IPMNET Bulletin series 2025

About the IPMNET Bulletin series 2025

Adoption of IPM practices is growing in all agricultural sectors to fulfil environmental aims, by reducing the risks associated with use of plant protection products (PPPs), and to comply with assurance schemes like Red Tractor and SFI paid actions. The IPMNET Bulletin series will support UK farmers and agronomists to access and benefit from various IPM tools and resources.

Each bulletin will focus on a different aspect of IPM and provide links to relevant resources, such as training videos and decision support systems. The scope of the bulletin covers all UK cropping systems.

IPMNET is an open network, freely available to anyone wishing to share and learn about integrated pest management. The network has been initiated as part of a Defra funded IPMNET Pilot project, and as part of an EU funded project AdvisoryNetPEST.

Join IPMNET

IPMNET Pilot

The Defra funded IPMNET Pilot has developed a framework for IPM data and knowledge sharing within agricultural communities. Results of the IPMNET, and associated analysis of YEN data, will be presented at the IPMNET Conference 13 February 2025.
Free to attend; register interest here & share with contacts.

AdvisoryNetPEST

AdvisoryNetPEST is an EU funded network (grant 101134122) connecting agricultural advisors with common interest in reducing the use and risk of pesticides. Efforts focus on identifying and demonstrating novel approaches to pest management and fostering knowledge sharing within and between national agronomy networks.

Science and Practice video series

The IPM Science and Practice video series was produced by Dr. Neil Paveley, and Dr. Frank van den Bosch, funded by Defra and freely available on YouTube. Twelve videos delve into the physiology of cereal crops, the epidemiology of the diseases and methods of control. The videos can be viewed in any order that interests you, but they'll make most logical sense viewed in the order in the menu.

Science and Practice video series

Introduction to 'Integrated Pest Management (IPM): Science and Practice' video series

IPMNET Conference Pre-registration

IPMNET Conference 2025
Thursday 13 February 2025

Featured IPM Resources

The IPMNET Bulletin series will feature resources from across IPM initiatives. If you would like your resources featured, please get in touch.

ipmnet@adas.co.uk

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS
Department for Environment Food & Rural Affairs

IPMNET Bulletin series 2025

About the IPMNET Bulletin series 2025

Weekly themes from January to March 2025

1. Introduction to IPM Resources
2. Understanding crop physiology
3. How much to protect
4. Monitoring and forecast systems
5. Preventative approaches
6. Reviewing IPM Plans
7. Pesticide applications
8. Targeting applications
9. Understanding pesticide resistance
10. Environmental stewardship
11. Holistic IPM
12. Benefits of networking
13. Adaptive approach

Featured Resources

The following resources will be consistently promoted through the IPMNET Bulletin. These are all freely available resources designed to facilitate and encourage discussion and advancement of IPM strategies in multiple crops. If you would like other resources promoted through the IPMNET bulletin, please get in touch.

The IPM tool is designed to support active engagement between advisors and farmers, in the creation of a detailed, bespoke IPM Plan. This tool was developed with farmers and advisors, is easy to use, and takes around 2-4 hrs. Throughout the tool, links connect to trusted content.

IPMWORKS established a network of farmers across Europe demonstrating IPM in practice. It also created an online IPMWORKS Resource Toolbox, which acts as both a repository of IPM practices, case studies and training, and a search engine for IPM resources.

The IPM Decisions platform is an open access interactive website provide access to IPM decision support systems for a range of crops. Run based on open access weather data, the DSS provide a measure of risk of different crop pests.

Upcoming events

YEN Conference
21 Jan 2025

BYDV Webinar
29 Jan 2025

IPMNET Conference
13 Feb 2025

Science and Practice video series

Introduction to 'Integrated Pest Management (IPM): Science and Practice' video series

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IPMNET Bulletin 07 Jan 2025

Resources for advancing IPM

Integrated pest management (IPM) is a coordinated and planned strategy for the prevention, detection and control of pests, weeds, and diseases. Implementation of IPM on farm requires two stages:

1) Selection of appropriate pest management tactics, and
2) Integration of these tactics into an overall IPM Strategy

Some tactics may be highly compatible with one another, while other tactics may conflict. Creation of an effective IPM strategy therefore requires a constant cycle of planning, implementation, adaptation and review, balancing selection of novel and established approaches. This bulletin focuses on resources supporting IPM planning and strategy. The full series is on FarmPEP.

IPM Planning Tools

This IPM Planning Tool provides specific guidance on the IPM control measures that are relevant to the crops you grow, and the pests, weeds and diseases that are a problem on your farm. Using the Tool will also complete and record an IPM plan for your crops. https://ipmtool.net/

There are several supporting **videos** (How to set up and produce an IPM Plan and summary report) and **guides** (Apples, Brassicas, Improved Grassland, Maize, Oilseed Rape, Peas & Beans, Potatoes, Sugar Beet, Cereals, and Weeds) available alongside the IPM Planning Tool.

The IPM Tool

There are three sector specific versions of the VI IPM Plan; arable, grassland and horticultural businesses. The VI IPM Plan allocates scores for the different components of IPM, so you can track changes over time. Upon completion you will receive a tailored report of your plan.

VI IPM Plan

IPMWORKS Resources Toolbox

The IPMWORKS Resources Toolbox is a collection of training, case studies, guidance and other resources from across IPM in Europe. Highlights from the IPMWORKS eLearning training modules:

Module 1: Agrosystems – Concepts and theory. (Chapters 1-4)
Module 5: Invertebrate IPM (Chapter 1)

Science and Practice video series

Introduction to 'Integrated Pest Management (IPM): Science and Practice' video series

IPMNET Conference Pre-registration

IPMNET Conference 2025
Thursday 13 February 2025

Featured IPM Resources

The tool was produced by crop protection and IPM specialists at ADAS and SRUC, and links to independent guidance.

Development of the Tool was funded by Defra as part of a Test and Trial project.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS
Department for Environment Food & Rural Affairs

IPMNET Bulletin 14 Jan 2025

Understanding Crop Physiology

IPM protects the crop; the targeted parts and timings of the protection require depend on how the pest(s) injure the plant, and following impact on yield and/or quality.

The Science and Practice video "What parts of the crop canopy need protecting" (28 minutes) introduces the principles of managing sink vs source limited crops, using barley and wheat as respective examples.

Further IPMWORKS eLearning modules expand on how an understanding of crop physiology underpins effective IPM, including:

- The biology of weeds (20 minutes)
- Injury and damage caused by invertebrate pests (38 minutes)

Growth guides

Crop growth guides have been developed for many crops grown in the UK, and offer overviews of key physiological considerations for management. Links to a selection of growth guides are provided – please share others.

- AHDB: Oilseed rape, wheat, and barley, and Opti-Oat: Oats guides
- PGRO: Online Pulse Agronomy Guide
- BBRO: Sugar Beet Reference Book
- NIAB: Best practice guides for apples and plums

Case study

IPMWORKS: Assessing the Efficacy and Economics of an Integrated Pest Management Program: A Demonstration of IPM Biofortification Disease Management in Winter Wheat

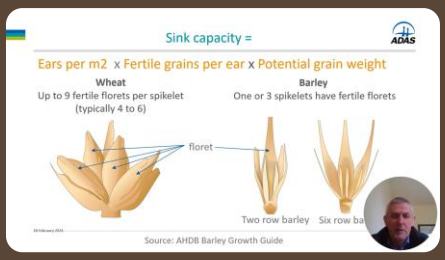
Yield Enhancement Network

Yield Enhancement Networks (YENs) were launched in 2012 to support and energise on-farm learning-by-sharing and enhance farming progress. Activities are embedded in understanding and managing crop physiology, and extend to address nutritional efficiency (YEN Nutrition), carbon intensity (YEN Zero), and IPM (IPMNET).

Upcoming IPM events

- **YEN Conference Harvest 2024, 21 January 2025** **£100**
  Results and insights from across the Yield Enhancement Networks
- **LEAF webinar, 22 January 2025** **Free**
  IPM best practice in the UK - Hear from the experts!
- **LEAF webinar, 24 January 2025** **Free**
  Scaling up sustainable farming: Promoting IPM across the EU
- **ADAS webinar, 29 January 2025** **Free**
  Managing BYDV

Science and Practice video series



What parts of the crop canopy need protecting: Science and Practice' video series

IPMNET Conference Pre-registration

IPMNET Conference 2025
Thursday 13 February 2025

Featured IPM Resources

IPM works TOOLBOX

A free IPM Resource Toolbox, containing reports, case studies, training and more.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 21 Jan 2025

How long do crops need protection for

Exactly which parts of the crop do we need to protect, and when?

Last weeks focus on crop physiology, and understanding which parts of the crop need protecting and when. This week's resources focus on how long we need to keep protection going for.

The Science and Practice video "How long does crop canopy need protecting?" (20 minutes) builds on the examples of barley and wheat.

The IPMWORKS eLearning modules promoted last week remain relevant, providing further examples for weeds and invertebrate pests:

- The biology of weeds (20 minutes)
- Injury and damage caused by invertebrate pests (38 minutes)

Pest Management Guides

Pest Management Guides offer a good starting point for both pest identification and understanding of their impact on crop physiology, and so protection required. Useful resources include:

- AHDB: IPM of cereal diseases, Encyclopaedia of pests and natural enemies, and How to manage weeds in arable rotations – a guide
- PGRO: Online Pulse Agronomy Guide
- BBRO: Sugar Beet Reference Book
- LEAF: LEAF Simply Sustainable IPM Guide

Case study and further reading

IPMWORKS: Assessing the Efficacy and Economics of an Integrated Pest Management Program: A Demonstration of IPM Biofortification Disease Management in Winter Wheat

Crop physiology: case histories for major crops. Editors: Sadras VO, Calderini DF (2021).

IPMWORKS Scotland Hub

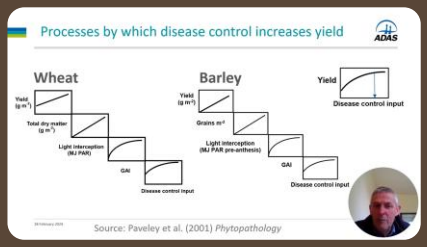
IPMWORKS created a number of Hubs across Europe, including in Scotland; find out more about what they've achieved!

IPMNET Conference, 13 February 2025

Selection of confirmed speakers:

- Sean Sparling, AICC
- Julie Smith, ADAS
- Rosemary Collier, Warwick University
- Holly Alpren, Defra

Science and Practice video series



How long does crop canopy need protecting

Sustainable Use Directive

The Sustainable Use Directive (Directive 2009/128/EC SUD) underpins IPM in Europe.
Agreed in 2009, when the UK was still a member of the European Union, it lays out the core principles of the sustainable use of pesticides in crop protection. Its 25 pages long,.

Read it here.

First case of glyphosate resistance found in UK - WRAG and ADAS announcement (January 2025)

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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Department for Environment Food & Rural Affairs

IPMNET Bulletin 29 Jan 2025

Monitoring and Forecast systems

The more we understand about pests, the better placed we are to understand what determines epidemics, assess the risk, and make treatment decisions according to need. Monitoring and forecast systems help guide these decisions, by reducing uncertainty around which pests are more or less likely to be a risk to the crop, and when.

The Science and Practice video "How to predict crop epidemic severity" (22 minutes) builds on the examples of barley and wheat. The IPMWORKS eLearning modules include a chapter on Decision Support Systems and monitoring as part of invertebrate IPM (22 minutes).

Crop monitoring resources

There are many excellent guides for crop monitoring; please contact ipmnet@adas.co.uk if you are looking for a specific crop monitoring guide. A selection of relevant resources include:

- AHDB Webinar recording: How to monitor crop development and disease (1hr 28 minutes)
- Warwick Crop Centre - Horticultural Crop Pest resources
- AHDB Horticulture legacy website
- SmartProtect Platform: Database of technologies and methodologies for IPM in vegetable production for open-field and greenhouse production systems.
- The Insect Survey a national resource hosted by Rothamsted funded by BBSRC. This network of suction and light traps that collect invaluable data on the migration of moths and aphids
- PGRO video How to monitor for aphids in pulse crops (30 seconds)

Pest forecasting resources

Decision Support Systems (DSS) can provide a measure of the potential risk posed by a given pest in a given crop. These are based on either weather and/or observation driven models, created from target research. Many DSS are available from public and commercial providers, including:

- IPM Decisions https://platform.ipmdecisions.net/
- AHDB (e.g. BYDV and Phoma)
- PGRO Pea Moth forecast, vining pea tool, and Agronomy App
- Warwick Crop Centre Pest updates

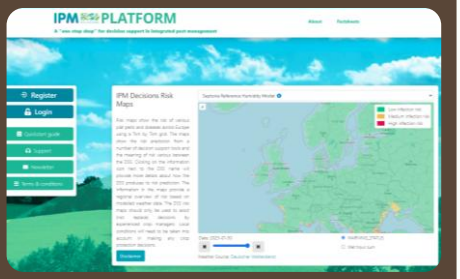
IPMNET Conference, 13 February 2025

IPM Scenario testing workshop (in person attendees only)
The aim of this workshop is to "live" future new crop management scenarios, working in teams to decide how you would apply IPM approaches on your farm or with your customers.

