

BCPC Pests & Beneficials Review 2020

***Making Metrics Pay – Can data-driven
decision making deliver profitable IPM?***



#BCPCPB



Abbey Farm, Flitcham





Pea moth



- Monitored using pheromone traps that catch males
- Two traps per field, checked three times a week
- The threshold for spraying is 10 or more moths in either trap on two consecutive occasions
- The spraying date is then calculated depending on local temperatures



My decision whether to spray or not?

- The threshold was very clearly reached on 24th June. The recommendation was to spray 10 days later
- Premium of £70/tonne for a good quality crop (c.25% of the crop value)
- This premium is lost if more than 2% of grains are damaged
- One application would cost £5/ha; c.0.5% of crop value
- Damage to beneficials from non-selective spray





- We sprayed once
- The outcome was good – a low level of crop damage
- We had very good agronomy advice from PGRO as I was in the Pea Yield Enhancement Network (YEN)
- Damage to beneficials – an unknown cost?

Virus
yellows in
sugar beet



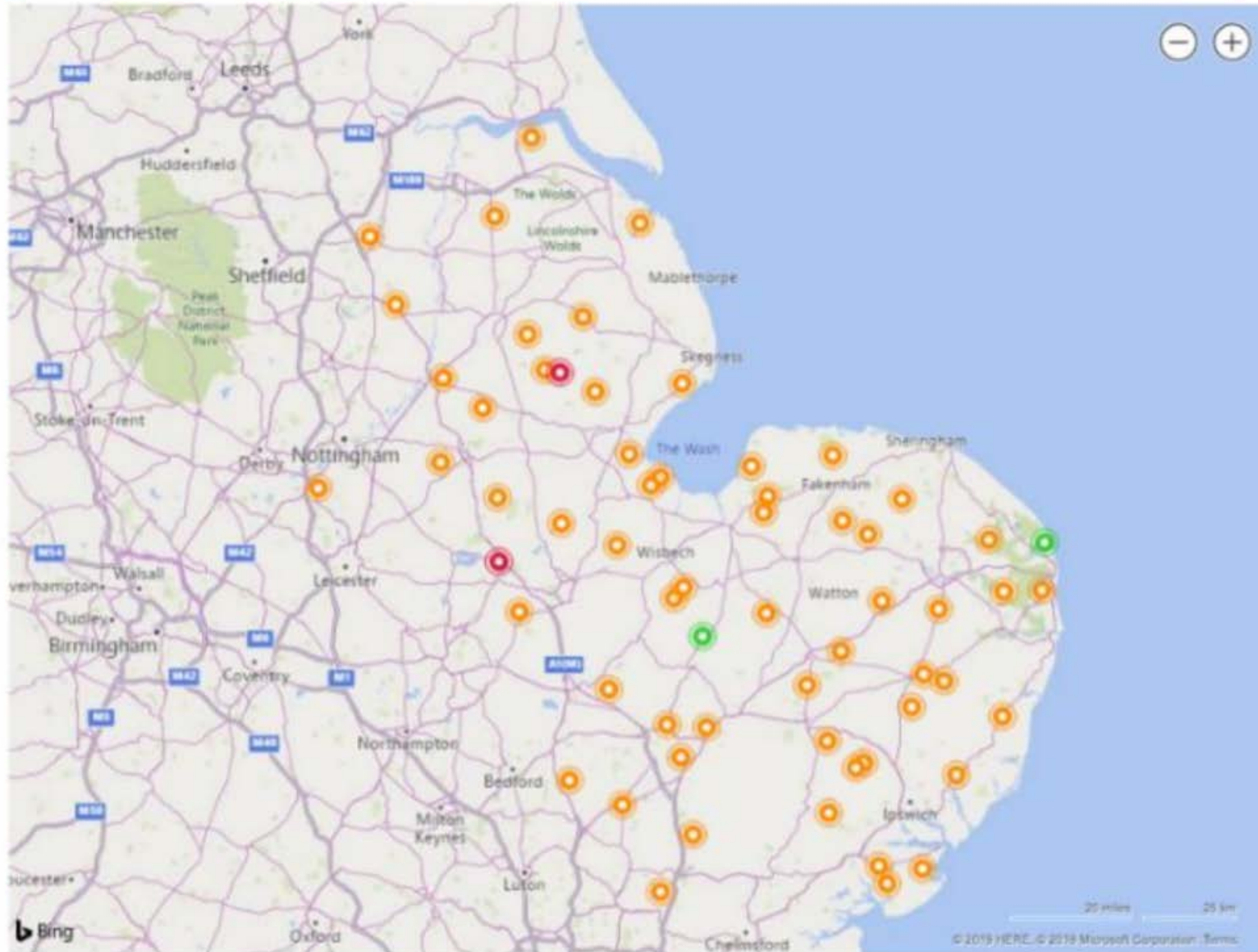




- In 2019 we were one of the British Beet Research Organisation (BBRO) monitoring sites
- Three water traps per field
- Twice weekly from mid-April to early July the whole catch was sent to BBRO who checked the catches for aphids
- If aphids were found, up to 20 were checked for the presence of virus

< May 20 - May 26 >

Click for more information



- **Green** – no aphids caught
- **Orange** – aphids caught but no virus in those tested
- **Red**- aphids caught and at least one of those tested had virus

My decision whether to spray?

- BBRO
 - Reported high numbers of aphids
 - None of those tested at Abbey Farm or any adjacent sites were found to have virus
- My agronomist
 - Recommended spraying
- Other factors
 - Financial pressure to avoid yield loss
 - Impact on beneficials and other wildlife





We did not spray insecticide, predominantly because of BBRO information on the lack of virus in my local area

The crop developed showing a very low level of disease

Savings

- £18/ha saved on chemical (about 1% of the crop value)
- No damage to beneficials
- Preserving efficacy?

