

Study reveals uncertainty over the benefits of feeding birds in winter

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Two blue tits are shown at a fat feeder in winter. Credit: John Harding/BTO

Wild bird populations are generally thought to benefit from being given additional food in winter but our understanding of the effects of such food provision is incomplete. The results of a new study, carried out by researchers at the University of Exeter and the British Trust for Ornithology (BTO), has found that feeding wild blue tits in winter resulted in less successful breeding during the following spring.

The research, just published in *Scientific Reports*, revealed that woodland blue tits that were provided with fat balls as a supplementary food during the [winter](#) months went on to produce chicks that were smaller, of lower body weight and which had lower survival than the chicks of birds that did not receive any additional food.

Dr Jon Blount from the University of Exeter who led the research said: "Our research questions the benefits of feeding wild birds over winter. Although the precise reasons why fed populations subsequently have reduced reproductive success are unclear, it would be valuable to assess whether birds would benefit from being fed all year round rather than only in winter. More research is needed to determine exactly what level of additional food provisioning, and at what times of year, would truly benefit wild [bird populations](#)."

Dr Kate Plummer, lead author of the paper, said: "There could be a number of different explanations for our results. One possibility is that winter feeding may help birds in relatively poor condition to survive and breed. Because these individuals are only capable of raising a small number of chicks, they will reduce our [estimation](#) of breeding success within the population. But more research is needed to understand whether winter feeding is contributing to an overall change in the size of bird populations."



A young blue tit chick is getting ready to fledge the nest in spring. Credit: Christine M Matthews/BTO

It is estimated that around half of UK householders feed birds in their gardens. This equates to around 50-60 thousand tonnes of bird food provisioned each year and contributes to a thriving bird food industry.

Jane Lawler, Marketing Director at Gardman, commented: "As the wider scientific evidence shows, feeding wild birds with appropriate

foods delivers a range of positive benefits. A number of unanswered questions remain, however, and this is why we have been supporting this and other research, using the information gained to inform our products and the advice that we provide to our customers."



An adult blue tit is on the hunt for caterpillars to feed its hungry chicks. Credit: John Harding/BTO

The three year study was conducted across nine woodland sites in Cornwall. During winter, populations of [blue tits](#) were left unfed, given plain fat balls or given fat balls enriched with vitamin E – a vitamin commonly present in bird food such as nuts and seeds. Nest boxes and bird feeders were distributed around the woodland study sites and [reproductive success](#) was investigated by checking the nest boxes in the spring to determine the number of eggs laid and the growth and survival

of [chicks](#).

Studies elsewhere have shown that feeding wild birds in winter can have almost immediate benefits for survival and can enhance future breeding success, so the latest results provide important new information and inform the debate around the role that feeding [wild birds](#) may play in their population processes. Whether providing food is detrimental or beneficial to wild bird populations, it is clear that more research is needed to better understand its effects.

Provided by University of Exeter

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