

## **Assessment of genetic structure in Mexican charolais herds using microsatellite markers**

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### **Abstract**

Knowledge of livestock genetic diversity is an essential step to respond to commercial demands and reach production objectives in different environments and production systems. The evaluation of animal genetic diversity is achieved by using molecular markers. Microsatellites are the most used markers for studies of this type. Eleven microsatellites were used to evaluate the genetic variation from three populations of Charolais cattle located in northeast Mexico. The studied populations exhibited a high allelic variability with a mean heterozygosity of 0.5. A moderate genetic differentiation between the Charolais populations ( $F_{ST} = 0.079$ ;  $P < 0.001$ ) was observed. This suggests subdivisions in Charolais breed established in Mexico, due to genetic material origin, reproductive and selective management and local isolation.