

Beet moth (*Scrobipalpa ocellatella*) has quickly established itself as a pest of UK sugar beet crops since it was first reported in 2022. Adult moths emerge from pupae in the spring and migrate into sugar beet crops. They lay eggs on the petioles and crown from which larvae hatch. As the larvae feed, they burrow into the petioles and heart-leaves of the sugar beet which results in blackening of the centre and loss of apical dominance.

In severe cases, often exacerbated by drought, significant leaf loss can occur. Sugar beet have been seen to recover but this often reduces sugar levels in the root. Plants which do not recover or regrow leaves before cold weather are vulnerable to rots and frost damage.

A greater understanding of its lifecycle and migration is essential, especially as hot, dry summers, which favour beet moth, become more common.

Monitoring

In 2023 BBRO began monitoring beet moth numbers at our 10 CropWatch sites positioned across the UK's beet-growing area. Delta traps with a beet moth specific pheromone lure (Russel IPM) were used to trap adult male moths in the field. The number of moths caught was counted and damage in the crop was monitored and recorded. This was later used to create a 1-5 damage scoring scale (Figure 3 and BBRO Beet moth fact file).

In 2025 and 2026 trapping rose to 20 sites, and monitoring began earlier in the season. Delta traps were upgraded to automated Xtrap Delta PRO from XFarm Technologies (figure 2). These traps capture a photo everyday from which the number of beet moth caught is counted by AI and verified by BBRO (figure 4).

Each CropWatch site is also equipped with a weather station placed in the field, allowing us to investigate the influence of weather on beet moth abundance and migration (figure 5).

For more information on BBRO's CropWatch network see poster 5.14.

