

DEVELOPMENT OF EMBRYO TRANSFER IN RHEINLAND PALATINAT IN WESTERN GERMANY. ASSISTED REPRODUCTION TECHNOLOGIES AND BREEDING PROGRAMMES TO ADVANCE AND EXTEND SUPERIOR GENETICS IN HOLSTEIN CATTLE

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The total number of bovine embryos produced shows a continuous increase in Germany as well as internationally. The genomic breeding value estimation introduced more than ten years ago increased the pressure to intensively reproduce the top animals discovered through genomics in order to pass on their high genetic predisposition to the next generation. The top donors must therefore produce as many offspring as possible in order to select from these, in turn, through genomic selection, the best males for the breeding programmes and the best females for further breeding. The breeding organisations in Germany work very intensively to increase the quality and quantity of top animals. In the field of Holstein breeding, the Rinder Union West plays a leading role in the German breeding industry. In order to intensify the breeding work even more, the PhönixGroup was founded in Germany in 2021. Through the cooperation of six breeding organisations, they try to provide the best genetics for the German as well as the international market with an innovative breeding programme.

Thanks to the membership in the PhönixGroup, new paths opened up for the Rinder Union West, which are briefly outlined below:

The in vitro process has also gained great importance, so that attempts are currently being made to multiply the maximum genetic potential of the RUW donors by means of the two biotechnical methods MOET and IVF. Special breeding centres have also been established to maximise the number of embryos produced through optimal conditions. One of these centres is located in Fließem in Rhineland-Palatinate. Here the top donors from the entire Rinder Union West area are stabled.

With programmes tailored to the individual animal, the concept has been very successful. MOET as well as OPU were carried out systematically and the in vitro embryos were produced in an external laboratory.

All embryos are transferred on the farms that provide the recipients. Recipient management is closely monitored by the ET team members. Although the breeding concept shows many successes, the quality of the oocytes and embryos obtained is continuously improved. They try to keep the growth rates at a high level and to maintain the good cooperation with the

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breeders in order to occupy leading positions in the German elite breeding lists.

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