Newly emerging pest in Western Europe: Beet moth monitoring in Belgium, United Kingdom and the Netherlands

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Fig. 3 Crown rot

Introduction

Beet moth (*Scrobipalpa ocellatella*) thrives in warm dry conditions (Fig. 1). In spring the first generation of the beet moth emerges after pupa in the surface layer of the soil have overwintered. Eggs are laid on petioles and both sides of sugar beet leaves. 5-10 days later the larvae emerge and feed on the lower leaves in the canopy (Fig. 2). Several generations can occur. Symptoms are browning of the petioles, absence of heart leaves and crown rot (Fig. 3). Drought worsens symptoms. Secondary infection can occur due to microorganisms. This can lead to rots during storage.

Materials and methods

In 2022 and/or 2023 beet moth was monitored with commercial pheromone traps in Belgium and the Netherlands using Bioprox INRAE delta traps on two traps per field and in the UK with traps from Russell IPM (Fig. 4 and 5). In total 26 locations were monitored. Plants were inspected for damage by beet moth larvae.

Fig. 1 An adult beet moth (12- 14mm)

Fig. 2 Beet moth larvae in petiole

Results and discussion

Monitoring results from Belgium show a very early beet moth peak starting in week 22 in June 2023 compared to week 32 in August 2022 (Fig. 6 and 7). Only in Crisnée plant damage was found. Monitoring results from the UK in 2023 show that beet moth activity started late June and early July (Fig. 8). At Fotheringhay plant damage was found in September.

Only a few moths were caught during monitoring in the Netherlands in the last week of September in 2023, no plant damage was found. Warmer and drier conditions were associated with an increase of beet moth recordings, while cooler, rainy conditions reduced populations.

