

Farmland bird indicator, 1915-2019

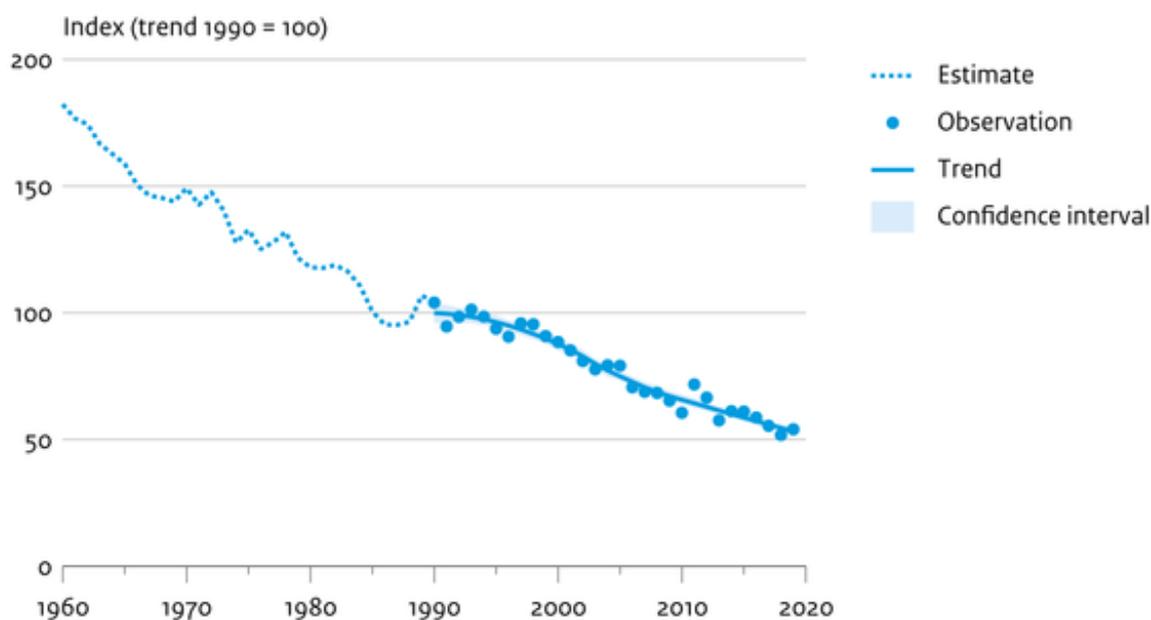
Indicator | 25 April 2021

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Changes in agricultural practices have caused a significant decline in breeding birds typical of agricultural areas in the Netherlands, starting from the early 20th century.

[figuurgroep]