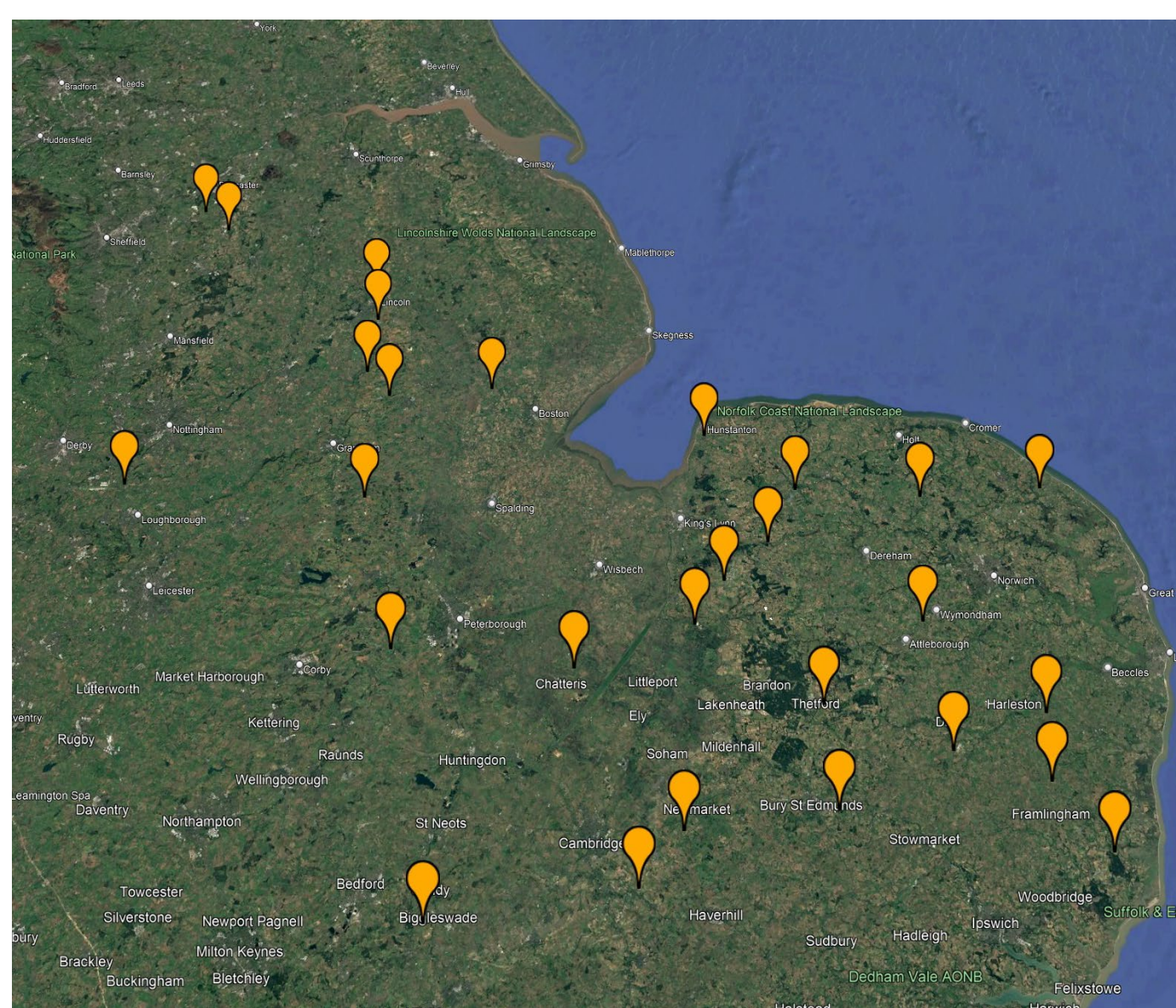


Figure 1- Map of cropwatch site locations (2023, 2024, 2025 and 2026)



Figure 2- Xfarm Delta pro and delta trap monitoring numbers of adult beet moth at Brettenham cropwatch site.

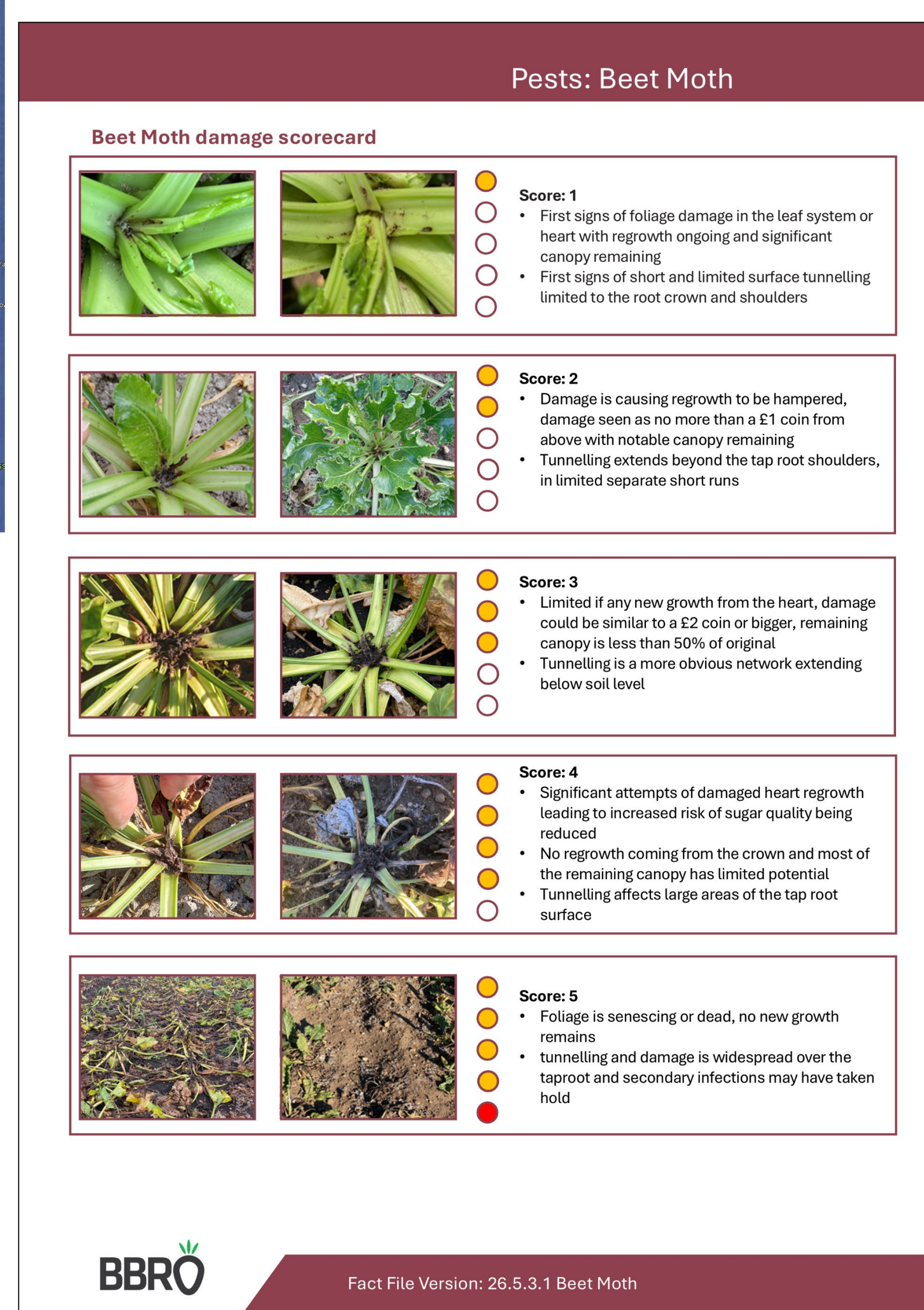


Figure 3-Beet moth damage score scale used to assess damage to the crop throughout the season.

