

PROFESSIONAL PEST MANAGEMENT

TALON[®]
COST
EFFECTIVE.
RESISTANCE-
BREAKING.

Daniel Lightfoot

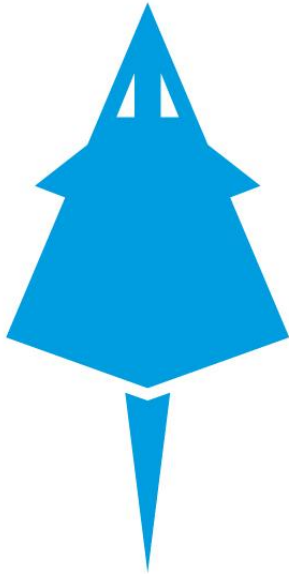


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What is Talon®?

Target organism



- ▶ Talon® is a product range of highly-effective and versatile rodenticides for professionals
- ▶ It also controls resistant rodent populations, delivering exceptional results, every time
- ▶ Incorporating the potency of brodifacoum in a range of high-quality bait formulations:
 - Waxblocks
 - Sachets
 - Paste
 - Grains
 - Pellets
- ▶ Talon® products are now available both at 50 ppm and below 30ppm brodifacoum
- ▶ This enables the PCO to choose always the best option for his needs

The power of Talon®

- ▶ Provided in four highly palatable formulations:
 - Talon®M
 - Talon®Soft Blocks
 - Talon®Pellets
 - Talon®Soft
- ▶ Resistance breaking
 - Controls all 1st generation rodenticide resistances (e.g Coumatetralyl)
 - Controls even populations resistant to 2nd generation rodenticides such as Difenacoum and Bromadiolone
- ▶ No brodifacoum resistance has been reported globally ¹⁾
- ▶ Thus Talon® with less than 30ppm is fully efficient
- ▶ All Talon® low strength rodenticides have no “Toxic to Reproduction” warning label

¹⁾ RRAC guideline on rodents resistances: no resistance known for Brodifacoum so far: https://croplife.org/wp-content/uploads/2015/10/Rodenticide-Resistance-Strategy_Sept2015v3.pdf

Talon[®]M the new formulation in Syngenta's rodenticide portfolio



- ▶ Talon[®]M consists of kibbled maize with 25ppm brodifacoum
- ▶ It is highly palatable and offers a new alternative to treat choosy rodents
- ▶ Easy to apply
- ▶ The application should always be done in tamper-resistant bait stations



EFFICACY OF TALON[®]M

In a lab trial with Talon[®]M showed a superior palatability and great efficacy against House mice and Norway rats

- ▶ Fantastic palatability of Talon[®]M
 - In a choice test with mice and rats Talon[®]M was highly preferred over the standard lab diet the rodents used to eat
 - The acceptance (amount of eaten Talon[®]M vs. lab diet) was above 80% for male and female mice
 - The acceptance for rats was 82% and 68% for male and female rats resp.
- ▶ The rat and mice trials resulted in 100% mortality demonstrating the high efficacy

Lab and field trials with Talon[®]M have demonstrated excellent efficacy

- ▶ Several field trials against mice and rats revealed a superior efficacy of this product.
- ▶ Lab trials and trials under simulated field conditions always resulted in 100% mortality with both species
- ▶ Rat trials in the field revealed 100, 100, and 99% efficacy
- ▶ Mouse field trails showed 93 and 90% efficacy

Talon[®]M is resistance breaking

- ▶ Talon[®]M shows a very good palatability in a lab trial against resistant mice.
- ▶ Great efficacy: 90% of the mice died
 - Only one mouse hardly ate the bait and thus didn't die.
- ▶ Talon[®]M has a superior resistance breaking capacity as the mice tested here were resistant against other first and second generation rodenticides (e.g. Warfarin, Coumatetralyl, Bromadiolone, Difenacoum).
- ▶ Furthermore Buckle et al.¹⁾ reported that Brodifacoum, the active ingredient of Talon[®]M, controls all known resistance mutations described in rats in the UK.

