Norwegian consumer attitudes towards pig castration: More emphasis on animal welfare

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MATERIALS AND METHODS
An internet-based survey of consumer attitudes towards four different methods (Surgical castration with anesthesia; castration without anesthesia; vaccinations against boar taint; entire males) was conducted. A total of 1002 persons participated in the survey administered in November 2016. The web-panel was made up of a set of randomly chosen males and females over the age of 18. Sampling of participants was weighted by age, gender, and geographical location to better reflect the Norwegian population. The survey conducted in 2016 is an accurate replica of the survey completed in 2008. However, in the 2016 survey, one additional question was added where the participants were provided information regarding past and ongoing research on vaccination against boar taint. This supplementary information explained that, despite considerable research activity over the past 10 years, it has not been possible to reduce boar taint levels in meat in Norway, from 2008 and 2016.

RESULTS AND DISCUSSION
First, the participants were asked to simply evaluate Norway’s current practice of castrating male pigs with local anesthesia and analgesia at approximately 10 days old. The results showed that 65% of the participants considered the practice to be acceptable, 18% found it unacceptable, while 17% did not have an opinion (Fig. 1). This shows a decline in acceptance of today’s castration method by 8 percentage points from what was observed in 2008. When asked to evaluate the current practice of surgical castration with anesthesia as compared to the three other methods (vaccination against boar taint, surgical castration without anesthesia or rearing of entire males), both surgical castration with anesthesia and vaccination against boar taint were highly accepted among the participants (88% and 78% respectively) (Fig. 2). Surgical castration without anesthesia was generally considered unacceptable among Norwegian consumers in both 2008 (77%) and 2016 (70%). When asked which factor was most influential on making a choice between the four methods, 73% of the consumers mentioned animal welfare as important, either as the most important (49%) or equally as important as the consideration for eating quality and food safety (24%) (Fig 3). Animal welfare is also the single factor that has increased the most since 2008 among a set of assessment criteria when purchasing pork products; from 2008, animal welfare as a purchasing factor has increased by 8 percentage points. When given additional information that vaccination against boar taint may not be able to reduce boar taint to the levels that castration with anesthesia does, consumer skepticism towards vaccination increased (Fig. 4).

CONCLUSION
Norwegian consumers are content with the current practice of castration using local anesthesia, but the acceptance of today’s method has declined since the original survey in 2008. The consumers also acknowledge vaccination against boar taint as an acceptable alternative to surgical castration, albeit slightly less so. Both in 2008 and 2016, approximately 40% of the respondents were uncertain about rearing of entire males as an alternative to castration, which may simply be due to lack of knowledge on the part of the consumer. Since 2008, animal welfare has gained more support as an important factor for the Norwegian consumers when evaluating each castration method. However, when informed that vaccination against boar taint may not result in boar taint levels as low as those seen with surgical castration, the pork quality concerns appeared to surpass the animal welfare concerns in that consumer acceptance of vaccination against boar taint slightly decreased while skepticism increased. Surgical castration without anesthesia was deemed unacceptable by most consumers, although an increase in acceptance was noticed in 2016 as compared to 2008.