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## Rodent Management – Session 1

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### **Rodents on pig farms: infestation levels related to environmental factors and management practices**

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Domestic pig meat consumption is globally rising, increasing its production in development countries. Rodents produce economic and sanitary problems on pig farms. Characteristics of pig housing and management may affect rodent infestation. To analyze the relationship between wild small mammal infestation with pig farms' environmental characteristics and farmers' management practices, seasonal live-trapping in five habitats within 18 pig farms (seven under intensive and eleven under extensive management systems) were performed in central Argentina simultaneously with an environmental and management practices survey. The last was done interviewing the farmers with a semi-structured questionnaire. A total of 472 wild small mammal individuals were captured (with 2,360 cage live trap-nights and 2,463 Sherman trap-nights): the three introduced murids, *Rattus norvegicus*, *Rattus rattus* and *Mus musculus*, three native sigmodontines, *Akodon azarae*, *Oligoryzomys flavescens* and *Oxymycterus rufus* and also two native marsupials, *Didelphis albiventris* and *Lutreolina crassicaudata*. The information of the environmental characteristics and management practices registered were synthesized in eleven variables. Based on a Redundancy Analysis, 56% of the variance of small mammal abundances in the farms was associated with the type of management system, the frequency of rodent control activities, the type of disposal of domestic waste and the existence and location of waste deposits. Generalized Linear Mixer Models showed that *Rattus norvegicus*, *Mus musculus* and *Akodon azarae* abundances depended on season and habitat. Moreover, *Rattus norvegicus* was more abundant in farms where rodent control activities were absent or were not frequent, while *Mus musculus* where rodent control activities were frequent. For *Akodon azarae*, a relationship between the density of pigs and the habitat distribution was found. *Rattus rattus* abundances increased with the increase of dog abundances in farms. Management actions influenced infestation levels of rodents but little attention is lent to pest rodent control or prevention.

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

Potsdam, Germany, 3-7 September 2018

Book of Abstracts



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