Science and Practice video series

How to predict crop epidemic severity

IPM Decisions



The IPM Decisions platform provides free access to 30+ pest forecasts for different crops.
It uses models developed from leading researchers across Europe.

Forecasts include:

- Risk of septoria infection
- Risk of cereal insect pests
- Risk of early and late blight of potatoes

We will highlight relevant risks from this platform through the growing seasons through the IPMNET.
See IPMDecisionsPlatform, About | IPM Decisions and How to register | IPM Decisions, which include a YouTube video on how to register.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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IPMNET Bulletin 04 Feb 2025

Preventative approaches

The impact of pest infestations are driven by the initial number of pests, population growth rate, and the maximum population size. Activities that reducing one or more of these factors will reduce the overall risk. Preventative approaches, many of which are put in place at the start of the season when selecting the crop, variety, and establishment method, influence pest risk and following management decisions through the rest of season.

The Science and Practice video "How to delay and slow crop disease epidemics" (23 minutes) discusses approaches for reducing disease epidemics in cereals. The IPMWORKS eLearning modules on integrated weed management covers a range of Individual tactics (20 minutes), including cultivation options (5 minutes), and two case studies; one on arable crops (35 minutes), and another on field vegetables (8 minutes). A further section covers biocontrol of invertebrate pests (25 minutes).

Variety/cultivar selection

Crop varieties/cultivars have different tolerance/susceptibility to different pests. Selection should reflect both the field situation and history, and intended management strategy. There are many useful resources available to support effective variety/cultivar selection and management, including:

- AHDB Recommended Lists for cereals and oilseeds and variety selection tool
- PGRO Pulse Description List
- AHDB variety evaluation trials for brassicas, carrots, onions and vining peas (2022)

It is important to adapt pest monitoring and management to variety/cultivar

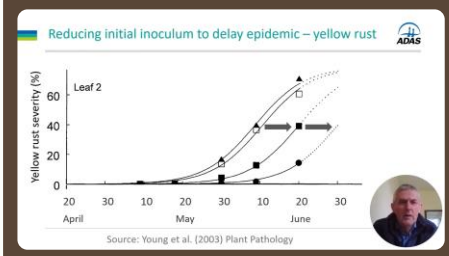
Further viewing/reading

- BBRO BeetTech24: Optimizing IPM in Sugar Beet
- IPMWORKS: A demonstration of companion cropping in winter OSR
- AHDB Strategic Farm East – BYDV Management
- IPMWORKS: IPM case studies from across Europe
- IPMWORKS: #IPM tutorial video series
- DEFRA Guidance: IPM in farming

IPMNET Conference, 13 February 2025

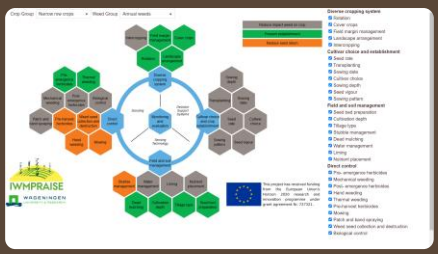
The IPMNET Conference is next week.
Attendance is free, but registration is required.
BASIS points will be available for in person delegates.
What can we learn from last year?
What can we do differently this year?

Science and Practice video series



How to delay and slow crop disease epidemics

Weed Management Tool



This free tool provides an essential guide to the options available for integrating weed management.

IPM Hubs

ADAS are currently running two IPM Hubs, one looking at BYDV management (**watch the recent webinar recording here**), and another looking at the role of companion cropping.

If you are interested in joining either Hub, or forming a new IPMHub, please contact **ipmnet@adas.co.uk**

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS
Department for Environment Food & Rural Affairs

IPMNET Bulletin 11 Feb 2025

Reflecting on IPM strategies

Over the last six weeks the IPMNET Bulletins have focused on IPM resources that support planning and preventative approaches. Starting with crop physiology and how much protection a crop might need, we then looked at the role of monitoring and forecasts in providing a measure of risk and improving targeting of IPM measures. Preventative approaches, including the combination of different establishment methods and varieties, can reduce or increase the risk of different pests, and need to be considered alongside in season risks.

Summary resources for IPM planning

Here are a few useful resources for IPM planning.

- IPM Tool – A free tool for creating IPM Plans
- Science and practice videos – How many have you watched?
- IPMWORKS Toolbox – A growing database for training, case studies and more
- AHDB IPM Hub – Full of IPM resources for Cereals and Oilseeds
- IPM Decisions platform – Free access to pest risk forecast and other decisions support systems ; set your account up now ready for the spring
- IPMWORKS eLearning Training Modules
- Integrated Weed Management Tool

IPMNET Conference, 13 February 2025

Pilot Hub members will receive their reports at the conference. Further results of the Pilot Hub and data analysis will be shared soon. You can watch the morning sessions livestreamed on YouTube using this link; later available as a recording.

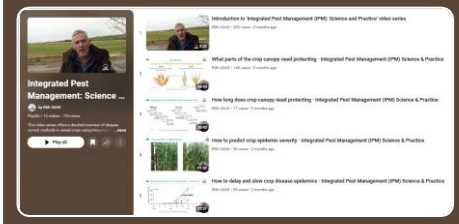
Things to consider ahead of the IPMNET Conference...

- How the IPM resources above be improved?
- How do we measure effective implementation of IPM approaches?
- What different approaches can we use manage pests?
- Would we cope with future changes? Are we ready for emergence and spread of new pesticide resistant pests?

Evaluating IPM

Continuous assessment of crop protection measures is a key part of IPM. IPM Plans should be reassessed, ideally annually, reviewing existing approaches and considering novel ones as they emerge. Total pesticide inputs, yield, agronomic techniques and farm specific factors all play a part in the design of IPM Plans. Joining smaller working groups, such as IPMNET Hubs, can help evaluation of individual approaches, by contrasting them with alternative approaches within the network.

Science and Practice video series

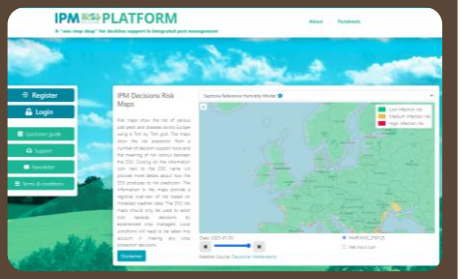


12 videos on the essentials of integrated disease management in cereals

Videos covered so far:

1. What parts of the crop canopy need protecting
2. How long does crop canopy need protecting
3. How to predict crop epidemic severity
4. How to delay and slow crop disease epidemics

IPM Decisions



Set up your free IPM Decisions account now, before the season gets busy!

IPMNET Hubs

Interested in benchmarking your IPM approach?

Contact us:
ipmnet@adas.co.uk

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS | Department for Environment Food & Rural Affairs

IPMNET Bulletin 19 Feb 2025

Pesticide applications

A key principle of IPM is to use as little pesticide as possible, and only as much as is necessary according to the needs of the crop.

The Science and Practice video "How much fungicide to spray" addresses the question of how much treatment a crop needs. For cereals and oilseeds, the AHDB fungicide performance trials provide reliable, independent information on the relative efficacy of fungicides against key diseases in wheat, barley and oilseed rape.
For horticultural crops, the SmartProtect Platform can help you find technologies and method for targeted pesticide applications. All these resources are also found in the IPMWORKS Toolbox.

Critical to IPM, decisions on pesticide application and dose must be made in the context of the risk of pest infestation, and the other management options that have been implemented.

The Sustainable Farming Incentive

Within the Sustainable Farming Incentive (SFI)'s 102 actions, there are payments for carrying out specific IPM actions. For example, £1,129 will be paid for action CIPM1: Assess integrated pest management and produce a plan (the payment is for the assessment and plan per year). Other actions, which you can find on the FIND tool, cover:

- creating habitats for natural crop pest predators
- using companion cropping to suppress weeds, reduce diseases and provide protection from crop pests
- minimising use of insecticides
- precision farming

Defra Guidance on IPM in farming

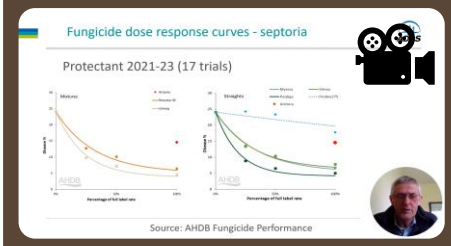
Nozzle Selection and Maintenance

Selecting the appropriate nozzle will have implications for product efficacy and the risk of losses both in run-off to the soil and as spray drift. Read more on this Best Practice Guide from the Voluntary Initiative

IPMNET Conference, 13 February 2025

The recording of the morning sessions from the IPMNET Conference will be available soon, along with the slides and a summary of the day.

Science and Practice video series



How much fungicide to spray

Alternative Weed Control

Using AI sensor technology on the sprayer to detect weed for crop protection.

From the Oper8 project

IPMWORKS Webinar: "Do we still need IPM?"

This free online event will underscore the continued importance of IPM in modern agriculture.
12 March 2025
Link to details

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS | Department for Environment Food & Rural Affairs

IPMNET Bulletin 25 Feb 2025

Targeted applications

Despite best efforts to avoid the need for pesticides, intervention may still be needed to manage infestations. In these cases, it is essential to target applications to ensure effective application of the product onto susceptible crop, and minimize impact on non-target organisms. The Science and Practice video "When to apply fungicides to crops" (26 minutes) discusses when it is most efficient to treat with fungicides – the principles can be applied to other crops/pesticides.

- Only treat if you need to.
- In wheat (a source limited crop) T1 and T2 timings are usually cost effective. T0 and T3 are sometimes cost effective.
- In barley (a sink limited crop) T1 timing is critical.
- Treating too early loses as much efficiency as treating too late.
- A higher dose (within max label dose) only extends the 'spray window' by a few days.

Critical to IPM, decisions on pesticide application and dose must be made in the context of the risk of pest infestation, and the other management options that have been implemented. The use of decision support systems (DSS) can improve targeting and reduce waste.

Using DSS to target applications

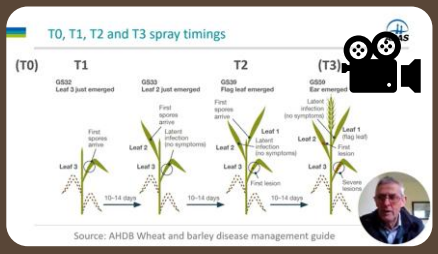
The IPM Decisions Platform contains pest risk forecasts available for crops in 2025. Most models start to run from March; setting up your farm and selecting systems of interest now will save time later.

- Disease risks: there are numerous models available for cereal diseases, including both forecast and observation based models. Most were developed in Denmark/Germany, so should be interpreted with caution and always in the context of field observations. There are current no OSR disease models on the IPM Decisions platform, instead please visit the AHDB models directly.
- Invertebrate risks: most models for invertebrate pests forecast likely timings of emergence/migration events. If these occur during vulnerable periods, the crop may be at risk. The models therefore help guide on whether/when in field monitoring is required.
- IPMNET Bulletin updates: From March – June the IPMNET Bulletins will highlight relatively high risks in the UK.

Further reading

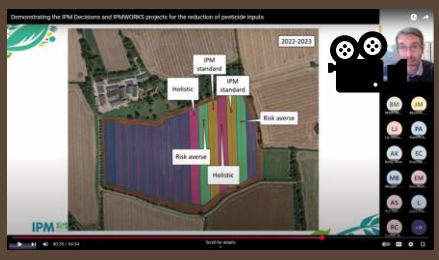
- EffiSpray – Based on weather forecast, this free online tool guides on the ideal day/hour for spray applications.
- AHDB Fungicide programmes for wheat
- AHDB Oilseed rape disease management guidance
- PGRO – Online Pulse Agronomy Guide
- Potato cyst nematodes (PCN): The hidden enemy of potato crops

Science and Practice video series



When to apply fungicides to crops (25:48)

IPM Webinar recording



Demonstrating the IPM Decisions and IPMWORKS projects for the reduction of pesticide inputs (55:34)

IPMWORKS Webinar: "Do we still need IPM?"

This free online event will underscore the continued importance of IPM in modern agriculture.
12 March 2025
Link to details

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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Department for Environment Food & Rural Affairs

IPMNET Bulletin 25 Feb 2025

IPM Decision Support Systems 2025

Highlights of DSS on the IPM Decisions Platform

Cereal DSS

- Septoria Humidity Model: Weather data from GS 31 are used. The humidity model estimates risk of septoria tritici blotch infections in winter wheat. Risk of attack is assumed after 20 hours with continuous wetness. A wet hour is defined as minimum 0.2 mm precipitation in an hour or minimum 85% relative humidity. This model also drives the Septoria risk map on the platform home page. Not yet formally validated in the UK, requires input on growth stages and applications.
- Various threshold Models: For various cereal leaf diseases, these models provide thresholds for action – requires input on growth stage and % infection observed.
- Various disease Models: Weather-based simulation model developed in Germany, calculate the infection probability of several disease in cereals to define periods of high risk, to guide field observations.
- Invertebrate pest models: weather based models that guide on risk of emergence of saddle gall midge and orange wheat blossom midge; guides field observations.

