December 2024

Cabbage stem flea beetle (CSFB) monitoring data (autumns 2020, 2021, 2022 and 2024)

The monitoring data presented in this report was gathered by ADAS (autumns 2020, 2021 and 2022) and NIAB (autumn 2024) under AHDB contracts. No monitoring was funded by AHDB in 2023. The ADAS project (21120185) investigated multiple aspects associated with CSFB management (total cost £240,000+VAT). The NIAB project only monitored CSFB (£24,280.80+VAT).

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1. Introduction

Cabbage stem flea beetle (CSFB) is the most important pest of winter oilseed rape. Since 2013, when neonicotinoid-treated seed was withdrawn from use in this crop, CSFB management has become far more challenging. Widespread resistance to pyrethroids has also limited the effectiveness of this chemical control option.

The lack of chemical control exposed significant knowledge gaps in pest biology and phenology, including an understanding of the factors that influence adult migration and larval invasion, and the relationship between larval load and crop damage.

The components of an integrated pest management (IPM) strategy are now relatively well known, including their strengths and weaknesses. Sowing dates are particularly influential, with a few weeks potentially making the difference between a good-yielding crop and a written-off crop. The most critical damage occurs when young crops encounter peak beetle migration, especially when soil moisture is low.

The monitoring information in this report strengthens a long-term data set that shows how CSFB migration varies annually and regionally (in response to local conditions). The information will be used to further develop and validate a decision support system that predicts local migration. Predicting migration windows would help farmers determine the lowest-risk point to sow OSR

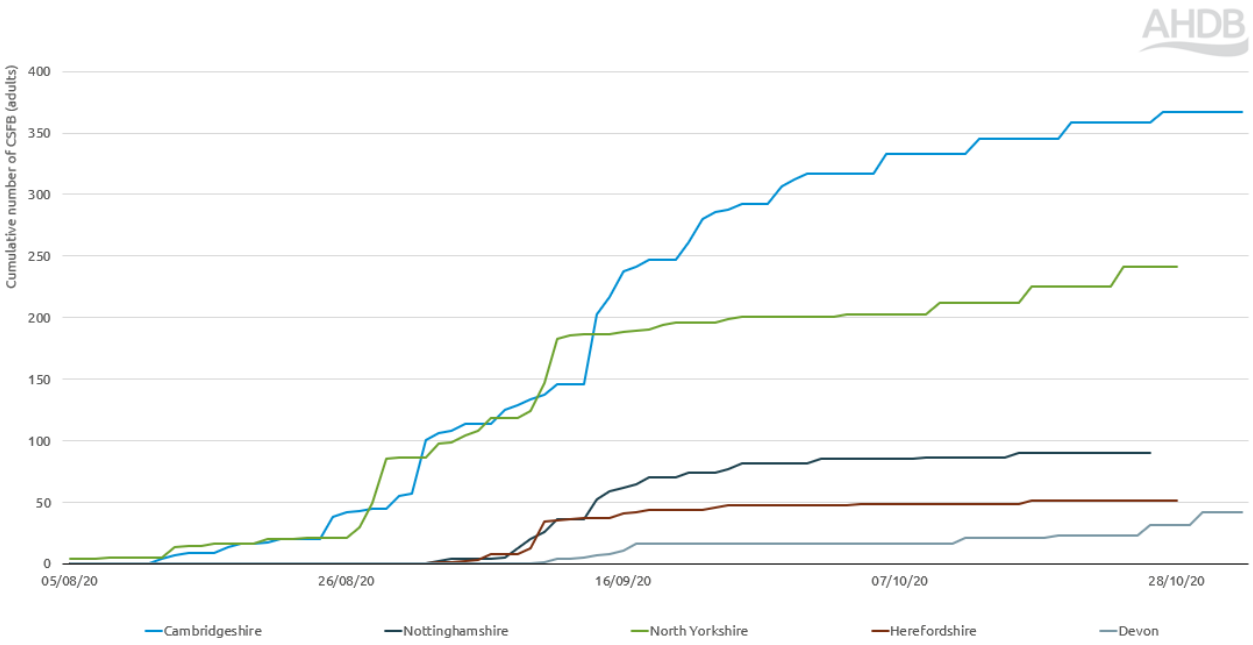
CSFB were monitored at several sites in England during autumns 2020, 2021, 2022 and 2024 (AHDB did not fund monitoring in 2023).

