Spodoptera species

Why the concern?

Several moths of the genus *Spodoptera* are recognised as quarantine pests in UK and EU legislation. These include *Spodoptera littoralis* (the Mediterranean climbing cutworm) which is present in Mediterranean Europe and Africa. Others, which do not occur anywhere in the EU, include *S. litura* (from Asia) and *S. frugiperda* and *S. eridania* (from the Americas). Of these *Spodoptera* species, *S. littoralis,* is the one most commonly intercepted in the UK, for example on imported ornamentals and produce.

Spodoptera littoralis is a destructive pest of subtropical and tropical agriculture, and has the potential to be a serious pest of glasshouse crops in northern Europe. The larval stages (caterpillars) feed on a wide range of plants, including edible and ornamental crops. Many populations are extremely resistant to pesticides and, if they become well established, can be exceptionally difficult to control. In these cases, it is important that a comprehensive treatment programme is implemented, incorporating a range of reliable control methods, including physical destruction of insects.

Adult *Spodoptera* sp. (actual length 20 mm)

defra
Department for Environment
Food and Rural Affairs

What does it look like?

The description given below is for *S. littoralis*, as it is the most likely species to be encountered in a UK nursery, but the adults and caterpillars of all the species are similar in appearance and are difficult to tell apart without laboratory examination.

- Eggs are laid in batches, on plants and other surfaces such as pots, benches or glasshouse structures. The female moth covers the egg masses with brown hairs giving them a "felt-like" appearance.
- On hatching, caterpillars (or "cutworms") are 2–3 mm long with white bodies and black heads and are very difficult to detect visually.

If they emerge from eggs laid on glasshouse structures or hanging pots, they can reach the plants below by "parachuting" down on silken threads.

The overall colour of the later stages of the caterpillar can vary from light to dark brown, and the body is strongly speckled with tiny white spots.

Caterpillar of *S. littoralis* (actual length 35–40 mm)

Adult *Spodoptera* sp. (actual length 20 mm)

Caterpillars develop characteristic markings on their backs soon after emergence from the egg. These include:

- a square of four yellow spots, each on a black patch, located just behind the head;
- a further pair of black patches just behind these, and another pair of black patches towards the end of the caterpillar.
- The caterpillars ultimately grow up to 4.5 cm long.

Typically, there are three orange-brown lines, punctuated with dashes of black and yellow along the back of the body. Depending on the background colour, these markings may be more evident on some caterpillars than others.

Caterpillars chew holes in the leaves and can completely defoliate plants if present in large numbers. Stems, buds, flowers and fruits may also be damaged. The red-brown pupae form in a loose coccoon just under the surface of the soil close to the host plant, and are up to 2 cm long.

Adult moths are up to 2 cm long with a wingspan of approximately 4 cm. The forewings are brown, with a large number of pale cream streaks and dashes and, when the adults are newly emerged, there may be a violet tint to the forewing. The hindwings are a translucent white, edged with brown. As the adults are nocturnal, light or pheromone traps should be used for monitoring purposes.

Keep a good look out

- Seek assurance from your suppliers that plants are free from this pest as part of any commercial contract.
- Carefully inspect new plants and produce on arrival, including any packaging material, to check for eggs and caterpillars and for signs of damage.
- Early notification to the PHSI of the presence of this pest, will allow rapid implementation of a comprehensive treatment programme, and will help eradicate it quickly from your nursery. Established outbreaks are very damaging and difficult to eradicate.

This is a notifiable pest. If you suspect its presence on your premises you should immediately inform your local Defra Plant Health and Seeds Inspector or the PHSI HQ, York:
Tel: 01904 455174
Fax: 01904 455197
Email: planthealth.info@defra.gsi.gov.uk
Website: www.defra.gov.uk/planth/ph.htm

Published for Department for Environment, Food and Rural Affairs

Printed in the UK on material that contains a minimum of 100% recycled fibre for uncoated paper and 75% recycled fibre for coated paper.

PB12352, replacing PB4641 (revised November 2006).