Oilseed DSS

- For oilseed rape disease forecasts, please refer to the AHDB website for sclerotinia and phoma leaf spot forecasts
- Pollen beetle migration model; based on widespread migration during period in which the air temperature is on average above 15 degrees Celsius, reports risk to crops at vulnerable growth stages. This model also drives the pollen beetle risk map on the platform homepage.

Potato DSS

- As well as the Hutton Criteria model for Late Blight, two other late blight models as well as one early blight (Alternaria) model are available.

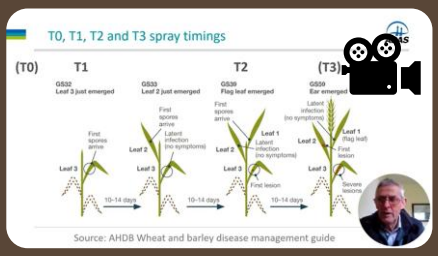
Other DSS

- Cabbage Root Fly
- Carrot Fly
- Cutworm
- Narcissus bulb fly
- Pollen beetle (in broccoli)

You can find information about all the models here:
IPM Decisions DSS information list

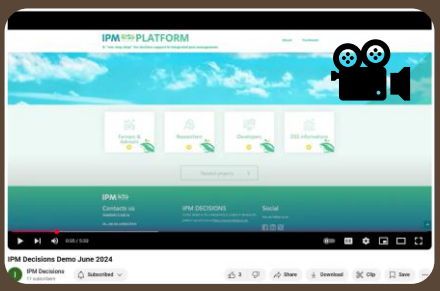
You can also search the IPMWORKS Toolbox using:
Resource types = “IPM Decision Support System” or “IPM Decisions Model”

Science and Practice video series



When to apply fungicides to crops

IPM Decisions



Platform Demonstration video (5:33)

IPMWORKS Webinar: “Do we still need IPM?”

This free online event will underscore the continued importance of IPM in modern agriculture.
12 March 2025
Link to details

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS
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IPMNET Bulletin 4 Mar 2025

Understanding Pesticide Resistance

We are losing pesticides through both legislative withdrawal from use, and reduced efficacy through development of pesticide resistance. New chemistry is no longer arriving quickly enough to keep pace with losses; the importance of addressing pesticide resistance was emphasized at the IPMNET Conference; watch the talk here.

The two-part IPM Science and Practice video "How to manage fungicide resistance" (part A = 28 minutes, part B = 21 minutes) walk through the mechanisms for resistance in cereal fungicides, and resistance management options. The IPMWORKS eLearning chapter 5.6 focuses on pesticide resistance management for invertebrates (9 minutes).

Slowing down selection of pesticide resistance populations ultimately boils down to three strategies:

1) Reduce growth rates of the resistance and sensitive populations
2) Reduce growth rate of resistant population relative to sensitive population
3) Reduce time that the populations are exposed to pesticide

The videos detail how these strategies work in practice. Different management strategies may be needed for diseases, weeds, and invertebrate pests – depending on (for example) the Mode of Action (MoA), but IPM fundamentally underpins any resistance management strategy.

Using a range of approaches to reduce the need for pesticide applications, targeting application where required, using models and forecasts, and using a range of MoA, all contribute to good resistance management.

Resistance Actions Groups in the UK

The UK RAGs produce guidance on pesticide resistance issues. Hosted by AHDB, this information can be used to help protect crops and the long-term efficacy of pesticides.

Fungicide Resistance Action Group [FRAG]

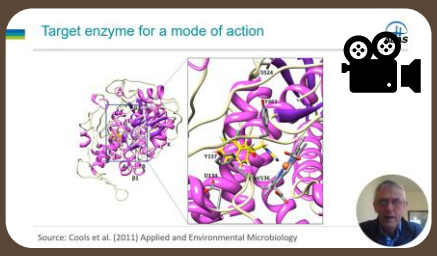
Weed Resistance Action Group [WRAG]

Insecticide Resistance Action Group [IRAG]

Further reading

- FRAG-UK Guidance
- WRAG-UK Guidance
- IRAG-UK Guidance

Science and Practice video series



How to manage fungicide resistance:
Part A - (27:48)
Part B – (21:29)

IPMNET Conference Outputs

The Importance of Pesticide Resistance management in Crop Productivity (22:10)

IPMWORKS Webinar: "Do we still need IPM?"

This free online event will underscore the continued importance of IPM in modern agriculture.
12 March 2025
Link to details

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

IPMNET Bulletin 12 Mar 2025

Environmental Stewardship

Most of the environmental impact of crop production is related to cultivation and nutrients to establish and grow crop canopy; allowing pests to destroy the canopy crop post-establishment is inefficient. Effective pest management is important to produce enough food, avoid the need for larger areas of production to meet demand, managing nitrogen inputs, and avoiding increasing water use.

To feed a growing global population, the agricultural sector must find a way to increase food production. Disease control is essential for this to happen, but what are the environmental ramifications, particularly around fungicide use? The IPM Science and Practice video "Crop disease control: Impact on the Environment" (25 minutes).

The following IPMWORKS modules relate to environmental stewardship: 1.5. Landscape ecology & epidemiology and agroecosystem management, and 4.2. Disease management in the context of Sustainable Agriculture

Pesticides are an important tool in IPM, but it is essential that they are managed to avoid resistance development and minimise impacts on human and environmental health.

Further reading

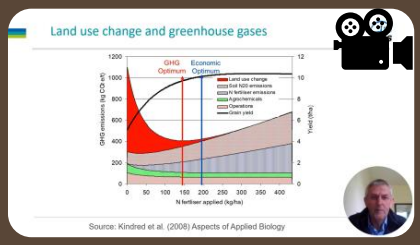
IPM for Biodiversity Enhancement; this review has shown that there is an extensive amount of evidence on the effects of IPM on species abundance, but there are many knowledge gaps, and these are detailed in the individual sections.

The State of Nature report is the most comprehensive report on the UK's current biodiversity. It used the latest and best data from biological monitoring and recording schemes, to provide a benchmark for the status of our wildlife.

This briefing summarises the latest knowledge on how chemical pesticides impact human health and the environment, and presents good practices to reduce their use and risk across Europe.

The SPRINT-project aims to develop a Global Health Risk Assessment Toolbox to assess impacts of Plant Protection Products (PPPs) on environment and human health and to propose several transition pathways. SPRINT has produced factsheets on pesticide residues.

Science and Practice video series

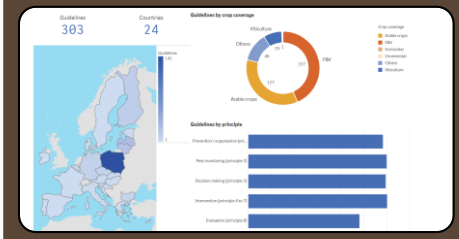


Crop disease control: Impact on the environment

IPMNET Conference Outputs

Implementing IPM on farm – David Bell, Fairfield Farms and Chair of the VI (26:10)

Crop/Sector guidelines inventory



This free online database contains guidelines and case studies from across Europe on IPM implementation
Link to details

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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IPMNET Bulletin 19 Mar 2025

Holistic IPM

Adopting a holistic approach to IPM requires careful combination of different preventative, monitoring, and control measures.

Main message

1) Each additional control method has a diminishing return for efficacy, but a benefit for maintaining control in the future
2) Pick the most effective methods and combine them.

The IPM Science and Practice video "How to combine control methods" (24 minutes) looks at how to combine control methods using the eight principles behind IPM. The IPMWORKS project define five pillars of Holistic IPM, which together support decrease reliance on pesticides while maintain effective management.

Pillar 1: Agricultural landscapes with diverse semi-natural habitats designed to manage pests, weeds and diseases, e.g. through spatial diversity in terms of landscape features such as hedgerows, grass and flower strips and other semi-natural habitats favouring beneficial biodiversity.

Pillar 2: Cropping systems designed to manage pests, weeds and diseases, e.g. through diversified crop rotations, cultivars resistant to diseases, intercropping, sowing dates adapted to escape pests, moderate fertilization, crop mixtures, and other practices.

Pillar 3: Optimized decision making guiding operational and strategic IPM choices, e.g. precise monitoring and IPM Decision Support Systems to avoid unnecessary treatments, and periodic evaluation of IPM strategies to continually fine-tune and improve context-specific approaches.

Pillar 4: Preferential use of non-chemical control options, e.g., mechanical weeding (and eventually robotics), release of biocontrol organisms and agents, mating disruption, protective nets, and other non-chemical methods.

Pillar 5: Increased efficiency of treatments, e.g. through technologies for precision and patch spraying, including anti-resistance strategies.

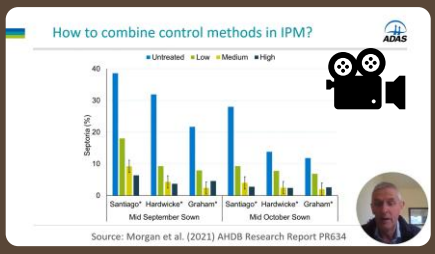
The following IPMWORKS modules relate to holistic IPM

1.6. Agroecosystem management for IPM. Holistic IPM concept
1.7. Two case studies: protected and arable crops
1.8. Open questions for reflection and discussion

And all chapters in Module 6: Holistic IPM examples

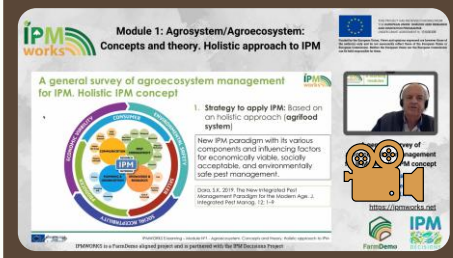
6.1. Holistic IPM in Orchards.
6.2. Holistic IPM in Arable crops.
6.3. Holistic IPM in Vineyards.
6.4. Holistic IPM in Outdoor vegetables.
6.5. Holistic IPM in Greenhouse.

Science and Practice video series



How to combine control methods (24 minutes)

IPMWORKS eLearning



Agroecosystem management for IPM. Holistic IPM concept (7 minutes)

IPM Planning Tool

The IPM Planning Tool has been designed with holistic IPM in mind. The Tool helps guide towards compatible approaches and avoids antagonistic methods for IPM.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS
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IPMNET Bulletin 26 Mar 2025

UK Pesticide National Action Plan 2025

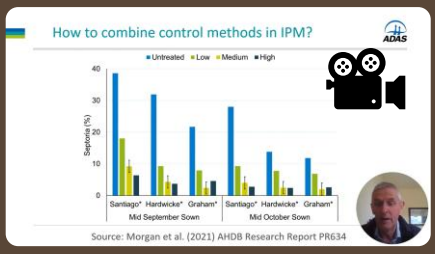
Last week the UK published the Pesticide National Action Plan. The Pesticide NAP has three Objectives.

- Objective 1: Encourage uptake of IPM
- Objective 2: Set clear targets and measures to monitor use of pesticides
- Objective 3: Strengthen compliance to ensure safety and better environmental outcomes

NAP Actions to encourage uptake of IPM

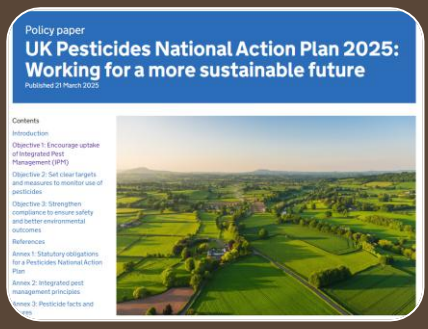
Action 1	• Increase awareness and knowledge of IPM strategies through the promotion of decision support and planning tools, practical guidance and access to learning and evidence from research and development.
Action 2	• Work with farming advice services to improve the current IPM advice offer, so that it supports increased IPM uptake.
Action 3	• Work with training providers to review the IPM offer to identify any gaps and areas of improvement to support IPM uptake.
Action 4	• Explore opportunities for IPM facilitation funding for farmer, grower and forester led networks.
Action 5	• Gather more data on IPM and pesticide usage in the amateur and amenity sectors to better understand use, how these contribute to overall pesticide load and potential IPM approaches.
Action 6	• Review regulatory barriers to innovation, particularly around precision application technologies: explore the potential benefits and drawbacks of pesticide application by drones and consider whether rules and guidance need to be amended.
Action 7	• Develop an internal evidence-based horizon scanning capability to identify, understand and mitigate pest control gaps.
Action 8	• Continue to provide additional support to biopesticide applications.
Action 9	• Consider how we can make improvements to the arrangements for GB biopesticides to reduce burdens without compromising environmental and human health standards.
Action 10	• Continue to direct funding to facilitate applied research and development on priority areas where alternatives to conventional chemical pesticides are lacking, particularly in major crops.

