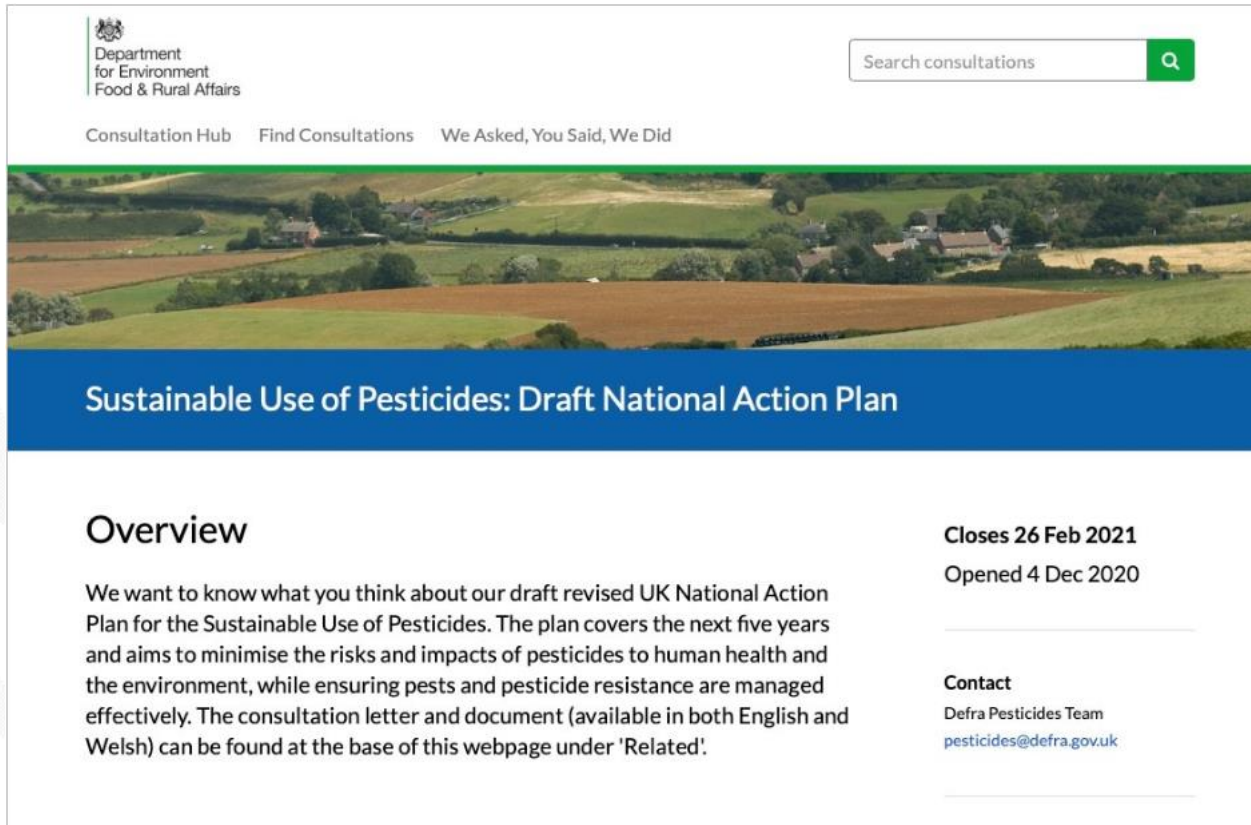


# IPM in the UK – a changing landscape



# So what's the plan?



The screenshot shows the top of a consultation page. At the top left is the DEFRA logo and the text 'Department for Environment Food & Rural Affairs'. To the right is a search bar labeled 'Search consultations' with a magnifying glass icon. Below the search bar are navigation links: 'Consultation Hub', 'Find Consultations', and 'We Asked, You Said, We Did'. A large landscape photograph of a rural area with fields and trees is featured. Below the photo is a blue banner with the text 'Sustainable Use of Pesticides: Draft National Action Plan'. Underneath the banner, the page is divided into two columns. The left column has a heading 'Overview' followed by a paragraph: 'We want to know what you think about our draft revised UK National Action Plan for the Sustainable Use of Pesticides. The plan covers the next five years and aims to minimise the risks and impacts of pesticides to human health and the environment, while ensuring pests and pesticide resistance are managed effectively. The consultation letter and document (available in both English and Welsh) can be found at the base of this webpage under 'Related''. The right column contains the dates 'Closes 26 Feb 2021' and 'Opened 4 Dec 2020', followed by a 'Contact' section with the text 'Defra Pesticides Team' and the email address 'pesticides@defra.gov.uk'.