Barley Yellow
Dwarf Virus
(BYDV) in
winter barley





BYDV MANAGEMENT

Filter by: **Region**

Multiple selections

T-Sum start date i

10/10/2019

10/29/2019

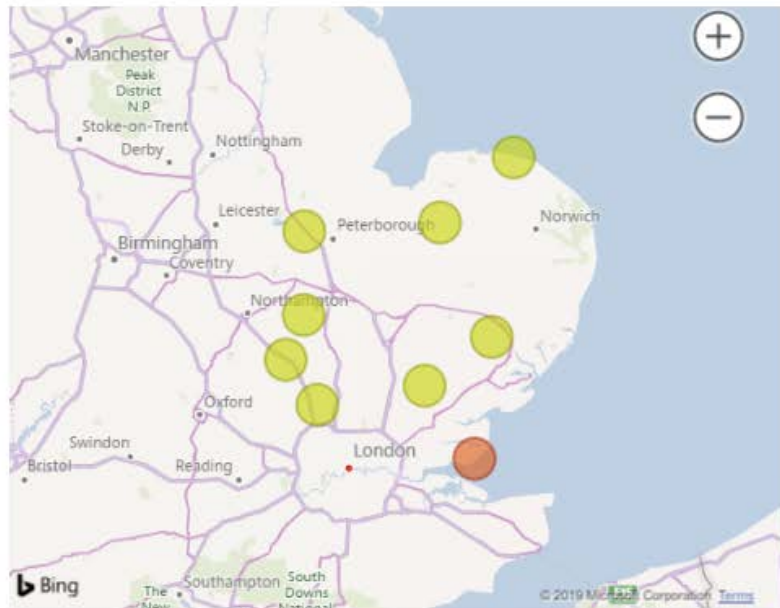
Weather type

Observed

Observed + forecast

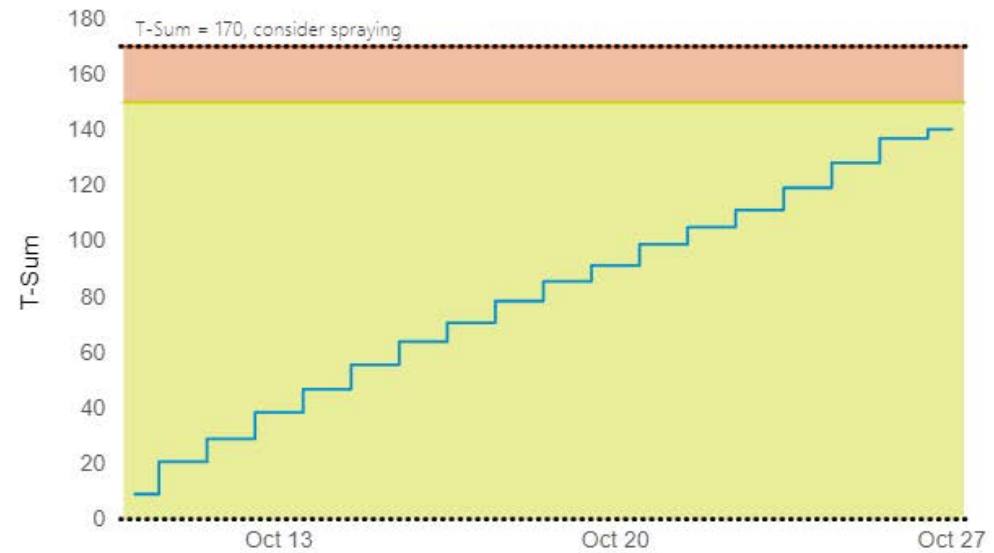
● T-Sum (yesterday) > 150 i

● T-Sum (yesterday) <= 150



T-Sum

Aphid flight activity



AHDB

This tool is powered by [AHDB WeatherHub](#) and uses observed weather data from the [MetOffice \(DataPoint\)](#) and forecast data from [MET Norway](#).