Science and Practice video series



How to combine control methods (24 minutes)

UK Pesticides NAP 2025



Published 21 March 2025

IPM Planning Tool

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Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 02 Apr 2025

Benefits of networking

IPM strategies need to be developed to fit the individual farms considering, among other things, the landscape in and around the farm, the crops being grown, the expected pest pressures, and IPM tools available. Engaging in local and national networks support development of IPM approaches through sharing of knowledge, experience and tools.

The IPM Science and Practice video "How to manage pathogen virulence" (24 minutes) highlights challenges of managing disease virulence and fungicide resistance. These challenges, like so many in crop protection, need to be addressed both at an individual farm level, as well as at a national level, which requires farmers, agronomists, researchers, industry and policy actors to work together .

Networking events and videos

Networking events and videos are often used to help connect us, and share up to date information with those who most benefit from it.

- IPMWORKS Module 8: Running events
  If you are interested in running IPM Networking events, this training module introduces some of the tools you can use.
- IPMWORKS Tutorials – video playlist
  On farm demonstrations are effective in showcasing IPM approaches, and facilitating discussion; this video series provides highlights from IPMWORKS demo events 2020-2024
- IPMNET Hubs
  Are you interested in novel IPM approaches, such as using novel varieties, DSS, companion crops? Get in touch!
  ipmnet@adas.co.uk

Advisor network & Pest and Disease Survey

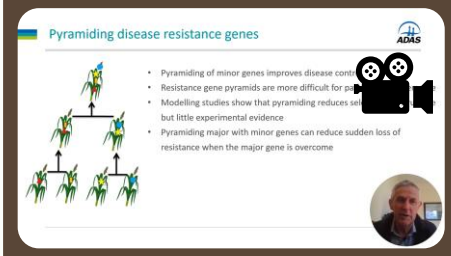
Are you an agronomist looking to reduce the use and risk of pesticides?

- Join this international network of advisors
- Discuss IPM with advisors and experts across Europe
- **Join network directly here**

Defra Survey of Crop Pests and Diseases – online platform feedback requested

- The Defra Survey of Crop Pests and Diseases has been collecting data about pest and disease severity on commercial farms since 1970 for winter wheat and 1982 for winter oilseed rape. ADAS have built an online platform to freely display this data.
- We'd love to get some feedback on the platform! **Five minute online survey here**

Science and Practice video series



How to manage pathogen virulence (24 minutes)

AdvisoryNetPEST

This EU funded project aiming to connect agricultural advisors on IPM is partnered with IPMNET. Join directly here

Defra Pest and Disease Platform

In the P&D platform you can look back at region disease data across England.

Tell us what you think in this survey

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS | Department for Environment Food & Rural Affairs

IPMNET Bulletin 08 Apr 2025

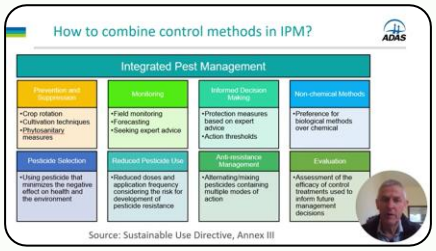
Adaptive approach to IPM

Good IPM plans are important but will always need to be adapted during the season in response to crop condition and the pest infestations that develop. IPM is most effective where in-season decisions build on the preventative/mitigating actions already in place, and in consultation with peers, advisors, and reliable decision support systems.

The IPM Science and Practice video "Cereal crop variety choice and disease control" (52 minutes) details how a plants defend themselves from fungal pathogens using three tactics; its ability to escape from danger, resist the disease attack, or tolerate what is happening. This video explores each of these and the role that cereal crop variety plays in enhancing those abilities.

Combining actions

Holistic IPM combines control methods, and monitoring crop and pests to identify where effective control is achieved, and where further intervention is needed.



- ❖ Identify control methods with proven efficacy
- ❖ If more control comes from one method, less control is needed from another
- ❖ Combined efficacy is predictable from efficacy of individual control methods
- ❖ Each additional control method has diminishing return for efficacy, but a benefit for maintaining control in the future.

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- Discuss IPM with advisors and experts across Europe
- **Join network directly here**

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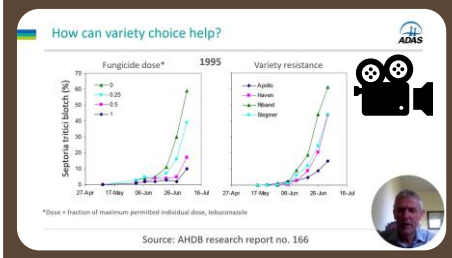
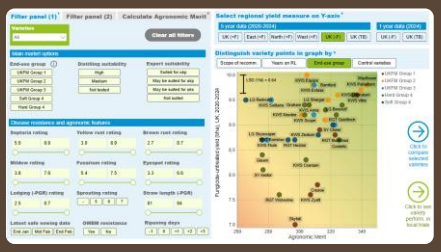


Cereal crop variety choice and disease control (52 minutes)

AHDB Variety Selection Tool



Use the tool to check the pest and disease ratings for cereals and oilseeds ahead of in-season IPM decisions

Defra Pest and Disease Platform

In the P&D platform you can look back at region disease data across England.

Tell us what you think in this survey

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS | Department for Environment Food & Rural Affairs

IPMNET Bulletin 15 Apr 2025

IPM in-season 15 April 2025

Cereals

As winter wheat approach GS31, the potential risk of diseases increases – but is not inevitable.

Septoria blotch

- Initial septoria pressure is driven in part by overwinter conditions; warmer, wetter conditions increase spore production, and so build up a higher initial pressure at GS31. After this, risk is driven by other factors such as relative humidity in the crop, crop varietal resistance, and canopy structure.
- The winter conditions in 2023/24 were highly conducive to spore production, leading to a high initial pressure last year, followed by periods of wet weather that subsequently increased infection in crops.
- This year, the winter conditions have been slightly cooler and much dryer compared to last year. Given these weather conditions our model predicts that the initial septoria risk is low.
- An explanation of this model is given in the IPM video series episode on "How to predict crop epidemic severity".
- Local conditions should continue to be monitored; after GS31, where the crop remains humid for extended periods, this increases the risk of septoria infection – even where the initial number of infecting spores are low.

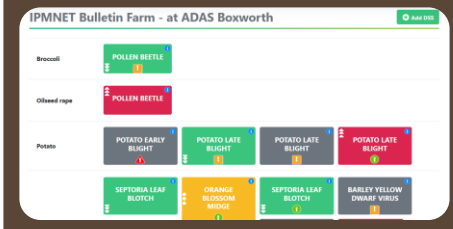
Yellow rust

- GS31/32 low observations of yellow rust (1-10% plants infected) are enough to justify action. 2024/25 winter conditions were relatively mild, increasing the risk of yellow and brown rusts.

IPM Decisions

Check IPM Decisions for current risk forecasts

IPM Decisions



Check IPM Decisions for current risk forecasts

Main messages:

Septoria blotch

- Treat crops according to need; given the relatively lower expected starting pressure, and current dry conditions in many parts of the UK, reduced inputs may be possible for some this season.
- Exploit varietal resistance; if rated above 7 for septoria, inputs should be avoided as far as possible.
- Check the IPM Decisions platform to see current septoria risk map – log in for detailed risk analysis, and for other cereal DSS

Other diseases

- If treatments are needed for other diseases, use targeted product selection.
- Keep alert for early rust infections. The winter has been warm enough to already produce yellow rust infestations in the UK – there are several relevant systems on the IPM Decisions platform for guidance on management based on observations and weather condition.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

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IPMNET Bulletin 24 Apr 2025

IPMWORKS - In-field comparisons of IPM approaches

As part of the Horizon 2020 project IPMWORKS, growers across Europe were supported in carrying out two or more strategies within the same/comparable field, comparing a conventional strategy with an IPM based strategy as part of demonstration activities. Each comparison case study is available on the IPMWORKS Resource Toolbox via the links below.

IPM Decisions

Check IPM Decisions for current risk forecasts

Arable crops

IPMWORKS: Using a Bio-fortification strategy to control foliar disease in wheat in Scotland (Part 1)

IPMWORKS: Using a Bio-fortification strategy to control foliar disease in wheat in England (Part 2)

IPMWORKS: Using intercropping of lentils with durum wheat to reduce weed populations in Italy

IPMWORKS: Using companion cropping to reduce weeds and pest pressure in Oilseed Rape in Scotland

IPMWORKS: Using resistant potato varieties in management of potato late blight in Germany

IPMWORKS: Using DSS to improve canopy disease management in arable crops in Sweden

IPMWORKS: Using DSS to improve Barley Yellow Dwarf Virus (BYDV) management in England (Part 1)

IPMWORKS: Using DSS and variety to improve BYDV management in England (Part 2)

IPMWORKS: Using Decision Support System to improve BYDV management in the Netherlands

IPMWORKS: Using a mechanical weeder in spring barley in England

IPMWORKS: Using sulphur for disease control in wheat in England

IPMWORKS: Management of slugs in winter wheat in Spain

Vineyard

IPMWORKS: Using pheromone disruption to reduce grapevine moth damage in vineyards in Spain

IPMWORKS: Using cover crops to minimise herbicide use in vineyards in Greece

IPMWORKS: Using holistic approaches to manage green leafhopper in vineyards in Portugal

Soft Fruits

IPMWORKS: Using biocontrol for soft fruit root diseases in Finland

Orchard

IPMWORKS: Using rock powder in the management Olive fly in Italy

Outdoor vegetable

IPMWORKS: Mulching in zucchini, a comparison between polyethylene plastic and biodegradable mulch in Belgium

IPMWORKS: Using mechanical weeding in a crop of pod peas to reduce weed pressure in Finland

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 24 Apr 2025

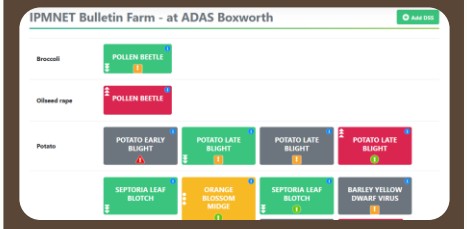
IPM in-season 24 April 2025

- Modelled relative humidity in crops remains low in most parts of the UK. In the south west, the risk of **Septoria blotch** is moderate due to recent wetter conditions.
- GS31/32 low observations of yellow rust (1-10% plants infected) are enough to justify action. 2024/25 winter conditions were relatively mild, increasing the risk of **yellow rust**.
- Adult **Saddle gall midge** are predicted to emerge over the next couple of weeks. In areas with historic issue, be prepared to start monitoring as any treatment must be applied before larvae move under the leaf.
- Adult **cabbage root fly** have likely now emerged in most parts of the UK, and egg laying is likely to being this week.
- Adult **carrot fly** are predicted to now be emerging in the south east, and expected to start most parts of the UK this week.
- **Pollen beetle** migration is patchy, as temperatures are just about warm enough in parts of the UK – but action is only required for backward crops not yet in flower AND where abundance is greater than AHDB thresholds.

IPM Decisions

Check IPM Decisions for current risk forecasts

IPM Decisions



Check IPM Decisions for current risk forecasts

IPM Decisions Septoria Risk Map 24 April 2025

This map is based on a restricted version of the Septoria Humidity Model, using only the weather dependent aspects of this Decision Support System. The full Septoria Humidity Model is available in the IPM Decisions platform. Risks displayed in the map may be higher or lower when crop specific parameters are provided. Consultation of the full version is required to support IPM decisions.

This map indicates the risk of splash-borne foliar diseases of wheat (septoria leaf blotch, glume blotch and tan spot) based only on the number of 'wet hours' in a 72 hour period (yesterday, today and tomorrow).

The risk criteria were developed in Denmark as the Septoria Humidity Model (Restricted).

