
	Veterinarians	Pig producers
Average age	10 days	10 days
Minimum age	4 days	5 days
Maximum age	21 days	15 days
Age – castration by producers		9 days
Assumed optimal age	8 days	8 days
Number of litters per visit	8 litters	10 litters
Number of litters per hour	9 litters	9 litters
Estimated costs per litter	104 NOK (12,7EUR)	107 NOK (13,1EUR)
Castration combined with other veterinary tasks at the farm	66%	69%

Veterinary hygienic practice

Washing/disinfection of surgeons hands



Washing/disinfection of piglets skin



- No association between reported hygienic procedures and occurrence of post-operative complications

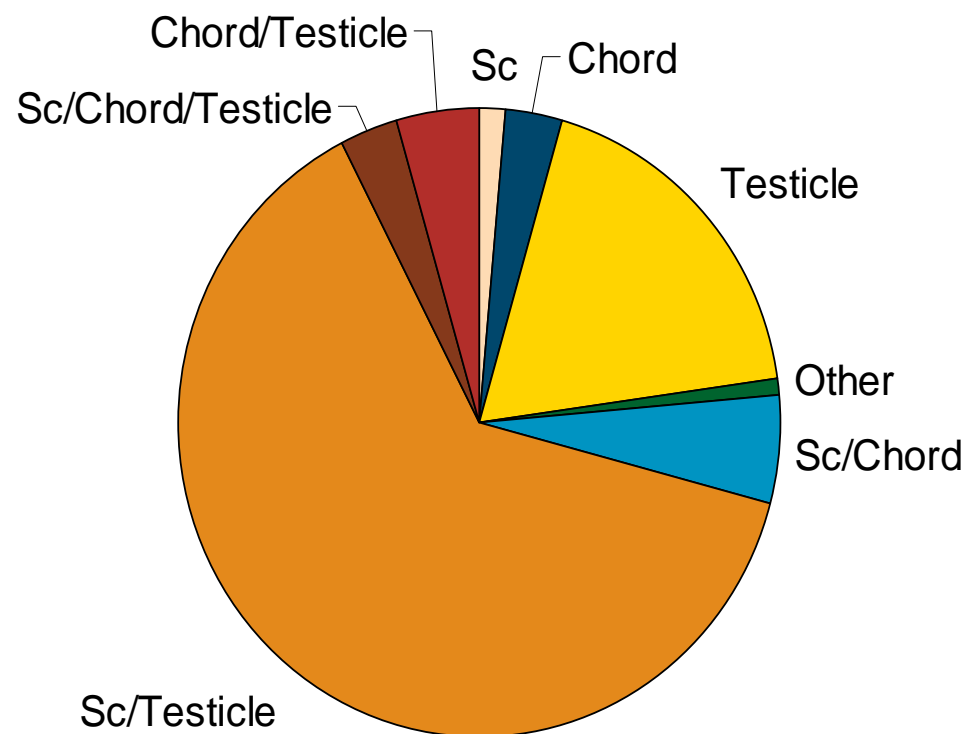
Veterinary hygienic practice

- 81 % of the producers characterized the vet's hygienic procedures as good
- This parameter was associated with a number of post-operative complications

