Feeding preferences of cabbage stem flea beetle (*Psylliodes chrysocephala*) on oilseed rape (*Brassica napus*).

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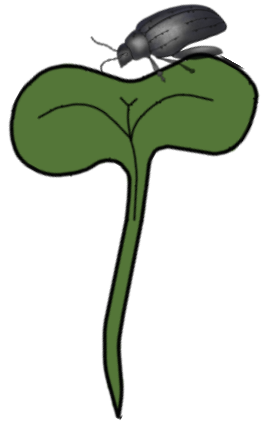
Background

- Cabbage stem flea beetle (CSFB) is a key pest of oilseed rape in the UK and Northern Europe.

- Pest pressure is rising due to a reduction in available effective controls.

- To develop new, effective controls, we must understand CSFB behaviour.

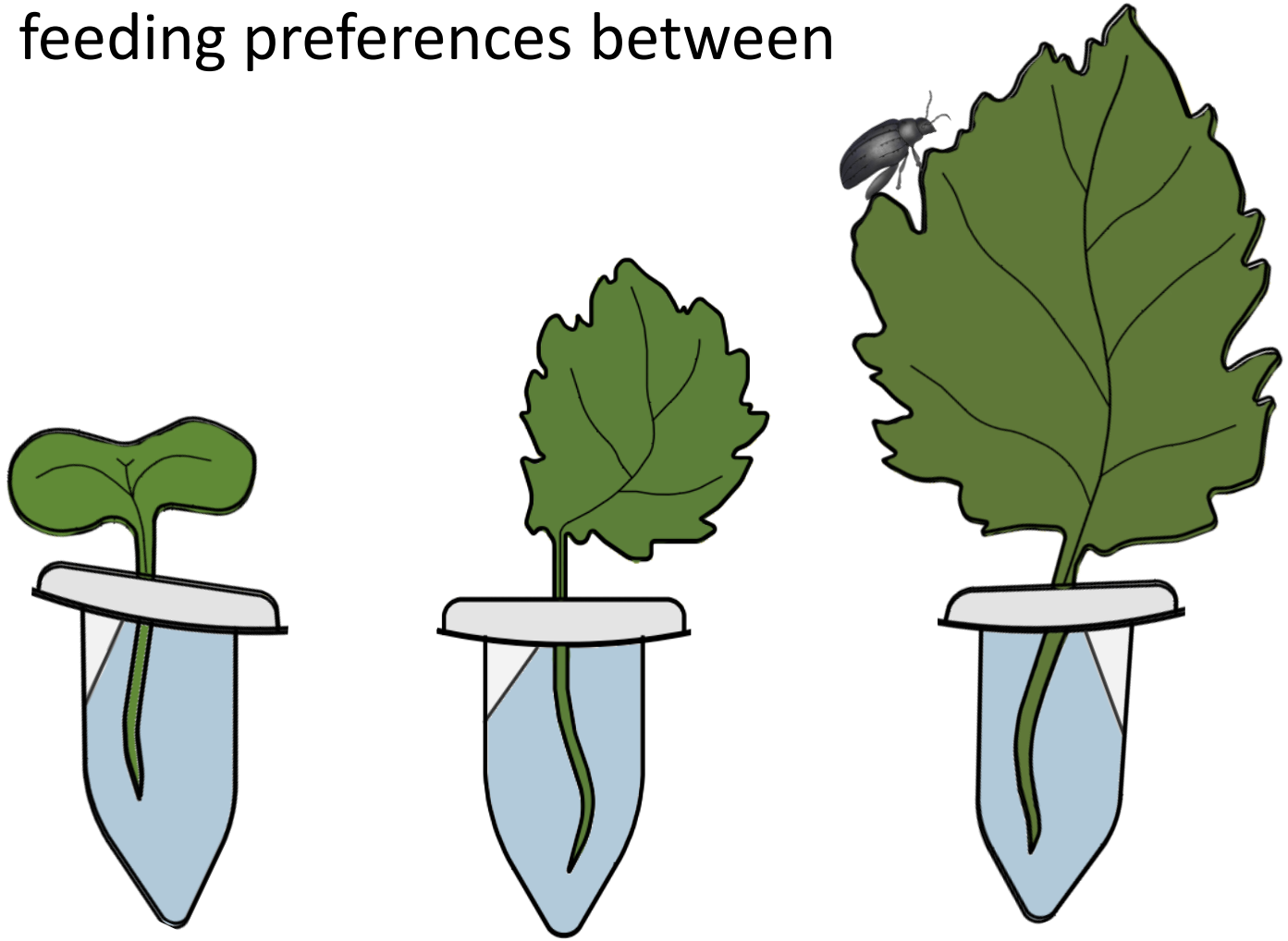


Project Aims

To better understand CSFB feeding preferences between

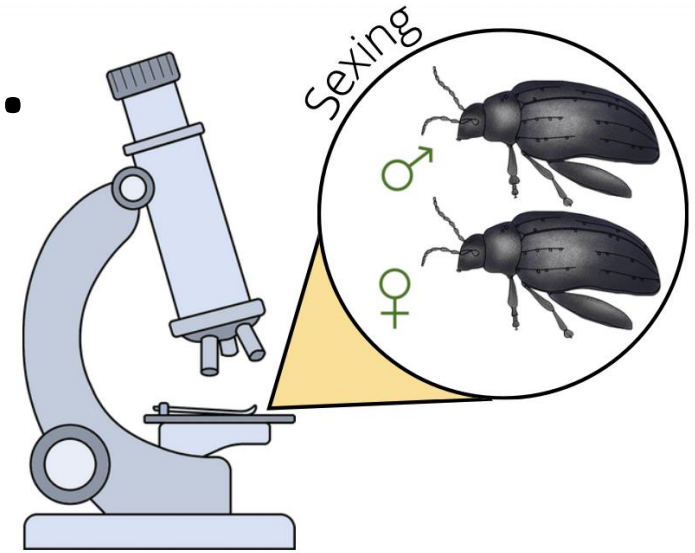
- Male and female CSFB

- Seedling leaf stage
  - Cotyledon
  - First True Leaf
  - Second True leaf



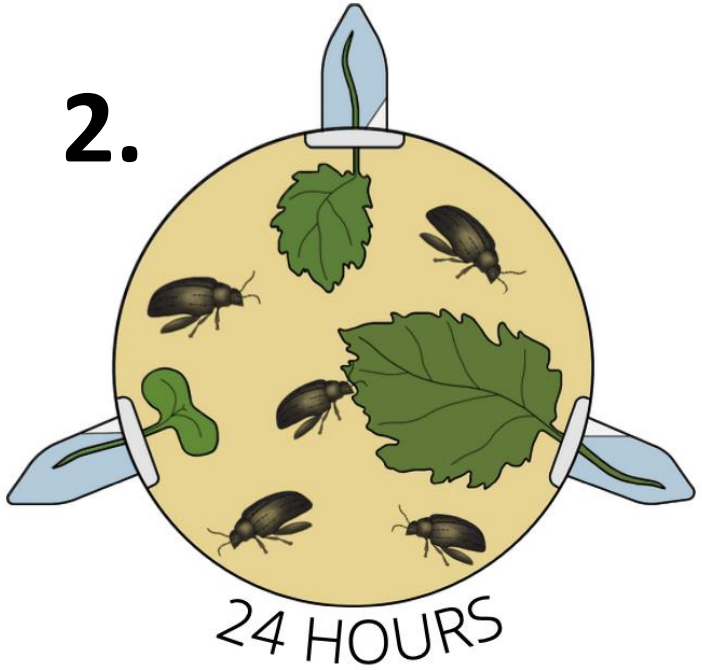
Methods

1.



Field caught CSFB sexed, separated, and starved for 48 hours.

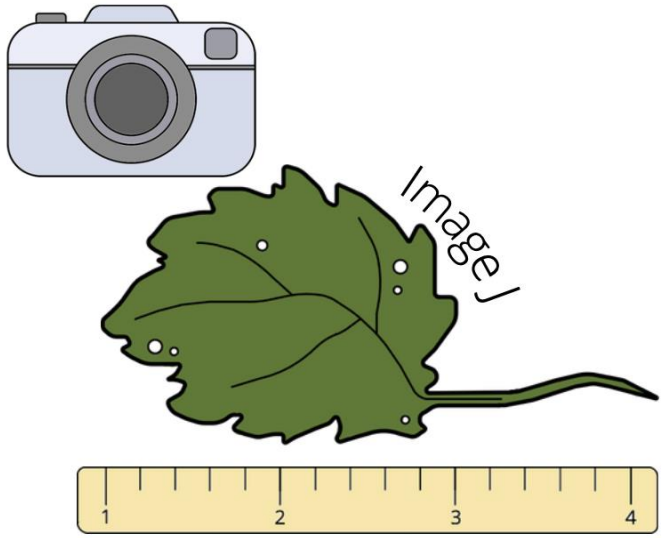
2.



5x single sex CSFB released into a choice arena to feed for 24 hours.

