

## **Potential use of a high hydrostatic pressure chamber for cryopreservation of boar semen**

### **Summary**

Research is being conducted at the Department of Reproductive Biotechnology and Cryopreservation of the National Research Institute of Animal Production on improvement of techniques for cryopreservation of boar semen, the application of modern methods for assessing sperm quality, and the use of new technological solutions. Our research showed that the addition of butylated hydroxytoluene to the semen extender ensures that high-quality sperm are obtained after thawing. Moreover, the classification of ejaculates for cryopreservation based on morphology and motility was found to be insufficient. The use of a panel of modern methods for quality assessment of cryopreserved semen enabled precise determination of the quality of a sub-population of sperm that had been frozen and thawed, as well as the specification of new selection criteria for ejaculates for cryopreservation. Treatment of sperm with high hydrostatic pressure (HHP) before freezing is a new technological solution proposed for sperm cryopreservation. Our study demonstrated that treatment with 350 bar protected sperm against damage during freezing.

**KEY WORDS:** boar, semen, cryopreservation, quality, high hydrostatic pressure