The risk map can be used to assist (not replace) decisions by experienced crop managers, taking into account all relevant local risk factors. If a risk is indicated in your area, please login and set up the complete Septoria Humidity Model for your farm, and check its outputs for a more in-depth assessment.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 2 May 2025

IPMWORKS - In-field comparisons of IPM approaches

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IPM Decisions

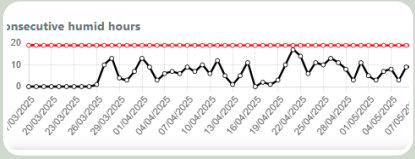
Check IPM Decisions for current risk forecasts

IPMWORKS: Using Decision Support Systems to improve canopy disease management in arable crops in Sweden

Decision Support Systems (DSS) are essential tools to optimise fungicide applications for managing diseases. The use of a DSS allows farmers to make informed decisions, potentially reducing fungicide inputs without compromising disease management or yield. The use of a DSS was evaluated in seven fields in different regions of Sweden in 2023, using a DSS to guide fungicide application timings to manage septoria leaf blotch in winter wheat. Timing of fungicide applications were based on the Crop Protection Online CPO humidity model through the Swedish Board of Agriculture, which is also freely available across Europe on the IPM Decisions platform. The CPO septoria model estimates risk of septoria tritici infections in winter wheat. DSS-timed treatments effectively reduced disease severity and maintained yields, generally comparable to routine growth stage-based programmes and higher than untreated wheat. In four cases, the DSS determined low disease risk, so no fungicides were applied, no disease was observed and there was no recorded yield impact. Overall, the comparisons demonstrated the efficacy of DSSs in optimizing fungicide applications, allowing farmers to make informed decisions based on the risk of disease

Read the full case study on the IPMWORKS Toolbox

Watch the IPM video “How to predict crop epidemic severity”



Consult the IPM Decisions septoria humidity model

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 2 May 2025

IPM in-season 24 April 2025

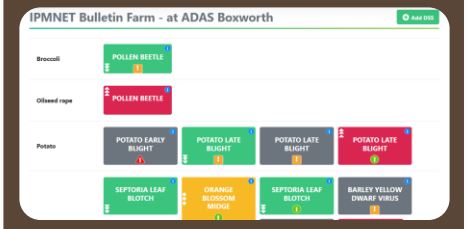
From IPM Decisions

- Modelled relative humidity in crops remains low in most parts of the UK, forecasting a low risk of **septoria** infection.
- Adult **saddle gall midge** emergence is forecast to have now started. In areas with historic issue, be prepared to start monitoring as any treatment must be applied before larvae move under the leaf.
- Adult **cabbage root fly** are predicted to start egg laying from next week in many parts of the UK.
- Adult **carrot fly** are predicted to be emerging across most parts of the UK this week.
- Risk of **orange wheat blossom midge** is low
- Risk of **late blight of potatoes** is low
- For the latest information on aphids, please refer to the Rothamsted Research aphid bulletin.

IPM Decisions

Check IPM Decisions for current risk forecasts

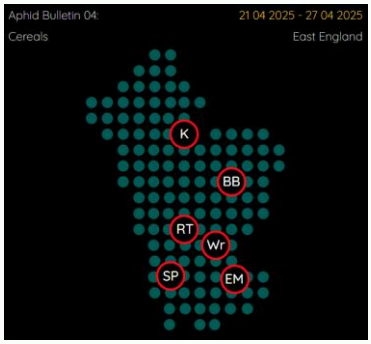
IPM Decisions

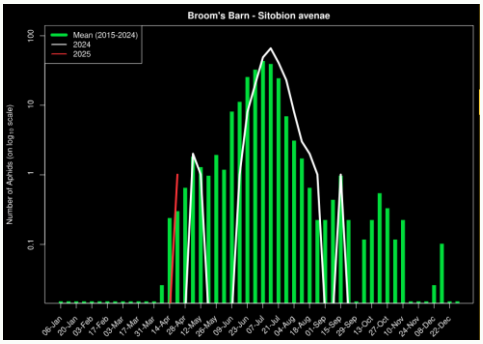


Check IPM Decisions for current risk forecasts

Rothamsted Research – Aphid bulletin

The Aphid Bulletin is based on data from a network of sixteen suction-traps. The traps are emptied daily during the 'aphid season' and the aphids identified to species in most cases. Each trap is representative of what is flying over an area of radius approximately 80 km.





Aphid Bulletin: Results (Pictured: Broom's Barn *Sitobion avenae)*

Distribution and abundance of pest aphids at a regional scale. The information is based on data from part of a national network of sixteen suction-traps.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 8 May 2025

IPM in-season 8 May 2025

From IPM Decisions

- Modelled relative humidity in crops remains low in most parts of the UK, forecasting a low risk of **septoria** infection.
- Adult **saddle gall midge** emergence is forecast be at around 50% complete by mid-May. In areas with historic issue, be prepared to start monitoring as any treatment must be applied before larvae move under the leaf. This year, emergence modelled to be around 1 week later compared to 2024.
- 95% of adult **cabbage root fly** are predicted to have emerged, and egg laying is now predicted as active across the UK.
- 50% of adult **carrot fly** are predicted to have emerging across most parts of the UK this week, and egg laying is now predicted to begin this week.
- Risk of **orange wheat blossom midge** is low
- Risk of **late blight of potatoes** is low

Aphid bulletin

For the latest information on aphids, please refer to the Rothamsted Research aphid bulletin.

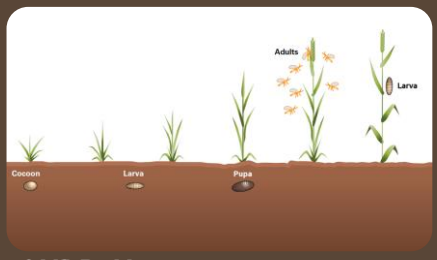
From Warwick pest activity 2025

- Aphids – relevant aphid observations from the Aphid bulletin
  - There are forecast models here for Lettuce aphid and willow-carrot aphids
- Cabbage root fly forecast – the same model as on IPM Decisions
- Yellow water traps and cabbage root fly eggs at Wellesbourne 2025, shows real data on egg laying, corroborating the forecast on IPM Decisions. Also reports observations on bean seed flies, pollen beetle, flea beetles (including cabbage stem flea beetle), and brassica weevils.
- Carrot fly observations at Warwick –shows real data on emergence, corroborating the forecast on IPM Decisions
- Diamondback moth sightings 2025
- Silver Y moth sightings 2025

IPM Decisions

Check IPM Decisions for current risk forecasts

Orange wheat blossom midge



AHDB: How to manage orange wheat blossom midge

Orange wheat blossom midge – a low risk year?

Orange wheat blossom midge (OWBM) larvae feed on developing grains, causing them to become small and shrivelled. They can also damage the outer grain layer (pericarp), making the grain vulnerable to fungal infection and premature sprouting. Susceptible crops are at the highest risk when adult midge emergence coincides with ear emergence, particularly growth stages 53–59. The OWBM model IPM Decisions predicts the emergence of adults and associated migration of females into vulnerable crops, when increased monitoring and/or treatment may be appropriate. Rainfall is a key trigger in the development of the OWBM lifecycle. Given the low rainfall across the UK in 2025, the model is currently forecasting a low risk for this pest.

- Local conditions may vary – check the forecast for your area in the platform
- In 2024 the warm wet spring was highly suitable for emergence, but few incidence of high abundance were reported – other factors play a role in driving risk, so the model outputs must be consulted within the context of individual crops.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 8 May 2025

IPMWORKS - In-field comparisons of IPM approaches

As part of the Horizon 2020 project IPMWORKS, growers across Europe were supported in carrying out two or more strategies within the same/comparable field, comparing a conventional strategy with an IPM based strategy as part of demonstration activities. Each comparison case study is available on the IPMWORKS Resource Toolbox via the links below.

IPM Decisions

Check IPM Decisions for current risk forecasts

IPMWORKS: Using a Bio-fortification strategy to control foliar disease in wheat in Scotland (Part 1) and England (Part 2)

Part 1 - Scotland 2022

Biostimulants and fertilisers, for plant vigour, together with bio-fungicides and other plant protection products, play an important role in agriculture, improving resilience and resistance against infection by fungal diseases. In this comparison, the effects of a holistic plant protection programme (IPM biofortification disease management strategy) integrating combined applications of micronutrients, elicitors for induced resistance, seaweed extracts and amino acids with bio-fungicides and minimal chemical fungicides, was compared to a reference disease control strategy in winter wheat grown in Scotland. The two strategies were applied along tramlines in a single field in 2022.

Read the full case study here

Part 2 – England 2022

Biofertilisers have recently gained prominence to increase fertiliser efficiency and reduce intensive application of nitrogen-based fertilisers. Derived from beneficial microorganisms, biofertilisers may contribute to soil fertility, enhance nutrient availability, and foster plant growth. This approach promotes healthier crops and mitigates the adverse impacts associated with excessive chemical fertiliser use but also has implications for plant resilience against pests and diseases. In this comparison, three strategies for crop nutrition and disease control were compared in winter wheat grown in England. Strategies were applied along tramlines in a single field in 2022.

Read the full case study here

You can find all the IPMWORKS in-field comparison case studies listed on FarmPEP

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 15 May 2025

IPM in-season 15 May 2025

From IPM Decisions

- Modelled relative humidity in crops remains low in most parts of the UK, forecasting a low risk of **septoria** infection.
- Adult **saddle gall midge** emergence is forecast be at around 50% complete.
- Adult **cabbage root fly** emergence predicted to be complete, and egg laying is predicted as 50% complete across the UK.
- 50% of adult **carrot fly** are predicted to have emerging across most parts of the UK this week and high risk of flight. Egg laying is now predicted have started, 10% complete – vulnerable crops should be monitored.
- Risk of **orange wheat blossom midge** is low-medium. In the south-west of UK recent rainfall has increased risk of emergence.
- Risk of **late blight of potatoes** is low.

Aphid bulletin

For the latest information on aphids, please refer to the Rothamsted Research aphid bulletin.

From Warwick pest activity 2025

- Lettuce aphid start of 2025 migration likely after June - monitor forecast
- Willow-carrot aphids start of 2025 migration likely to start in south weeks in coming weeks, elsewhere in June – monitor forecast
- Yellow water traps and cabbage root fly eggs at Wellesbourne 2025
- Diamondback moth sightings 2025
- Silver Y moth sightings 2025

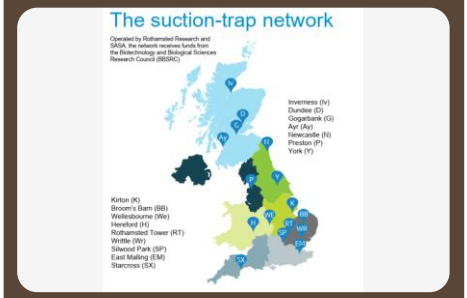
Aphids

Lots of aphids have been seen around the UK recently – not all are significant crop pests. Check the Aphid Bulletin for details. The warm spring means aphids are reproducing quickly, and leading to earlier development of apterous (winged) aphids in some species. Natural enemies, including ladybirds, hoverflies, lacewings, and parasitoid wasps, are also benefiting from spring conditions. Check any infestations against guidance and thresholds where available, and avoid any actions that may impact natural enemies populations.

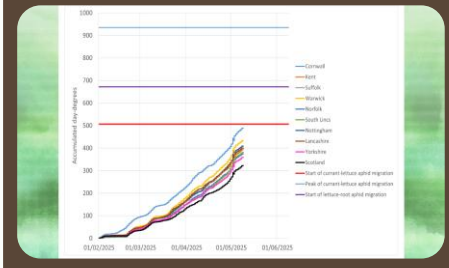
IPM Decisions

Check IPM Decisions for current risk forecasts

The UK aphid monitoring network



Warwick aphid forecasts 2025



Currant-lettuce and lettuce-root aphid forecasts

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 15 May 2025

IPMWORKS - In-field comparisons of IPM approaches

You can find all the IPMWORKS in-field comparison case studies listed on FarmPEP

IPMWORKS: Using Decision Support Systems to improve Barley Yellow Dwarf Virus (BYDV) management in England 2022 (Part 1), England 2023 (Part 2), and the Netherlands (2023)

Barley yellow dwarf virus (BYDV) significantly impacts UK cereals, and severe infestations can cause up to 84% yield loss in winter wheat. Transmitted mainly by bird cherry-oat aphids (*Rhopalosiphum padi*), and grain aphids (*Sitobion avenae*), control has shifted from a dependence on neonicotinoid seed treatments and application of pyrethroid insecticides towards integrated pest management (IPM) approaches. The UK T-sum decision support system (DSS) aids in managing BYDV by predicting aphid generations for targeted insecticide application. As this model does not include observation data it can overestimate infection risk, however when consulted alongside field observations it is a useful tool for targeting interventions and avoiding unnecessary applications. A more advanced BYDV DSS, ACroBAT, is under development, along with BYDV tolerant varieties.

England 2022-23 (Part 1)

This study compared the T-Sum model to 'risk averse' regular insecticide application and to a more holistic approach. The risk-adverse approach did not significantly reduce BYDV vectors or infection and had lower profit margins. Using the T-Sum approach, and the holistic approach were effective in managing the risk of BYDV to the crop in this comparison.

England 2023-24 (Part 2)

This study compared the T-Sum DSS with a Beta version of the AHDB ACroBAT , along with a BYDV tolerant variety. Consultation of both DSS guided towards a low risk of BYDV in either variety, and no applications were made. Symptoms of BYDV were assessed in both varieties, and found to be very low. The use of DSS and field monitoring allows for better risk assessment and a reduction in insecticide use in low pressure years.

The Netherlands (2023)

This study assess the potential for using the T-Sum model in the Netherlands. Aphid populations were monitored in two fields of winter wheat in autumn 2023 and the T-sum model used to guide insecticide applications. The T-sum results for these fields was also compared to a field which was drilled slightly later to demonstrate the impact of sowing date.

England 2024-25 (Part 3)

Further work is underway as part of the AHDB Strategic Farm East project, looking in further detail at the T-Sum and ACroBAT DSS and variety tolerance.

Find out more at the SFE Summer open day.