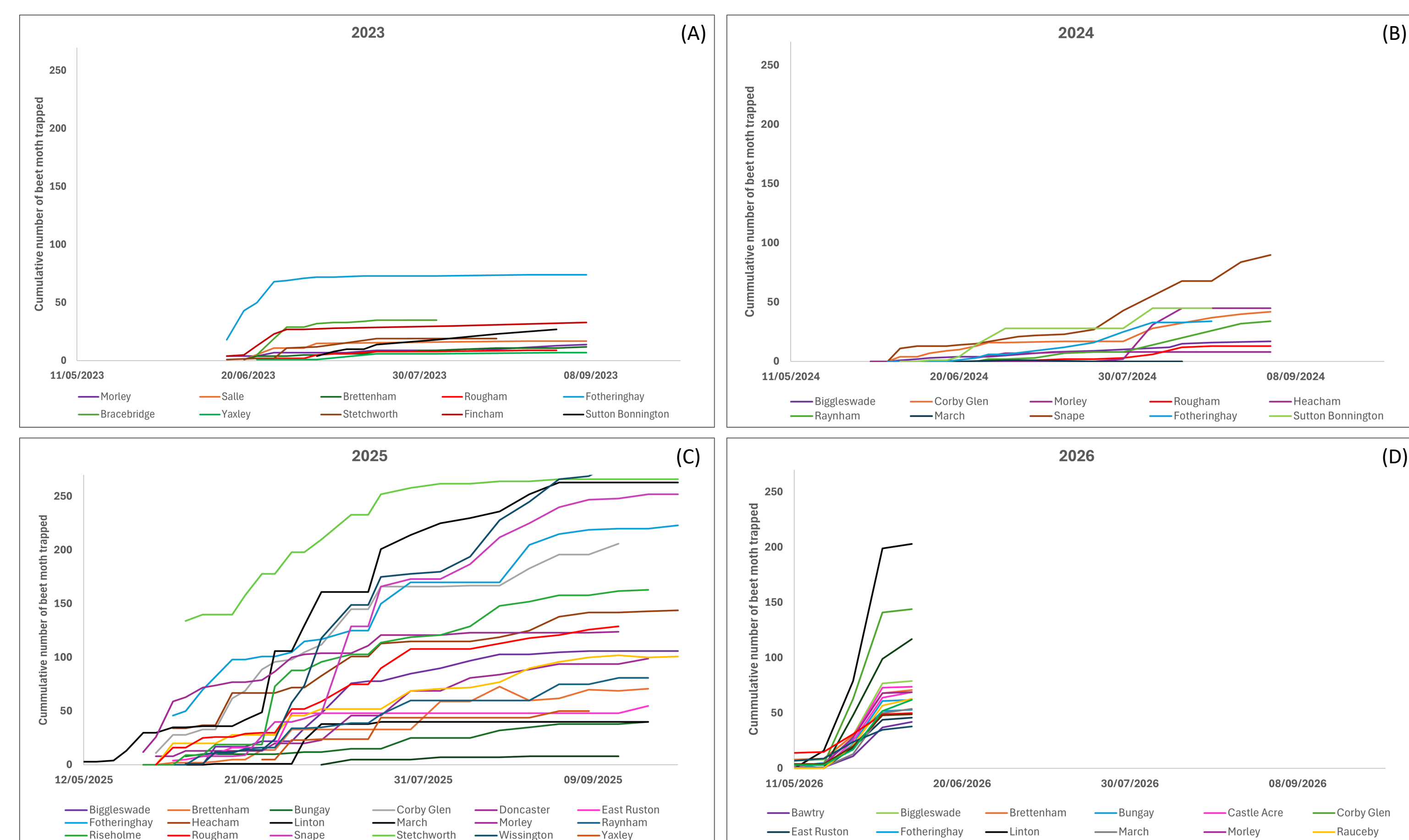


Figure 4-The cumulative number of beet moth caught in traps at BBRO cropwatch sites in (A)2023, (B) 2024 and (C) 2025 and (D) 2026.

Results

CropWatch monitoring has shown an increase in the number of beet moth caught each year since 2023, suggesting beet moth has developed into an established pest in the UK.

