

Polymorphismes biochimiques et cytogénétique

CHROMOSOMENUNTERSUCHUNGEN BEI WILD- UND HAUSSCHWEINEN

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Von 10 Wildschweinen (*Sus scrofa ferus* 6♂, 4♀) und 12 F₁-Tieren (5♂, 7♀) wurden die Chromosomenzahlen an Leukozytenkulturen nach der Methode von MOORHEAD et al. untersucht. Das Alter der Wildschweine die aus 3 Herden stammten, schwankte von 6 Wochen bis 2 Jahre, die F₁-Tiere waren 2 Wochen alt. Bei Wildschweinen wurde der Karyotyp von 285, bei Bastarden von 303 Zellen bestimmt und ausgezählt. Folgende Prozentanteile an Zellen mit 35 und weniger, 36, 37, 38, 39 und mehr Chromosomen (2n) wurden gefunden: Wildschwein 5, 69, 3, 20, 4 %. F₁ 0, 14, 65, 19, 3 %. Der von McFEE et al. (*Cytogenetics*, 1966, 5, 75-81), gefundene Wildschweinkaryotyp mit 2n = 37 konnte an diesem Material nur teilweise bestätigt werden. Der von MAKINO et al. (*Proc. Jap. Ac. Sci.* 1965, 41, nr. 3) bei *S. vitt. leuc. M.* beobachtete Karyotyp von 2n = 38 wurde hier nicht gefunden.

BLOOD GROUPS AND PROTEIN POLYMORPHISM IN REPRODUCTION OF FARM ANIMALS.

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From the until now presented studies of numerous authors it can be assumed that blood group antigens are not primarily present in animal and human spermatozoa. Hitherto on the spermatozoa only antigens soluble in body fluids and thus in seminal plasma, too, whence they can be absorbed on spermatozoa, were detected. The importance of these antigens for fertility lies in the presupposition that spermatozoa carrying such antigens can be agglutinated or otherwise damaged by natural antibodies which are present in genital tract fluids of the females. The J blood group system in cattle and the A in pigs is such a phenomenon. The author did not prove the presence of anti-J and anti-A antibodies in cervical mucus of females. They occurred, however, in ovarian follicular fluid. During the studies in vitro their harmful effect on the spermatozoa of the J and A positive males was not detected. Also the fertility of the J and A negative females, which were inseminated or mated with the J and A positive males, was not affected.

Blood groups have a further importance from the fertility aspect during the haemolytic disease of piglets. The origin of this disease is apparently in an immune process in the mother accompanied by the formation of antibodies against blood group antigens of the foetus which is inherited from the father. But it is not quite clear yet which antigens possess the prevailing antigenicity from this aspect and which do not.

As regards the importance of serum polymorphic systems for animal fertility the serum transferrins in cattle and in the pig were studied most frequently. The authors' results differ, however, considerably and so far no conclusions for selective breeding work can be drawn from these results.

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