Manual yellow water traps were inspected for adult beetles (about twice a week). Each site had a trap set on the ground and 1 metre above the ground. Symptoms of crop invasion by larvae was also noted.

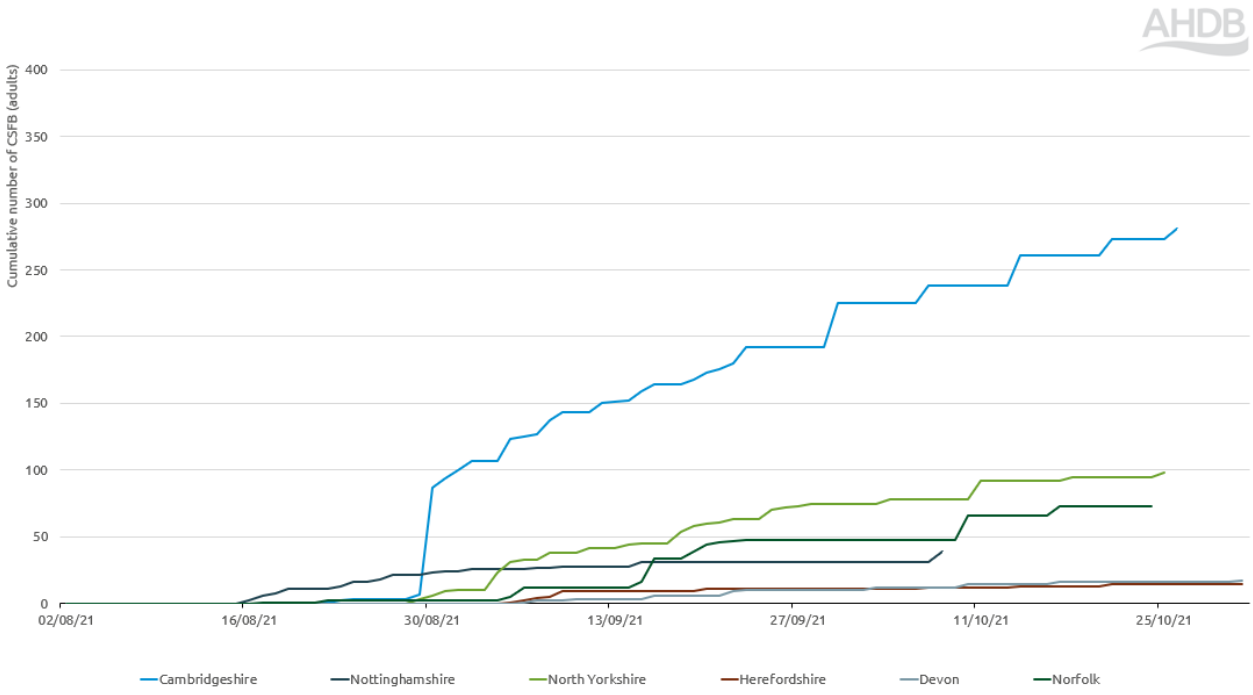
Cumulative data on adult CSFB numbers (from both trap types) are presented in the first four charts.

The final chart shows the cumulative mean number of larval scars per plant in autumn 2024 (each mean is based on 50 plants).

