

# *Oryzaephilus surinamensis* (L.)

## (Sawtoothed grain beetle)

Fam. Silvanidae

**General information:** Important (secondary) pest worldwide; preferably infests damaged or processed seeds and cereal products of all kinds, dried fruits and oilseeds; several generations per year in tropics; beetles can hibernate on substrate in cracks and crevices

**Infested products:** Cereal products, dried fruits, nuts, oilseeds

**Related species:** *O. mercator* (merchant grain beetle)

**Total development:** 19 - 27 days at 32 °C and 70 – 80 % relative humidity

<b>Egg</b>	<b>Larva</b>	<b>Pupa</b>	<b>Adult (beetle)</b>
			
3 to 8 days	12 to 49 days	6 to 21 days	Female: 6 to 10 months Male: up to 3 years
<ul style="list-style-type: none"> <li>- up to 0.8 mm, capsule-shape</li> <li>- white yellowish (ochre)</li> <li>- eggs are laid loosely in the substrate individually or in small groups (6 - 10 per day)</li> <li>- 150 - 400 eggs per female</li> </ul>	<ul style="list-style-type: none"> <li>- white to pale yellow, brown head</li> <li>- elongated, flattened with long hair</li> <li>- fully grown to 5.0 mm long</li> <li>- 4 – 5 larval instars</li> </ul>	<ul style="list-style-type: none"> <li>- free pupation in the substrate</li> <li>- coarse web of grain residues (glued by oral secretions)</li> <li>- yellowish-brown</li> <li>- up to 3.0 mm long</li> </ul>	<ul style="list-style-type: none"> <li>- 2.5 – 3.5 mm long</li> <li>- dark brown</li> <li>- slim, flat body with jagged edge on the pronotum (6 "teeth" per side)</li> <li>- elongated elytra with rows of points</li> <li>- short antennas with lobe end</li> </ul>

**Damage:** No typical traces of frass, rather general damage as adults and larvae feed on already broken substrate; contamination by flour dust, feces, larval and pupal skins and dead individuals; visible mold formation, hot spots and rising moisture in the upper part of grain stocks

**Prevention:** Removal of flour residues and broken cereals; thorough cleaning and cleanliness in warehouse/grain stores; dry, cool and insect-proof storage of undamaged grains; closure of fissures and cracks

**Early detection:** Visual inspection (mold on substrate surface); screening and sieving of cereal products; traps with special grain sensors that automatically count the caught pest beetles

**Control:** Removal of old stored products; contact insecticides, inert dusts and gases as well as fumigation; application of authorized pesticides (see database [www.bvl.bund.de](http://www.bvl.bund.de)); thermal disinfestation/heat, freezing.