Department for Environment Food & Rural Affairs

Search consultations

Consultation Hub Find Consultations We Asked, You Said, We Did

## Sustainable Use of Pesticides: Draft National Action Plan

### Overview

We want to know what you think about our draft revised UK National Action Plan for the Sustainable Use of Pesticides. The plan covers the next five years and aims to minimise the risks and impacts of pesticides to human health and the environment, while ensuring pests and pesticide resistance are managed effectively. The consultation letter and document (available in both English and Welsh) can be found at the base of this webpage under 'Related'.

**Closes 26 Feb 2021**  
Opened 4 Dec 2020

**Contact**  
Defra Pesticides Team  
[pesticides@defra.gov.uk](mailto:pesticides@defra.gov.uk)




Revised draft NAP published Dec 2020

DEFRA received 38,500 responses to this consultation

Planned publication date Q4 2023

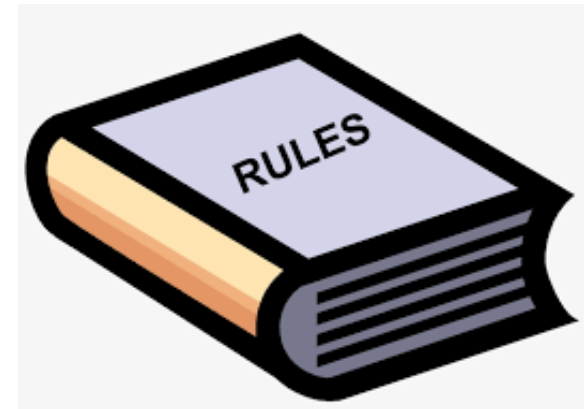
# What does the plan hope to achieve

## Key goals

1. Ensure continued robust regulation to protect our health and environment; 
2. Support the development and uptake of Integrated Pest Management; 
3. Ensure those that use pesticides do so safely and sustainably;
4. Support in the reduction of the risks associated with pesticides by setting clear targets and improving metrics and indicators; and, 
5. Ensure that we work effectively with others to deliver the NAP goal

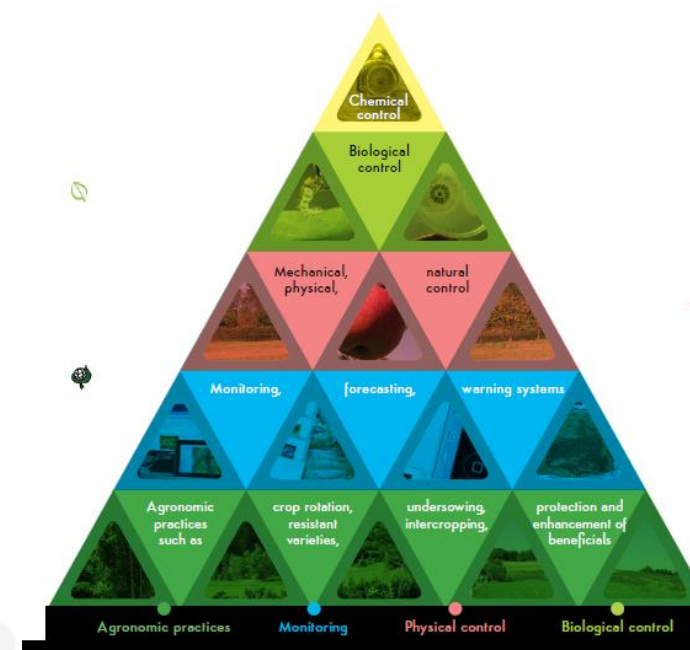
# Ensure continued robust regulation to protect our health and environment

- Work within, and develop, our existing regulatory framework to **make the system simpler for users**, while maintaining levels of protection for health and the environment.
- Support the development of the knowledge needed to ensure that regulation of pesticides across the UK **promotes positive innovation and change**.
- Review operation of **regulation for biopesticides**, to **encourage greater uptake of these within IPM approaches**.