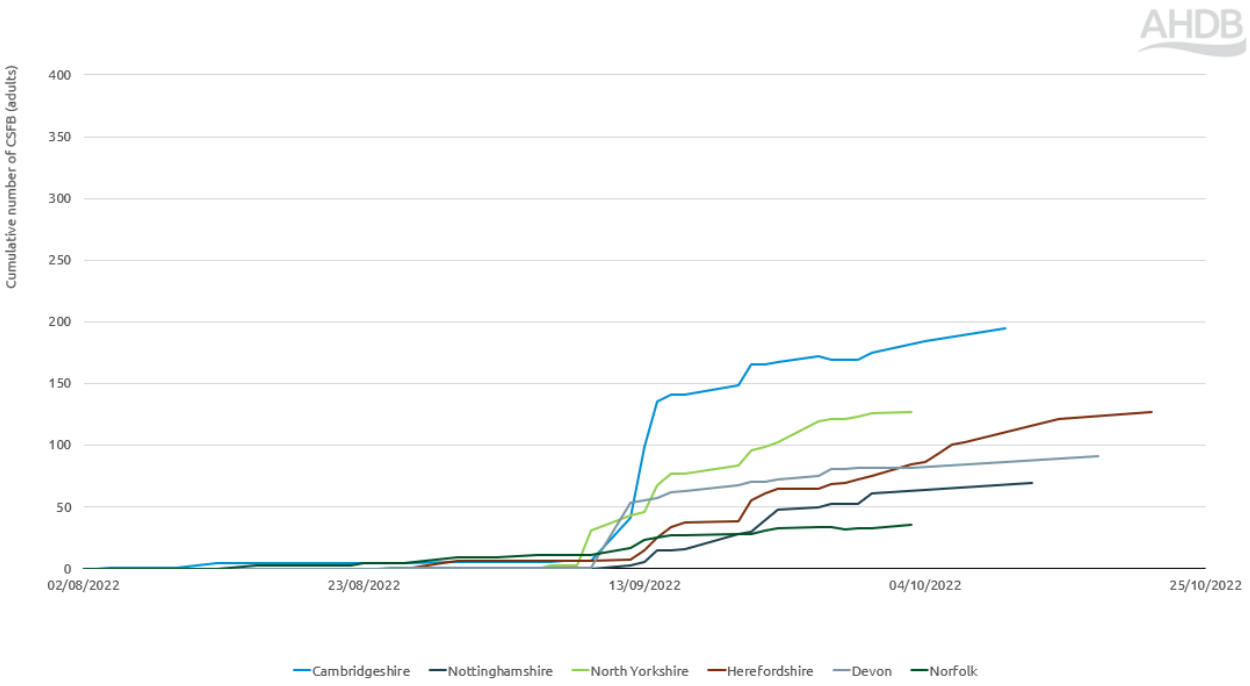
2. Autumn 2020 migration data



3. Autumn 2021 migration data



4. Autumn 2022 migration data

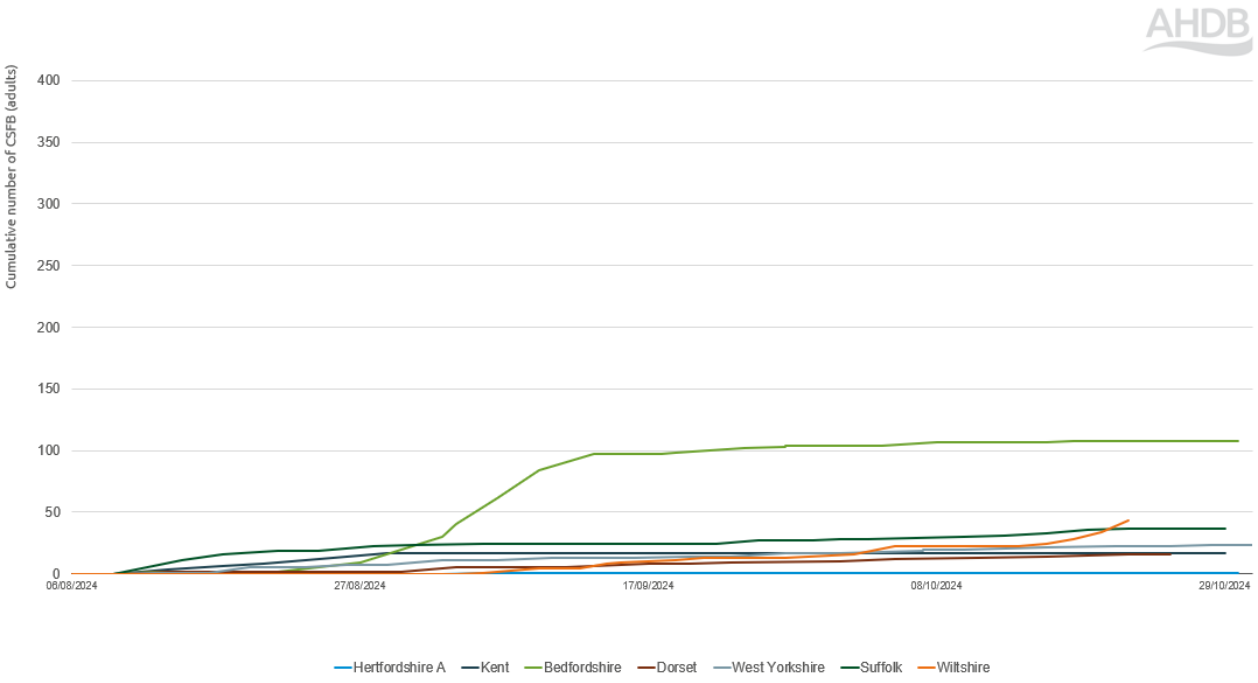


5. Autumn 2024 migration data

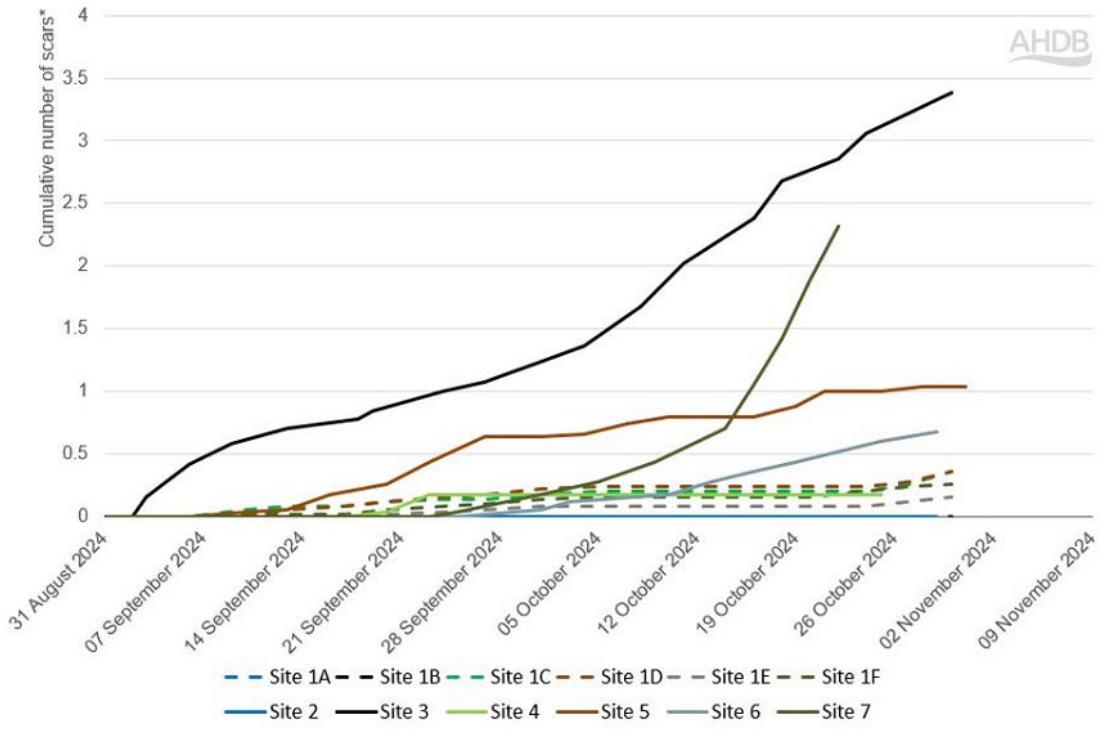
Core site locations:

1 = Hertfordshire/Essex (six sites)
2 = Kent (east)
3 = Bedfordshire
4 = Dorset
5 = Yorkshire (north)
6 = Suffolk (north)
7 = Wiltshire (north)

Map indicates approximate locations.



6. Autumn 2024 larval scarring data



*Cumulative mean number of larval scars per plant (each mean is based on 50 plants).