

Why should we be well informed about farmland birdlife ?

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Introduction

Farmland birds originate from a variety of natural habitats and therefore they are adapted to farmland on different levels (e.g. species which utilize farmland for foraging, reproduction or both). In addition a clear definition of farmland and differences regarding agricultural practice is not easy, and agricultural land can be defined as grassland (pasture/meadows for livestock husbandry) and 'real' agricultural land (for annual or perennial crop production). During the last decades ongoing agricultural intensification in South America and particularly in Brazil leads to the fact that farmland becomes more and more a substitute habitat for different bird species **that are adapted to live in an environment managed for agriculture**. Therefore the question becomes obvious, for which species agricultural habitats are of any importance. Furthermore, within these 'habitats' birds are exposed to applications of agrochemicals.

Based on the procedure to assess the risk to birds from applications of agrochemicals in Europe (EFSA 2009), we started a program on so-called 'focal species' (see print out below for more details) 'in crops'. Our preliminary results using simple and standardized methods established for pesticide registration procedures common in Europe (EFSA 2009) identified bird species that are found in agricultural fields and start to answer the question to which extent they can be found within crop fields.

Methods & Results

For this reason 20 rice and soybean fields in Santa Catarina, Brazil, were surveyed once each during February and May 2011 using the 'transect method'. This means that all bird species are recorded in the field by walking slowly along a defined longitudinal line transect crossing the entire field, allowing for a clear view on the rows of crop plants in a given distance, and all individual birds within the 'transect band' recorded visually or acoustically have been registered (see print out below for more details).

Birds species found in at least 20% of the surveyed rice fields		Portion of fields where species was found N=20	Individuals recorded in crop	Number of individuals per record (min-max)
Southern Lapwing	<i>Vanellus chilensis</i>	75 %	65	1-16
White-browed Blackbird	<i>Sturnella superciliaris</i>	65 %	29	1-5
Brazilian Teal	<i>Amazonetta brasiliensis</i>	60 %	41	1-8
Saffron Finch	<i>Sicalis flaveola</i>	30 %	19	2-6
Yellow-chinned Spinetail	<i>Certhiaxis cinnamomeus</i>	25 %	10	1-3
Striated Heron	<i>Butorides striatus</i>	25 %	9	1-3
Brown-chested Martin	<i>Progne tapera</i>	20 %	40	1-21
Rufous Hornero	<i>Furnarius rufus</i>	20 %	8	1-3
Great Kiskadee	<i>Pitangus sulphuratus</i>	20 %	7	1-3

In 20 selected rice fields we found 42 species, and 9 in at least 20% of all fields of this crop. Besides those species listed left, we found 2 species even in higher numbers (Chestnut-capped Blackbird *Chrysomus ruficapillus* and the White-faced Ibis *Plegadis chihi*) but just in 2 of 20 fields surveyed (flocks of more than 70 and up to 120 individuals).

In 20 soy bean fields selected we found 44 species, and 8 in at least 20% of all fields. Besides these 8 species listed right, we found high numbers (>50) of Grassland Yellow-Finch *Sicalis luteola* within one flock and also one pair of Black-and-White Monjita *Xolmis dominicanus* listed as vulnerable on regional and national level and according to IUCN in one surveyed field.

Birds species found in at least 20% of the surveyed soybean fields		Portion of fields where species was found N=20	Individuals recorded in crop	Number of individuals per record (min-max)
Southern Lapwing	<i>Vanellus chilensis</i>	50 %	64	2-20
Rufous-collared Sparrow	<i>Zonotrichia capensis</i>	35 %	46	1-26
Grassland Sparrow	<i>Ammodramus humeralis</i>	35 %	15	1-4
Eared Dove	<i>Zenaida auriculata</i>	30 %	19	1-7
Southern House Wren	<i>Troglodytes musculus</i>	25 %	7	1-3
Picazuro Pigeon	<i>Patagioenas picazuro</i>	20 %	16	1-8
Hellmayr's Pipit	<i>Anthus hellmayri</i>	20 %	8	2
Gray Monjita	<i>Xolmis cinereus</i>	20 %	6	1-2

Perspective & call for participation

Such information as given here is not easy to get from Brazil or other parts of South America, and the little data available (recorded with similar methods) for birds shows as expected similarities and differences for different regions and crops (e.g. Beltrame 2006). Therefore we are interested in any keen birdwatcher, study group etc. working in 'farmland' and may be able to collect data as we plan to continue doing to get a better picture of the importance of cropped areas for birds in Brazil and to which extent and during which time of the year which species may be exposed to plant protection products while foraging, breeding, rearing young or just for resting.

We plan to evaluate our data in more detail and if you are interested in the full data set and for any further information and possible co-operation please contact jan-dieter.ludwigs@rifcon.de