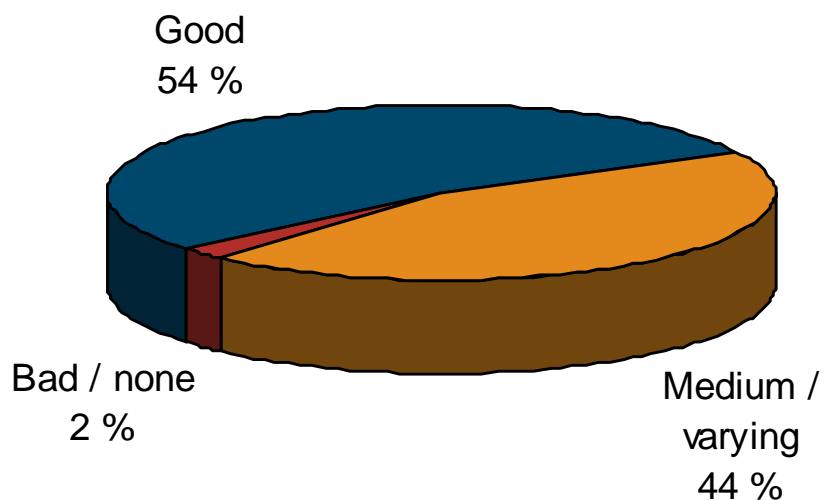


Administration of anaesthesia

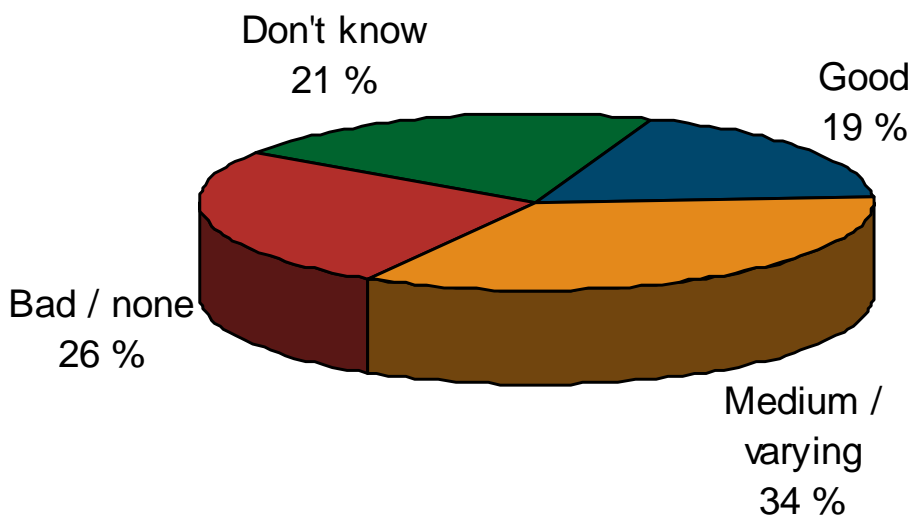
- Sedation - 1%
- Long term pain relief - 14%
- Lidocaine / xylocaine
 - 2% - 57%
 - 1-<2% - 37%
 - <1% - 6%
- Average volume - 1.75ml
- Minimum waiting time from adm of anaesthesia to castration - 9 min. on average



