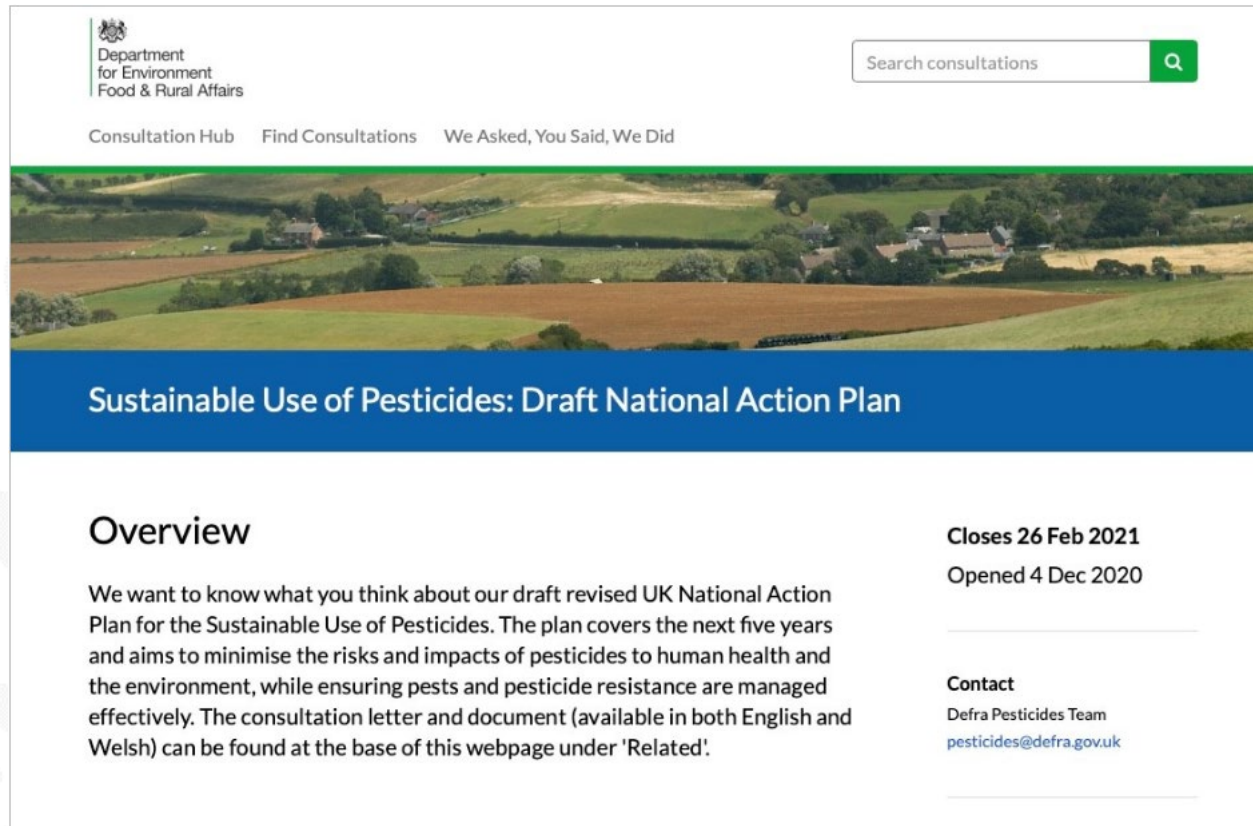


Notes from A Small Island – IPM in the UK



So what's the plan?

Previous National Action Plan written in 2013 (SUD obligation)



The screenshot shows the DEFRA consultation page for the Sustainable Use of Pesticides: Draft National Action Plan. The page header includes the DEFRA logo, a search bar, and navigation links. The main content area features a large image of a rural landscape and a blue banner with the title. Below the banner, there is an 'Overview' section and a 'Contact' section.