# Support the development and uptake of Integrated Pest Management (IPM)

- Ensure all pesticide users have **access to information and support to integrate IPM** approaches so pesticides are used sustainably, as part of a targeted and integrated control system.
- **Support the development of IPM approaches** which provide maximum opportunity to protect or enhance the environment whilst maintaining crop protection



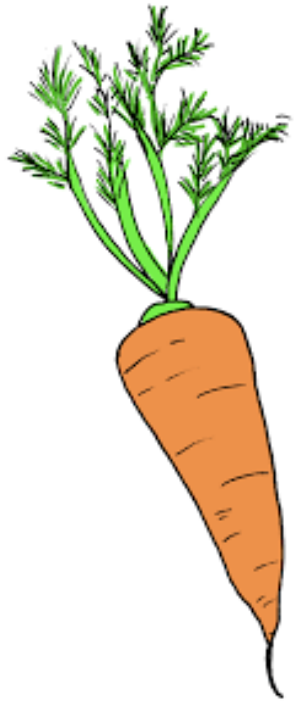
# Improve metrics and indicators for monitoring pesticide risk

- **Establish targets** to support the reduction of risk associated with pesticide use.
- Ensure pesticide policy helps to deliver existing commitments on biodiversity and water.
- Develop **improved metrics for IPM uptake and updated environmental indicators for pesticides** to provide a suitable baseline against which we can establish appropriate reduction targets.





# Proposed solutions



**Sustainable  
Farming  
Incentive**

Register your interest from:  
**30th August**

Applications open:  
**18th September**

The complex block features an aerial photograph of a lush green landscape with a stream and a hedgerow. Overlaid on the image is a green, brush-stroke style banner containing the text 'Sustainable Farming Incentive'. Below this, the registration date '30th August' and the application opening date '18th September' are also highlighted in green brush-stroke banners.

# What does the SFI standard for IPM look like?

1. Assess IPM & produce a plan (**£989 / yr**)
2. Flower-rich grass margins, blocks, or in-field strips (**£673 / Ha / yr**).  
Achieved by sowing a seed mix containing at least:
  - 4 grass species (must not include ryegrass) with the grass component not exceeding 90% of the total seed mix by weight
  - 10 wildflower species, with no individual flower species > 25% of the total wildflower species component by weight
3. Companion crop (**£55 / Ha / yr**). Achieved by
  - trap cropping – to attract crop pests away from the main crop
  - inter-cropping – sowing the companion crop with the main crop
  - undersowing – sowing a companion crop to form a living mulch beneath the crop
4. No insecticide (**£45 / Ha / yr**)





# Improve metrics and indicators

**Current reporting system:** Pesticide Usage Survey .

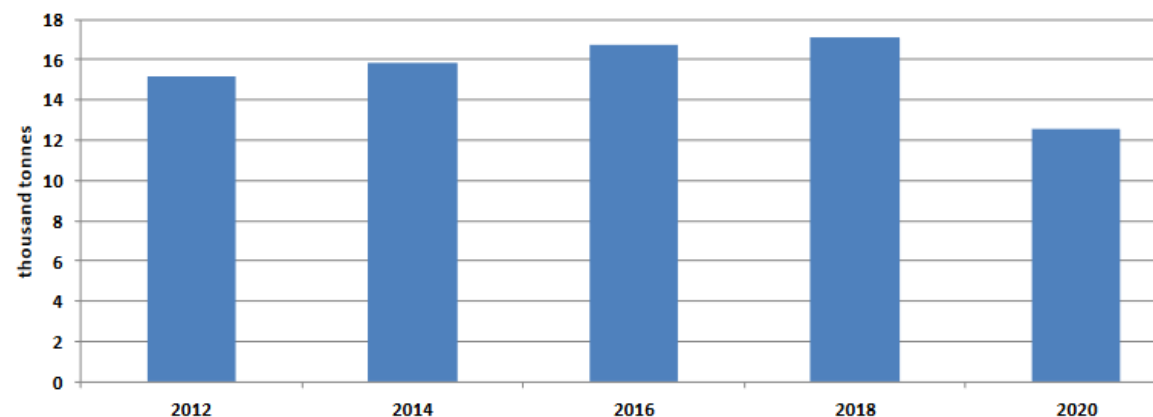
Surveys on a biennial cycle

- Data Collected = what chemicals are used in what crops & at what rates
- Reporting = Treated Area and weight of Active Substance applied

