This dataset belong to a study conducted in farmland in Scania, southern Sweden. A more complete description of methods and data can be found in Stjernman et al 2019.

Description of variables (columns in the dataset):

landscape	(character) Identifier for the 1 km–radius landscapes in which birds were counted.
design	(character) Identifies to what design within the SAPES project the landscape belongs. These design were used in other publications (see e. g. Anderson et al 2014, Jönsson et al 2015) and was not investigated in the present paper. Briefly, the landscapes in the ley design varied in the proportion of ley in the landscape and the flower design landscapes had sown flower strips in the centre of the landscape.
visit	(numeric) First (1) or second (2) visit to the landscape
observer	(character) Identifier for the observer doing the bird survey.
npoint	(numeric) The number of local observation points (within the 1 km radius landscape) from which birds were counted for 5 min. Points were distributed in a 4 by 4 grid with an inter-point distance of 400 m after which half the points (columns 1 and 3) where moved to nearest field border and points in private gardens etc. were also moved. Points ending up far outside farmland where discarded and not all points could be accessed at both visits, hence maximum number of points were sometimes lower than 16.
countNN	(numeric) Total number of individuals of species NN counted within 150 m from the npoint observation points in the landscape (5 minutes at each point). Translations of the NN species code to species name can be found in table 1 below. Note that for species St (Starling), counts of groups of individuals (n>1) made after 2011-06-04 (the synchronous fledging date of starlings in the region in 2011) have been downscaled by 1/3 (rounded up to nearest integer) before counts were summarized at landscape level to control for the presence of juvenile birds in flocks. Starlings fledge synchronously in the region (in 2011 at 2011-06-04 as could be seen in data) and hence flocks contain both adults and young. The normal ratio of adults to young in such flocks is 1/3 and hence, such downscaling avoid inflating starling counts with juvenile birds.
Farml.area	(numeric) Total farmland area (in hectares) within the 1 km radius landscape as determined from ARARAT, an IACS database for administration of agricultural subsidies in Sweden, maintained by the Swedish Board of Agriculture.
LHI	(numeric) Landscape heterogeneity index (LHI). Basically a combination of proportion semi-natural pastures and field borders (assuming 1 m width) in the landscape. A principal component analysis (PCA) using these two variables was conducted on a set of non-overlapping 1 km radius landscapes covering (and hence representing) the most to medium productive regions in Scania, southern Sweden. From this the first principal component (PC1) was extracted to represent landscape heterogeneity. LHI for the study landscapes (which were not among the non-overlapping landscapes) was calculated on the PC1 scale of the representative landscapes by using the following formula (overbars indicate means, SD = standard deviation):

$$LHI = \frac{\sqrt{2}}{2}\left(\frac{\sqrt{prop.pasture_{study}} - \overline{\sqrt{prop.pasture_{representative}}}}{SD\left(\sqrt{prop.pasture_{representative}}\right)} + \frac{prop.field\ border_{study} - \overline{prop.field\ border_{representative}}}{SD\left(prop.field\ border_{representative}\right)}\right)$$

Hence, LHI is measured in standard deviations (scaled by sqrt(2)/2).

Prop.ext. (numeric) Proportion of the area of arable farmland (i.e. excluding semi-natural pastures) consisting of more extensive land use (i.e. leys and fallows) in the 1 km radius landscape.

Ext.qual. (numeric) Proportion of area of land with more extensive land use (all leys and fallows) that were of "higher quality" i.e. long-laying leys and fallows in the 1 km radius landscape.

Cropdiv. (numeric) Shannon diversity of crop groups in the 1 km radius landscape, where the crops in the IACS database are grouped into 14 structural groups based on their structural characteristics and seasonality. For a description of how crops were grouped, see Stjernman et al 2019.

Prop.spr-sown (numeric) Proportion of the area of cereals and oil-seed rape that is spring-sown (as opposed to autumn-sown).

References

Stjernman, M., U. Sahlin, O. Olsson and H. G. Smith. 2019. *Estimating effects of arable land-use intensity on farmland birds using joint species modelling*. Ecological Applications In Press.

Andersson, G. K. S., J. Ekroos, M. Stjernman, M. Rundlöf, and H. G. Smith. 2014. *Effects of farming intensity, crop rotation and landscape heterogeneity on field bean pollination*. Agriculture, Ecosystems & Environment **184**:145-148.

Jönsson, A. M., J. Ekroos, J. Dänhardt, G. K. S. Andersson, O. Olsson, and H. G. Smith. 2015. *Sown flower strips in southern Sweden increase abundances of wild bees and hoverflies in the wider landscape*. Biological Conservation **184**:51-58.

Table 1 Translation of species abbreviations used as headers in the "count"-columns.

Species	*Latin name*	*Short*
Barn swallow	*Hirundo rustica*	BS
Curlew	*Numenius arquata*	Cu
Greater whitethroat	*Sylvia communis*	GW
Lapwing	*Vanellus vanellus*	Lw
Linnet	*Carduelis cannabina*	Li
Meadow pipit	*Anthus pratensis*	MP
Red-backed shrike	*Lanius collurio*	RbS
Rook	*Corvus frugilegus*	Ro
Skylark	*Alauda arvensis*	Sk
Starling	*Sturnus vulgaris*	St
Tree sparrow	*Passer montanus*	TS
Wheatear	*Oenanthe oenanthe*	We
Whinchat	*Saxicola rubetra*	Wc
Yellow wagtail	*Motacilla flava*	YW
Yellowhammer	*Emberiza citrinella*	Yh