

Sitophilus granarius (Linnaeus)

(Granary weevil)

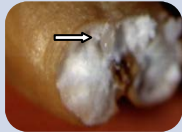



Fam. Curculionidae

General information: Worldwide primary pest; infestation causes heat and moisture in stored goods which lead to formation of mould and mycotoxins; cold tolerant - infestation already at temperatures of 15°C, but development is prolonged

Infested products: Whole cereal grains, pasta products

Related species: *S. oryzae*, *S. zeamais*

Total development: 55 days at 20 °C temperature / 65 - 70 % relative humidity

Egg	Larva	Pupa	Adult (weevil)
			
~ 10 days	~ 30 days	~ 19 days	Up to 2.5 years
<ul style="list-style-type: none"> - 0.6 x 0.3 mm in size - shiny white - oval - 200 to 300 eggs per female - Females lay eggs into grain kernels 	<ul style="list-style-type: none"> - up to 3.5 mm long - whitish - brownish head capsule - wrinkled surface - eyeless and legless - antenna - lives in the grain 	<ul style="list-style-type: none"> - pupation occurs inside the grain - whitish - proboscis, wings and legs already visible 	<ul style="list-style-type: none"> - 2.5 to 5 mm long - uniformly dark brown to dark - elongated snout, feeler knelt - rough points in rows on chest and abdomen - coalesced elytra - hatches from the grain - unable to fly

Damage: Characteristic feeding damage to grain by erosion of meal body (endosperm) up to total destruction; round exit holes formed by emerging adults, further damage by secondary contamination with fungi (risk of mycotoxin formation), mites, bacteria

Prevention: Pest-tight storage; cooling T < 15 °C

Early detection: Cup trap set in the top of a grain cone on the cereal surface; lancing traps, dome trap; acoustically; float test (infested grains swim up)

Control: Sieving, bouncing; heat treatment in empty rooms (warehouses, mills, bakeries); deep freezing, biological antagonists; use of authorized plant protection pesticides (see database: www.bvl.bund.de)