



REPRODUCTION OF HENS SELECTED FOR CHOSEN EGG QUALITY TRAITS VS. CHANGES OF SOME MICROSATELLITE ALLELE FREQUENCIES

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While investigating linkage between egg traits and chosen microsatellite loci it appeared that there might have been an association between locus MCW0139 on the third chromosome and reproduction traits in general, in relation with selection for hatchability. Thus, due to the economical importance of the trait, the second stage of the experiment aimed at scanning chromosomes 3, 4, 7 and 26 for presence of QTL affecting reproduction. Altogether 15 loci were genotyped on 1203 Rhode Island Red birds in four generations. The following reproduction traits were considered: sexual maturity, hatchability from eggs set and fertilized, fertilization rate, and survival of the progeny over rearing and production stages combined. Linkage analysis between these traits and the chosen microsatellite loci lead to the identification of QTL for sexual maturity (chromosome 3), hatchability from fertilized eggs (chromosomes 4 and 26), and survival of progeny (chromosome 3).

Further investigations should be focused on a more dense saturation with markers (possibly SNPs) of the chromosomal regions in which linkage with putative QTLs was observed.

Key words: reproduction traits, microsatellite sequences, laying hens