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# A NEW ULTRASOUND TECHNIQUE TO EVALUATE THE SOUNDNESS OF BOVINE STIFLE JOINTS IN BEEF BULLS

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## Background/Aim

In beef bulls, a common cause of lameness is osteochondrosis with lateral trochlear ridge of distal femur as predilection site. The aim of the study was to investigate the possibility of using a basic portable ultrasound equipment in stifle examinations of bulls in order to potentially add the protocol to bull breeding soundness evaluation for field conditions.

## Material & methods

The study was performed in three steps, 1) *in vitro* on slaughterhouse material followed by *in vivo*, 2a) test the method on cows at the teaching clinic, Swedish University of Agricultural Sciences, 2b) test the method under field conditions on beef bulls of various ages at two commercial herds. Four ultrasound machines, linear and sector transducers, frequencies 4 – 12 MHz was used in the *in vitro* step including one portable machine commonly used in mobile large animal practice that was used for the *in vitro* steps.

## Results

Ultrasound examination of two cows was performed according to the *in vitro* protocol followed by eight Hereford, four Simmental and one Charolais bull in an age range of 14,5 – 60 months. The bulls were successfully examined according to the final protocol based on the initial *in vitro* and subsequent *in vivo* protocol finalised after examination of cows.

## Discussion/Conclusion

The method can identify lateral trochlear ridge of distal femur. It has potential to develop into a screening program within the bull breeding soundness evaluation in order to exclude bulls with major changes from breeding and over time get a more sustainable production with fewer animals suffering from painful joints.