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Hardness and elasticity of hoof horn

S u m m a r y

To assess which factors influence the hardness and elasticity of the hoof horn, 93 horn samples were collected from the hoof front wall during trimming 50 horses. The hardness examined with the ball indentation method and the longitudinal modulus of elasticity were measured with HPK 8411 hardness tester. The data was elaborated with least square analysis of variance. Considerably higher hoof hardness was found in mares than in stallions and geldings, as well as in young horses at the age of three to six years in comparison to older horses. The tendency of higher hoof hardness in warmblooded horses compared to coldblooded horses was not significant. Means in horses of different colours, in pigmented, striped or unpigmented hooves, as well as front and hind hooves were alike. The groups did not differ considerably with respect to the mean hoof horn elasticity.