Effect of anaesthesia



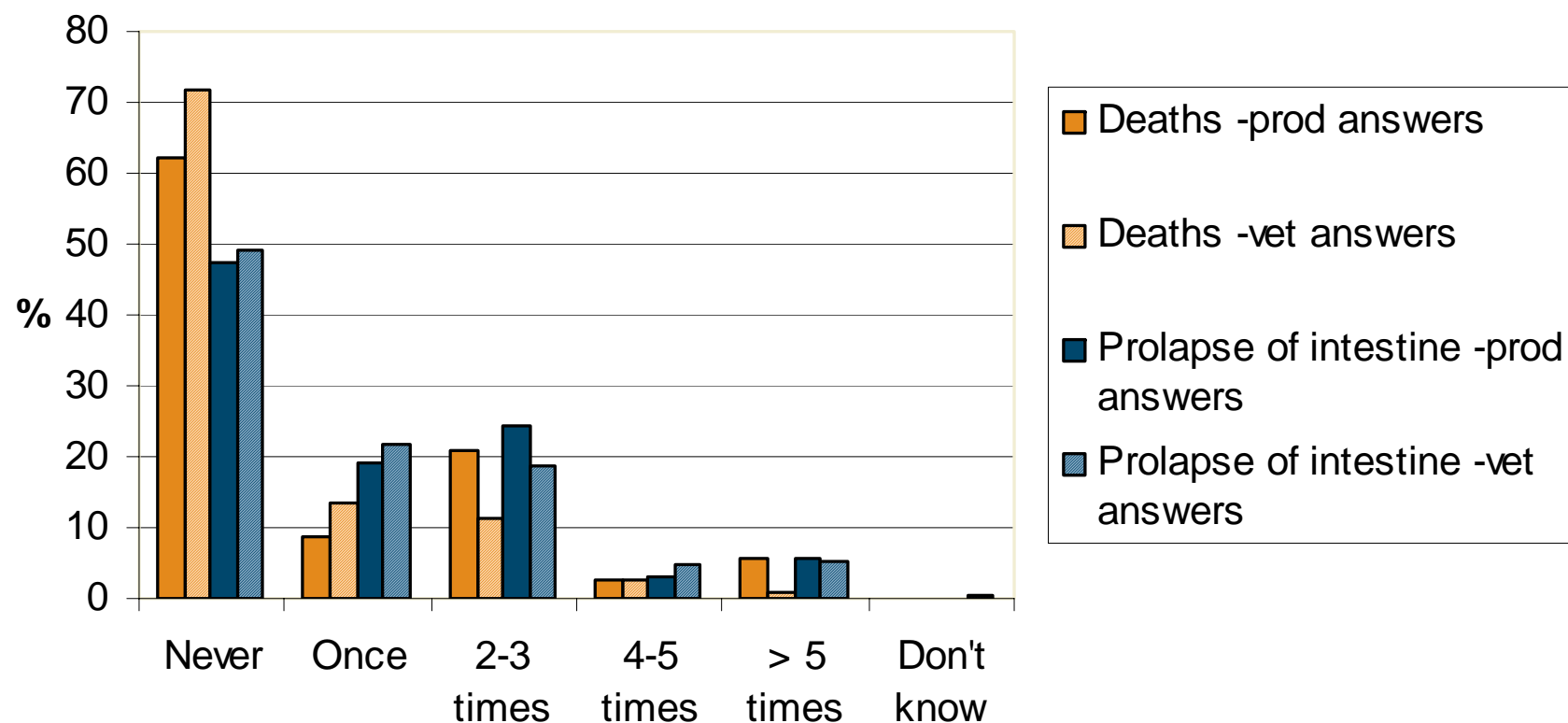
Veterinarians



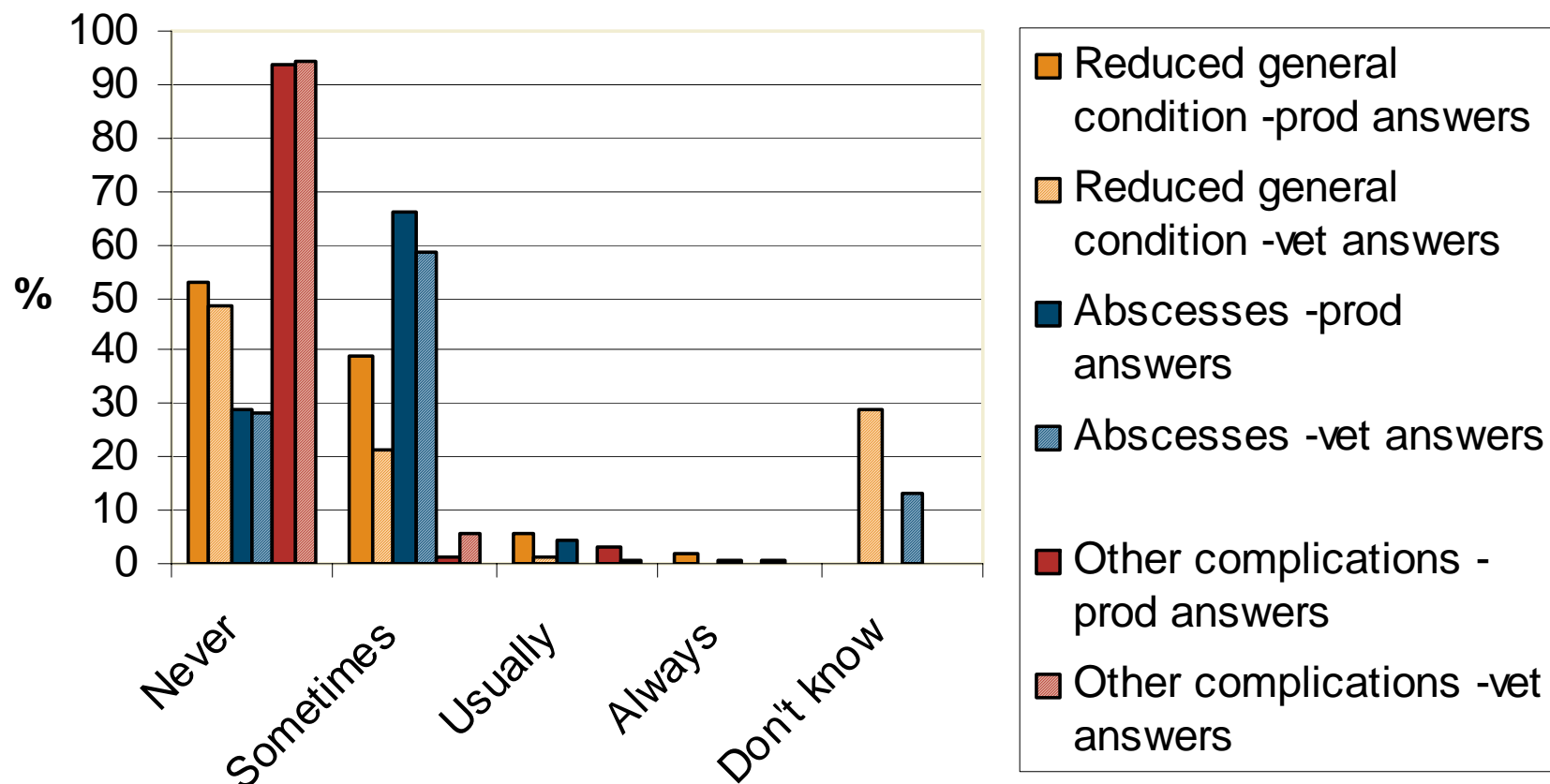
Pig producers



Post-operative complications



Post-operative complications (2)



Parameters associated with complications -adjusted for number of litters (prod)

