

Pests

Sporadic foliar pests

Seasonal threats to the beet crop

Sugar beet can be affected by several different pests throughout the year, with certain species becoming more prominent depending on season and changing weather conditions. As the impacts of climate change intensify, we may see the occurrence and severity of these pests increase or new species making their way to UK shores.

Leaf Miner

When: Late spring to early autumn, in which two or three generations may develop.

Symptoms: White elongated eggs laid onto beet leaves Eggs hatch and larvae mine into the leaf, causing blisters to form on the surface. First generation is the most harmful due to small leaf area and severe infestation can kill plants. Larvae pupate and adults emerge which then lay more eggs onto the host plants. Later generations feed on the older, outer leaves and can be problematic affecting autumn growth potential of crops.

Risk factors: Surveys of leaf miner in recent years have seen the pest move across the UK from east to west and may be less of a problem than in previous years.

Comments: Yield losses of up to 9% can be see from the second and third generations. Several pyrethroids are approved for leaf miner control but caution should be observed due to impact on beneficial insects.



Slugs and snails

When: All plant stages.

Symptoms: Feeding damage below or above the soil level can occur at any point in the season though plants are most vulnerable in the spring and autumn. Damage early in the season can reduce seedling numbers, whilst on older plants feeding damage causes irregular shaped wounds on leaves and roots. Often alongside this damage slime trails can be seen.

Risk factors: Particularly an issue on heavy or poorly drained soils, or those with high humus content (e.g. where organic manure has been applied). Slug and snail populations can be particularly large following oilseed rape and pea crops due to the ample organic matter available to sustain populations.

Comments: Control is reliant on cultural practices, including using cover crops which are of a low host risk.



Photo 1 (left): Leafminer larvae
Photo 2 (above): Slugs

Thrips

When: Seedlings and immature plants.

Symptoms: Thrips break the cell surface of young leaves causing stippling or puckering which can turn red/brown. Leaf expansion can be affected if feeding damage occurs on still-curled heart leaves.

Risk factors: Most damage is seen in cold dry springs, when seedling growth is slow. Fields near alliums or brassicas are most at risk.

Comments: Thrips are generally a transient issue as sugar beet is not a good host for them. Plants will, generally, grow away from damage once weather conditions allow, however growth can be significantly reduced.



Photo 3: Thrips

Tortoise beetle

When: Seedlings to mature plants.

Symptoms: Tortoise beetle larvae feed on the underside of leaves, leaving the upper surface intact such that it forms a thin 'window' within the leaf. These windows dry and crack, leading, in severe cases, to skeletonised leaves.

Risk factors: Warm dry spring/summer conditions favour the insect. The larvae and beetles feed on many *Chenopodiaceae* species but show a particular preference for fat hen.

Comments: Tortoise beetle is a relatively new pest to the UK, having previously only been associated with warmer Mediterranean and North African climates. Although complete defoliation can occur.



Photo 4: Tortoise beetle