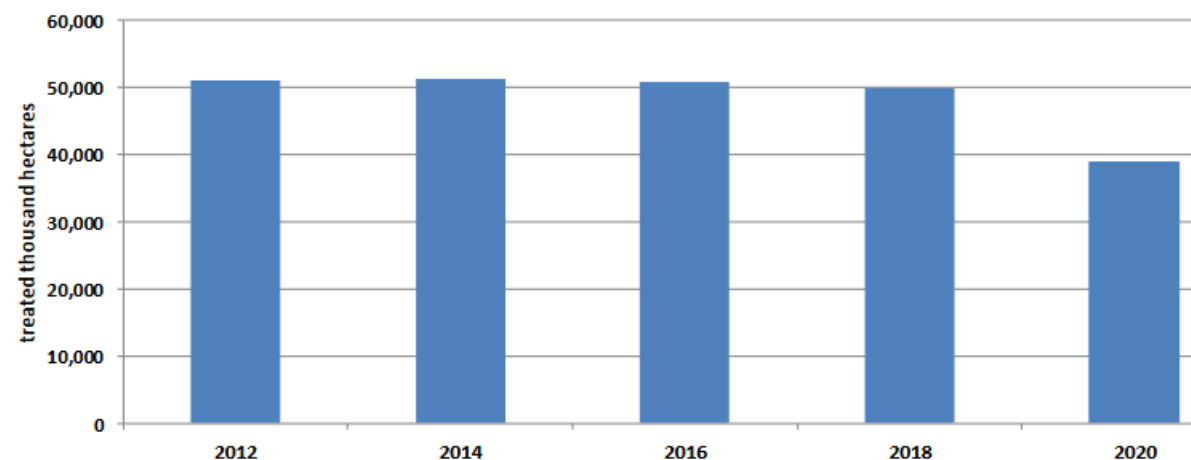
Issue: data doesn't tell us anything about the environmental risk /potential impact

Solution: develop a tool which more accurately reflects the potential environmental risk – Pesticide Load Indicator

Treated Area of arable crops 2012-2020



Weight of pesticide (AS) applied to arable crops 2012-2020



# Pesticide Load Indicator - Load metrics

There are 4 environmental fate and 16 ecotoxicity (6 aquatic, 10 terrestrial) load metrics:

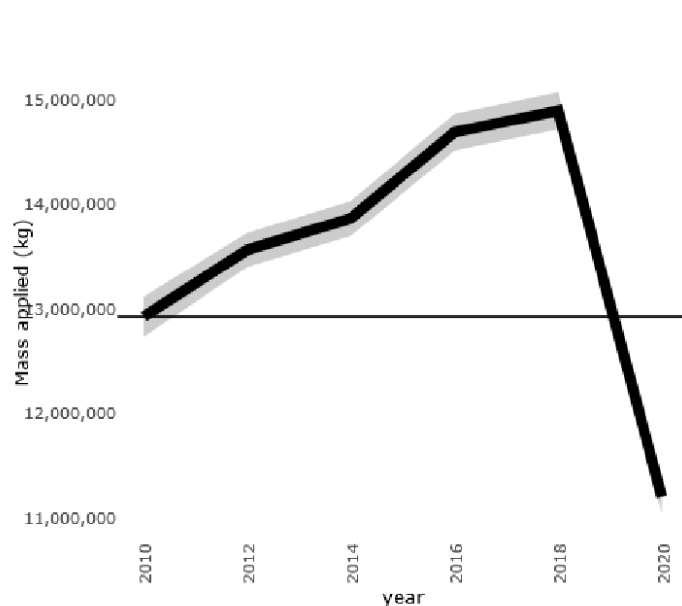
- **Fate metrics:**

- Persistence (soil  $DT_{50}$ )
- Surface water mobility (K<sub>foc</sub>/K<sub>oc</sub>)
- Groundwater mobility (GUS)
- Bio-concentration factor (BCF)

