

# NoCheRo

# Efficacy Guide for Traps

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# Aim of efficacy testing

- Comparative assessment to rodenticide products.
- But, trap-manufacturers may be interested in a certification mode for humaneness, **independent** from the above. See non-prof certificate.



# Guide for Traps shall be close to ECHA guide for rodenticides.

## General questions related to efficacy:

- With one fixed guide, traps can get certified only when also **passing the comparative assessment** with rodenticide –  
though it could be a good trap before that! -----Therefore, lower requirements for non-prof certification.
- Intense assessments of **risk to wildlife** required for authorisation of Rodenticides.  
How do we prove traps pose a lower risk to wildlife, besides observations in efficacy tests?
- Constraints to get **lab-trials permission**.

# Understand Testing - Efficacy Characteristic: Bait vs. Trap

## Trap

- ↑ • Very quick
- ↑ • Carcass located
  - Event on individual level
- ↑ • Quick solution for singles and few individual
- ↪ • Learning, observation: Avoidance
- ↪ • Chance decreases with complexity of rodent society ?

## Bait

- Delayed (> 3 days)
- ↪ • Carcass hidden
- ↑ • Individual (vole) AND social (rat)
- ↪ • Delayed effect even with singles
- ↑ • No learned aversion
- ↑ • Socially enhanced treatment effect, positive follower-effect
- ↪ • Resistance may be selected at un-proper treatments

What is the effect under practical conditions?

# Why field-studies?

- All **Age** classes of rodents;
- Individuals more **Experienced** than lab-animals;
- Several **Feed alternatives**;
- **Variable** environments;
- **Social** interactions;
- Stamped **Individual Behaviour** types: Presenter, Observer, Follower; neophobe, neophile; etc.
- Coverage of individual behave-ecol types; **Specialist vs. Generalist**;
- Species-specific: Rats are very **Social** and hierarchic; water voles **Solitary**: Treatment of **Communities vs. Individuals!**
- Do not require an experimental licence (unlike any lethal semi-field trials)

# ECHA Efficacy Guide Rodenticides

## Basic Principles

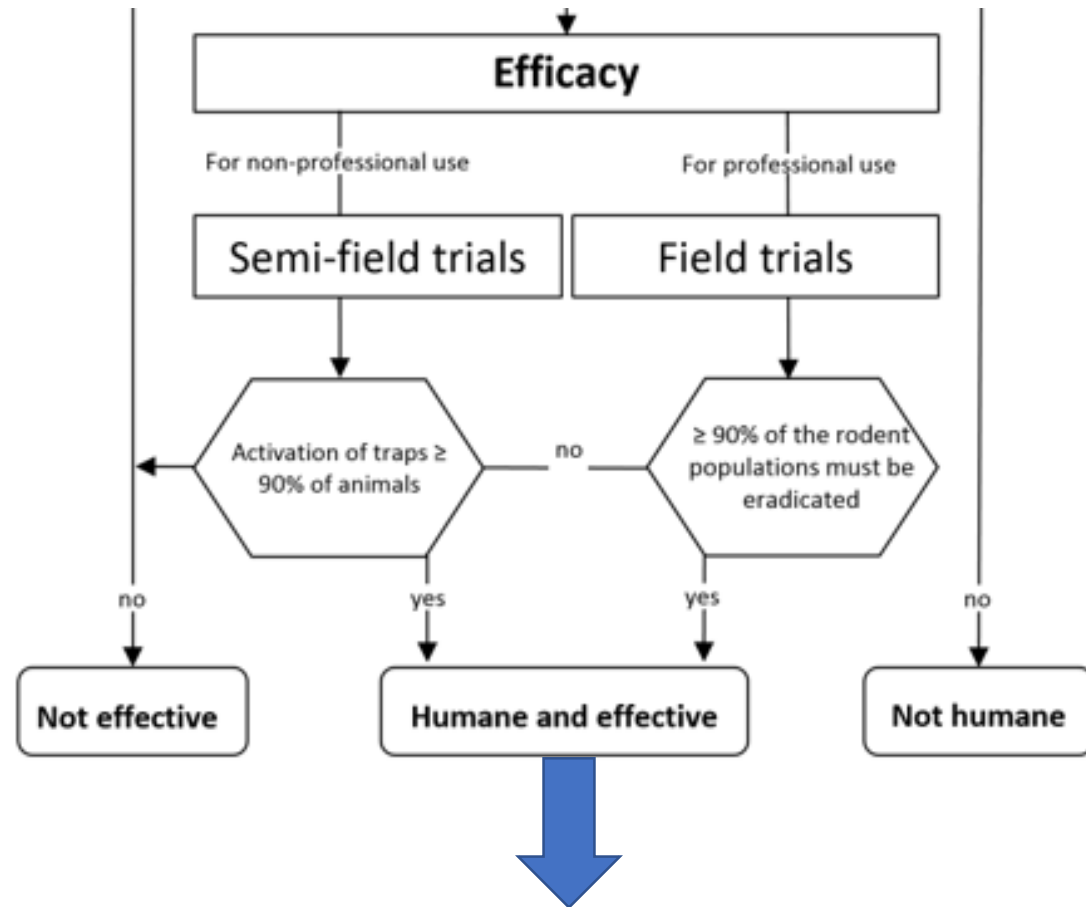
M = Mandatory	Purpose	Example
No-choice feeding tests	Efficacy, mortality	10 rats, individually, 4 days feeding
<b>M: Bait choice feeding test</b>	Palatability and efficacy; shelf life claims.	10 rats wild strain, 4 days bait and oats: 90% mortality; > 20% bait/total consumption.
<b>M: Field studies</b>	Efficacy under real use conditions. The <b>ultimate proof</b>	Census – Treatment (<35 days) – Census: ➤ 90% reduction! ➤ Example infestation size: census feed; Mouse 100g to 300g/day; rats 300g to 1,500 g/day.
Semi field trial (Lab)	Limited simulation of field trial. Accepted only as surrogate to one of two field studies, +R.r.	Like choice trial, but groups in pens (per rat >1 sqm, per mouse >0.5 sqm)

# Efficacy Guide Baits and Traps

## Basic Principles

Purpose bait test	ECHA Bait Test guide	Trap Test guidance draft
Efficacy, mortality (a.i.)	No-choice feeding tests	Not includes, because a.i. related. Welfare asmt.
Palatability and efficacy; shelf life claims.	<b>M: Bait choice feeding test</b>	See semi-field and welfare assessment (although in vitro); No efficacy-requirements yet on ageing!
Efficacy under real use conditions. <b>The ultimate proof</b>	<b>M: Field study</b>	<b>M: only for Professional use; large infestations. The only real use test!</b>
<b>Limited simulation</b> of field trial. Surrogate to one of two field studies.	Semi field trial (Lab), choice test	<b>M: non-professional use; like choice test.</b>

# Decision Tree



- Misleading Issue: Two very different investigations end in the same box „Effective“, although testing different characteristics



# Decision Tree: Alternative tbd

