Organic farming, wildlife and climate change
Article by Martin Cottingham for The Independent

On a wet and windy August day, with disinfectant wheel spraying and boot dipping at the entrance to ward off Foot and Mouth, Commonwork Organic Farm was not the most welcoming place for the casual visitor. But if the mood was meant to be subued, the birds that populate this picturesque corner of the Kent countryside had not read the script.

In a short walk around the farm at Chiddingstone, near Edenbridge, I saw or heard around 20 species. The colourful yellowhammer and the dancing flight of the goldfinch. The noisy chatter of house sparrows and the piping call of bullfinches from a hawthorn hedge. A grey wagtail and a pheasant exploring the silage pits. A heron strutting in the stubble of recently harvested wheat.

In 2001, the year Commonwork completed its conversion to organic production, a British Trust for Ornithology winter survey recorded 32 bird species on the farm. Two years later the number had risen to 42, including 16 on the RSPB's red and amber lists for species of high and medium 'conservation concern'.

"I love to hear the skylarks when they are trilling high above the fields," says Mike Cottrell, Commonwork's farm manager. "We don't use any insecticides, pesticides or wormers, so we have large numbers of insects for birds like skylarks and bats to feed on. We also have a greater diversity of weeds, which means a wider range of bird species are able to live in the crops."

Surveys by the Centre for Ecology and Hydrology show that Commonwork has nearly five times the level of bat activity found on a typical non-organic farm and is in the top third of UK farms for the diversity of weed species. Such findings echo a wealth of data from across the UK: a review of scientific research published in 2006 found that, on average, wildlife was 50 per cent more abundant on organic farms and there were 30 per cent more species than on non-organic farms.

The organic approach has a number of key wildlife-friendly features, according to the Department for Environment Food and Rural Affairs. These include the predominance of rotational mixed farming; the greater variety of crops grown; restricted use of chemicals and veterinary medicines; lower stocking densities for livestock; and careful management of natural features such as hedges, ponds and grassland.

"Skylark populations thrive when the adult birds can raise several broods of young during the year," explains Ian Alexander, a senior specialist for Natural England. "Because of the diverse cropping on organic farms the birds can usually find a suitable nesting habitat from April through to August. Conventional farms have more limited habitat, and because there are fewer insects the birds have to fly farther to find sufficient food for their young."

Commonwork is a typical mixed farm, alternating its fields between crops such as wheat, oats, peas and triticale and clover-rich grass to rebuild fertility in the heavy clay soil and provide grazing for a 300-strong herd of dairy cows. "We have laid lots of new hedges to reduce our average field size and create wildlife corridors between the fields," says Mike Cottrell. "We only cut our hedges every two years and never in the nesting season between March and October."

As well as benefiting wildlife, the expansion of organic farming is a positive force in the fight against climate change. Environmental analysis published by the European Commission last year found that over 30 per cent of Europe's greenhouse-gas emissions come from food production and distribution, but research conducted for Defra shows that producing food

organically is typically 30 per cent more energy efficient than non-organic production. A significant factor is the prohibition of nitrogen fertilisers, whose production accounted for 37 per cent of energy use in UK farming in 2004.

An independent evaluation produced two years ago by the environmental consultancy Best Foot Forward found that Commonwork's annual carbon emissions amounted to just 200 tonnes – equivalent to the typical carbon footprint of 20 individuals in the UK. It also found that the farm was producing one unit of milk-protein energy for every 3.4 units of fossil-fuel energy expended, compared to an average ratio of around 1:20 on non-organic diary farms.

Determined to do even better, Commonwork has embarked on a ten-year programme to slash the use of fossil fuels. It already uses wind energy, having chosen Ecotricity as its electricity supplier, and is seeking planning permission for its own turbine. This month it has installed a biodiesel plant in a disused farm building, collecting used vegetable oil from local chip shops to make fuel for vehicles and machinery.

In the autumn it will replace the oil-fired boiler currently heating the main farm house with a biomass boiler fuelled by wood chips from the farm's woodland. Plans also include reducing food miles by becoming a hub for collaborative distribution by local farmers, building solar panels into the farm's new dairy and using a methane digestor to produce biogas from cow slurry.

Increasing numbers of large and small organic businesses are taking steps to reduce their carbon emissions. Instead of receiving an individual delivery to the door by van, the 400 families in Reading and Oxford who are customers of Tolhurst Organic Produce collect their weekly vegetable orders from a local neighbourhood representative.

"Each rep is responsible for looking after around 15 to 18 customers," explains grower Iain Tolhurst. "These customers all live within a short distance. We encourage them to pick up their weekly vegetable orders on foot or by bike, and most of them manage this because they are close enough to be able to do so. Each rep receives a complementary bag of vegetables every week."

An environmental audit for Riverford Organic Vegetables, the UK's biggest box scheme with around 50,000 customers, found that the biggest single component of its carbon footprint was emissions from the fleet of vans that make its doorstep deliveries. Managing director Guy Watson has decided to widen deliveries to include meat and products such as soups and sauces in the hope that a broader group of organic enterprises will improve their collective fuel efficiency and that their customers will make fewer car journeys to supermarkets.

"My policy used to be that vegetables are what we know about and we should concentrate on what we produce ourselves," says Watson. "This audit has led us to think that in environmental terms it's important to use our distribution network as a conduit for other people's produce."