70th Annual Meeting of the European Federation of Animal Science

Ghent (Belgium), 26– 30th August 2019

Piglet's vocalizations during castration and vaccination

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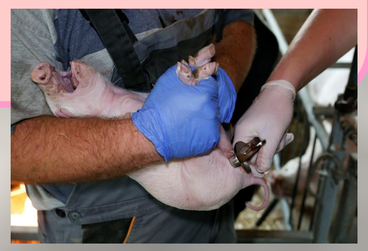
INTRODUCTION

Since the public opinion considers animals as sentient beings and the interest in the **PROTECTION OF FARM ANIMALS** is consistently growing, the issue of reducing the **PAIN** due to the routine processing procedures is gaining considerable importance.

AIM OF THE STUDY

To use the **VOCALIZATIONS** produced by piglets as a tool to evaluate the state of **DISTRESS** and **PAIN** during the most common and stressful farm practices: **CASTRATION** and **VACCINATION**.



MATERIAL AND METHODS

VOCALIZATIONS (numbers and peak value in dB) of 173 piglets were recorded by using a digital sound level meter and analyzed by a SoundLabsound capture software during three different procedures:

- **CASTRATION**

  of 88 seven-day-old male piglets

- **INTRAMUSCULAR VACCINATION,** by using a needle syringe (IM), of 43 fourteen-day-old piglets

- **INTRADERMAL NEEDLE-FREE VACCINATION,** by using the idal® device (ID), of 42 fourteen-day-old piglets

STATISTICAL ANALYSIS

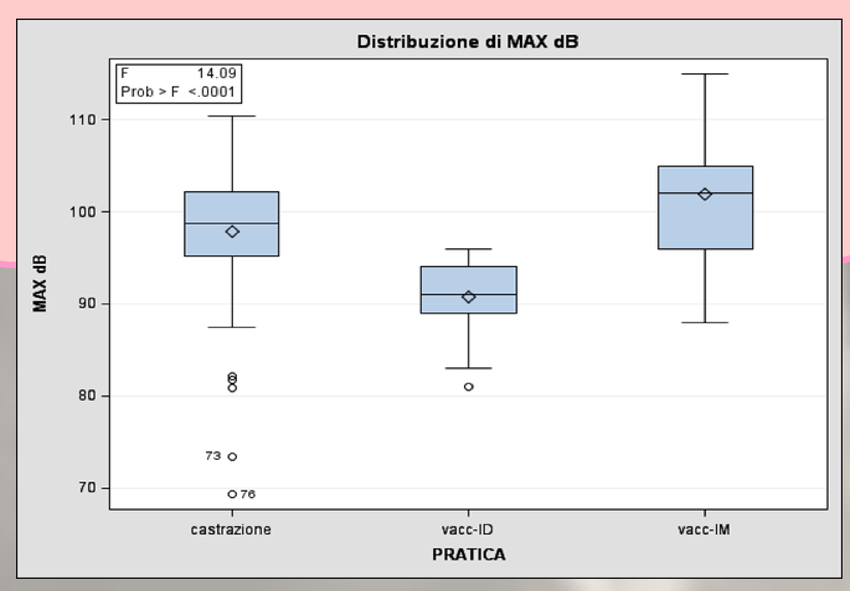
- A chi square test was applied to identify differences in the number of piglets that produced at least one vocalization during the procedures
- The intensity of the vocalizations was analyzed using a one-way ANOVA Model

RESULTS

All piglets vocalized during castration, while 61.9% and 37.2% vocalized during IM and ID vaccination, respectively. A statistically significant difference was observed between castration and vaccination.

VOCALIZATION	n° cases	n° tot	%	
CASTRATION	88	88	100	**a**
ID	16	43	37.2	**b**
IM	26	42	61.9	**b**

Considering the peak value of the vocalizations, a significant difference (P<0.001) were identified among treatments. The **highest peak value** was measured in the group of piglets vaccinated by using the **needle** (101.9 dB), whereas **the lowest** during the **intradermal vaccination** (90.8 dB). As regards castration, the recorded value was 97.9 dB.



DISCUSSION and CONCLUSIONS

The research highlights how different **procedures** can affect the **vocalization** repertoire in terms of number of piglets that vocalize and peak value during farm practices.

Therefore, vocalizations could be a promising **objective tool** for **evaluating** and **classifying** the state of pain and distress at the farm level. This could contribute to **improve** and **develop less painful practices** for pigs.