
Abstract
The loading and unloading of cattle for road transport is stressful but the stress is difficult to evaluate in terms of the welfare of the cattle. Over one year, 40 normal commercial journeys in northern Spain were analysed in terms of time limits and behavioural events in order to design an objective method for assessing the stresses imposed on the animals, and a scoring method was developed for assessing the welfare of the animals during loading and unloading. Several definitions of time intervals were assessed to calculate a time score per animal, and easily observable behavioural events were scored and combined with the time score to obtain a total loading/unloading score. More than half of the loadings and unloadings involved turns, slips and vocalisations. Mounts and bouts of fighting were infrequent and balks and falls were significantly more frequent during loading than unloading. The plasma concentrations of cortisol, glucose and lactate, the activity of creatine kinase and the pH of the meat 24 hours after the animals were slaughtered were also measured. The results indicated that loading was more stressful than unloading and that higher scores implied significantly higher levels of stress.