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

The high-level aim of the NAP is to minimise the risks and impacts of pesticides to human health and the environment, while ensuring pests and pesticide resistance are managed effectively

Revised draft NAP published Dec 2020 and open to public consultation for 8 week (until Feb 2021)

DEFRA received 38,500 responses to this consultation

What does the plan hope to achieve

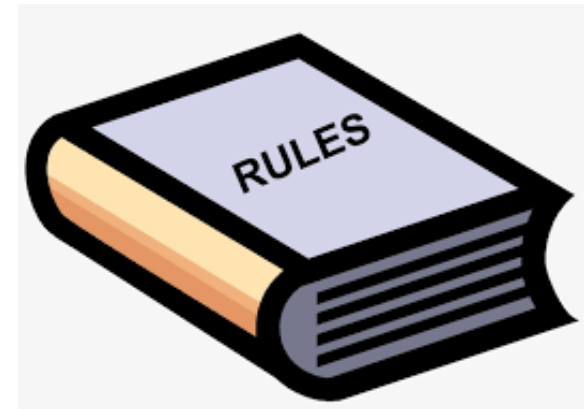
Key goals

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 by the end of 2022, and improving metrics and indicators; and,
5. Ensure that we work effectively with others to deliver the NAP goal

What does delivery look like

1. Ensure continued robust regulation to protect our health and environment

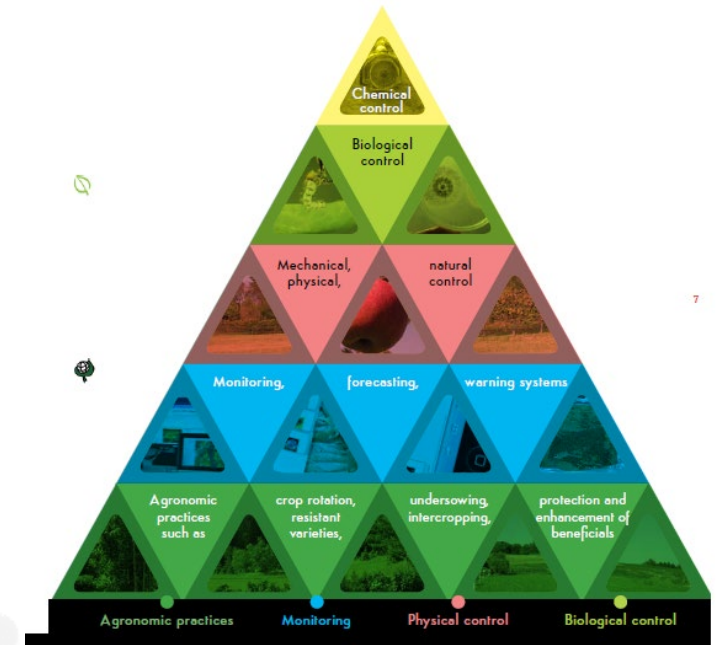
- Work within, and develop, our existing regulatory framework to **make the system simpler for users**, while maintaining levels of protection for health and the environment.
- Support the development of the knowledge needed to ensure that regulation of pesticides across the UK **promotes positive innovation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



What does delivery look like

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

- Ensure all pesticide users have access to the 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



What does delivery look like

3. Ensure those that use pesticides do so safely and sustainably

- Enhance enforcement, with more frequent compliance checks.
- Ensure professional user have appropriate training and certification.
- Ensure pesticides are used correctly so that risks to the environment are minimised and risks to human health are avoided.
- Promote clear messages for amateur users to encourage **non-chemical alternatives** wherever possible and provide improved advice on safe usage and disposal.



What does delivery look like

4. Set clear targets by the end of 2022, and improve metrics and indicators for monitoring pesticide risk

- Establish targets to support the reduction of risk associated with pesticide use by the end of 2022.
- 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.



What does delivery look like

5. Ensure that we work effectively with others to deliver the NAP goals

- Review the arrangements for delivery of the NAP to drive forward sustainable use of pesticides and **IPM**.
- Consider how this can be achieved through partnership approaches with stakeholders and industry.



Public response to NAP consultation

Regulation

More flexible approach now that the UK has left the EU (quicker approvals process for low-risk actives)

- more timely communication around the regulatory process and decisions
- clearer, more consistent and more accessible guidance to help them navigate the process

Importance of robust regulation - concerned that 'greater flexibility' post Brexit could be linked to a weakening of environmental and health protection.

- reduce or eliminate the use of derogations
- stronger requirements to protect people who might be exposed to pesticides

Better transparency and accountability

- full publication of evidence underpinning decisions, and how this was funded
- more consultation and a dedicated communications channel for regulatory decisions, delivering engaging and accessible briefings

Public response to NAP consultation

IPM

More investment in advice, training and education to increase awareness, understanding and uptake of IPM, by:

- providing standardized and regularly updated IPM guidance for users (via IPM Centre of Excellence)
- improving access to IPM education and training, across all sectors
- ensuring credibility of advice through professional certification, support for peer-to-peer learning, and clear separation of advice from sales
- promoting IPM within voluntary standards was felt by some respondents to be effective. Others argued that 'sticks' might be more effective than 'carrots' in delivering change among hard-to-reach groups.
- better communication of 'what works' in IPM, accounting for costs and effectiveness alongside environmental benefits

