



Supplementary feeding of turtle doves

Information & recommended protocol from Operation Turtle Dove



Credit: Les Bunyan (rspb-images.com)

The turtle dove is now the UK's most threatened breeding bird. Its population has fallen by 94% in the UK since 1995 and they have now disappeared from more than half of the breeding range they occupied in 1970. These birds spend the winter in West Africa before returning to the UK countryside in spring to breed. Creating and maintaining good quality breeding habitat is key to their recovery and we really need your help to provide this habitat.

What do turtle doves need?

Turtle doves have three basic habitat requirements:

1. **Food:** turtle doves feed on the ground, almost entirely on seeds of low growing wild plants or spilt crop seeds. They need sparse vegetation and or patches of open ground to be able to find the seeds.
2. **Nesting habitat:** they nest in dense woody vegetation, eg. tall thick hedgerows, or tall dense scrub.
3. **Accessible water:** such as a shallow-sided pond.

Research has shown that a loss of suitable and accessible seed food has been the most significant factor in driving the decline of turtle doves in the UK. A lack of seed food in the wider countryside has affected both adult and young turtle doves. Breeding adult birds take longer to get into breeding condition and finish breeding earlier – resulting in fewer broods and fewer chicks fledged. Young birds reared on a poorer quality seed diet also have poorer body condition.

Plants that produce suitable seeds for turtle doves can be encouraged using a variety of measures (see separate guidance from Operation Turtle Dove). However, practical ways of delivering suitable seed to turtle doves in the early breeding season (Mid April to June) is particularly challenging.

For this reason, and due to the steep and worrying decline in numbers of this bird in the UK, we are now recommending supplementary feeding as an important emergency conservation measure that could be helpful in all areas where turtle doves still breed.

Providing supplementary food for turtle doves when they return to the UK in spring will help to ensure adult birds are able to get into good breeding condition and will help to bridge the gap when native wildflower seed is scarce.

Alongside supplementary feed it is important to provide foraging areas of native wild arable plants (**Figure 1** overleaf). Research has shown that native arable plant seeds provide the most nutritional value to turtle dove young, when they are growing and developing.

Supplementary feeding trials for turtle doves, carried out in 2016 and 2017, have shown that feeding – using the methods and protocol described here – is effective and safe, with no evidence of increased risk of disease transmission between birds. Therefore, Operation Turtle Dove recommends that the protocol described here is followed closely to maintain this effectiveness and safety.

What to feed?

Operation Turtle Dove only recommends feeding with a mix of suitable seed types, not just a single seed, to provide nutritional variation. This mix used in the supplementary feeding trials was designed to reflect a range of seed types known to be currently well represented in turtle dove diet, and to provide high nutritional value to turtle doves, at a reasonable price: 10% Wheat, 35% Oil Seed Rape, 35% Feed White Millet, 10% Canary seed, 10% Sunflower Hearts. This can be viewed as a high standard ideal mix, and Operation Turtle



Figure 1: Showing an area of suitable turtle dove forage habitat, with native arable plants and areas of bare ground. Credit: Leila Walker

Dove recommends its use if possible. As a minimum, we recommend that any supplementary seed mix for Turtle Doves should contain at least 3 seed types picked from the 5 above, with no more than 10% wheat in any mix, and at least 10% of any other single component. This should ensure that nutritional balance and quality of the overall mix is maintained. Each feeding site will require 75 kg of the seed mix each year. This should be enough to enable weekly deployment of the supplementary feed for at least eight weeks.

Location & management of feed areas

- Supplementary food should be located near to (within 300m of) good turtle dove nesting habitat – eg. tall thick hedges, areas of dense scrub, particularly near ponds. If there is local knowledge of where turtle doves are currently breeding, or have nested recently, supplementary food is best placed within 300m of these locations.
- The feeding site must be a bare surface free of vegetation or have vegetation that is short (<15cm) and patchy, including at least 30% (preferably 50-60%) bare areas.
- If the vegetation grows to cover the ground and becomes taller than 15cm before late June, it should be cut back or rotovated.
- Suitable areas for seed deployment could include stubbles, other fallow or recently established or cultivated areas (including fallow or seed plots), bare or sparsely vegetated tracks, beet pads, very short grass etc.
- The fed area should be a strip 50m long by 5m wide, or similar.
- Feeding stations should be in an open location, and not under tree canopy. On farmland they can be located either in-field or adjacent to field boundaries. Maintaining the supplementary feeding site in the same location through a breeding season is the preferred method. If for any reason the original feeding site cannot be maintained throughout the breeding season, eg. because the vegetation becomes too overgrown or there is build up of uneaten seed, then the seed should be moved as short a distance as possible to a location that is suitable, rather than continuing to use what becomes unsuitable vegetation structure.

When, and how much to feed

- Supplementary feeding for turtle doves should be carried out for at least eight weeks from the first week of May until late June. Starting earlier (mid- April) and continuing into July could be beneficial in at least some situations, and can be done wherever possible.
- Seed should be put out each week; spun or scattered to spread it thinly and evenly across the whole feeding site, to avoid creating piles or trails of seed. 6kg of seed per week over a 50m x 5m feeding site is the recommended rate.
- This low rate of seed delivery has been tested and found to be safe for preventing a build up of pathogens. If you want to provide more seed then consider putting in more than one feeding plot. A trail camera is a good way of monitoring your feeding sites.
- If there is a visible build-up of unused food, stop feeding for at least one week to reduce the chance of pathogen build-up.

Other considerations

If you are in an agri-environment scheme such as Countryside Stewardship you may need to seek permission from Natural England if the area selected for the supplementary feed is within an agreement option. Contact your local Natural England Advisor for more information.

Seed-eating birds other than turtle doves are highly likely to find and use this supplementary food. The presence of other birds should not prevent use by turtle doves, and indeed may alert turtle doves to the presence of the seed, which may then increase the chance of them benefitting from it. Other seed-eating bird species of conservation concern may also benefit from this supplementary feeding, possibilities including: grey partridge, skylark, linnet, bullfinch, yellowhammer, reed bunting.