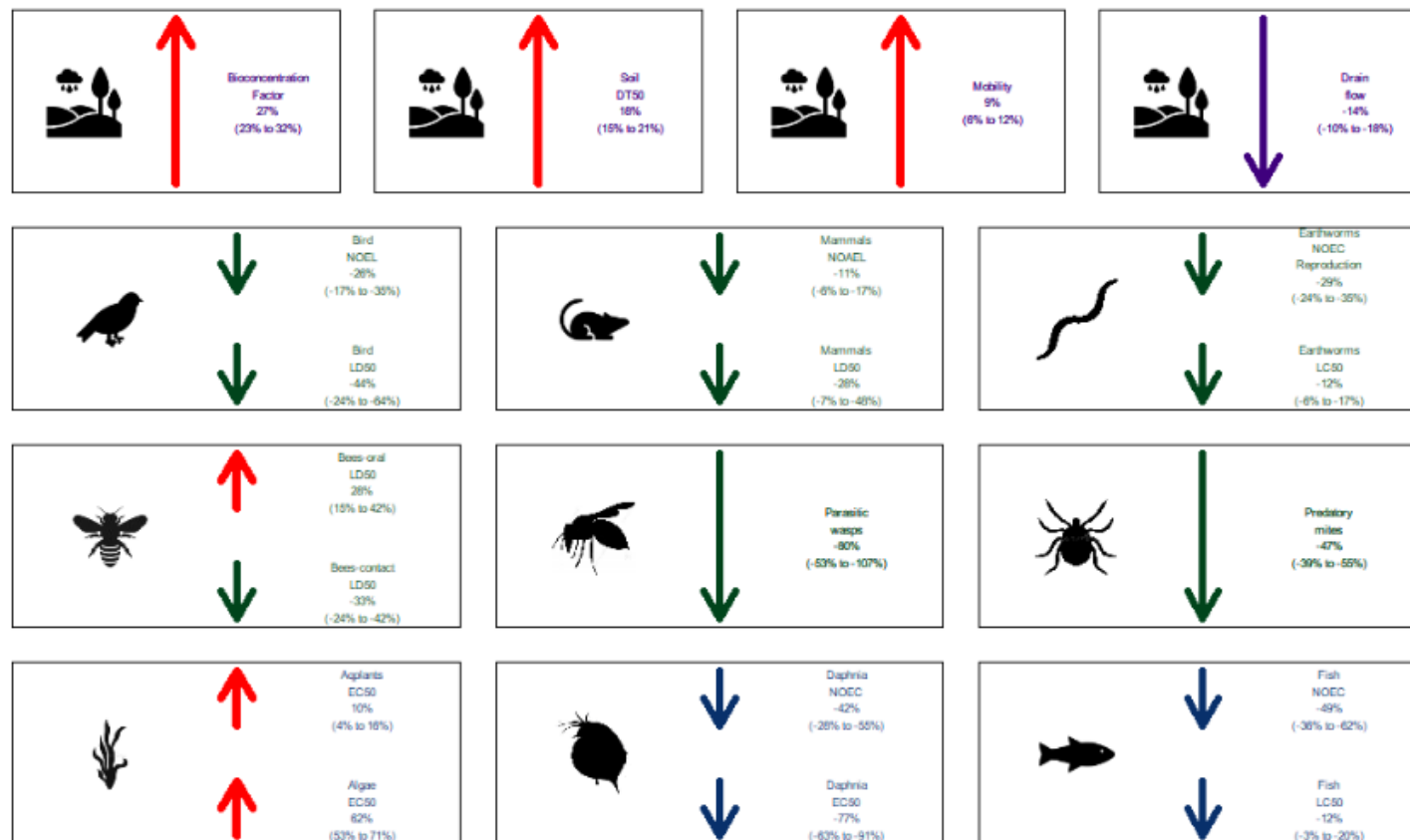
- **Ecotoxicity metrics:**

- Algae acute ( $EC_{50}$ )
- Aquatic plants acute ( $EC_{50}$ )
- Daphnia acute ( $EC_{50}$ ) and chronic (NOEC)
- Fish acute ( $EC_{50}$ ) and chronic (NOEC)
- Birds acute ( $LD_{50}$ ) and chronic (NOEL)
- Worms acute ( $LC_{50}$ ) and chronic (NOEC)
- Bees contact ( $LD_{50}$ ) and oral ( $LD_{50}$ )
- Mammals acute ( $LD_{50}$ ) and chronic (NOAEL)
- Parasitic wasps ( $LR_{50}$ )
- Predatory mites ( $LR_{50}$ )

# Pesticide Usage versus Pesticide Load Indicator



Trend Total Mass of AS applied to UK arable crops 2010-2020



Change (%) in load for selected metrics for arable cropping 2010-2018

# Regulations for biopesticides

Biopesticide Champion: provides initial contact for product innovators/manufacturers, and helps them through the approval process [bpc@hse.gov.uk](mailto:bpc@hse.gov.uk)

The regulator has been adding capacity in terms of expertise to evaluate biopesticide submissions