Public response to NAP consultation

Measuring progress

- joined-up approach to data collection and analysis
- maximise access to data to gain added value from scientific expertise
- investment in inclusive, applied research that delivers practically applicable results
- adopt a precautionary approach where evidence is incomplete
- wider participation in the search for more sustainable solutions
- clear roadmap setting out commitments to action, timings, and goals
- faster progress towards the establishment of targets for reducing the risks
- ensure NAP governance includes representation from a full cross-section of interest groups

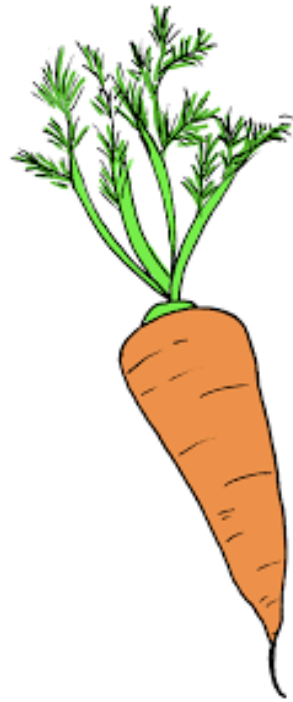
Progress

Consultation closed 26th Feb 2021 - Aim was to publish the revised National Action Plan in late 2021



But it has been a busy time for government, so there has been some slippage

Proposed solution?



Proposed solution

Sustainable Farming Incentive (SFI) Standards

Likely 2-3 'tiers' in each SFI standard

2022	2023	2024	2025
Arable and horticultural soils	Nutrient management	Agroforestry	Organic (drawing together relevant elements of other standards into one)
Improved grassland soils	Integrated pest management	Low and no input grassland	On-farm woodland
Moorland (introductory level)	Hedgerows	Moorland (all levels)	Orchards and specialist horticulture
Animal Health and Welfare Review		Water body buffering	Heritage
		Farmland biodiversity	Dry stone walls

What will an SFI standard look like?

Details on what an IPM standard would include have yet to be announced

As an indicator, the Soil Standard is as an annual payment of:

£22 (€25) per ha for introductory level

£40 (€45) per ha for intermediate level

Actions:

1. Complete a soil assessment + produce a soil management plan
2. Test soil organic matter
3. Add organic matter to all land in the standard at least once during the 3 year SFI agreement
4. Have green cover on at least 70% of land over winter (**intro**) or green cover on at least 50% of land over winter and multi-species cover crops on an additional 20% of the land (**intermediate**)



How to drive uptake

To support the standard, an online IPM decision making tool is being developed to assist farmers and growers in producing IPM plans specific to their farm and cropping system.

Published across a series of tables, the review includes at-a-glance information on the most effective non-chemical control measures and how they compare to chemical control. For example, in cereals, varietal choice, sowing date and rotation were cited as particularly effective.

Practical guidance will be created on how to use the online tool

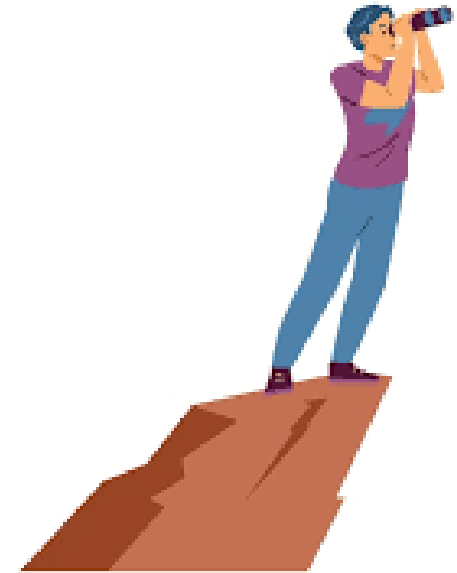


So what does the future look like?

There is a desire to push IPM, but the details and mechanisms still need to be worked out and a faster / cheaper registration route for biopesticides has yet to be announced

.....however....

Although progress at a policy level is slow, the science continues at pace.....