T-Sum start date



9/25/2019

1/16/2020

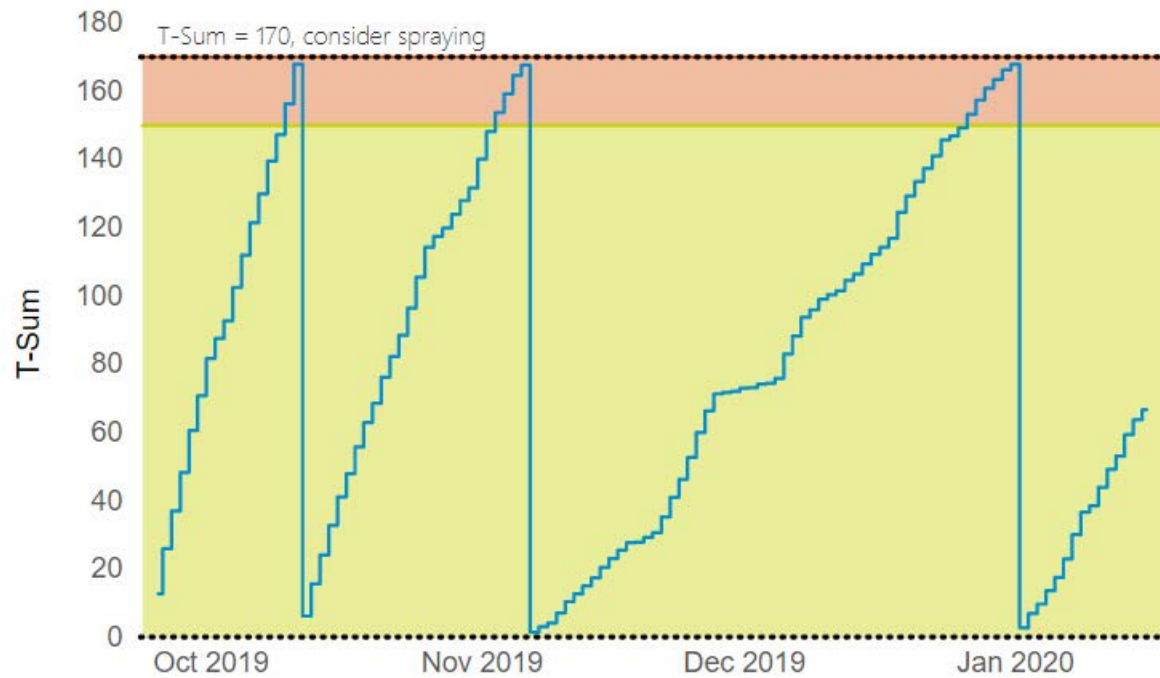
Weather type

Observed

Observed + forecast

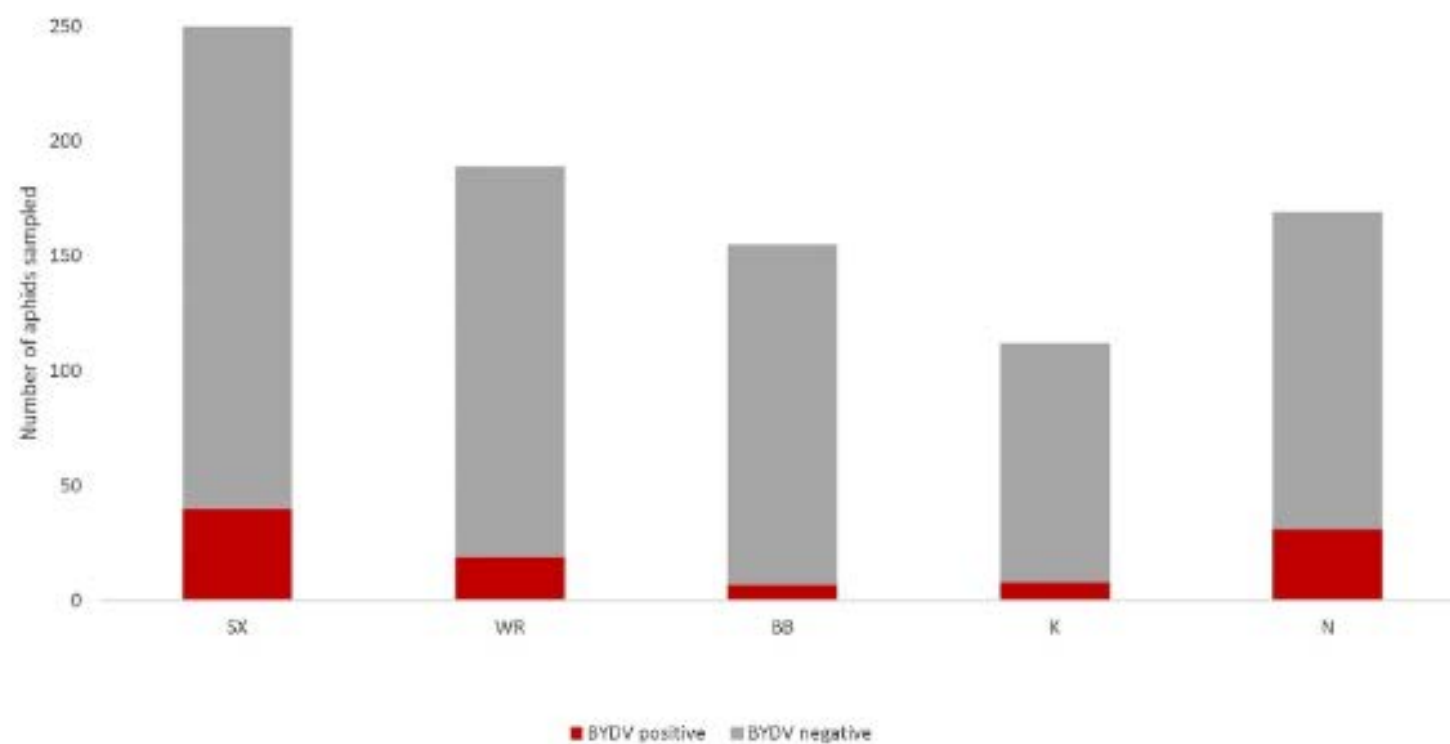
T-Sum

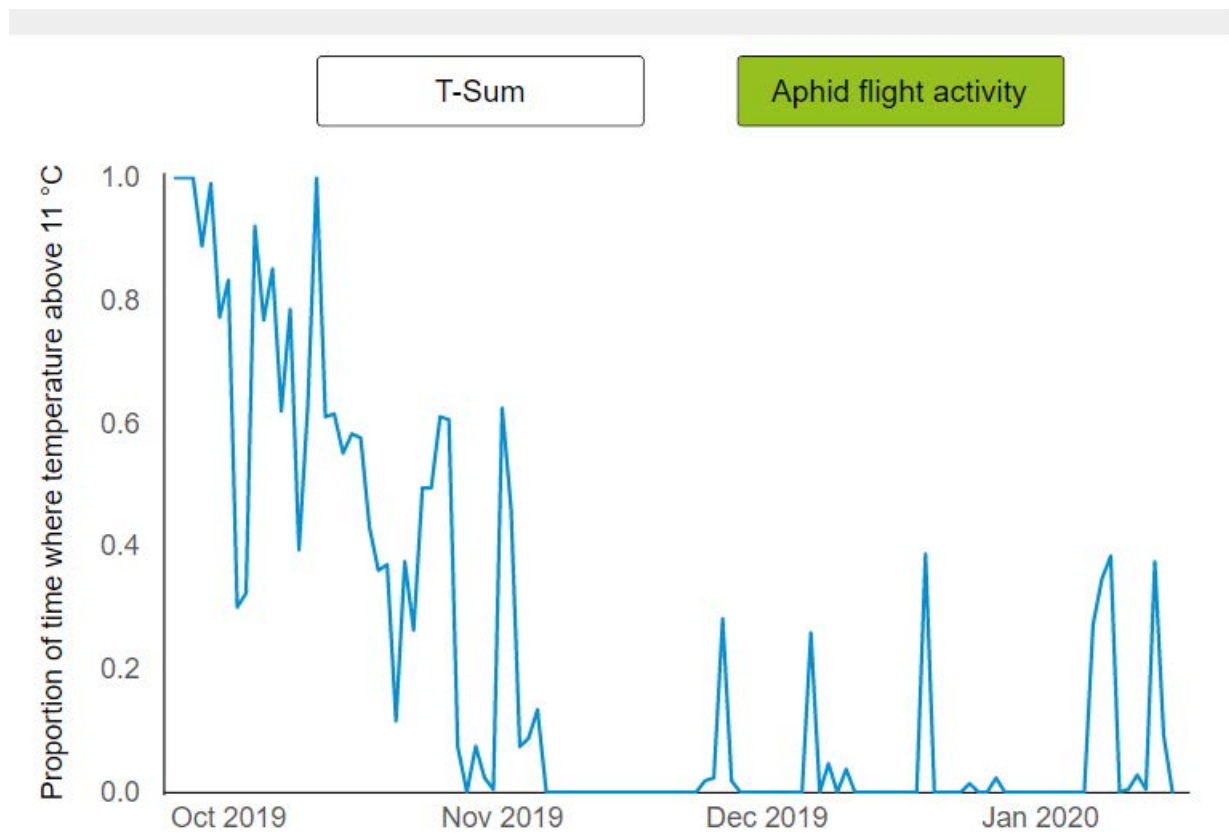
Aphid flight activity



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Bird cherry-oat aphid





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Monitoring on Abbey Farm

- 16 strips checked 2-4 times per week, October - early November
- Confirmed the first T-sum calculation
- After early November I was too busy to continue

My decision whether to spray?

AHDB

- The T-Sum suggested spraying 1-3 times from mid-October
- Low virus levels in nearest sites
- Winged aphid activity was falling by early November

Other factors:

- I found very few aphids in late- Oct. and early Nov. but kept finding beneficials
- Each application costs £10/ha, just over 1% of the crop value
- Weather





We sprayed the earliest field in mid-October, but that was all

We'll know the outcome in 2-6 months

This felt like a sketchier decision

- Less external agronomy input
- My monitoring stopped too soon
- AHDB network of sites not as detailed as BBRO
- The warnings seemed more alarmist – threshold?
- What weight to put on saving beneficials?

Does using data contribute to profitable IPM?

- It requires more work by growers/agronomists in the field
- Decisions can seem complex and are not always clear
- Data can reduce the risk of serious pest damage to crops
- It may help build more effective populations of beneficials