- *Thursday 19 June 2025*
- *The Morley Agricultural Foundation NR189DF*
- ***Book Now***

Dave Jones
AHDB SFE Host farmer

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS | Department for Environment Food & Rural Affairs

IPMNET Bulletin 30 May 2025

IPM in-season 30 May 2025

From IPM Decisions

- Modelled relative humidity in crops remains low in most parts of the UK, forecasting a low risk of **septoria** infection in most parts of UK, a medium risk in parts of south and west, and a high risk in parts of central Wales and NW England – check the details model in the platform for more accurate forecast.
- Adult **saddle gall midge** emergence is forecast approaching 90% complete.
- Adult **cabbage root fly** emergence and egg laying is almost complete across the UK.
- The majority of adult **carrot fly** are predicted to have emerged across most parts of the UK now, egg laying is now predicted around 60% complete
- Risk of **orange wheat blossom midge** is low-medium. In the south-west of UK recent rainfall has highlighted a few emergence events, and adults have been observed in low numbers.
- Risk of **late blight of potatoes** is currently low.
- Risk of cutworm is currently low, base on 1st arrival of adult moths 22 May 2025 (default in model is 1 June 2025)

Aphid bulletin

For the latest information on aphids, please refer to the Rothamsted Research aphid bulletin.

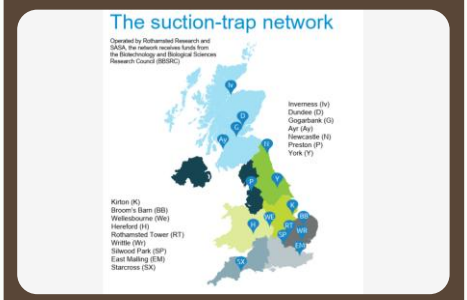
From Warwick pest activity 2025

- Lettuce aphid currant-lettuce aphid 2025 migration is predicted to have started in in most of the UK, and aphids are being observed in traps and on crops- monitor forecast
- Willow-carrot aphids start of 2025 migration likely now at or above 10% migration in all parts of the UK – monitor forecast
- Black bean aphid starting to appear, 10% aphid migration expected in most parts of UK mid-late June
- Yellow water traps and cabbage root fly eggs at Wellesbourne 2025
- Diamondback moth sightings 2025
- Silver Y moth sightings 2025

IPM Decisions

Check IPM Decisions for current risk forecasts

The UK aphid monitoring network



Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 30 May 2025

Conservation Biological Control – making the most of natural enemies

There is great potential to manage agricultural landscapes to better support the naturally occurring predators and parasitoids of crops pests. These natural enemies are an important component of IPM, reducing the population growth rate of pests and helping either prevent pests from reaching economically damaging levels, or delay the point at which economic thresholds are exceeded to beyond susceptible growth stages. The impact of natural enemies can be limited by a lack of essential resource not available to natural enemies in crops. The targeted provision of these resources, known as Conservation Biological Control (CBC), aims to promote diverse, robust natural enemy populations to encourage a reliable and consistent contribution to pest management.

The arrival and spread of aphids can be difficult to predict, and insecticides have become central component of their management as they are relatively easy to use, cheap compared to the potential impact of pests, and result in obvious reductions in insect population size when applied correctly. Insecticides are, however, a victim of their own success. Their intensive use over large areas is driving the development of resistance in target pests, and they are having chronic impacts on non-target farmland species, including natural enemies, leading to increased restrictions on their use and promotion of alternative approaches.

14 spot ladybirds were busy over the bank holiday weekend. Less common than 7 spot or harlequin ladybirds, but still important aphid predators in the UK

Natural enemies of crop pests

Most pests of arable crops have several naturally occurring predators and parasitoids. In the absence of natural enemies, pest infestations can grow rapidly. Most natural enemies need a more diverse range of resources for their development than crops provide. Managing additional habitats that include these resources will encourage natural enemies and so reduce the risk of the associated pests.

Floral resources

Adult insects often eat very different food from their offspring, to avoid competition and to make the most of seasonal changes in food availability. The adults of many largely carnivorous larval species feed mostly or entirely on floral resources (Table below). Floral pollen is especially important as it provides the proteins needed for reproduction. Although adult hoverflies, ladybirds and other predators are mobile, and can commute between crops and floral habitats, such habitats can be in short supply in agricultural landscapes.

Natural enemy	Larvae feed on...	Adults feed on....
Marmalade fly, Episyrphus balteatus	Various aphids	Pollen and nectar
7-spot ladybird, Coccinellia 7-punctata	Various aphids	Various aphids, pollen and nectar
Aphid parasitoids, Aphidiinae spp.	Various aphids	Aphid honeydew and nectar

Additional prey

Pest infestations in crops can be very damaging, but they may only occur for a few weeks of the year, leaving periods in which prey may be scarce for natural enemies. Fortunately many predators can feed on alternative prey. By increasing landscape diversity natural enemies are more likely to find suitable prey all year round, maintaining populations ready to respond to the next pest outbreak.

Overwinter habitat

Winter habitat is important for providing food and/or shelter for overwintering natural enemies, from which they can migrate into arable crops the following spring. Undisturbed grassland is used by many beneficial insects, including the specifically designed 'beetle banks'. Tussocky grasses are especially important in providing shelter, though leaf litter, seed heads, dead herbaceous stems and bark are also commonly used.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 13 June 2025

IPM in-season 13 June 2025

From IPM Decisions

- Modelled relative humidity in crops has increased over the last couple of weeks in many parts of the UK, forecasting a low to medium risk of **septoria** infection – check the details model in the platform for more accurate forecast.
- Risk of **orange wheat blossom midge** is low-medium, and in most parts of the UK crops are past vulnerable growth stages.
- Risk of **cutworm** is currently increasing, base on 1st arrival of adult moths 22 May 2025 (default in model is 1 June 2025)

Potato blight

- There are three potato blight models available on the IPM Decisions platform.
- According to the **Negative prognosis**, many crops will now be vulnerable to potato blight.
- According to both the **Hutton Criteria** model and **Nærstad** model, there are likely to be periods of risk in the next week.

The 'Negative prognosis' model was developed across UK, Denmark and other northern European countries. It estimates the length of the initial 'epidemic free' period from emergence until the crop first becomes vulnerable to late blight.
The 'Hutton criteria' model was developed in Scotland, and determines when weather conditions create high risk of infection, enabling targeted treatments.
The 'Nærstad model' was developed in Norway, and predicts favourable condition for spore production and spread, survival and infection of these spores.
The Hutton criteria model and Nærstad model take different approaches, so the resulting guidance can be different. Note that the Nærstad model has not been formally validated in the UK, while the Hutton criteria model has.

Due to the dry spring, the negative prognosis model is predicting susceptibility to late blight is starting 3-4 weeks later compared with in 2024.

You can compare the risk for 2024 and 2025 for your own location using the Comparison Dashboard in the IPM Decisions platform

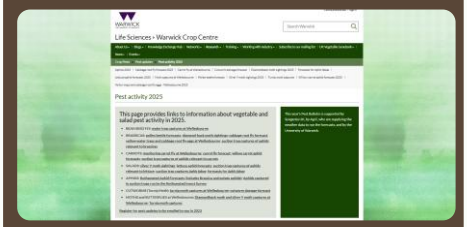
IPM Decisions

Check IPM Decisions for current risk forecasts

Aphid bulletin

The Aphid Bulletin is based on data from a network of 16 suction-traps.

Warwick pest activity 2025



This page provides links to information about vegetable and salad pest activity in 2025.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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IPMNET Bulletin 13 June 2025

IPMWORKS: Arable systems in the UK

Over the last few years, a network of farms across Europe have been looking at the impact of IPM strategies. Find out more about what we learnt through the IPMWORKS Booklets below.

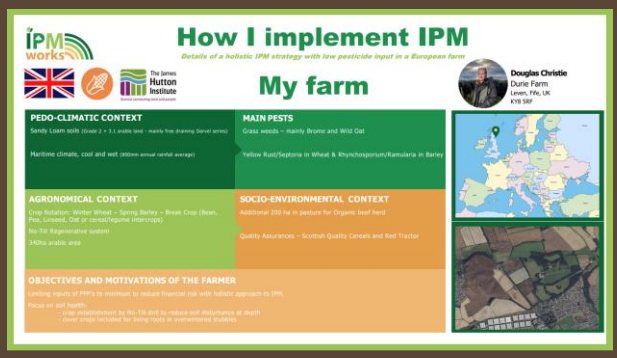
IPM adoption in a Scottish arable hub

Key conclusion: Understanding context of each members' farming system is key to understanding where gains in efficiency can be made with an integrated management approach. The intricacies and nuances relative to each farm must be addressed in order to achieve the best outcomes.

It is important to build trust between the hub coach and the farmer in order for uptake of new ideas. One to one meetings, surveys and in-field comparisons can help to bring these new ideas to life. An idea sparked from conversation can be tested as an in-field comparison providing on-farm validation, which informs the decision-making process.

Read more here

IPMWORKS Scottish Hub



IPMWORKS Hub - Example Arable farm in Scotland, UK [James Hutton Institute]

Surveys of arable farmers: Progress in IPM adoption 2020-2024

Key conclusion from Survey #3:

- Farmer's motivation reduce pesticide use and adopt IPM has increased.
- Half of farmers in the survey have change their cultural practices at the farm level to adopt integrated pest management.
- Most farmers change fertiliser use and sowing dates, and cultivar selection.
- Little increase in the use of biocontrol solution, DSS, mechanical weeding, false seed bed, introduction of companion crops or mix cultivars.
- Most farmers reported a decrease in pesticide use during the study period
- There was no indication that reduced pesticide use increased the risk of weeds, diseases or invertebrate pests
- While farmers did report equipment costs increase with IPM, PPP costs were reduced and salary costs were unaffected.
- Farmers reported there was no change in yields, workloads, or profitability where pesticide use was reduced as part of an IPM strategy.

Read more here

See also

- IPMWORKS Booklet: Farm Survey Results (Arable) – Pesticide use, Pesticide impact, and cost-efficiency
- All IPMWORKS Booklets

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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Department for Environment Food & Rural Affairs

IPMNET Bulletin 20 June 2025

IPM in-season 20 June 2025

From IPM Decisions

- Modelled relative humidity in crops has increased over the last couple of weeks in many parts of the UK, forecasting a low to medium risk of **septoria** infection – check the details model in the platform for more accurate forecast.
- Risk of **orange wheat blossom midge** is low-medium, and in most parts of the UK crops are past vulnerable growth stages.
- Risk of **cutworm** is currently high, base on 1st arrival of adult moths 22 May 2025 (default in model is 1 June 2025)

Potato blight

- There are three potato blight models available on the IPM Decisions platform.
- According to the **Negative prognosis**, crops that emerged before May are now vulnerable to potato blight.
- According to both the **Hutton Criteria** model and **Nærstad** model, there are likely to be periods of risk in the next week in some parts of the UK – but not all. Check local conditions.

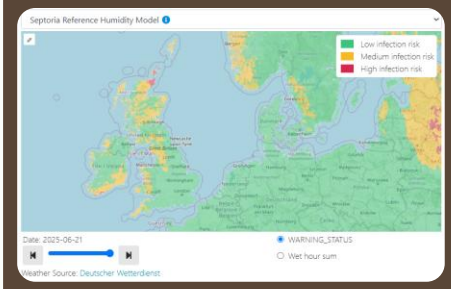
BBRO Aphid Watch

- BBRO Aphid Watch mapping site provides real-time information of aphid activity across the UK sugar beet growing area. The maps depicts the level of green wingless aphids found on the crop and should be used as an early warning system for growers to monitor crops more closely. The traps on BBRO trial sites will be tested to provide an overview of virus across the growing area. The same 20 plants are counted on each site, twice a week.
- The threshold for treatment is 1 green wingless aphid per 4 plants up to the 12-leaf stage, increasing to 1 per plant between 12 and 16 leaf stage.
- British Beet BBRO Research Organisation **Find out more**

Other pests

- **Diamondback moth sightings**: A few more sightings have been noted in the UK over the last week, but still in low numbers.
- Many aphid species are highly abundance this year, as are their natural enemies.

IPM Decisions



Check IPM Decisions for current risk forecasts

Aphid bulletin

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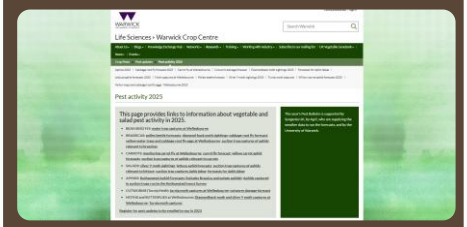
Warwick pest activity 2025



This page provides links to information about vegetable and salad pest activity in 2025.

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS Department for Environment Food & Rural Affairs

IPMNET Bulletin 20 June 2025

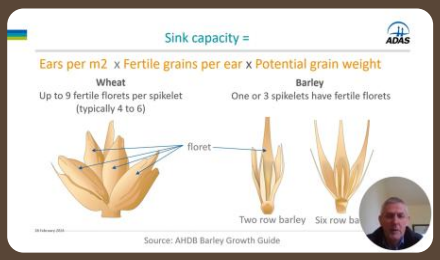
At the start of 2025, the IPMNET Bulletins introduced the IPM Science and Practice video series, produced by Dr. Neil Paveley, and Dr. Frank van den Bosch, funded by Defra and freely available on YouTube. These twelve videos delve into the physiology of cereal crops, the epidemiology of the diseases and methods of control. The videos can be viewed in any order that interests you, but make most logical sense viewed in the order in the menu.

