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The welfare of game birds destined for release into the wild: a balance between early life care and preparation for future natural hazards

JR Madden†, F Santilli‡ and MA Whiteside*†

† Centre for Research in Animal Behaviour, Psychology, University of Exeter, Exeter EX4 4QG, UK
‡ Studio di Gestione Faunistica, Campiglia Marittima, Italy
* Contact for correspondence: Mark-Whiteside@Hotmail.co.uk

Abstract

Globally, over 110 million game birds are reared annually and released for recreational hunting. Game birds differ from other reared livestock because they experience two very distinct environments during their lives. Chicks are first reared in captivity for 6–12 weeks under managed, stable conditions and then released into the wild. A limited set of 13 studies have explored how the rearing conditions experienced by chicks influences their pre-release welfare, typically in terms of physical injury (feather-pecking) or behavioural assays of stress responses. However, no studies have considered the specific indicators of welfare of game birds after release. We therefore need to draw from studies that do not specifically investigate welfare but instead ones that examine how rearing environments influence post-release morphology, behaviour and survival. Consequently, we reviewed how reared and wild-born game birds differ and suggest methods by which more naturalistic rearing conditions may be achieved. We noted five areas where artificial rearing deviates substantially from natural conditions: absence of adults; unnatural chick densities; unnatural diet; unnatural physical environment; and exclusion of predation risk. Mimicking or introducing some of these elements in game bird rearing practice could bring two benefits: i) facilitating more natural behaviour by the chicks during rearing; and ii) ensuring that birds after release are better able to cope with natural hazards. Together, these could result in an improved overall welfare for game birds. For example, enrichment of the spatial environment may serve to both improve welfare pre-release and after release into the wild. However, some adaptations may induce poor welfare for a short period in the young birds. For example, exposure to predators may be temporarily stressful, but ultimately such experiences in early life may permit them to better cope with such threats when released into the wild. Therefore, to achieve an optimal welfare for the entirety of a game bird's life, a careful balance between the conditions experienced in early life and adequate preparation for later life in the wild is required.

Keywords: *animal welfare, conservation, hunting, partridge, pheasant, reintroduction biology*