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## Response to Human Induced Changes

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### **Population recovery of *Mus musculus* in poultry farms of central Argentina. The role of local and landscape features**

**Vanina A. León, Jimena Fraschina, Juan S. Guidobono, Regino Cavia, María Busch**

IEGEB (UBA\_CONICET), Buenos Aires, Argentina, mbusch@ege.fcen.uba.ar

Poultry farms in rural areas of central Argentina are dispersed within a landscape dominated by cropfields. The composition of the rodent community differs between farms and neighbouring fields: In the first habitats there is a dominance of commensal exotic species, as *Mus musculus*, *Rattus norvegicus* and, occasionally, *Rattus rattus*, and native species are rare. In cropfields and longitudinal edges between fields or along roads there are native species, and commensal species are rare. In this work we want to answer the question: where the *Mus musculus* individuals that recolonise poultry farms after control come from? The alternatives proposed were: from the surrounding of the farms, from other farms, that they are transported by men, or from the population recovery of remaining individuals. To answer this question we have used different approaches: description of rodent communities in farms and surrounding habitats, genetic studies in order to estimate gene flow according to geographic distance, models that relate *Mus musculus* abundance and environmental variables at local and landscape scale, tracking movements with fluorescent powders, experimental application of control at different spatial scales and enclosure experiments. Our conclusion is that immigration is from nearby farms and not due to passive transport by human or from surrounding habitats, that this species normally travels short distances and that dispersal movements are along cropfield borders or riparian habitats, and not through cropfields. Recovery after control is mainly due to reproduction of remaining individuals, and the abundance of *Mus musculus* in poultry farms is mainly related to intrinsic characteristics of farms. An increase in poultry activity in the area with a shortening of distances among farms may cause an increase in the levels of infestation by *Mus musculus* in these habitats, but probably not in other habitats.

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Jens Jacob, Jana Eccard (Editors)

6<sup>th</sup> International Conference of Rodent  
Biology and Management  
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16<sup>th</sup> Rodens et Spatium

Potsdam, Germany, 3-7 September 2018

Book of Abstracts



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**Editors:**

Jens Jacob<sup>1</sup> and Jana Eccard<sup>2</sup>

<sup>1</sup>Julius Kühn Institute, Federal Research Centre for Cultivated Plants,  
Institute for Plant Protection in Horticulture and Forests, Vertebrate Research,  
Toppeideweg 88, 48161 Münster, Germany

<sup>2</sup>University of Potsdam, Institute of Biochemistry and Biology,  
Animal Ecology Group, Maulbeerallee 1,  
14469 Potsdam, Germany

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