

# *Ephestia elutella* (Hübner)

## (Tobacco moth, warehouse moth)

Fam. Pyralidae

**General information:** Common primary pest in grain, cocoa, and tobacco warehouses; lives in moderate climates; up to 3 generations per year.

**Infested products:** Cereals, grain products, dried fruits, nuts, almonds, cocoa beans, chocolate, tobacco, animal feed, herbal drugs

**Related species:** Almond moth (*E. cautella*) and Mediterranean flour moth (*E. kuehniella*)

**Total development:** 60 – 70 days at 20 °C and approx. 70 % relative humidity

Egg	Larva	Pupa	Adult (moth)
			
6 to 7 days	30 to 60 days	10 to 45 days	14 to 21 days
<ul style="list-style-type: none"> <li>- up to 0.3 x 0.5 mm</li> <li>- yellowish white</li> <li>- finely textured surface</li> <li>- one female lays up to 300 eggs</li> </ul>	<ul style="list-style-type: none"> <li>- up to 15 mm long</li> <li>- different color variations (white, light pink, yellowish) with dark spots at base of hairs, brown head capsule</li> <li>- 5 larval instars</li> <li>- Grown larvae leave stored products for pupation and overwinter</li> </ul>	<ul style="list-style-type: none"> <li>- up to 10 mm</li> <li>- light to dark brown</li> <li>- pupation occurs in a cocoon</li> </ul>	<ul style="list-style-type: none"> <li>- up to 10 mm long and up to 17 mm wing span</li> <li>- greyish brown to blue, forewings glossy with lighter horizontal stripes, hind-wing whitish grey. Wing coloration is lost with age, so it is not a clear determinant</li> </ul>

**Damage:** In tobacco leaves, only the midrib and stronger side veins remain, sweet tobaccos low in nicotine are preferred, impurities by feces, webbings, larval skins, etc.

**Prevention:** Thorough cleaning and cleanliness in warehouses; short storage times; cool, insect-proof and dry storage

**Early detection:** Monitoring traps for male moths based on pheromones (female sexual pheromones); monitoring sticky traps; visual inspection (webbings on surface of infested storage goods and in packaging)

**Control:** Use of authorized pesticides (please, refer to the database: [www.bvl.bund.de](http://www.bvl.bund.de)); contact insecticides (Fogging, spraying), fumigation, use of beneficial organisms such as *Trichogramma evanescens* egg parasitoids or *Habrobracon hebetor* larval parasitoids at low levels of infestation.