

# Recovery of common vole populations (*Microtus arvalis*) after rodenticide application

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The common vole (*Microtus arvalis*) is the most important vertebrate pest species in European agriculture because of its damage potential during outbreaks. Management usually relies on the use of rodenticides which is limited to one application a year. To base such management decisions on relevant and realistic data, extensive and detailed information about common vole ecology and behavior in different habitats and crops is vital.

In the past, many studies have been conducted dealing with population development and population dynamics of common voles in different habitats and considering the effects of various landscape modifications. Although a great number of publications are dealing with this species, there is only little knowledge about population recovery after rodenticide application.

In this project we will investigate recovery time, possible mechanisms of recovery and recolonisation of common vole populations after treatment with zinc phosphide using live trapping and hair tubes. One further objective deals with kinship analysis via PCR and microsatellite analysis using hair samples obtained in the field.

Preliminary studies in enclosures indicated that hair tubes are frequented by voles only if placed on runways. However, using bait in the tubes attracts voles to the tubes even if they are placed away from runways. This suggests that hair tubes may provide a suitable and cheap alternative to live trapping for monitoring common voles.