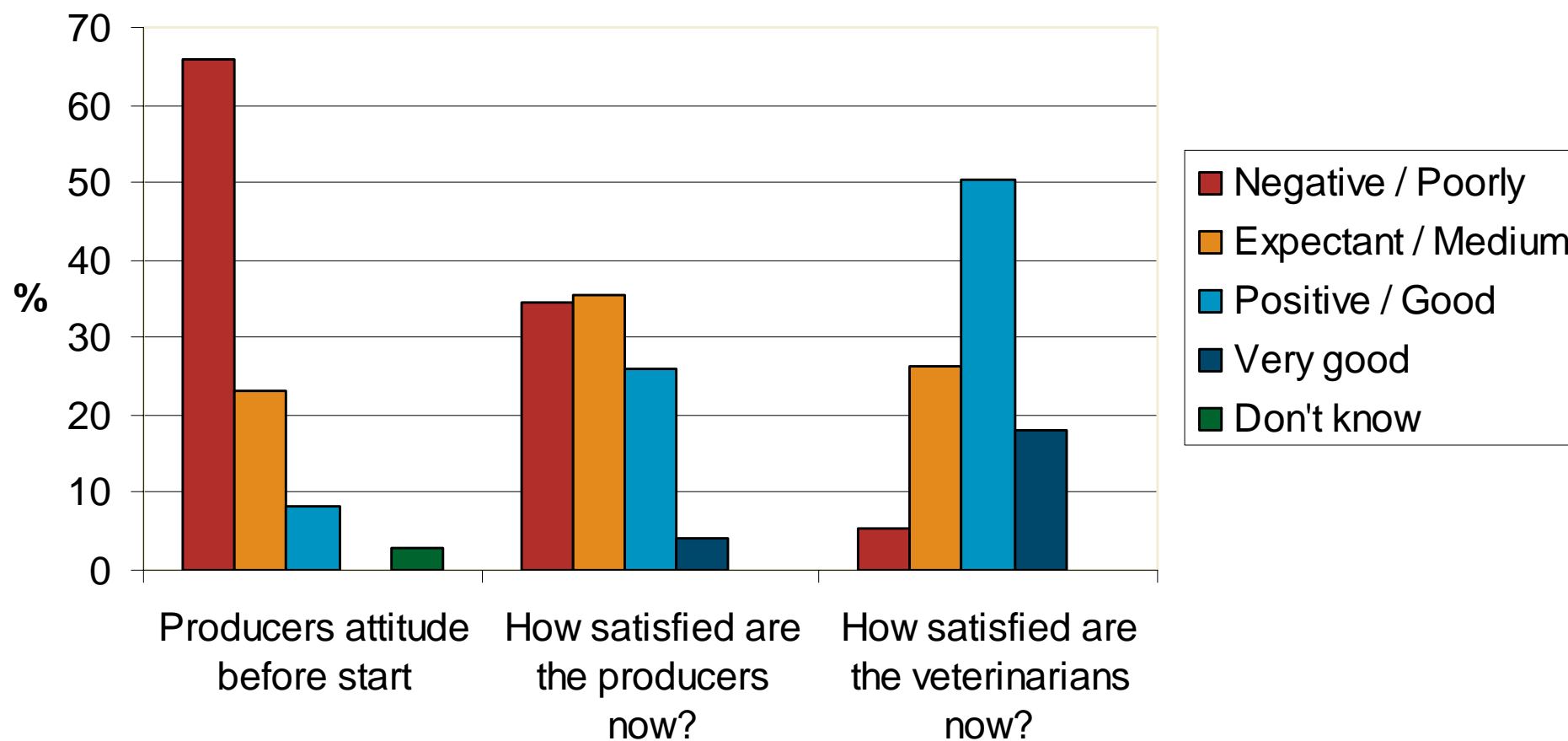
- Over-all
 - Vet's hygienic practice good - preventive ($p=0.001$)
- Reduced general condition
 - use of adrenalin (preventive) ($p=0.06$)
 - good effect (preventive) ($p=0.08$)
 - Vet's hygienic practice good - preventive ($p=0.06$)