Adult moths are first caught in the crop in low numbers but quickly increase during spring and peak early in the summer. Numbers then only increase minimally with weekly catches dropping during summer and autumn. By October almost no new moths are caught.

Overlaying the average weekly rainfall with the number of moths caught at the Linton cropwatch site demonstrates a decline in the number of moths caught following heavy rainfall.

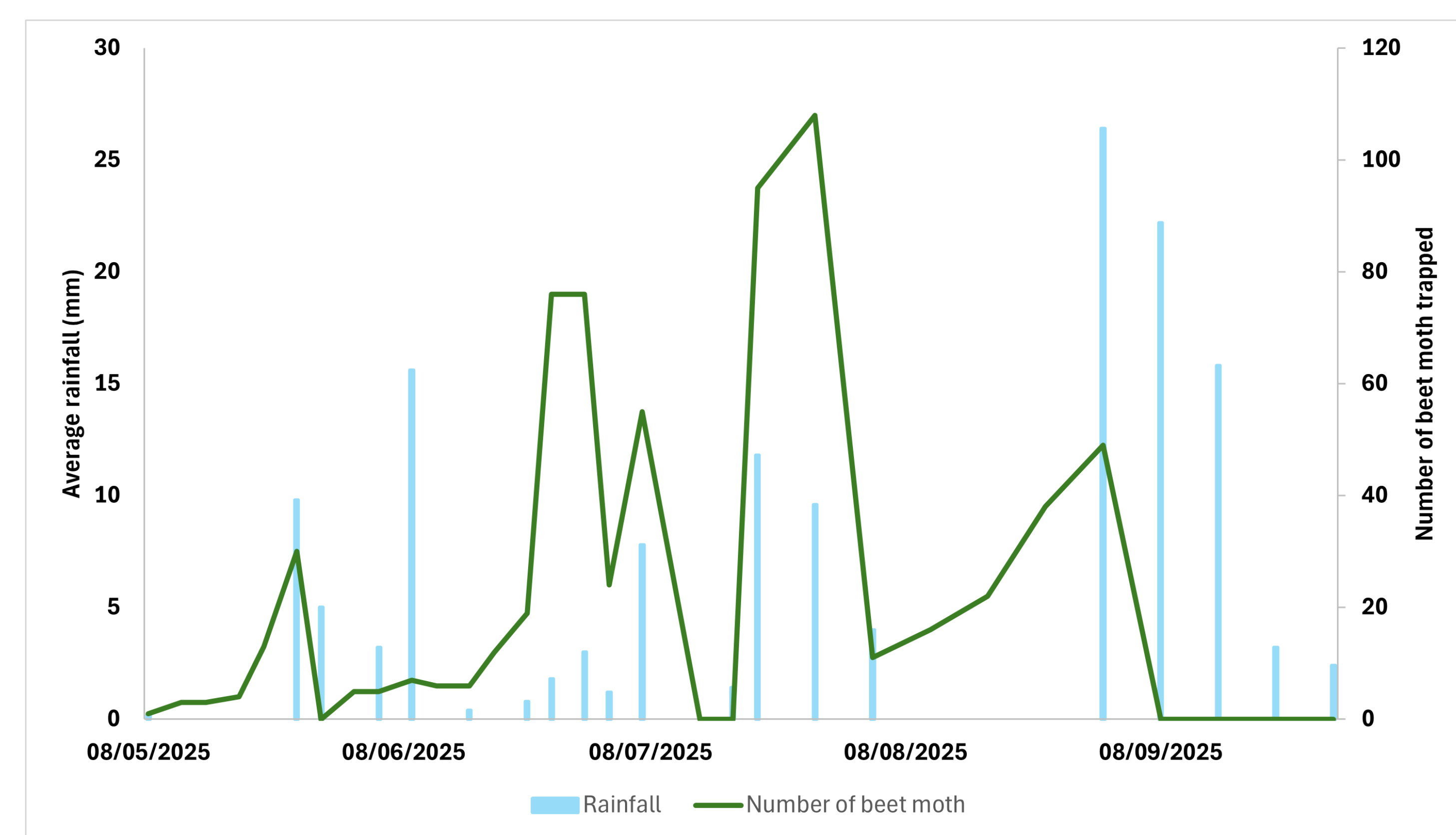


Figure 5- Number of beet moth trapped at Linton with average weekly rainfall. Data collected from 08/05/2025- 29/09/2025

BBRO Beet moth research

BBROs strategy is underway over the next three years and seeks to gain an understanding of beet moth in four key areas:

Life Cycle & Behaviour



Trapping & Monitoring

Chemical Control

Cultural Management

Beet moth traps from Xfarm technologies

Thanks to BBRO CropWatchers for their support with deploying and operating the network.