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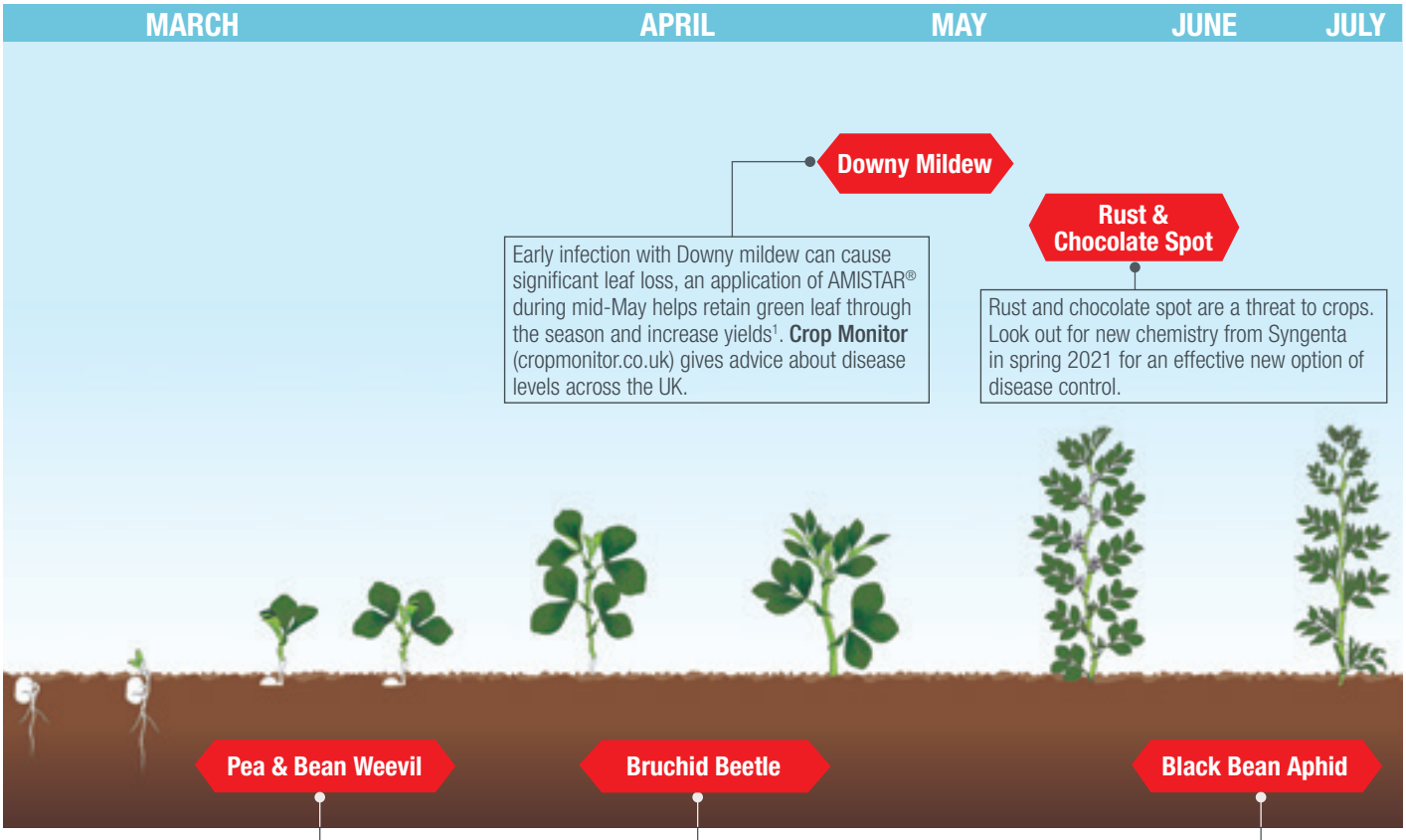
SPRING BEAN AGRONOMY ADVICE

CULTURAL ADVICE

Healthy, actively growing crops are able to resist disease and pests better than stressed crops. Establishment is key to a good crop, consider delaying sowing until soil conditions improve to help encourage emergence and a good root structure. Later sowing can have an effect on yield, information on this can be found by downloading the PGRO Optibean tool (available at www.pgro.org), but this is often compensated by improved soil conditions.



Early infection with Downy mildew can cause significant leaf loss, an application of AMISTAR® during mid-May helps retain green leaf through the season and increase yields[1]. **Crop Monitor** (cropmonitor.co.uk) gives advice about disease levels across the UK.

Rust and chocolate spot are a threat to crops. Look out for new chemistry from Syngenta in spring 2021 for an effective new option of disease control.

To help reduce pesticide use monitor weevil activity with pheromone traps (see PGRO technical bulletin for details)[2]. Poor growing crops are worst affected, if control is not achieved resistance is suspected, therefore do not reapply.

A second spray is usually required 10 days after the first to give adequate control. Use HALLMARK Zeon® as weevil numbers and egg laying increases.

For the 2021 season Syngenta and PGRO have decided to stop the use of Bruchidcast. This decision has been made due to it's inability to act as a stewardship tool to reduce spray events. From experiences in the last couple of seasons, increasing temperatures has caused prolonged periods of spray events, rather than few targeted events. As such the tool was not promoting good practice, nor was it helping to achieve higher efficacy and therefore better quality.

However if individuals want to keep track of their risk using the model behind Bruchidcast, it can be done with a few simple steps. Bruchid beetle adults fly into crops attracted to the pollen once flowering starts. When adults are found in the crop, the maximum daily temperature has reached 20°C on two consecutive days and beans have developed the first pods on the lowest trusses, this will trigger egg laying the next day and therefore damage.

