Talon® WAX BLOCKS
RODENTICIDE

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WEATHERABILITY & PALATABILITY IN RODENT CONTROL

Potency and specificity of the active constituent are key determinants of field performance of an effective rodenticide. However, weather-resistance and palatability of bait formulations are essential if the bait is to be consumed by target rodent pests and is to remain attractive and active over prolonged periods between bait placements.

TALON WAX BLOCK FORMULATION

TALON RODENTICIDE WAX BLOCKS (0.05g/kg brodifacoum) offers the combination of a highly active toxicant in a highly weather-resistant and palatable wax block formulation that is effective against all rodent species. The product is the result of extensive research and field testing around the world over many years in a range of domestic, industrial, agricultural and commercial situations.

More recent weatherability and palatability testing of the TALON WAX BLOCK formulation has confirmed the product's excellent performance when compared to other rodenticide bait products available in Australia.

WHY WAX BLOCKS?

Rodenticide baits are often used in moist conditions or in situations where the bait cannot be effectively contained or protected from spoilage. Pellets can easily degrade when exposed to moisture and are a potential hazard to birds and other non-target species. Wax blocks have proven popular due to their weather-resistance and ease of use particularly in bait stations.



Talon Cast Wax Blocks

As with pellets, wax block formulations are also mainly composed of cereals, either whole, cracked or milled. However, wax blocks contain a significant proportion of wax usually in the range 15-40%. Wax block formulations can be made using a number of processes. TALON WAX BLOCKS are cast into moulds after all the ingredients are melted together. Compressed blocks can be made using briquetting (Stratagem*) or extrusion (Ditrac*) processes. The manufacturing process has an effect on the properties of the blocks. Cast wax blocks such as TALON WAX BLOCKS, consist of a fine particulate matrix that withstands exposure to moisture better than blocks made by compression which typically contain relatively large cereal particles.

WEATHERABILITY

The ability of the formulation to withstand weathering is an important attribute for effective rodenticide bait, particularly when placed in moist or other aggressive environmental conditions. Durability of the formulation effects bait attractiveness and palatability to rodents over time thus largely determining the consumption of bait and success or otherwise of a rodent control programme. It is therefore important to take care to use the appropriate rodenticide formulation to suit the situation and environment.

Weatherability can be defined as the degree to which a formulation resists the effects of environmental conditions over time. These are commonly moisture and heat, and although temperature extremes are important in tropical areas, it is durability under moist conditions that is more commonly relevant.

The Vertebrate Pest Unit at the University of Reading in the UK recently conducted a series of tests using a rain simulation technique to measure the degree of weatherability of various wax block bait formulations. The technique involved exposing wax blocks to water spray for a prolonged period, then drying and weighing the blocks to determine the weight loss as a result of the treatment. The results are presented in Figure 1.



Rain Simulation Technique

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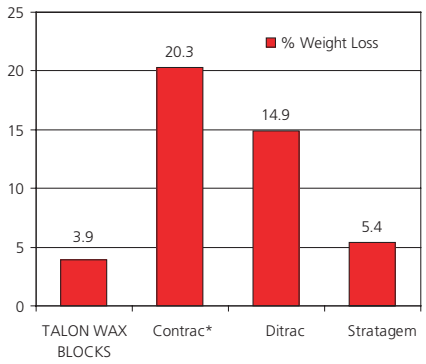


Figure 1: Weatherability of Wax Block Formulations (expressed as % weight loss after exposure to simulated rainfall)

TALON WAX BLOCKS performed exceptionally well, losing only 3.9% of dry weight, compared to other products that lost up to 20% mass as a result of the treatment. This test is not directly relevant to field conditions where baits would normally be protected from direct rainfall; nevertheless, the results do provide an indication of the comparative expected durability of blocks when subjected to moisture over prolonged periods.

Observations of the blocks suggest that the particulate grain in compressed and extruded blocks absorbs moisture and swells making the blocks disintegrate or erode more easily.

PALATABILITY

For bait formulations, palatability is a major factor in ensuring the effectiveness of a rodenticide treatment. Unless the rodent pest takes sufficient bait to obtain a lethal dose, then control will fail. Competing alternative food sources and species preferences need to be overcome for a rodenticide formulation to be accepted and effective. Palatability is generally directly related to cereal content in the bait; thus pellets are usually more palatable than wax block formulations. However, pellets are subject to rapid deterioration or spoiling and can become quickly unpalatable. Because wax blocks are more durable they generally retain their palatability longer.

The palatability of a range of rodenticide bait products available for use in Australia, including TALON WAX BLOCKS, was recently tested by the Vertebrate Pest Unit, University of Reading UK. A standard two day choice test was used involving comparison of each product with a standard laboratory diet. The results are presented in Figure 2.

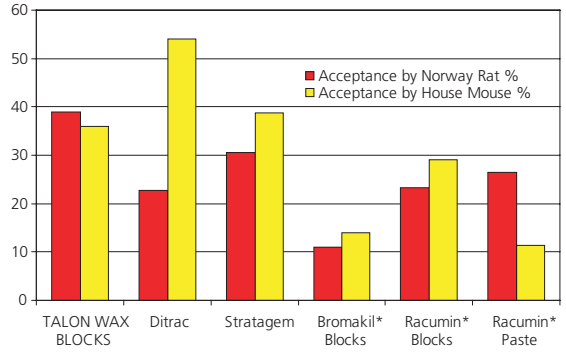


Figure 2: Palatability of Rodenticide Formulations (2 day choice test vs. standard laboratory diet, expressed as % acceptance).

TALON WAX BLOCKS exhibited the highest palatability to Norway rats and good palatability to mice. Across both species Talon WB exhibited excellent acceptance compared to other products.

Care needs to be taken relating to these data to the field since local rodent population food preferences and the presence of alternative food sources will have an impact on rodenticide bait acceptability. The test results clearly demonstrate good palatability across species when compared to other commercially available baits.

OPTIMUM PERFORMANCE

It is generally assumed that higher wax content blocks are more weather resistant but also less palatable. TALON WAX BLOCKS demonstrates an optimum balance between these two bait characteristics by exhibiting both high weather as well as acceptable palatability to both rats and mice. In combination with a highly active toxicant, TALON WAX BLOCKS provides a robust and effective rodenticide for use in rodent control programmes in a wide range of domestic, agricultural and professional applications.

For further information please call the Syngenta Technical Product Advice Line on 1800 067 108 or visit our website at www.syngenta.com.au

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