Effect of sight barriers in pens of breeding ring-necked pheasants (*Phasianus colchicus*) on behaviour, welfare and reproduction

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The effects of sight barriers (straw bales and metal sheets) in the pens of breeding ring-necked pheasants were investigated on a commercial game farm. Data were collected from eleven conventional pens (control) and eleven pens with additional sight barriers (barrier) over the course of a ten week breeding season. Each pen contained 8 males and 56 females at the beginning of the season. There was a higher rate of mortality in males (6.25%) than females (2.11%) though pen type did not influence mortality. Feather damage increased over the breeding season although both male and female pheasants showed significantly better feather condition in the barrier pens at the end of the season. The pheasants spent most of their time walking or standing although providing barriers increased perching, but reduced preening. Provision of sight barriers had no effect on the incidence of courtship and mating, but did reduce aggressive interactions such as pecking and chasing. Both egg production per pen and the numbers of rejected eggs were not significantly affected by the presence of the barriers. By contrast, fertility was significantly higher (3% on average) and persisted for longer in the barrier pens, particularly towards the end of the laying season. Embryonic mortality was unaffected by the presence of the barriers but hatchability was significantly higher (2.7% on average), which was associated with higher levels of fertility. This study provides baseline data on the behaviour of breeding pheasants under these husbandry conditions. Barriers may improve pheasant welfare by reducing potentially harmful aggressive interactions, without affecting activity patterns or reproductive behaviour. Establishing sight barriers in breeder pens for pheasants would also appear to offer significant commercial advantages through increases in fertility and hatchability. A full report of the study will be published in British Poultry Science in 2011.