



Piglets and new research projects in the Dummerstorf eco-stable

Direct comparison of husbandry systems

At the Research Institute for Farm Animal Biology in Dummerstorf (FBN), research is not only conducted in conventional stables. Since last year, a pigsty that was built in accordance with the EU Organic Farming Directive has also been part of the FBN's animal experimentation facilities. Now the researchers welcome the first piglet offspring for a new research project.

In the extension building, which opened in August 2020, ecological aspects of animal production in particular will become a stronger focus of the FBN's research in the interest of animal-friendly, environmentally friendly and climate-friendly livestock farming. Other focal points include research into old and endangered breeds of livestock and the development of smart solutions for sustainable agriculture.

All FBN-institutes are involved

In the current project entitled "Comparative phenotyping of dams of two pig breeds (German Landrace, Saddleback) and their offspring under two environmental and management conditions", the animals will be comprehensively studied and sampled in the two different husbandry environments, conventional and organic.

"All research areas of the FBN from genetics and genome biology, behavioural physiology, muscle biology, reproduction and nutrition, are involved in this project," announced Director Prof. Klaus Wimmers. "Through observations, behavioural tests, saliva, milk, blood and tissue samples from each experimental animal in addition to the routinely collected data, a comprehensive picture of the individual animal is thus being created. As with every animal experiment at the FBN, care is taken to reduce interventions on the animal to a minimum or to replace or supplement them with gentler or non-invasive methods. In recent years, for example, the determination of cortisol (stress hormone) from saliva has become established as an alternative to blood samples."

With the new construction of the 780-square-metre organic barn, conventional and organic husbandry conditions can now be studied under authentic conditions at one location in the experimental pig facility. In the experimental facility for pigs, which was already opened in 1998, the animals have another 1,140 square metres at their disposal.

Tissue samples in the biobank reduce animal testing

"In the organic barn, the animals live in larger, littered pens, have access to outdoor runs and are fed organic feed. Animals of the German Landrace and the German Saddleback pig are kept," explained the head of the experimental pig facility, Marianne Zenk. "Our animals are herd breeding animals, they are only mated with boars in their own breed in pure breeding, so that we can then continue breeding with the offspring. In this way we also make an important contribution to the preservation of these two rare pig breeds," says the agricultural engineer.

"In the past few weeks, the first piglets have now been born in the new barn. 60 piglets from four sows in the German Landrace and 27 piglets from two sows in the Saddleback. They stay with their mother for six weeks, after which the sows are inseminated again and wait in the large area for pregnant sows for the next birth. The piglets come to the rearing area as a family. From this

point on, we can collect and evaluate feed data from each animal until the end of fattening on the 160th day of life, such as feed quantity, feeding time and feeding period."

Numerous tissue samples are to be preserved in a separate biobank at the start of the project and stored for other research approaches. In this way, the FBN is making a contribution to reducing animal experiments. In four years' time, the results of the most comprehensive study of this kind to date at the FBN on pigs are to be presented to the public.

Lessons in the barn?

The FBN is an extracurricular place of learning

Organising bodies of day-care centres and groups of children or schools can find out about lessons in the pig or cattle barn on the research facility's homepage and register if they are interested.

Further information and registration at www.fbn-dummerstorf.de/stadt-land-stall/

Project „Stadt-Land-Stall“

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