Here is a reminder of the first six videos

Science and Practice video series

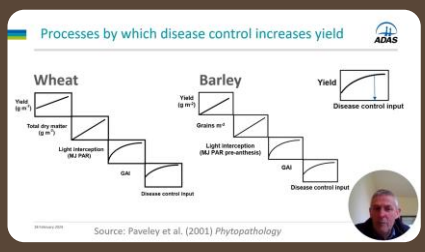
1. Introducing the IPM Science and Practice video series

Science and Practice video series



2. What parts of the crop canopy need protecting (29 minutes)

Science and Practice video series

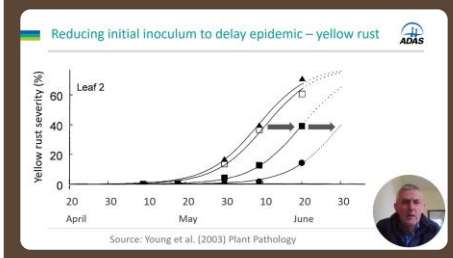


3. How long does crop canopy need protecting (21 minutes)

Science and Practice video series

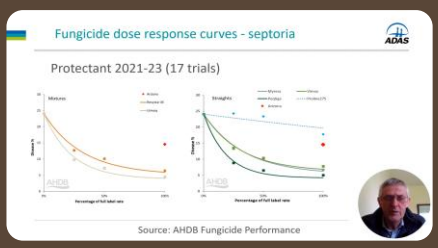
4. How to predict crop epidemic severity (22 minutes)

Science and Practice video series



5. How to delay and slow crop disease epidemics (22 minutes)

Science and Practice video series



6. How much fungicide to spray (23 minutes)

YouTube

Full IPM Science and Practice video series playlist

Paveley, N., van den Bosch, F., & Ramsden, M. (2024). Video Series: Integrated Pest Management focusing on disease control in cereals. ADAS. https://doi.org/10.5281/zenodo.13982925

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 27 June 2025

IPM in-season 27 June 2025

From IPM Decisions

- Modelled relative humidity in crops is forecasting a moderate risk of **septoria** infection in south and west parts of the UK, a low risk elsewhere – check the details model in the platform for more accurate forecast as recent rain may increase local risk.
- Risk of **cutworm** is currently high. Future assessment will be based on no observation of larvae or successful management on 1 July.

Potato blight

- According to the **Negative prognosis**, crops that emerged before May are now vulnerable to potato blight.
- According to both the **Hutton Criteria** model and **Nærstad** model, there are likely to be periods of risk in the next week in some parts of the UK – but not all. Check local conditions.

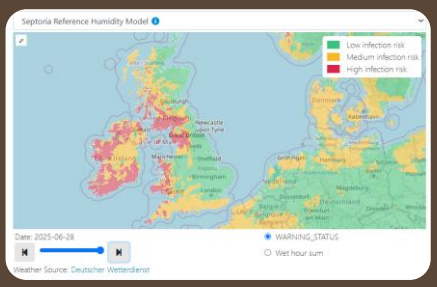
Aphids

- BBRO Aphid Watch: the threshold for treatment is 1 green wingless aphid per 4 plants up to the 12-leaf stage, increasing to 1 per plant between 12 and 16 leaf stage. Check the aphid site map here.
- Willow-carrot aphid are forecast to be past 10% migration across the UK.
- Lettuce-root aphid migration started in all parts of the UK.
- Currant-lettuce aphid migration started in all parts of the UK, start of peak migration forecast in Cornwall and Warwick around now.

Other pests

- **Diamondback moth sightings**: A few more sightings have been noted in the UK over the last week, but still in low numbers.
- Many aphid species are highly abundance this year, as are their natural enemies.

IPM Decisions



Check IPM Decisions for current risk forecasts

Aphid bulletin

The Aphid Bulletin is based on data from a network of 16 suction-traps.

Warwick pest activity 2025

This page provides links to information about vegetable and salad pest activity in 2025.

IPM Online Workshop – 16 July, 9-12

What's on the agenda:

🧠 **Interactive Quiz & Discussion** – A dynamic introduction to the goals and methods of the participating projects.

🔧 **Peer-to-Peer Learning Tools** – Presentations on tools like Hub Coach, cross-visits, demonstration events, and more.

📊 **IPM Project Results & Key Resources** – Sharing best practices, toolboxes, case studies, and training modules

Please register (free) **by July 14th to confirm your participation**

🔗 https://us02web.zoom.us/meeting/register/7N9mAltBSzCgs8_rRNsSDg

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

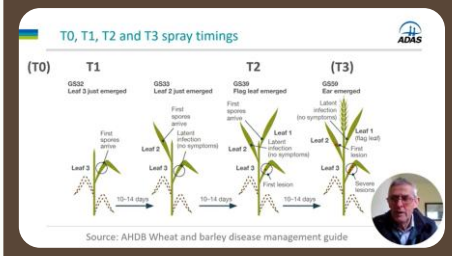
Department for Environment Food & Rural Affairs

IPMNET Bulletin 27 June 2025

At the start of 2025, the IPMNET Bulletins introduced the IPM Science and Practice video series, produced by Dr. Neil Paveley, and Dr. Frank van den Bosch, funded by Defra and freely available on YouTube. These twelve videos delve into the physiology of cereal crops, the epidemiology of the diseases and methods of control. The videos can be viewed in any order that interests you, but make most logical sense viewed in the order in the menu.

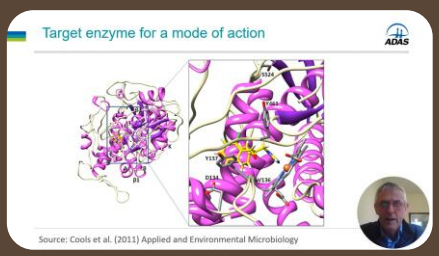
Here is a reminder of the second six videos (video 8 is in two parts)

Science and Practice video series



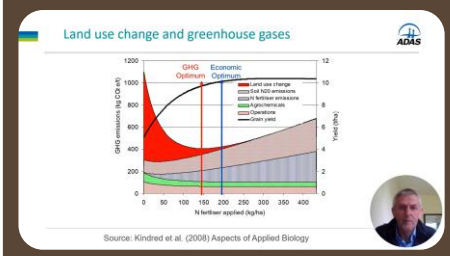
7. When to apply fungicides to crops (25:48)

Science and Practice video series



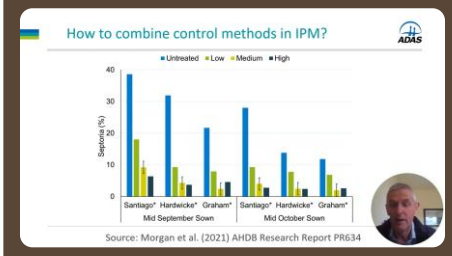
8. How to manage fungicide resistance: Part A - (27:48) Part B – (21:29)

Science and Practice video series



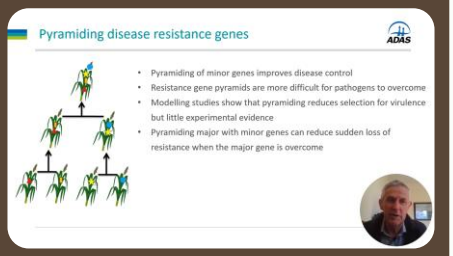
9. Crop disease control: Impact on the environment (25 minutes)

Science and Practice video series



10. How to combine control methods (24 minutes)

Science and Practice video series



11. How to manage pathogen virulence (24 minutes)

Full IPM Science and Practice video series playlist

Paveley, N., van den Bosch, F., & Ramsden, M. (2024). Video Series: Integrated Pest Management focusing on disease control in cereals. ADAS. https://doi.org/10.5281/zenodo.13982925

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 9 July 2025

IPM in-season 9 July 2025

From IPM Decisions

- Risk of **cutworm** is currently low, based on no observation of larvae or successful management on 1 July. Risk remains high for untreated crops.
- The second generation of **pollen beetle** have now emerged and are migrating across the UK.
- The second generation of **carrot fly** is likely to be emerging, with egg laying starting in mid-July

Potato blight

- According to both the **Hutton Criteria** model and **Nærstad** model, there are likely to be periods of risk in the next week in some parts of the UK – but not all. Check local conditions. Greater risk associated with more northerly parts of the UK.

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IPM Online Workshop – 16 July, 9-12

What's on the agenda:

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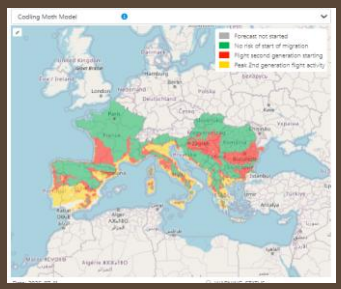
IPM Decisions



Check IPM Decisions for current risk forecasts

Aphid bulletin

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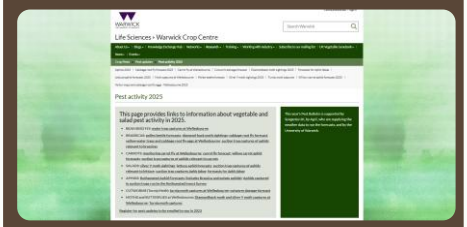
Warwick pest activity 2025



This page provides links to information about vegetable and salad pest activity in 2025.

IPM Online Workshop Link to register

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS | Department for Environment Food & Rural Affairs

IPMNET Bulletin 9 July 2025

The New Integrated Pest Management Paradigm for the Modern Age

Dara S.K. (2019), Journal of Integrated Pest Management, Volume 10
https://doi.org/10.1093/jipm/pmz010

ABSTRACT

Earlier models of integrated pest management (IPM) focused on ecological aspects of pest management. With the recent developments in agricultural technology, modern communication tools, changing consumer trends, increased awareness for sustainably produced food systems, and globalization of trade and travel, there seems to be a need to revisit the IPM paradigm as appropriate for modern times. A new model, built on earlier models based on ecological and economic aspects, is expanded and reconfigured to include management, business, and sustainability aspects and emphasize the importance of research and outreach. The management aspect contains four components of IPM that address the pest management options, the knowledge and resources to develop management strategies, the management of information and making timely decisions, and the dissemination or sharing of information. With the business aspect that includes the producer, consumer, and seller, and the sustainability aspect that covers economic viability, environmental safety, and social acceptability, the new model presents the human, environmental, social, and economic factors that influence the food production.

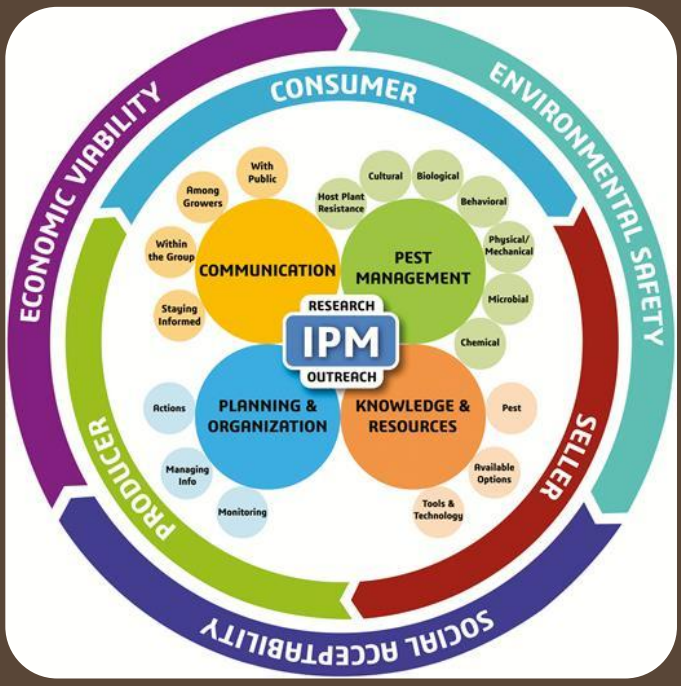


Fig. 1.New IPM paradigm with its various components and influencing factors for economically viable, socially acceptable, and environmentally safe pest management.

Link to full article

Full IPM Science and Practice video series playlist

Paveley, N., van den Bosch, F., & Ramsden, M. (2024). Video Series: Integrated Pest Management focusing on disease control in cereals. ADAS. https://doi.org/10.5281/zenodo.13982925

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

IPMNET Bulletin 17 July 2025

IPM in-season 17 July 2025

From IPM Decisions

- Risk of **cutworm** is currently low, based on no observation of larvae or successful management on 1 July. Risk remains high for untreated crops; recent rain will reduce risk.
- The second generation of **carrot fly** is likely to be emerging, with egg laying starting in mid-July

Potato blight

- According to both the **Hutton Criteria** model and **Nærstad** model, there are likely to be periods of risk in the next week in some parts of the UK – but not all. Check local conditions. Greater risk associated with more northerly parts of the UK.