Parameters associated with complications -adjusted for number of litters

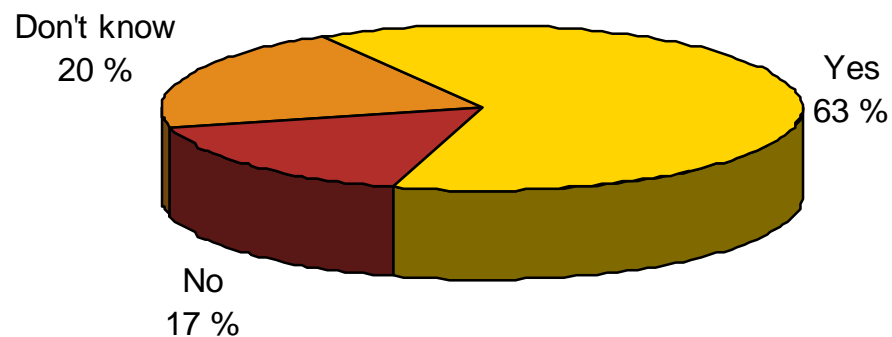
- Deaths
 - Vet's hygienic practice good - preventive ($p=0.04$)
 - Producers - Good effect - preventive ($p=0.02$)
- Abscesses
 - Pre-arrangement by producers - preventive ($p=0.04$)
 - Vet's hygienic practice good - preventive ($p=0.0004$)



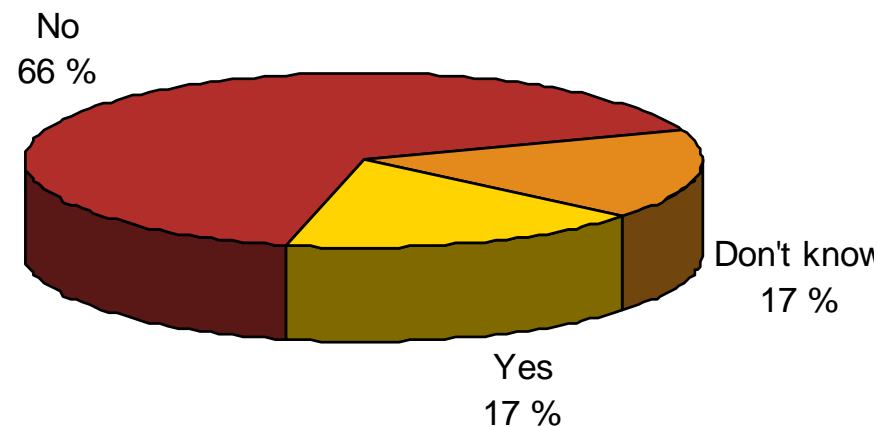
Over-all evaluation



Castration performed by veterinarians using anaesthesia - an improvement in animal welfare?

