

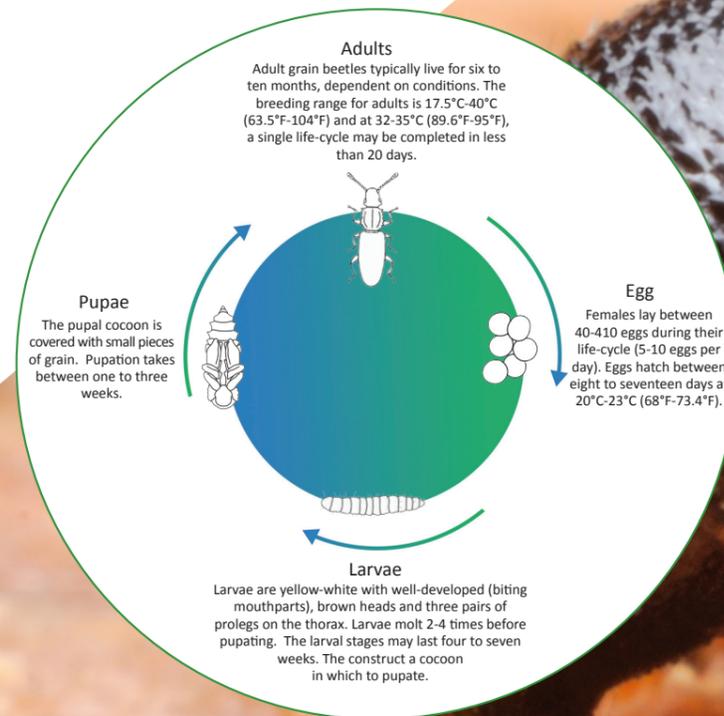
## Grain Beetles

Grain beetles (Superfamily: Cucujoidea) are important pests of stored grains, cereal products, nuts, rice, drugs, oilseeds, cocoa, tobacco, dried fruits and meats. Found within homes and commercial facilities.

## Damage

Grain beetles consume grains and cereals, capable of significantly reducing the quality and weight of these products. Most importantly, infestations of these species cause stored grain, cereals and fruits to heat, leading to caking, mould growth, grain germination, tainting and discolouration; rendering such foodstuffs commercially unviable. Infestations of grain beetle damage might be identified by the presence of larval moults and cocoons and mould growth.

## Life Cycle



## Monitoring and Management

Good hygiene is an essential part of managing food stores in order to find and remove and prevent the source of new infestations. Grain beetles and weevils commonly hide in storage fabrics and sacks, they are able to feed and survive on the smallest amounts of grain sacks. Therefore, cleaning is a crucial part of controlling these insect pests. Stores should be constructed to ensure they are easy to clean, well-insulated, well-ventilated and damp-proof. If possible stored grain should be dried (<9.5% moisture content) and kept cool (<13°C / 55.4°F) for long-term storage. Freezing infected stored products below -18°C (0.4°F) for three days can destroy these species. Xlure MST should be used to monitor grain beetle populations, informing control programmes and preventing infestations.

Scientific and common name	Image	Size (mm)	Identification
<i>Oryzaephilus surinamensis</i> Sawtoothed grain beetle		2.4 - 3.1	Incapable of flight and possess characteristic "teeth"-like structures (saw-tooth) running down the side of the prothorax and a triangular head. Dark brown in colour.
<i>Oryzaephilus Mercator</i> Merchant grain beetle		2.4 - 2.6	Merchant grain beetle adults are similar in appearance to those of the sawtoothed grain beetle; however, this species has larger eyes, a narrower, more ovular head shape and is capable of flight. Dark brown in colour.
<i>Cryptolestes ferrugineus</i> The fat or rusty grain beetle (Family: Laemophloeidae) -		2	Distinctly oblong with antennae two-thirds as long as its body. Infests moulding stored grains, exacerbating damage. Reddish-brown in colour.

## Associated Russell IPM Products



**Xlure**MST Please see page 8.