

# DAFM Plant Pest Factsheet

## *Spodoptera frugiperda* Fall Army Worm

EU  
Priority  
Pest!



Fig 1 *Spodoptera frugiperda* larva infesting maize

### Pest Characteristics

- **Pest:** *Spodoptera frugiperda*
- **Common name:** Fall army worm
- **Hosts:** *Spodoptera frugiperda* is a polyphagous pest with a reported 186 host plants spanning across 27 plant families. Its favoured hosts include maize, rice and sorghum. In Ireland the pest would pose a potential threat to certain crops grown under protected cultivation which is heated throughout the winter. Outdoors the pest would not survive an Irish winter.
- **Invasive Risk:** The risk of this pest reaching Europe is very high. The pest is spreading rapidly throughout Africa since its introduction in 2016. Should it come to establish more widely across North Africa, more migrations will likely reach Europe. However, there are limited areas in the EU where the pest is considered capable of establishing all year round.
- **Entry Pathways:** The most likely entry into the EU is the medium to long term future is via natural migratory spread from North Africa. However, the pest is also regularly intercepted on infested commodities entering the EU from third countries where the pest is already established.
- **Symptoms:** Infestations of life stages can generally be observed visually. Egg clusters can usually be found on the underside of host leaves and have a hairy / mouldy appearance. Early larval instars stage (1-2) feed close to the egg mass and damage to host leaves is visible. Later larval instars (3-6) spread outward in search of food and can bore into fruits of some hosts plants. Larvae have distinctive Y shapes on their heads.



Fig 2: *Spodoptera frugiperda* eggs on maize (a) characteristic Y shape on larvae head (b) feeding damage on maize ear (c) and *Solanum aethiopicum* (d) More photos are available on the [EPPO Database](#)



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine

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- **Distribution:** *Spodoptera frugiperda* is native to the Americas but has now established in countries in Africa (2016), Asia (2018) and Australasia (2020). The world distribution of the pest is shown in Figure 4.
- **Dispersal:** In Spring in the Americas, adults migrate up to 480 km from their tropical / sub-tropical endemic areas into temperate regions where they reproduce. However, winter kills off these transient populations. Overall, the pest can spread up to 2,000 km across the whole season.
- **Climatic suitability:** *Spodoptera frugiperda* is a tropical / sub-tropical species which struggles to establish in temperate areas. Larval mortality occurs when soil temperatures are  $<10^{\circ}\text{C}$  for 2 or more consecutive days. The pest is not considered capable of establishing in the Irish environment.
- **Lifecycle:** Adult moths are generally nocturnal. They first emerge from pupae buried in the soil in spring (Fig 3). Females can lay up to ~1,000 eggs. These are laid in clusters of 100-300 on the underside of host plant leaves. Females cover egg clusters in a layer of hairs from their abdomen. Egg hatch and larval development times are highly dependent on temperature. Larva undergo 5-6 developmental stages called instars. The final larval instar burrows 2-8 cm below the surface of soil to pupate. The number of generations produced in any year is dependent on the climate.
- **If suspected:** If you find suspected symptoms or specimens, please submit images to DAFM at: [plantpestreport@agriculture.gov.ie](mailto:plantpestreport@agriculture.gov.ie)

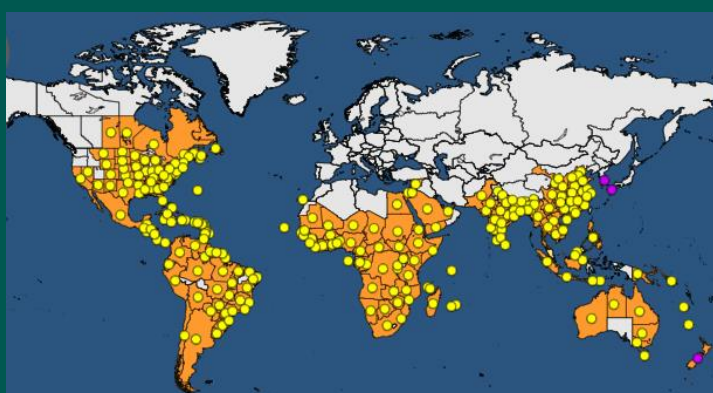


Fig 4: World map of *S. frugiperda* distribution taken from the EPPO database ([Link](#))

Photo credits: Fig 1, 2 (a,c-d) 3 (a,b,d) EPPO ([Link](#)); Fig 3 (c) William Lambert, University of Georgia, Bugwood.org; Fig 3 (e) John C. French Sr., Retired, Universities: Auburn, GA, Clemson and U of MO, Bugwood.org; Fig 3 (f) Scott Bauer, USDA. Fig 2(b) Robyn Earl, DAFM, Plant Sciences Division