**eCP**  
Expert Committee  
on Pesticides

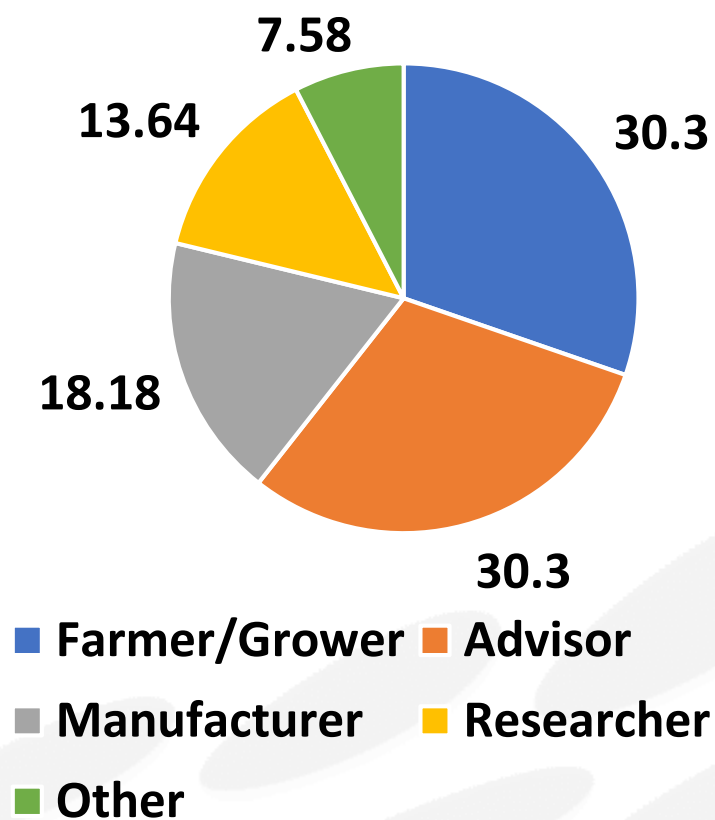
## The Expert Committee on Pesticides - biopesticide cloud

- Baculovirus – species/transmission
- Semiochemicals
- Plant extracts
- Viruses/virology
- Fungi
- Bacteria
- Microbials (infectivity, pathogenicity and persistence)

# What does the industry say?

Online survey March 2023

What is your primary role?

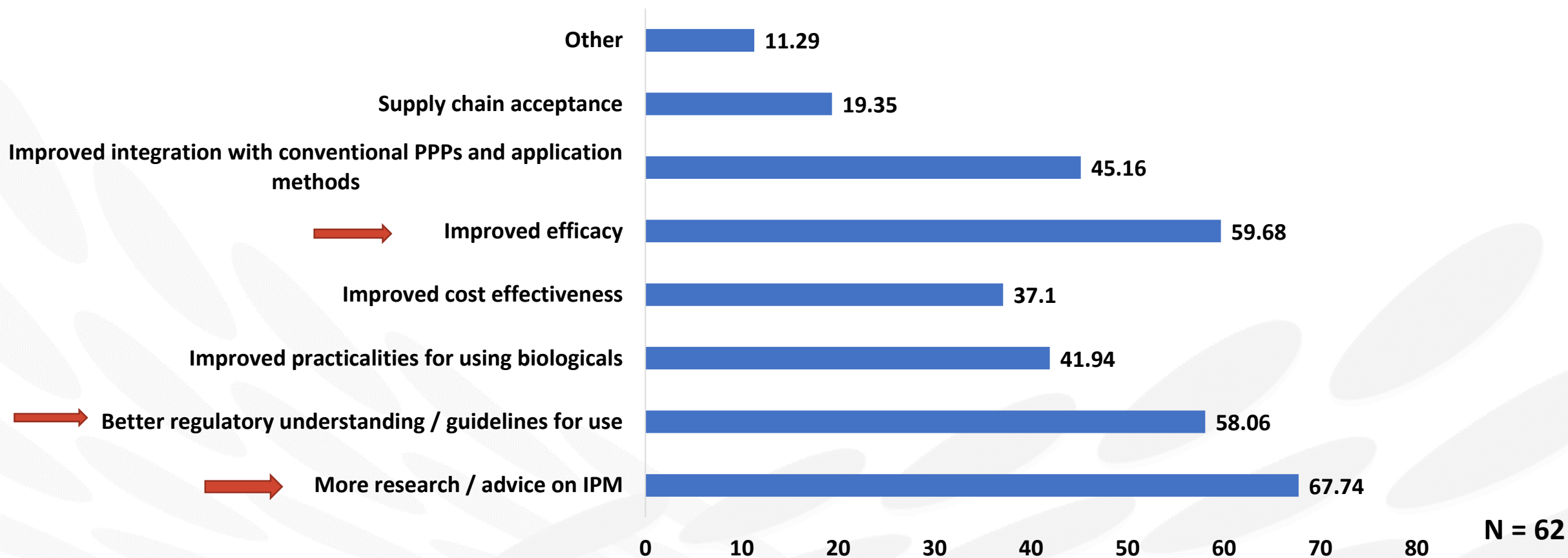


N = 66



# What does the industry say?

What needs to change to encourage the adoption of more biological crop protection programmes/products?



