OCCURENCE OF 1/29 TRANSLOCATION IN " *HUNGARIAN GREY* " CATTLE

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Out of 106 *Hungarian Grey* cattle 4 (3,8 p. 100) proved to be heterozygous carrier of 1/29 translocation. One heifer was 60, XX/60, XY chimaera. A simplified and effective blood culture method was used. Hypotheses concerning the origin of 1/29 centric fusion in cattle are discussed.

PRELIMINARY OBSERVATIONS ON THE MEIOTIC BEHAVIOUR OF A 130— / 140+ TRANSLOCATION IN DOMESTIC PIGS

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A reciprocal translocation resulting from the exchange of almost all of chromosome number 13 and the distal end of chromosome number 14 has previously been reported in a *Swedish Yorkshire* boar with approximately 52 p. 100 reduced litter size. In an attempt to characterize the behaviour of this translocation during meiosis air-dried preparations from the testicles of heterozygous males and cultured oocytes from heterozygous females were examined. At diakinesis/metaphase I 17 bivalents and 1 quadrivalent were observed. The most common forms of the quadrivalent were a ring structure and a chain like structure. While only a limited number of second metaphase were analyzed, normal, balanced and unbalanced karyotypes were observed.

G-BANDING AND FLUORESCENT-BANDING IN SHEEP WITH HETEROZYGOUS AND HOMOZYGOUS TRANSLOCATION

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The chromosome 1p- and the translocation chromosome can be identified in a ram and a ewe with heterozygous balanced translocation by G-banding and fluorescent-banding, according to the Reading Conference 1976. Based on the negative aerea in the central part and the distinct narrow telomeric band of the long arm of the autosome 1, the chromosome 1 p- is well recognizable by the G-bands. The translocation chromosome is ordered to autosome 20, because of three dark G-bands of similar intensity in the proximal part of this chromosome. The distal part is followed by a light segment and two dark G-bands, wich can be seen in the distal part of the chromosome 1 p.

The karyotyp of the ram with the homozygous balanced transloction, $2n = 54$ XY, $(1p^-)^2$ $t(1p^-; 20^+)^2$, is well identified according to the G-banding patterns and the RMbanding patterns.

The fluorescence staining shows a bright broad band in the distal half of the translocation-chromosome. This translocationchromosome cannot be mixed up with the chromosome pairs 4-9, because in these chromosomes exist no band of this size in the distal part of these chromosomepairs.

The G-banding technique and the fluorescence technique give an identification and the rowing of a submetazentric autosome in sheep.

The translocationchromosome is well identified based on the R-bands. A broad bright band is to be seen in the distal part of the chromosome 20^+.