Farmland birds in the Netherlands

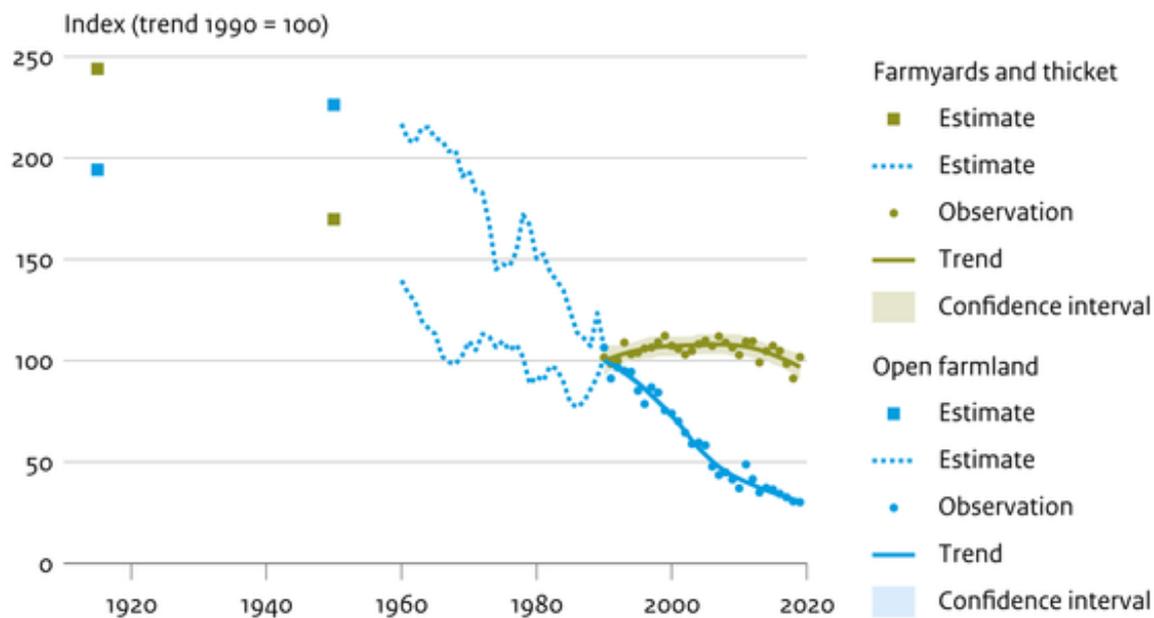


Bron: NEM (Sovon, CBS)

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Birds of open farmland and of farmyards and thicket

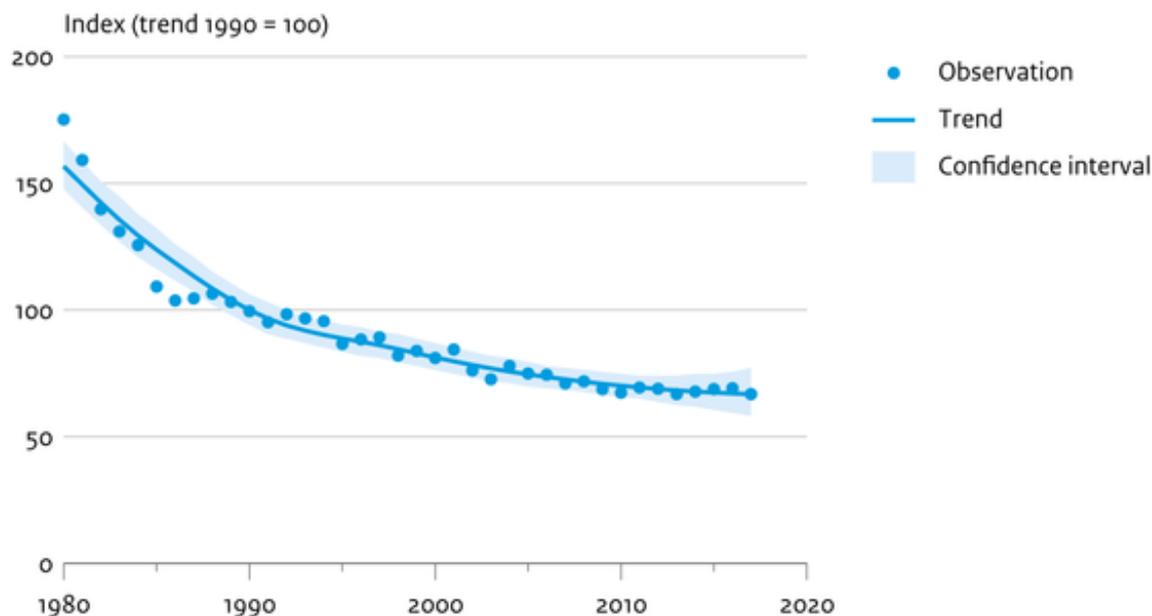


Source: NEM (Sovon, CBS)

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Farmland birds in the European Union



Bron: European Bird Census Council

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Developments in the Netherlands as of 1990

There has been a substantial overall decline in farmland bird populations since 1990 (first tab page). Twenty different species have dwindled while five have increased and two have remained stable. A few declining species had already become rare by 1990, including the corn bunting and the ruff. However, other much more common species have lost ground as well since 1990; these include the black-tailed godwit, the northern lapwing and the Eurasian oystercatcher. The two species with the highest growth rates are the European stonechat and the European goldfinch. Rather than a large variety of farmland bird species, nowadays large flocks of geese dominate the agricultural landscape. The past few decades have seen a surge in goose populations during the winter season, along with the emergence of a large breeding population. Nevertheless, the various goose species do not count as typical farmland birds because, during breeding season, they are commonly found in many other habitat types as well, for example in marshland.