Black bean aphid usually appears from mid-May. Insecticide applications are justified when 5% of plants are colonised. Check the **Rothamsted Insect Survey** (rothamsted.ac.uk/insect-survey) for information about activity in your area.

A second spray is usually required as aphid numbers can build through June, monitor crops for presence.

[1] Data from Syngenta trials in 2015/16 have shown a yield benefit

[2] Refer to PGRO Technical Update TU08 – for spring beans, a threshold catch occurs when an average count per trap exceeds 30 weevils on any one recording day (traps should be sited by mid-February and weevils counted three times each week)

PRODUCTS FOR FIELD BEANS

Amistar®

MAPP No: 18039
Approved use: Field Beans
Maximum individual dose: 1.0 l/ha
Maximum number of applications: 2
Latest time of application: 35 days before harvest, 21 day minimum application interval. FRAC guidelines must be followed.

Hallmark Zeon®

MAPP No: 12629
Approved use: Field Beans
Maximum individual dose: 75 ml/ha
Maximum total dose: 150 ml/ha
Latest time of application: 25 days before harvest, 7 day minimum application interval.

Solatenol™

Anticipated crop: Field Beans
Maximum individual dose: 0.66 l/ha
Maximum treatments per crop: 1
Application window: Up to and including 20% of pods having reached typical length (GS72)
Solatenol contains prothioconazole (STL/PTZ)
Requested claims – Chocolate spot, Rust and Ascochyta

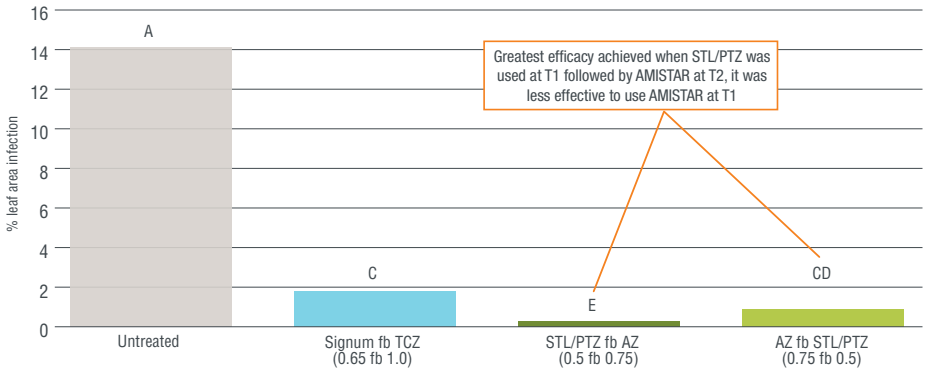
2020 TRIAL WORK CONDUCTED WITH PGRO – RUST

In recent seasons Bean rust (*Uromyces fabae*) has been the main disease threat. However, Chocolate spot (*Botrytis fabae, B. cinerea*) remains a considerable threat to bean crops given a season with the right conditions. Trials with the new product have shown good activity against both these important pathogens of winter and spring field beans.

The PGRO spring bean trial was based on two applications at T1 – GS60-63 and T2 – GS69-75. The trial demonstrates the effectiveness of the new product STL/PTZ (Solatenol formulation also contains prothioconazole) against bean rust. The cultivar used was Lynx and the crop was drilled on 28 March 2020.

Using the STL/PTZ product at T1 and following with AMISTAR at T2 gave the best control of rust.

SOLATENOL CONTROL OF RUST (*UROMYCES SP*) IN SPRING FIELD BEANS ASSESSED 28 JULY



Source: PGRO Flawborough site 2020. T1 application: flowers on lower trusses, GS60-63, 8 June. T2 full flower, approaching full canopy, GS69-75, 10 July

2020 TRIAL WORK CONDUCTED WITH PGRO – CHOCOLATE SPOT

While 2020 was not a bad season for Chocolate spot (*Botrytis fabae, B. cinerea*), PGRO were able to find a location for winter beans with some disease but not a high-pressure site.

In the trial a two spray programme was used for all the programmes. In the Syngenta programme STL/PTZ at T1 was followed by AMISTAR at T2 and this was compared with Signum at T1 and T2.

The winter bean site was drilled on 29 October 2019 with the cultivar Tundra. The T1 application time was 19 May 2020 at GS61-65. The T2 application time was 16 June at GS67-69.

The STL/PTZ product at both the 0.66 and 0.5 l/ha rate followed by AMISTAR gave as good control of Chocolate spot as the standard Signum used at T1 and T2.

APPLICATION ADVICE FOR FUNGICIDES AND INSECTICIDES

3D Nozzle alternating forward and backward along the boom for improved coverage. **Alternatively in compromised conditions use:** AMISTAR nozzle when operated at 1.5 bar pressure.

In denser crops coverage can be increased by using higher water volumes, do not exceed 200 l/ha.

TARGETING PRODUCTS FOR MAXIMUM EFFICACY

Using forecasts and agronomy/decision making tools helps improve efficacy and reduces environmental impact.

Consider using the following to help optimise pest and disease control in your crop.

AHDB Pest Bulletin

Growers can get advance warning of impending key vegetable crop pest threats by visiting: **syngenta.co.uk/ahdb-pest-bulletin** for weekly in-season reports. *Provided by Syngenta in association with The University of Warwick.*

Disease development is monitored annually and a regional risk forecast is available from: **cropmonitor.co.uk**

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