MEDIA INFORMATION

Leibniz Institute for Farm Animal Biology

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LEIBNIZ INSTITUTE FOR FARM ANIMAL BIOLOGY

A chance for the old German saddle pig

Greater focus on organic livestock farming

Today, the ecological extension of the experimental pig farm at the Leibniz Institute for Farm Animal Biology Dummerstorf (FBN) was formally opened. The extension was designed according to the guidelines of organic farming and was funded by both the Ministry of Agriculture MV and the Federal Ministry of Food and Agriculture within the framework of programme operations to the amount of 1.8 million euros.

In the interest of animal-, environment- and climate-friendly livestock farming, the extension building is intended to focus FBN's research activities more strongly on ecological aspects of animal production. Further focal points are the research of old and endangered breeds of farm animals and the development of smart solutions for sustainable agriculture.

"Especially the view of the social debate on farm animal husbandry, on more animal welfare, on climate protection and climate-friendly animal husbandry, but also the global challenge of securing the world's food supply and changing human nutrition make the necessity of research in these subject areas absolutely clear", said the Minister of Agriculture and Environment MV, Dr. Till Backhaus. "The FBN addresses precisely these socially relevant aspects of sustainable livestock farming. This is an elementary component of agriculture and a nutrient recycling economy. Many areas, e.g. permanent grassland and savannah, can only contribute to food production through livestock farming. Certain forms of livestock farming provide landscape conservation and are the basis for the preservation of biodiversity".

More space and free outlet

The new experimental unit with a total floor space of around 780 square metres is designed for 24 sows and their offspring. It contains eight insemination stands and farrowing pens each. There is space for a total of 284 animals. In addition, the annex has a test room for behavioural observations as well as outlets in all areas from suckling pigs to fattening pigs. In the experimental pig facility, which was opened in 1998, the animals have around 1,140 square metres at their disposal.

The biggest differences in building according to ecological standards are the larger space requirement and the free outlets for all animals. In interspersed bays, the natural instincts of the animals, such as nest-building behaviour and rooting, can be better exercised. Due to the greater space available, the pigs have better possibilities to structure the pens into feeding and activity areas

as well as resting areas and "toilets". The animals remain in the family group, the tails are not shortened and the males are not castrated.

Comparison of husbandry conditions

"Our scientists are now in a position to compare conventional and organic husbandry conditions at one location under authentic conditions", stressed FBN Executive Director Prof. Dr. Klaus Wimmers. "The focus is on the comparison of husbandry systems in the interest of animal welfare."

Furthermore, old breeds of farm animals are to be characterised. "We are planning a long-term project at the Institute lasting more than ten years in which we will compare old breeds with the modern German Landrace in both husbandry environments," explained Wimmers. "We want to know whether the breeds benefit in different ways from the better husbandry conditions. These relationships between breeds and the environment, so-called genotype-environment interactions, are biologically interesting phenomena that we want to research and use to find the best possible balance between the needs of the animals and their environment. The programme will be started with the German saddle pig. The animal with a black base colour owes its name to the light stripe at "saddle height". Committed breeders have ensured that this robust and very fertile breed has not already become extinct. In the past, researchers at FBN have already been able to achieve success in the preservation of the Hungarian Mangalitza pig breed.

"We are also focusing on the establishment of a tissue and cell bio-bank for pigs," the Director continued. "With the long-term investigations, we want to set the starting point for establishing a BioBank of tissues and cells with reference data as an important resource for research".

Prof. Dr. Klaus Wimmers named so-called "Smart Livestock Farming" as the fourth research focus in the new extension building, i.e. innovative solutions for more animal welfare as well as environmental and climate protection in livestock farming. "To this end, we want to use and develop intelligent digital systems for monitoring behaviour, health and physiological conditions as well as automated learning devices for individual animal care."

Digitization plays a major role

"Digitalisation with individual recording of feed intake (behaviour) as well as video systems for analysing social behaviour enable us to efficiently collect and analyse data comparing conventional and organic farming with animals of different origins", emphasised Klaus-Dieter Witt, head of the animal experimental facilities. "Among other things, we can directly measure the influence of husbandry conditions on important indicators for animal welfare and animal health."

At the Leibniz Institute, a large number of research projects on pig farming are currently underway. These include, for example, the social behaviour of piglets and the individual assessment of their environment as well as the identification of biomarkers for animal welfare or the optimisation of supply for increased resource efficiency and better meat quality. Furthermore, the scientists are investigating how old, robust breeds such as the saddle pig differ from modern breeds such as the German Landrace in metabolism as well as in reproduction and behaviour.

In addition to the experimental pig facility, there are also animal experimental facilities for cattle, poultry, dwarf goats, mice, soldier flies and aquaculture fish on the premises of the research facility

in Dummerstorf.

The Leibniz Association

The Leibniz Association connects 93 independent research institutions that range in focus from the natural, engineering and environmental sciences via economics, spatial and social sciences to the humanities. Leibniz Institutes address issues of social, economic and ecological relevance. They conduct knowledge-driven and applied basic research, maintain scientific infrastructure and provide research-based services.

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They are subject to an independent evaluation procedure that is unparalleled in its transparency. Due to the importance of the institutions for the country as a whole, they are funded jointly by the Federation and the Länder, employing some 19,100 individuals, including 9,900 researchers. The entire budget of all the institutes is approximately 1.9 billion Euros.

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