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**Abstract**

Farmland songbirds have shown dramatic population declines that have been linked to agricultural intensification. Populations have been impacted via three key factors: a reduction in available nesting habitat, a reduction in the availability of food for nestlings, and a reduction in over-winter food availability. The abundance of nest predators such as corvids, and the presence of sub-clinical disease may also play a part, and this thesis investigates the inter-relationships of some of these five factors along with their potential impacts upon farmland bird populations, using the yellowhammer *Emberiza citrinella* as a model species. It appears that the quality, not the quantity of fledglings has declined, possibly due to delayed life-history effects following on from conditions experienced in the nest. Increases in corvid abundance are associated with declines in chick growth and condition, mediated by behavioural compensation by provisioning adults: these effects are especially marked in large broods and where invertebrate food supply is low; where food supply is high a slightly positive effect of corvid abundance on condition and growth is found, implying an adaptive response by adults to maximise food provisioning in order for chicks to fledge more quickly and thus reduce their risk of predation in the nest. High territory densities, found where the availability of suitable nesting habitat is high, are associated with apparent density-dependent competition for high quality food and reduced chick growth, probably reducing fledgling quality and potentially leading to population sinks in areas of good nesting habitat, or in areas with high corvid densities. Survival analysis from a yellowhammer population sampled over four successive winters indicates that survival is male-biased, probably due to the higher work rates of females during breeding. Survival probability increases with increasing wing length, although analysis of 21 years of ringing data from the same site indicate a significant trend towards decreasing wing length, when controlling for the effects of age and sex. This apparent paradox is likely to have arisen from a decline in wing length of fledglings recruiting into the population as a result of a decline in habitat quality or food availability, both of which have been shown to influence feather growth. Infection by blood parasites showed associations with reduced feather growth and may indirectly influence survival, possibly by compounding food stress over-winter.