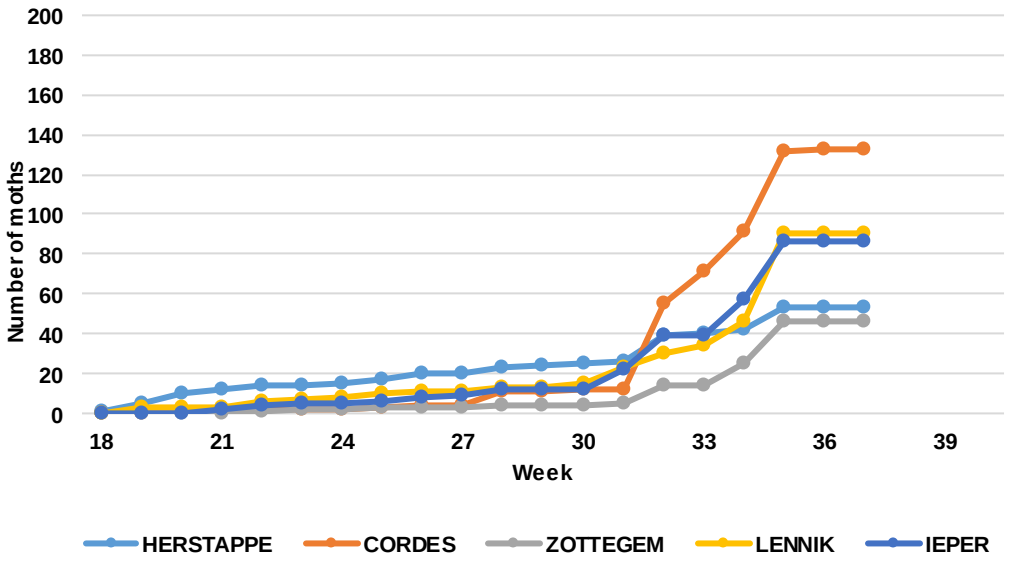

Fig. 6 Beet moth monitoring results from Belgium for 2022

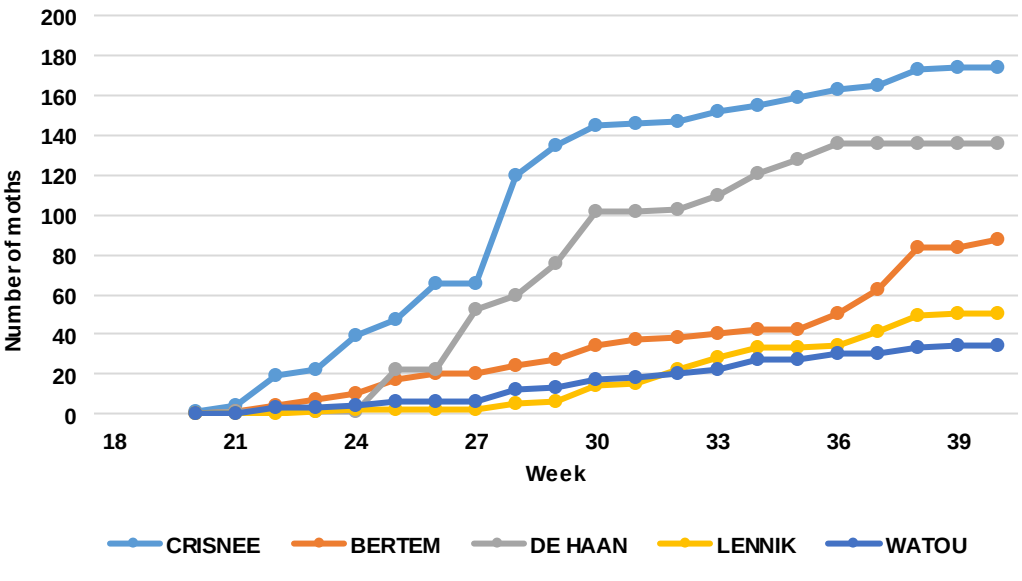

Fig. 7 Beet moth monitoring results from Belgium for 2023

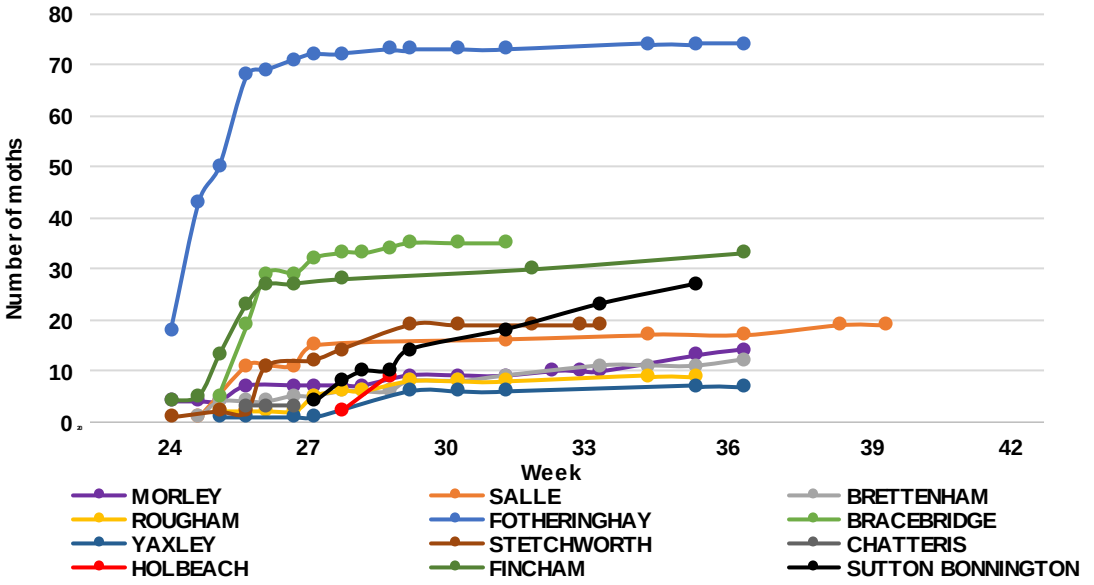

Fig. 8 Beet moth monitoring results from the UK for 2023

Fig. 4 Delta trap

Fig. 5 Russell IPM trap

Conclusions

Monitoring beet moths is crucial to estimate the potential risk of this newly emerging pest. Monitoring needs to be further developed since an increase is expected due to climate change, to obtain reliable estimations of beet moth populations and to explore if it can contribute to timing of insecticide applications.