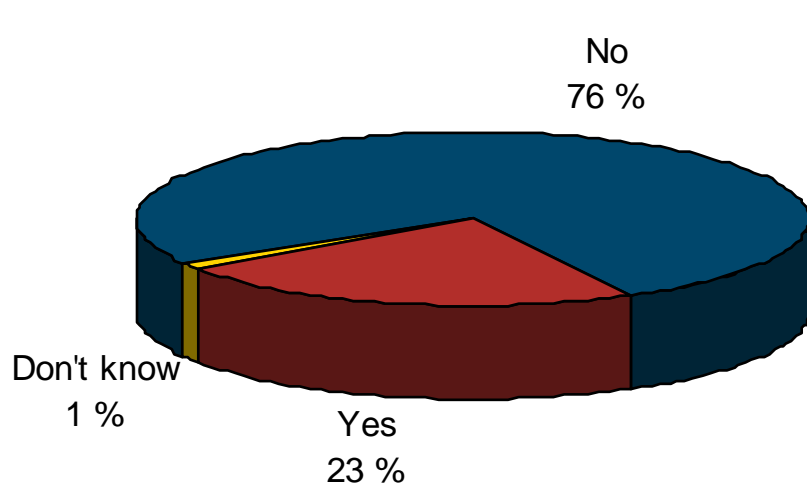


Veterinarians

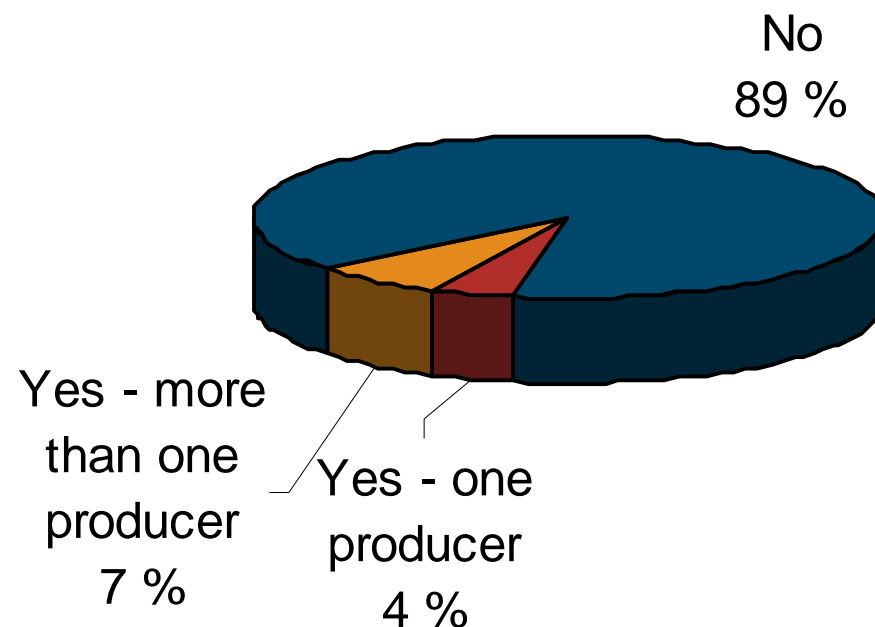


Pig producers

Do you know pig producers who still perform castration of piglets themselves?



Veterinarians



Pig producers

Over-all evaluation (producers) associated with:

- Region
- Whether pre-arrangements were done
- Type of production
 - Producers with combined production less satisfied than producers with farrowing herds

Conclusions

- The average piglet is castrated at 10 days of age, with a combination of subcutaneous and intratesticular injection of lidocaine with adrenaline
 - The numbers of post-operative complications are low
 - Veterinarians evaluate the effect of the anaesthesia and the improvement of animal welfare to be better than what the producers do
 - Veterinarians are over all more positive to the implemented policy than the producers
 - Producers are more positive now than they were at the start
 - Most producers and all veterinarians are loyal to the regulations
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