

PRESS RELEASE

FOR IMMEDIATE RELEASE

June 2021



Pig Improvement Company ('PIC')
Institute for Reproduction of Farm Animals Schönow (IFN)



PIC is implementing Fertiboar Technology to increase boar utilization

PIC is pleased to announce the implementation of the newly developed Fertiboar technology in its largest boar multiplier farm in Germany. The concept of the Fertiboar technology was developed in collaboration with IFN Schönow, an innovative research and training institute for livestock, during a 4-year intensive joint research project. Fertiboar Technology provides opportunities to predict boar semen quality based on testicular ultrasound measures prior to first semen collection. With this technology, PIC can identify boars with the best semen quality and select these boars for placement in Gene Transfer Centers (GTCs). GTCs see benefit in terms of increased boar utilization and commercial pig producers can expect improved semen quality and fertility rates.

The newly developed Fertiboar technology is based on the analysis of boar testicular ultrasound pictures which reflect characteristics of the sperm producing tissue (Theriogenology 158 (2020): pp 58-65). A machine learning approach (Convolutional Neural Network) was used to identify regions within the testicular pictures that are key to semen production. Those regions were analysed to calculate parameters describing novel attributes like the homogeneity and echogenicity of the tissue. In a second step, a supervised learning algorithm was applied to the calculated parameters to predict the probability that a boar will produce ejaculates of desired quality. Through continuous collection of ultrasound data and associated semen quality from GTCs, the predictive power of this innovative technological approach will help PIC to continuously improve the quality of its products.

The implementation of this exciting technology is in progress in PIC Europe largest AI (Artificial insemination) boar multiplier farm, which is located in Germany and will be fully implemented over the coming months. In the near future this cutting-edge technology will be implemented across all PIC elite and boar multiplier farms globally.

Jürgen Kramer, PIC Europe Regional Director: *“This new technology will further enhance our leading AI boar products. Both our partner GTCs and customers will directly experience the benefits of improved boar stud efficiency and semen quality.”*

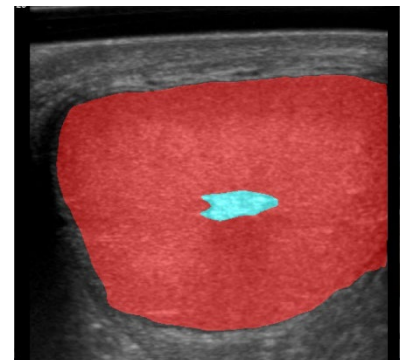


Figure 1:
Identification of germinative tissue

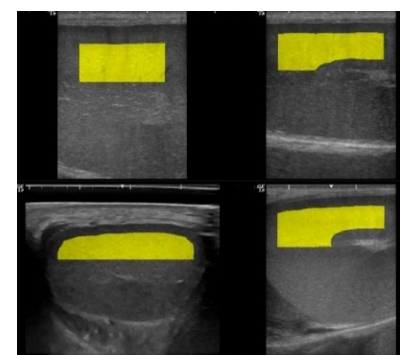


Figure 2:
Automated selection of region of interest

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About PIC

PIC (Pig Improvement Company) is the global leader in swine genetics. PIC provides genetically superior breeding stock to pig producers and supports with technical services to help them realize the genetic potential. PIC is a subsidiary of Genus, a UK based company that has as its vision to pioneer animal genetic improvement to help nourish the world.

For more information, see www.pic.com.

About IFN Schönau

The IFN is a research institute in the field of animal breeding and livestock research. Founded more than 60 years ago with the mission to build and develop research, education and training in the field of livestock reproduction, it now occupies a leading position in practice-oriented research in Germany, Austria and Switzerland. Affiliated to the institute is a spermatological reference laboratory for boars and bulls and a genetic diagnostic laboratory. Currently, the IFN has 26 member organizations.

For more information, see www.ifn-schoenau.de

For more information

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