

Identification of horses

Hot iron branding versus microchip transponders

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Identification of horses with hot iron branding is one of the most controversial issues in German horse breeding and also discussed in other countries. Traditionally horses have been identified by hot iron branding with breed-specific symbols and additional numbers. Since 2009, European Union legislation requires that all horses born after that year must have a microchip implanted for identification, although some exceptions are possible. So far it has not been tested using scientific criteria to what extent branding and microchips reliably allow identification of individual horses. In this study, the readability of branding symbols and numbers was analyzed by 3 independent investigators in 248 horses participating in an equestrian competition. Microchip transponders implanted into the neck were read in another 182 horses on different breeding farms. Microchip readings were made on both sides of the neck and 3 different commercially available ISO 11785/11785 scanners were compared (A: Minimax II, B: I-MaxPlus, C: Isomax V, all by Virbac, Germany).

Correct reading of the branding breed symbol in horses at an equestrian championship by the individual investigators was close to 90% and differed only marginally between the investigators. Correct identification of the breed-specific symbol by all 3 investigators occurred in 84% of cases. The double-digit number branded together with the breed symbol was identified correctly by all 3 investigators in 39% of cases with correct readings by individual investigators ranging from 47 to 54%. Correct identification of the branding signs did not differ significantly between horses of different coat color and age group.

Readability of microchips differed between scanners. Best results were obtained with scanner C which allowed microchip reading on the implantation side in 100% and on the contralateral side of the neck in 95% of 182 horses. Time for location of the microchip on the implanted side ranged from 1 to 4 sec (1.1 ± 0.4). Scanner A identified 92 and 25% of microchips on the

implanted and contralateral side, respectively while corresponding values for scanner B were 86 and 20%. Readability of microchip transponders on the side contralateral to implantation was influenced by size and thus caliber of the horse.

In conclusion, hot iron branding does not allow unique identification of horses and individual branding numbers can be read in less than 40% of the horses. Readability of microchip transponders is more reliable compared to hot iron branding but depends on the type of scanner used. Scanner C allowed identification of all horses tested and gave good results also when used on the contralateral side of the horses' neck.

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