Developments in the Netherlands as of 1900-1930

Populations of breeding birds typical of agricultural areas in the Netherlands (meadow birds, arable birds, farmyard and thicket birds) have dwindled since 1900-1930 (second tab page: period 1900-1930 appearing as '1915'). Twenty out of the 27 species have shown a continuous decline since 1900-1930 while some species including the European goldfinch are more common now than in the early 20th century. Farmland bird populations have declined by more than 70% since 1960 (see second tab page). Divergent historical trends have been observed in open-farmland birds on the

one hand (e.g. northern lapwing, black-tailed godwit) and farmyard and thicket birds on the other (e.g. yellowhammer, European stonechat, European goldfinch). As for birds in open farmland (arable land and grassland; 14 species), populations increased over the first half of the 20th century, but for many species decline set in after 1960, followed by a still further decrease after 1990. The total decline in open-farmland breeding birds as of 1900-1930 has reached 85 percent.

The decline in breeding birds of farmyard and thicket (13 species) began in the early 20th century and continued until around 1990. The population has remained fairly stable since then. Overall, this group has dwindled in size by 60 percent. These birds breed in hedges, hedgerows and shrubs on farmland and around farmyards.

Developments in the European Union as of 1990

This Farmland Bird Indicator is the national version of the European Union's Farmland Bird Indicator (FBI). The FBI shows a similar downward trend in farmland bird populations (third tab page). As of 2004, the European indicator does appear to be stabilising and therefore less negative than the national indicator. The FBI covers 39 breeding bird species and is commonly taken as a key indicator for biodiversity in agricultural areas.

Causes of decline in open-farmland birds

Developments in farmland bird populations are closely related to those in farming practices. The increasing use of chemical fertilisers in the early 20th century benefited species including the northern lapwing and the black-tailed godwit as they could avail of more food such as earthworms and other animals living underground in grassland areas. This trend was followed by steady decline as of 1960 due to the increasing intensification of arable and cattle farming. For most species, the changing choice of crops, use of pesticides, higher level of mechanisation and scale increase in agriculture affected the availability of food, nesting opportunities and chick survival rates. More intensive land management has resulted in the loss of nests and younglings, due to a combination of insufficient cover, more predator access and poor growing conditions for the younglings. Agricultural land management (including arable field margin management) has so far not halted this decline. In addition, many breeding areas have been lost due to expanding urbanisation and infrastructure as well as increasing road traffic. Other species groups as well have deteriorated due to the intensification of agriculture.

Causes of decline in farmyard and thicket birds

Over the course of the 20th century, birds of farmyard and thicket have decreased in number due to the disappearance of hedges, hedge rows and bushes from farmland. This was partly the result of the agricultural land exchange ('ruilverkaveling') that was introduced after World War II. Many small landscape elements are still disappearing from areas with sandy soil. In the low-lying part of the Netherlands, however, more habitats suitable for thicket birds have emerged in the open polder landscape in recent decades due to the addition of roadside and farmside vegetation. On balance, the decline in farmyard and thicket birds has therefore levelled off in recent years.

Causes of the trends around Europe

Similar factors are at play in north-western Europe as in the Netherlands. A recent study showed that EU policies to encourage farmers to improve the ecological quality of their land - such as special protected areas for birds and financial incentives within so-called agri-environmental schemes - have been insufficient to halt the decline in farmland bird populations, despite a number of positive effects.

Furthermore, in eastern and southern Europe, natural farmland bird habitats are lost as agricultural activities in unprofitable agricultural areas are more often discontinued, resulting in encroachment and ultimately forest growth.

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Reference for this page

CBS, PBL, RIVM, WUR (2021). [Farmland bird indicator, 1915-2019](https://www.clo.nl/en/indicators/en147912) [12] (indicator 1479, version 12 , 25 April 2021). www.environmentaldata.nl. Statistics Netherlands (CBS), The Hague; PBL Netherlands Environmental Assessment Agency, The Hague; RIVM National Institute for Public Health and the Environment, Bilthoven; and Wageningen University and Research, Wageningen.

Source URL:<https://www.clo.nl/en/indicators/en147912>

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[1] <https://www.clo.nl/en/indicatoren/en1479> [2]
https://www.clo.nl/sites/default/files/infographics/1479_002g_clo_12_en.png [3]
<https://www.clo.nl/sites/default/files/datasets/c-1479-002g-clo-12-en.xlsx> [4]
<https://www.clo.nl/sites/default/files/datasets/c-1479-002g-clo-12-en.ods> [5]
https://www.clo.nl/sites/default/files/infographics/1479_005g_clo_12_en.png [6]
<https://www.clo.nl/sites/default/files/datasets/c-1479-005g-clo-12-en.ods> [7]
<https://www.clo.nl/sites/default/files/datasets/c-1479-005g-clo-12-en.xlsx> [8]
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