¹⁾ Buckle et al., 2018, Rodenticide Resistance Action Group RRAG, bpcr.org.uk/RRAG: L128Q, Y139S, Y139C, L120Q, Y139F



**BRODIFACOUM,
THE ACTIVE
INGREDIENT OF
TALON®**

What is Brodifacoum?

- ▶ Proven low-dose, second generation anticoagulant
- ▶ Proven resistance breaker against warfarin-resistant rats and mice, but also against rodents resistant to other second-generation rodenticides than brodifacoum (bromadiolone, difenacoum)
- ▶ Cost-effective performance as it kills normally after the first feeding in just one night

Brodifacoum is proven to have the best efficacy compared to other SGARs

Anticoagulant	LD ₅₀ (g of 25ppm bait for a 250g rat)
Second-generation anticoagulants	
▶ Brodifacoum	▶ 2.6
▶ Bromadiolone	▶ 7.6
▶ Difenacoum	▶ 25
▶ Difethialone	▶ 5.6
▶ Flocoumafen	▶ 5.6

Tab.1: Acute oral LD₅₀ of several anticoagulants to Brown rat *Rattus norvegicus*



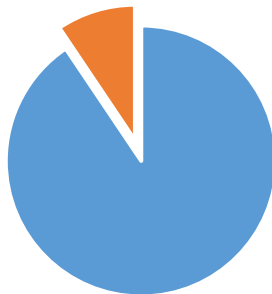
**MINIMIZING THE
USE OF
RODENTICIDES
WITH THE
GREATER
EFFICACY OF
TALON[®]M**

Less bait is needed for control

Talon[®]M is a single-feed/single-night rodenticide. It takes just about 10-16% of a typical daily feed intake to consume sufficient active ingredient to control. An amount a rat may even eat at once (single feed) and a mice at their several visits of the bait (single-night):

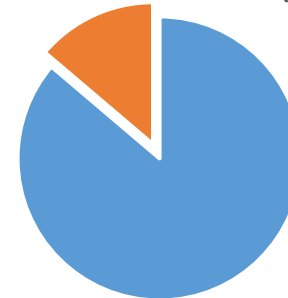
- ▶ LD₅₀: 2.6 g (10%) for a rat (250gr weight)
- ▶ LD₅₀: 0.4 g (16%) for a mouse (25gr weight)

Talon M Rats (LD50)



■ Daily feed (90%) ■ Talon M (10%)

Talon M Mice (LD50)



■ Daily feed (84%) ■ Talon M (16%)

Talon[®]M - Minimizing the use of rodenticides

- ▶ Greater efficacy of Talon[®]M means less bait for higher level of control
- ▶ Lower quantities of bait minimize the exposure to non-target organisms
- ▶ Less product to transport
- ▶ Reduced product cost to complete control

Talon[®] is 'the first resort' rodenticide

A quote from a scientist on Talon[®]M

«Talon[®]M has literally the best palatability in the lab I have seen in 24 years»





APPLICATION

Talon[®]M application against rats and mice

- ▶ Indoors and outdoors (around buildings)
- ▶ To be used in bait stations
- ▶ 20 – 60gr (up to 200gr) for rats and 20gr for mice
- ▶ Stations placed every 10m (mice 5m) where rodents are active.
- ▶ Stations placed 5m (mice 2m) apart in areas of high infestation.
- ▶ Place them throughout the area along walls and where rodents are suspected to run, hide, or enter the building.
- ▶ Regularly check bait consumption and replace consumed or spoilt bait until consumption has stopped.

Product range benefits

- ▶ **Reliable:** only a few percent of the daily meal is required to control any rodent infestation
- ▶ **Resistance breaker:** proven control of resistant rodents
- ▶ **Maximum value:** Less bait and labour needed for control
- ▶ **Versatile:** High quality baits for every situation



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