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
- **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
This tool is powered by AHDB WeatherHub and uses observed weather data from the MetOffice (DataPoint) and forecast data from MET Norway.
Bird cherry-oat aphid
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