Aphids

- BBRO Aphid Watch has now finished for 2025. Low levels of virus have been reported so far this year.
- Lettuce-root aphid and Currant-lettuce aphid migration now at or above peak in all parts of the England, approaching peak in Scotland.

Other pests

- **Diamondback moth sightings**: Very few sightings have been noted in the UK over the last week.
- Many aphid species are highly abundance this year, many reports of high numbers aphid natural enemies, including ladybirds and hoverflies
- **Pea Moth forecasting** is underway, and adults are still being recorded in high numbers. Visit the PGRO website for details, as well as the **PGRO Crop Updates 2025**

BBRO Cercospora Leaf Spot monitoring now live for Sugar Beet

- Cercospora spores were detected at three sites 30 June 2025

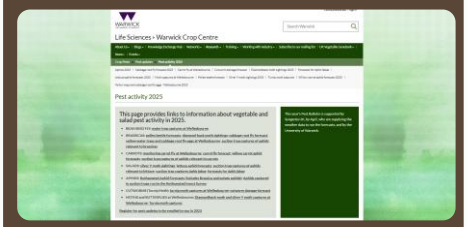
IPM Decisions

High risk late blight potatoes at High Mowthorpe this week. Check IPM Decisions for current risk forecasts

Aphid bulletin

The Aphid Bulletin is based on data from a network of 16 suction-traps.

Warwick pest activity 2025



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Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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Department for Environment Food & Rural Affairs

IPMNET Bulletin 17 July 2025

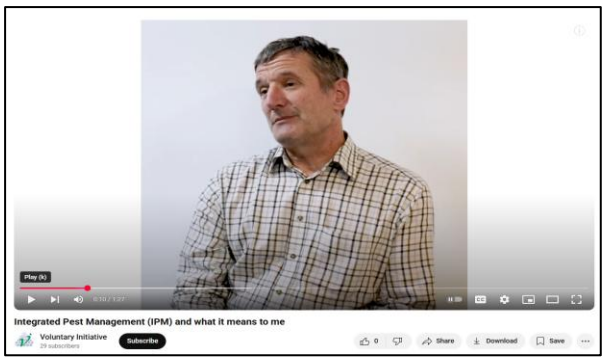
The Voluntary Initiative
Championing Integrated Pest Management

VI Champions

The Voluntary Initiative (VI) has recruited a team of experienced and passionate growers and advisers to provide knowledge and peer-to-peer learning, driving home the VI's emphasis on IPM

The VI Champions deliver VI IPM-focused presentations and messages, to lead active dialogue to challenge current practice and drive through a commitment to farming in an environmentally sustainable way.
The 42 VI Champions, advocate forward-thinking farming practices with an excellent knowledge of the challenges affecting the UK farming and water industries.

Find out more here



YouTube

Here are some of our other Champions describing what IPM means to them and why it is important.

VI Champion current locations 2025

Full VI Champions video playlist

14 videos from the VI Champions

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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Department for Environment Food & Rural Affairs

IPMNET Bulletin 24 July 2025

IPM in-season 24 July 2025

From IPM Decisions

- Risk of **cutworm** is currently low, based on no observation of larvae or successful management on 1 July. Risk remains high for untreated crops; recent rain will reduce risk.
- The second generation of **carrot fly** is likely to be emerging, with egg laying approached 10% complete

Potato blight

- According to both the **Hutton Criteria** model and **Nærstad** model, there are likely to be periods of risk in the next week in some parts of the UK – but not all. Check local conditions. Greater risk associated with more northerly parts of the UK, however high risk days remain isolated, rather than continuous.

Aphids

- BBRO Aphid Watch has now finished for 2025. Low levels of virus have been reported so far this year.
- Lettuce-root aphid and Currant-lettuce aphid migration now at or above peak in all parts of the England, approaching peak in Scotland.

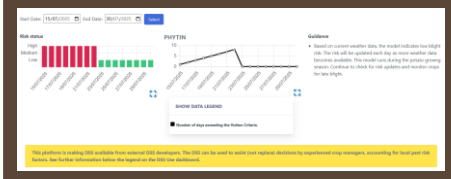
Other pests

- **Diamondback moth sightings**: Very few sightings have been noted in the UK over the last week, though many sightings have been noted from around 13-15 July 2025
- Many aphid species are highly abundance this year, many reports of high numbers aphid natural enemies, including ladybirds and hoverflies
- **Pea Moth forecasting** is underway, and adults are still being recorded in high numbers. Visit the PGRO website for details, as well as the **PGRO Crop Updates 2025**
- **Beet moth** caterpillars are active in sugar beet, benefiting from warm dry conditions.

BBRO Cercospora Leaf Spot monitoring now live for Sugar Beet

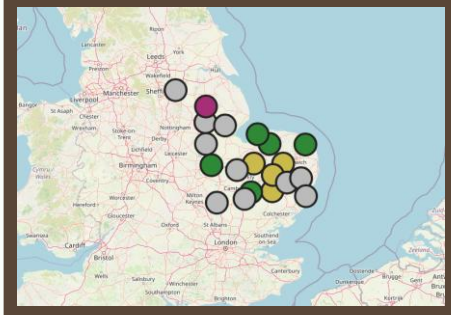
- Cercospora spores were detected at five sites 14 July 2025

IPM Decisions

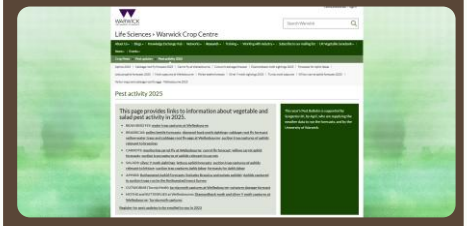


High risk late blight potatoes at High Mowthorpe this week. Check IPM Decisions for current risk forecasts

BBRO Cercospora leaf spot monitoring



Warwick pest activity 2025



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Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

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IPMNET Bulletin 24 July 2025

AdvisoryNetPEST

Novel Approaches

Are you doing something different? We'd love to hear from you!

Working with a Europe wide initiative to reduce pesticide inputs while maintaining productivity, we are looking for examples of 'novel approaches' to crop protection.

A crop protection farming practice is a 'novel approach' if:

- It contributes to the reduction of the use and risk of pesticides, *and*;
- It is not widely used yet, but has been tested on a few farms

If you are doing something different, and would be happy to share your experience with others in the UK and Europe, please get in touch - or send details directly to the group using the link provided >>>

Share your novel approach here!

- **Read more about Novel Approaches here**

YouTube

Follow AdvisoryNetPEST on YouTube for more insights

10 videos available now about the project expectations and progress

Links to relevant projects and initiatives

IPMNET | Farm-PEP | IPMWORKS | AdvisoryNetPEST | IPM Decisions

ADAS

Department for Environment Food & Rural Affairs

IPMNET Bulletin 06 Aug 2025

IPM in-season 06 August 2025

From IPM Decisions

- Risk of **cutworm** is currently increasing. Based on no observation of larvae or successful management on 1 July, 1-4 batches of third instar larvae are now possible. Increase monitoring efforts in vulnerable crops.
- The third generation of **cabbage root fly** are forecast to be emerging in many parts of England, and forecast egg lay at 10% complete.
- The second generation of **carrot fly** emergence is forecast to be around 50% complete, with egg laying 25-50% complete.

Potato blight

- According to both the **Hutton Criteria** model and **Nærstad** model, there is a low risk this week in England, medium risk in parts of Wales, and high risk in parts of Scotland. Check local conditions. High risk days remain isolated, rather than continuous.

Other pests

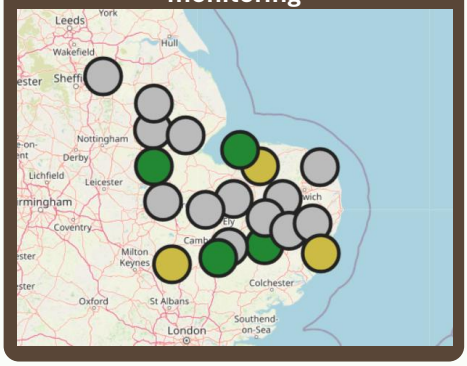
- Diamondback moth sightings: Very few sightings have been noted in the UK over the last week, though many sightings have been noted from around 22-25 July 2025
- Pea Moth forecasting is underway, and adults are still being recorded in high numbers. Visit the PGRO website for details, as well as the PGRO Crop Updates 2025

- **Sugar beet (from the BBRO Advisory Bulletin):**
  - **Foliar diseases**: rust, powdery mildew and cercospora leaf spot are all starting to be found.
  - **Beet moth** caterpillars are active in sugar beet, benefiting from warm dry conditions, along with many beneficial insects.
  - Emergency authorisation: use of one application of Coragen (chlorantraniliprole) has been granted for beet moth control until 30th September 2025. BBRO ask growers to leave untreated area to assess for efficacy of treatments.
  - BBRO Cercospora Leaf Spot monitoring now live for Sugar Beet: Cercospora spores were detected at five sites 14 July 2025. You can also see the Cercospora Monitoring and Forecasting system here

IPM Decisions

Low risk late blight potatoes at High Mowthorpe this week. Check IPM Decisions for current risk forecasts

BBRO Cercospora leaf spot monitoring



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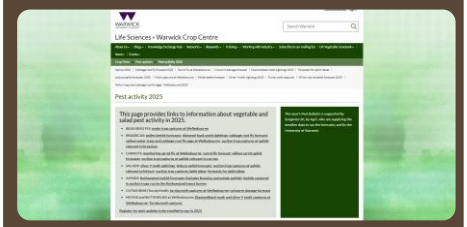

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Links to relevant projects and initiatives

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ADAS

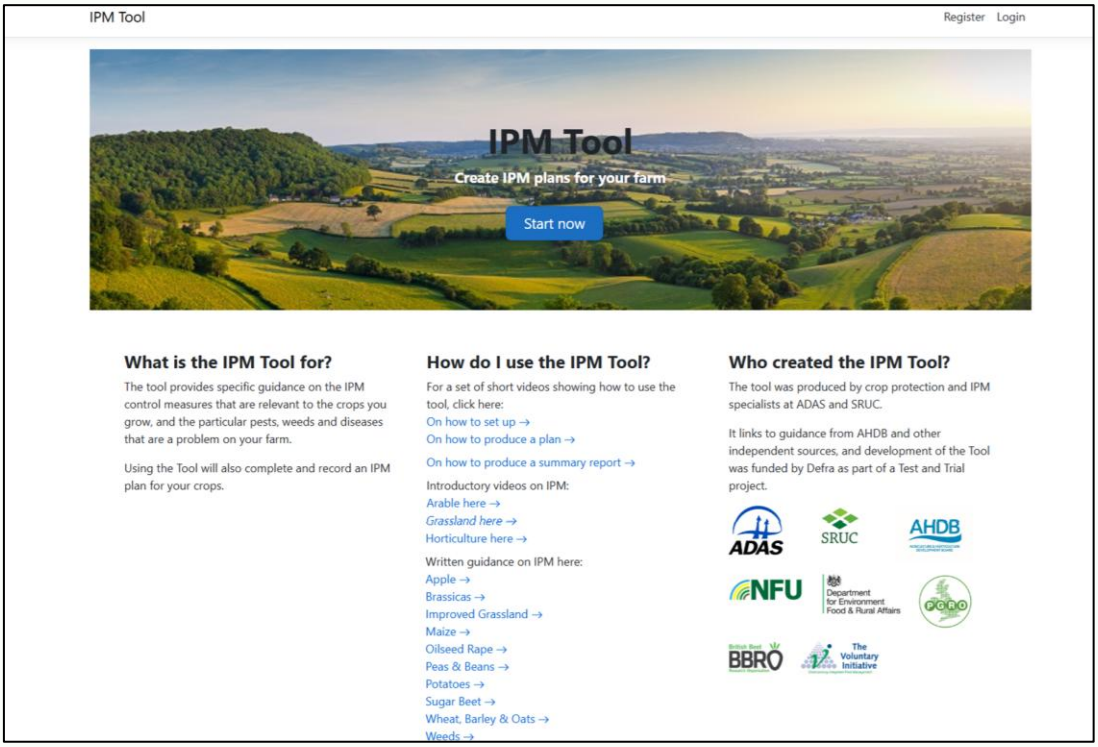
Department for Environment Food & Rural Affairs

IPMNET Bulletin 06 Aug 2025

At the heart of any effective IPM strategy requires an effective IPM Plan, identifying and integrating effective approaches into an overall crop protection program.

The IPM Planning Tool provides specific guidance on the IPM control measures that are relevant to the crops you grow, and the pests, weeds and diseases that are a problem on your farm. Using the Tool will also complete and record an IPM plan for your crops. https://ipmtool.net/. There are several supporting **videos** (How to set up and produce an IPM Plan and summary report) and **guides** (Apples, Brassicas, Improved Grassland, Maize, Oilseed Rape, Peas & Beans, Potatoes, Sugar Beet, Cereals, and Weeds) available alongside the IPM Planning Tool.

The 2025-26 season is approaching, have 2024-25 plans been reviewed? Are plans for 2025-26 in place?



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