# Advice on IPM



A “one-stop shop” for decision support in integrated pest management



<https://www.ipmdecisions.net/>



An online library for knowledge sharing and literature

IPMWORKS Networks dedicated to farm demonstration and peer-to-peer knowledge exchange focusing on IPM or on other aspects of farming.



LEAF- Linking Environment And Farming



<https://ipmworks.net>

# Improved efficacy / guidance on use

## AMBER Project (Application and Management of Biopesticides for Efficacy and Reliability)

### Aims and Objectives:

To understand the reasons why some biopesticides are giving sub-optimal results in current commercial practice;

To research innovations in management practices that can improve biopesticide performance;

To exchange information and ideas between growers, biopesticide companies and others to provide improved best-practice guidelines for biopesticides.

Webinar: [www.youtube.com/watch?v=Cd1Hh\\_C\\_KoA](https://www.youtube.com/watch?v=Cd1Hh_C_KoA)

# Help Creating an IPM Plan

IPM Tool

Register Login



An online IPM decision making tool has been developed to assist farmers and growers in producing IPM plans specific to their farm and cropping system. The IPM Planning Tool takes approximately 1 hour to complete.

[https://www.youtube.com/watch?v=648k\\_bfz2eA](https://www.youtube.com/watch?v=648k_bfz2eA)

<https://ipmtool.net/>



# Crop Genetic Improvement projects

The GINs aim to enhance the productivity, sustainability and resilience of the main UK crops by drawing upon genetic resources in UK gene banks and diversity collections. The GINs develop tools to help breeders incorporate beneficial genes into elite varieties, ensuring UK crops are being grown more efficiently, with reduced environmental impact and increased economic potential.



**Wheat**  
**Pulse (legume crops)**  
**Oilseed Rape**  
**Vegetables**

## Genetic Technology Act becomes law

[Defra Press Office](#), 24 March 2023 - [Farming](#)



On Thursday 23<sup>rd</sup> March, the Precision Breeding Act became law. The Act sets in motion changes to allow farmers to grow crops which are drought and disease resistant, reduce use of fertilisers and pesticides, and help breed animals that are protected from catching harmful diseases.

<https://defracropgenetics.org/>

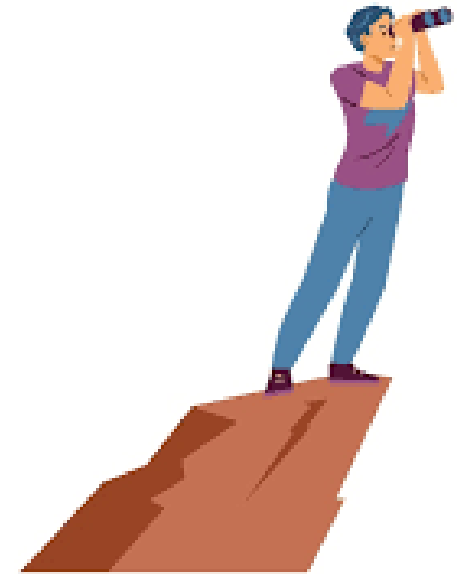


# So what does the future look like?

In the UK, as in the EU, the policy drivers are there to drive uptake of IPM and biopesticides

We still have some work to do to help growers adopt some of these practices and technologies

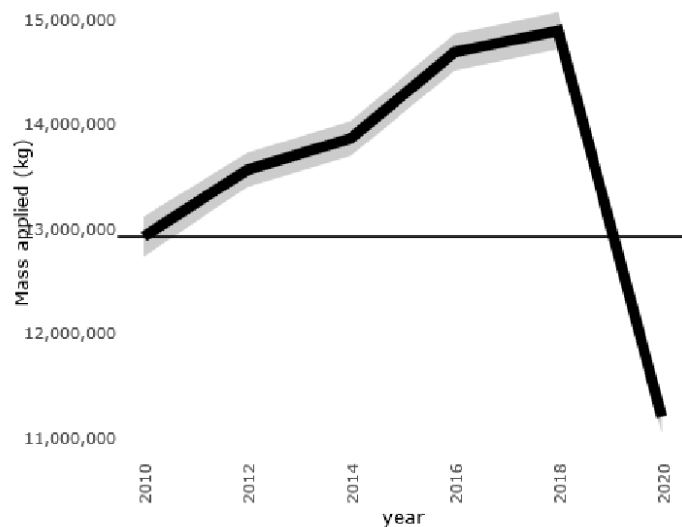
But the rapid expansion of peer to peer learning networks and the innovation in the sector are evidence that the future is very bright...



