



*A sight you might see on shoot day: A beetle bank provides a corridor through the centre of the field through which birds can move more safely © GWCT*

## **Winter cover crops: for shelter**

### **What are winter cover crops?**

Areas in which gamebirds can forage and shelter from both predators, and severe weather. Plants which stand through the winter, and retain seeds through to spring are ideal winter cover. Some species, for example, maize, provide good cover until Christmas but then die off and collapse, leaving birds exposed if other species are not available nearby.

Some seed mixes include species which are suitable for winter cover as well as those which benefit chicks and adults earlier in the year. The placement of winter cover can be influenced by the layout of a shoot – cover in certain areas can be used to ‘hold’ birds which have travelled from their home wood to feed during the day at nearby sites, before driving them back, over the Guns.



### **Benefits to other species**

Game cover crops have the potential to give great benefits to biodiversity on farmland. The extent to which they do this depends very much on the species or mix of species chosen, and this varies widely. The different mixes provide different benefits for both gamebirds and other species. The most diverse mixes are usually the most beneficial, with wild bird seed mixes being highly recommended to provide food throughout the winter, and preferred by a broader range of species.

For example, one study looking at game crops in Scotland (consisting of kale, triticale, mustard, wheat, oil seed rape and quinoa), recorded up to 100 times as many songbirds per hectare in game cover crops, compared to set-aside, stubble or conventional crops.

Game cover crops in this study attracted 21 bird species, including linnet, bullfinch, reed bunting, house sparrow, tree sparrow, song thrush, compared to 14 in set aside/stubble fields and only 11 in conventional crops<sup>3</sup>.



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Another study looked at how many farmland birds were found on “winter bird crops” (WBCs) compared with conventional crops. This study of 192 farmland sites found that overall, bird densities were more than 12 times higher on WBCs. When the analysis was confined to the WBC species which the birds most preferred, this rose to 50 times higher<sup>4</sup>. These are just two of many studies that have shown the value of seed-bearing crops in winter<sup>81</sup>.



The same profile of game cover crop species has also been studied in summer and shown to contain not only up to 80 times more birds than nearby conventional crops, but also 15 times more butterflies and 40 times more bumblebees<sup>82</sup>. When plants are considered, 90% more weed species were observed in game crops, some of which provide food for other bird species, but which also support more invertebrates<sup>3,82</sup>.

The benefits of game cover crops to many farmland bird species are well established, with studies consistently demonstrating more than ten times as many birds found in game crops in winter, compared to control arable areas<sup>2,4,83</sup>.

Game cover crops are widespread, with an estimate made from the PACEC survey of the shooting community published in 2006 suggesting that there are 93,000 ha of game cover crops in the UK<sup>35</sup>. Assuming this is near the true number, and using an estimate of two tonnes of seed per hectare from such crops, it has been put forward that 180,000 tonnes of seed per year could be provided from this source<sup>84</sup>. For game cover crops to fulfil their potential to support birds through the winter, they should not be ploughed in at the end of the season but rather should be left to stand and provide food through the hungry gap in the late winter and early spring, when many bird food sources are exhausted.