

Salmonellosis in Garden Birds



Outbreaks of mortality in wild birds in gardens in the UK were first reported in the mid-1960s, when members of the general public began to put out bags of peanuts to feed the wild birds. In these first outbreaks most deaths were due to infection with the bacterium *Salmonella* Typhimurium (abbreviated to *S. Typhimurium*) and occurred in greenfinches (*Carduelis chloris*) and house sparrows (*Passer domesticus*). Mortality incidents have continued, and since 1995 many post mortem examinations have been carried out at the Avian Health Unit (AHU) of the Veterinary Services Group of SAC (Scottish Agriculture College). The results from these investigations have shown that in Scotland two strains of *S. Typhimurium*, DT 40 and DT 56 variant, cause most of the deaths from salmonellosis in garden birds.

Deaths are most often seen in greenfinches, chaffinches (*Fringilla coelebs*) and house sparrows, but other birds such as goldfinches (*Carduelis carduelis*), siskins (*Carduelis spinus*), tree sparrows (*Passer montanus*) and great tits (*Parus major*) have also been affected in smaller numbers. During outbreaks of disease, dead birds or sick birds are usually found in the vicinity of the bird feeders. If seen alive the birds are fluffed up, reluctant to fly, and may look as if they are breathing heavily or have difficulty in swallowing.

The post mortem examination of birds dying from salmonellosis often reveals substantial areas of damage to internal organs such as the oesophagus (gullet), crop, liver, spleen (an organ that tries to fight off diseases) and sometimes the lungs and lower part of the digestive tract. The damage to the gullet can be so severe that it causes a partial blockage, preventing food getting to the bird's stomach even if it continues to eat. Confirmation of the cause of death requires specialist laboratory facilities for the culture and identification of the bacteria.

Most outbreaks of salmonellosis in garden birds occur between October and March, with losses peaking in January and February. Evidence is also emerging of a geographic variation- most isolates from the north of Scotland have been type 40, whereas elsewhere in Scotland isolates are fairly evenly divided between type 40 and type 56 variant. Unravelling the reasons for these differences may help to explain how these diseases spread.

Why are the deaths occurring?

Although the mortality incidents in the UK usually occur at sites providing supplementary feeding for wild birds, the food is not believed to be the initial source of the bacteria but rather the cause of the congregation of large flocks of birds in a small area. Some birds probably carry small numbers of *Salmonella* in their intestines, and when the birds congregate at bird tables and feeding stations a build up of these bacteria may occur, contaminating the feeders and drinkers and the surrounding environment. Under these conditions, the bacteria may then have the chance to overwhelm the birds and cause their deaths.

General control measures

- Use several feeding sites, to reduce bird numbers at any one site
- Move the feeding sites regularly, to reduce any build-up of debris and infectious agents around the feeders
- Don't use all the feeding sites all of the time – rest periods will help to reduce levels of contamination
- Clean and disinfect feeders and feeding stations regularly. Rinse the feeders and allow them to dry before using them again.
- Consider leaving birdbaths or drinkers empty for a short period. Otherwise be particularly vigilant to provide clean drinking water on a daily basis
- Consider significantly reducing or stopping feeding for two weeks. This will encourage the birds to disperse and reduce the chance of new birds becoming infected at the feeding station. Feeding can then be gradually re-introduced, monitoring for further signs of ill health
- Always wash and dry your hands thoroughly after cleaning bird feeders or handling sick or dead birds.

Illness in humans and cats

Human illness from wild bird strains of *Salmonella* is currently uncommon in the UK, but there is the potential for spread to humans. Rubber gloves should therefore be worn when cleaning bird tables or if the carcasses of dead birds have to be handled, and hands must be thoroughly washed and dried, especially before preparing food. Wild birds should also be

excluded from food preparation areas. Disease may also occasionally spread to pet cats that come in contact with sick or dead infected garden birds.

SAC VS is a founder member of the Garden Bird Health *initiative*, a consortium set up in 2005 to investigate deaths in garden birds. Further information about the GBHi can be found on the GBHi page of the UFAW website at www.ufaw.org.uk

If you wish to report dead or sick garden birds, please phone the GBHi Helpline at 0207 449 6685. If large numbers of birds (ten or more) have been found, the Defra Avian Influenza Helpline (08459 335577) should first be contacted. Where appropriate, arrangements can then be made to have post mortem examinations carried out to determine the cause of death of the birds.

Reference

- Pennycott, T.W., Park, A. and Mather, H.A. (2006) Isolation of different serovars of *Salmonella enterica* from wild birds in Great Britain between 1995 and 2003. *Veterinary Record* **158**, 817-820

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