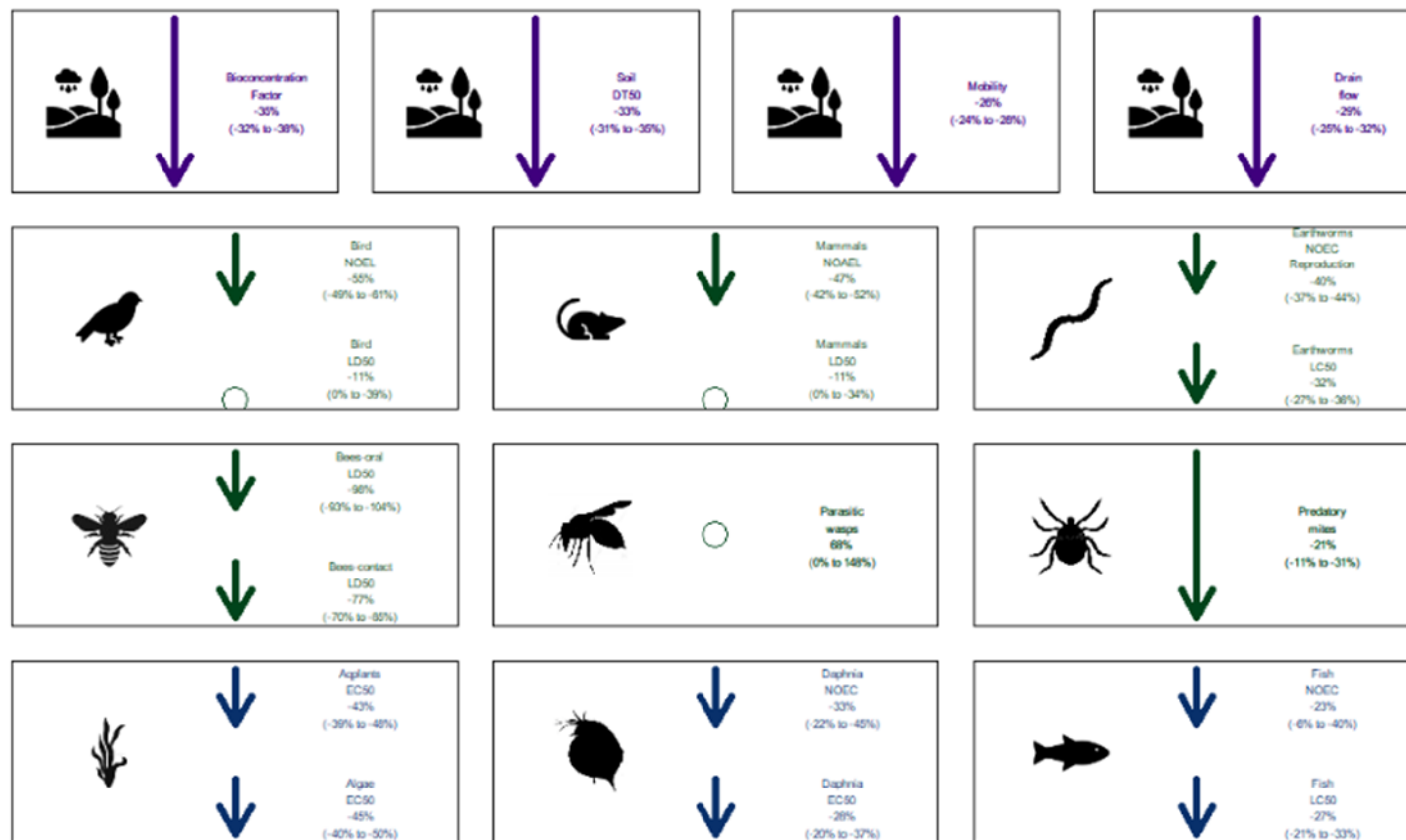




# Pesticide Usage versus Pesticide Load Indicator



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Change (%) in load for selected metrics for arable cropping 2018-2020