Update on the biological control of the Oriental Chestnut Gall Wasp (*Dryocosmus kuriphilus*) in England



Chris Malumphy, Neil Audsley, Rachel Down & Damian de Marzo

Oriental Chestnut Gall Wasp (*Dryocosmus kuriphilus*)

- *Dryocosmus kuriphilus* is native to China and is the World's most important pest of sweet chestnut
- Accidentally introduced into Italy in 2002 and had a devastating impact on commercial nut production
- It is parthenogenetic, univoltine and induces bud galls
- First detected in the UK in June 2015
- No statutory action in Great Britain.



D. kuriphilus adult



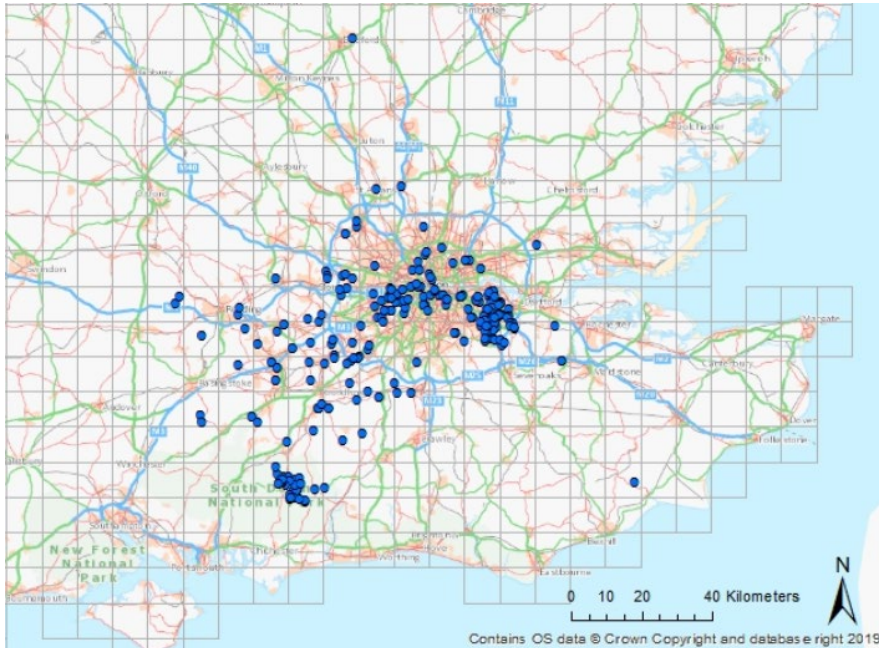
D. kuriphilus larva inside gall



Dryocosmus kuriphilus galls on sweet chestnut

Spread and Impact in UK

- *Dryocosmus kuriphilus* spread rapidly in the SE of England, where the majority of sweet chestnuts are found in the UK
- Gall density increased 2015 - 2021 resulting in reduced leaf area (30% of canopy), abnormal growth and changes in tree architecture



Terminal buds may be killed



Decrease in leaf surface area



Gall density up to 142 galls/m in the spring

Classical Biological Control

- Biological control agent (BCA) *Torymus sinensis*
- Has been used successfully to control the gall wasp in Croatia, France, Hungary, Italy (since 2003), Portugal, Slovenia, Spain and Turkey
- In parts of northern Italy it has reduced *D. kuriphilus* infestation rates to almost zero
- Application for a release licence in England required a detailed risk assessment for the BCA.



Torymus sinensis adult inserting ovipositor into gall



Torymus sinensis adults are available commercially

Research at Fera

- Expansion of non-target hosts was reported in Italy – 15 species of native oak gall
- 25 oak cynipid-gall species, 3 rose cynipid-gall species, and 5 non-cynipid galls were tested in no-choice oviposition trials
- Host location by ovipositor probing occurred in galls of 11 non-target species
- First evidence that *T. sinensis* may oviposit in cynipid galls on rose
- No *T. sinensis* were reared from non-target hosts
- Hybridisation trials found no evidence that *T. sinensis* would mate with native *Torymus*
- Adult *T. sinensis* survived for 228 days at 5.4°C, fed on dilute honey



Examples of *Torymus sinensis* inserting its ovipositor into non-target oak galls

