

# Cultural management and monitoring of bean seed fly







Bean seed fly affects more than 40 different host plants and is an important pest of peas, maize and beans. Hosts include Phaseolus beans, peas, broad beans, cucumber, melon, onion, pepper, potato, maize (alfalfa, cotton, strawberry and tobacco are secondary hosts) and the bean seed fly larva is a common pest found in most tempere



- The bean seed fly reporting app became available in March 2019 as part of the AHDB Horticultural Strategic Centre for Field Vegetables (FV462)
- So far we've had a total of 36 reports, 16 in 2019, 16 in 2020, and 4 in 2021 in vining peas, broad beans, runner beans and spinach
- Reports are from Yorkshire, Lincolnshire, Warwickshire, Herefordshire, Norfolk and Sussex
- For further information go to https://www.pgro.org/agronomy-app-tools/





# 2019, 2020 and 2021 Survey in Yorkshire and Lincolnshire

- Attractant traps to monitor peak pest presence (10 sites 2019, 8 sites 2020, 9 sites in 2021)
- Sowing timing both general and related to period following cultivation
- Cultivation techniques drill type/ direct drilling/ min-till/ drilling depth
- Foot rot risk in BSF damaged plants
- Preliminary look at nematodes for control (Steinernema feltiae) at field scale









# Monitoring















#### Yorkshire

#### Lincolnshire













#### Lincolnshire 2021 mean of 3 sites



### 2019-2021 survey



- 2019 work indicated the following:
- There were differences in timing of peak adult activity in different regions
- The period 10 days before and after peak activity was high risk for drilling
- the period between cultivation and drilling seemed to have an effect on damage levels
- 2020 work indicated the following:
- The period around peak activity was not as clear as in 2019 and it seemed that, although highest levels of damage were recorded in crops sown within 10 days of peak activity, activity and damage continued in crops at low to medium levels after this

- 2021 work indicated the following:
- There were differences in timing of peak adult activity in different regions
- The period 5-10 days before and after peak activity was high risk for drilling
- the period between cultivation and drilling seemed to have an effect on damage levels
- Damage levels were lower in 2021 overall

#### 2019-2021 survey





#### Cultivation trial, Stubton, 2020 and 2021 Drilled 27<sup>th</sup> April in both years



#### Bean seed fly larval damage 2020



#### Bean seed fly larval damage 2021





# Cultivation trial, Yorkshire 2021 (field-scale)

[C]



C = 4 weeks between cultivation and drilling

# Entomopathogenic nematodes, Lincolnshire 2021 (field-scale)





#### Thank you





- Thanks to Matthew hayward, Nick Lount, Ewan Findlay, Ian Watson, Liz Johnson and Phil Langley for monitoring and reporting, and Jo Arden for fly identification
- For further information go to <u>www.pgro.org</u>
- <u>becky@pgro.org</u>
- Or call 01780 782585
- Download the App from Google and Apple stores





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BEAN SEED FLY (DELIA PLATURA)



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