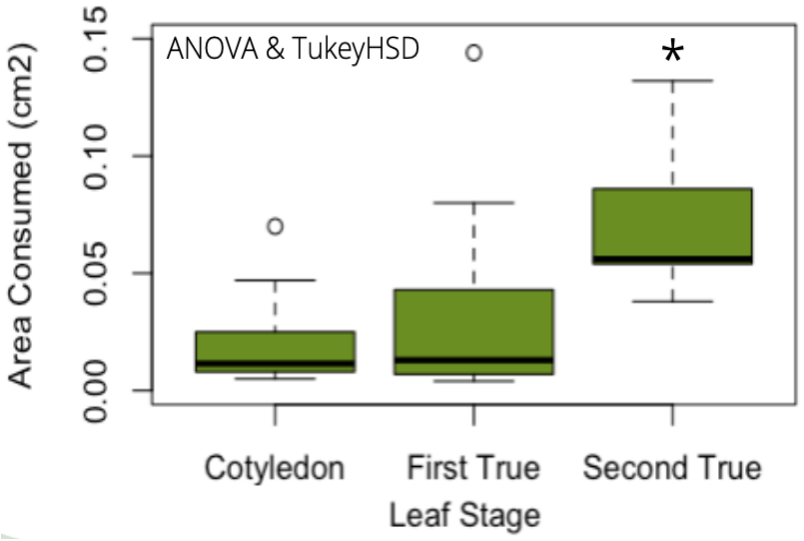
18x replications per sex

3.



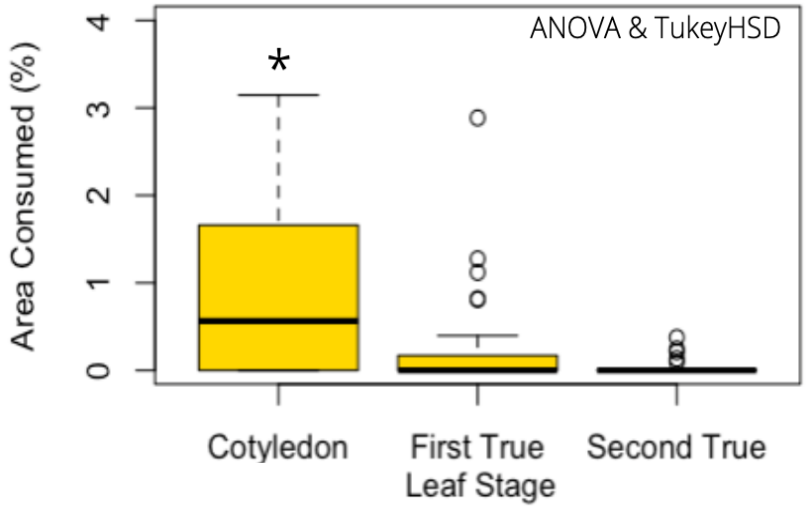
Leaves photographed and area consumed analysed in ImageJ.

Results



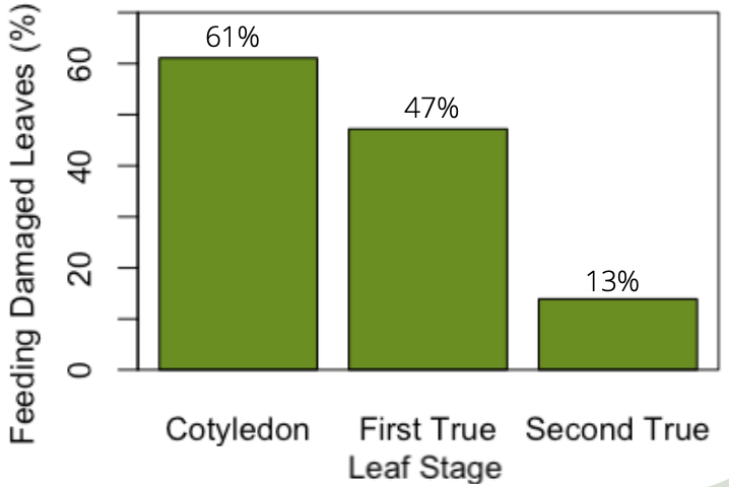
Is total leaf area consumed dependent on the leaf stage?

Significantly larger area was consumed for second true leaves than cotyledon ($P < 0.01$) or first true ($P = 0.01$).



Is total leaf consumption proportionate to the leaf size?

A significantly larger proportion of leaf was consumed for cotyledon leaves than first true ($P < 0.05$) or second true ($P = 0.05$).



Is frequency of feeding damage equal across leaf stages?

Cotyledon leaves showed the highest frequency of feeding with 61% of all cotyledons being damaged.

Any questions?

Please come and find me at my poster!

Special thanks goes to Dr Joe Roberts, Dr Tom Pope and Alex Bartley