

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

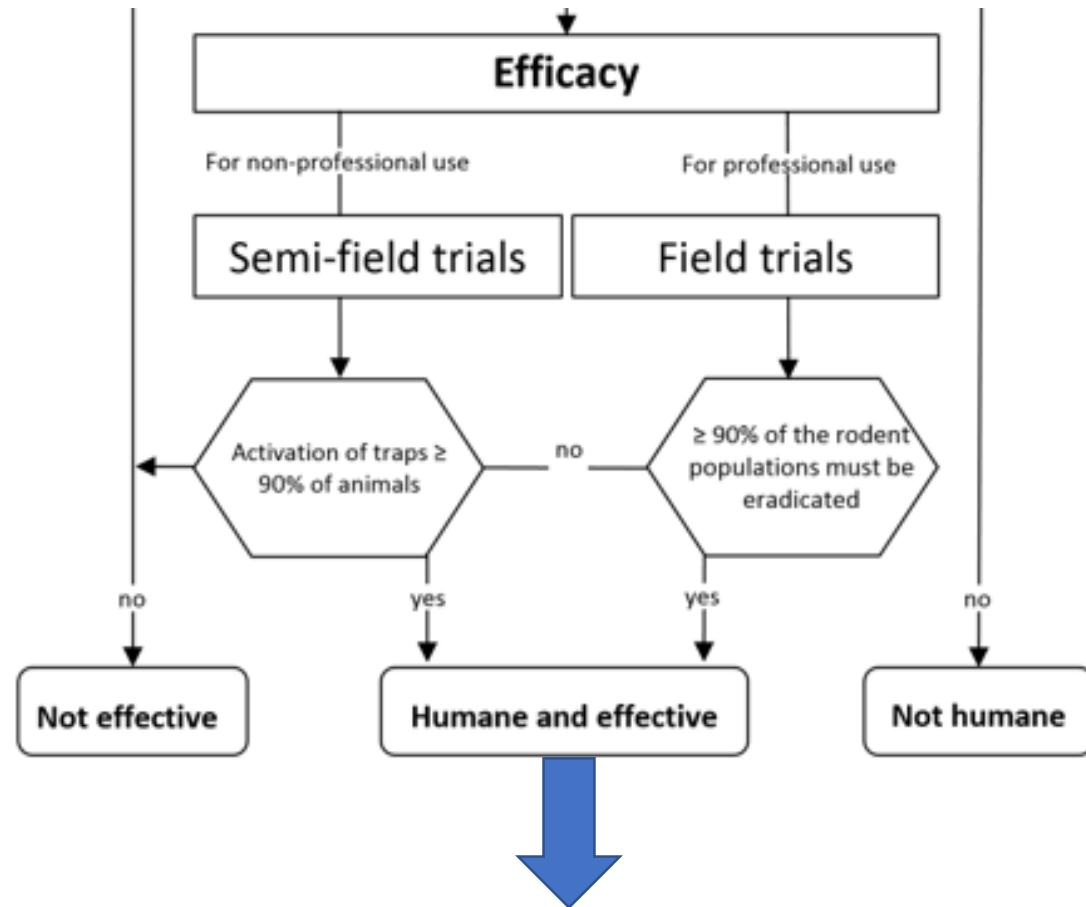
M = Mandatory	Purpose	Example
No-choice feeding tests	Efficacy, mortality	10 rats, individually, 4 days feeding
M: Bait choice feeding test	Palatability and efficacy; shelf life claims.	10 rats wild strain, 4 days bait and oats: 90% mortality; > 20% bait/total consumption.
M: Field studies	Efficacy under real use conditions. The ultimate proof	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.	M: Bait choice feeding test	See semi-field and welfare assessment (although in vitro); No efficacy-requirements yet on ageing!
Efficacy under real use conditions. The ultimate proof	M: Field study	M: only for Professional use; large infestations. The only real use test!
Limited simulation of field trial. Surrogate to one of two field studies.	Semi field trial (Lab), choice test	M: non-professional use; like choice test.

Decision Tree



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

Decision Tree: Alternative tbd

