

BYDV management tool

Aphids can transmit barley/cereal yellow dwarf viruses (BYDV). Initially, aphids colonise relatively few crop plants. However, the second-generation tends to move away from the plant originally colonised. Controlling this generation is a key part of a BYDV management strategy.

The second generation is likely to be present when the accumulated daily air temperatures, above a baseline temperature of 3°C, reaches T-Sum 170. To use a simple scenario, daily average temperatures of 20°C for ten consecutive days equates to $170 = (20^{\circ}\text{C} - 3^{\circ}\text{C}) \times 10$ days.

T-Sum calculations should start either:

- On the day of crop emergence
- Following a pyrethroid application (account for product persistence, see label)

Enter the T-Sum start date in the box. Select an area – a weather station or stations (by selecting a 'Region'). The chart then displays the T-Sum results (blue line). Crops are at an unacceptable risk when the line reaches 170. At this stage, check crops and consider treatment.

Notes

Colours change from green to orange at 150.

Once 170 is reached, the T Sum resets to 0.

The default analysis uses observed weather data (up until yesterday).

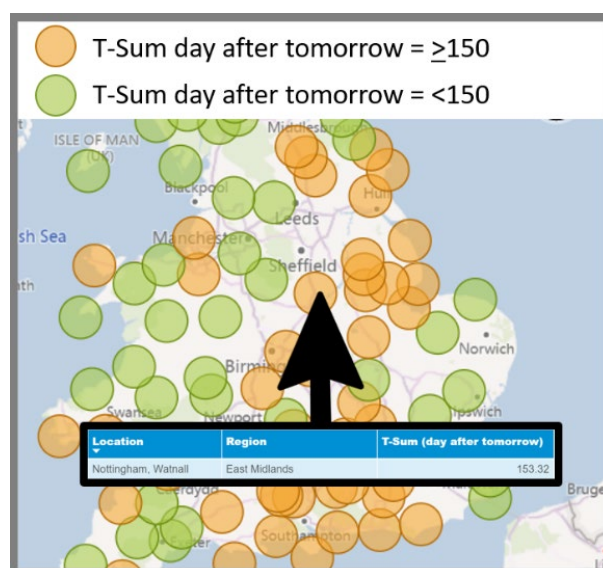
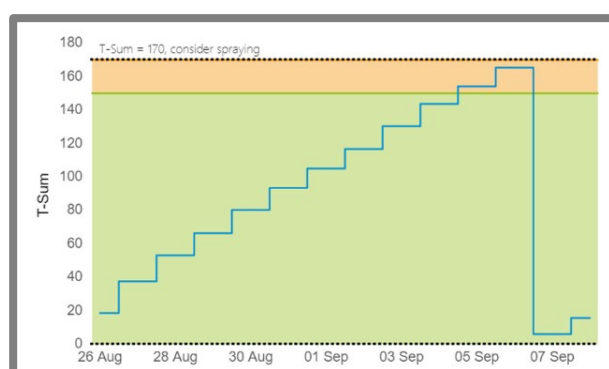
The observed + forecast analysis (see 'Weather type') also uses data for today and the next 48 hours.

Hover the mouse cursor over a site to reveal the precise T-sum value.

BYDV risk is highest during the early growth stages and passes at GS31. As average daily temperatures decrease throughout autumn into winter, earlier drilled crops usually reach the 170 threshold quicker.

In most years, aphid flights stop when temperatures drop below about 11°C. The 'Aphid flight activity' tab shows the proportion of time that temperatures are above 11°C. Aphid activity greatly reduces when temperatures drop below 3°C.

The tool can be accessed via ahdb.org.uk/bydv



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