Release and monitoring

Licence granted

- March 2021

First Release

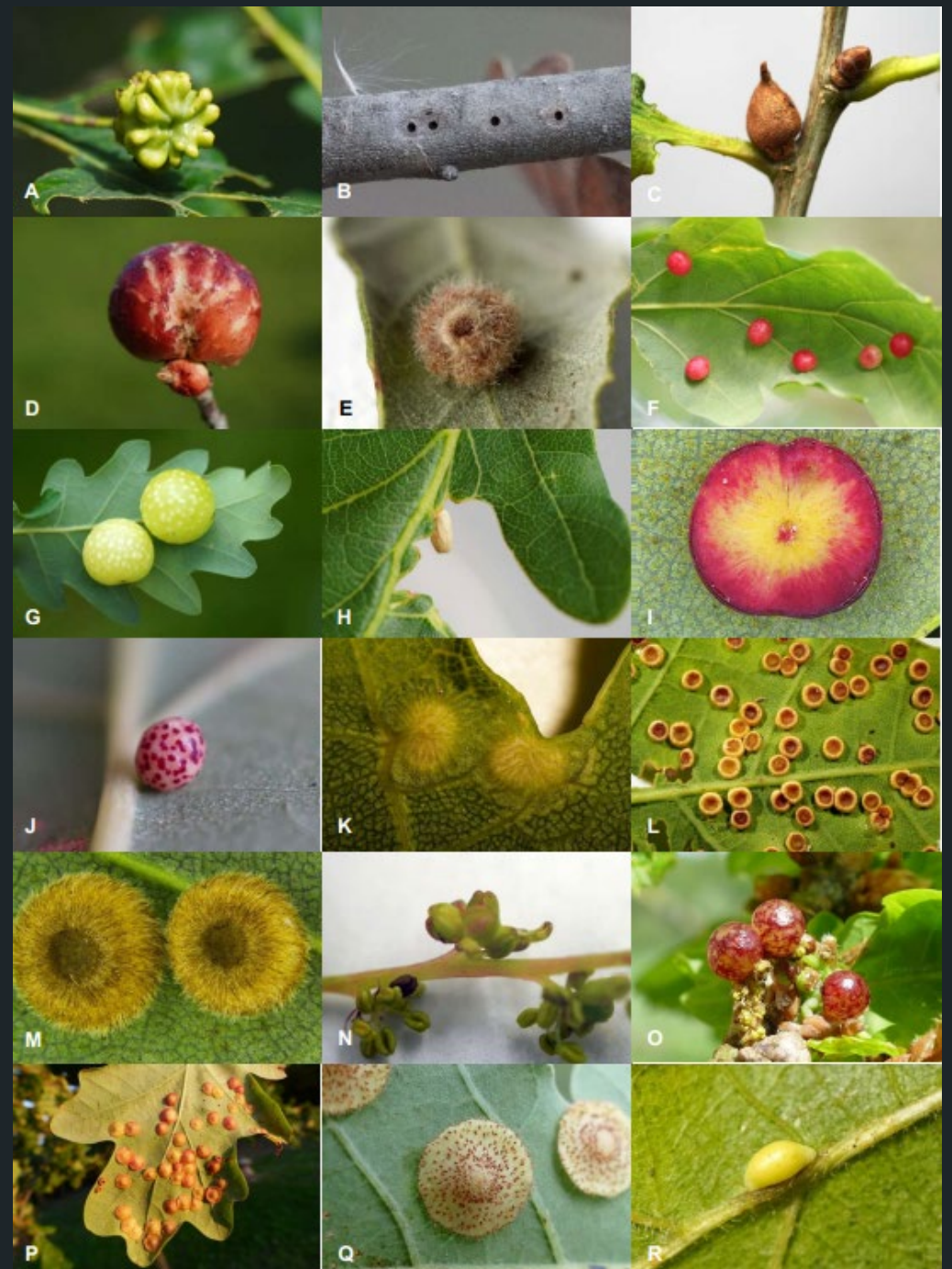
- 180 adults released at 9 sites in SE England in April 2021. Weather was exceptionally cold.

Second Release

- 220 adults released at the same sites in April 2022.

Monitoring gall densities and rates of parasitism

- Monitoring continues to determine efficacy and potential non-target impacts to oak cynipid wasps



Results 2021-22

- *Torymus sinensis* adults emerged from OCGW galls collected at all 9 release sites
- *Torymus sinensis* adults have also emerged from galls collected in sites adjacent to the release sites
- No *T. sinensis* have emerged from any non-target galls on oak or rose



T. sinensis adult
antennal drumming
to locate host



Preliminary results 2022-23

- Average gall density in a park in London reduced from 24.6 galls/m in 2021 to 5.2 galls/m in 2022 (79% decrease).
- Average gall density in a park outside London reduced from 9.4 galls/m in 2021 to 1.1 galls/m in 2022 (88% decrease).
- Also been a reduction in oak gall density but the 3 dominant species (spangle galls) in Autumn are unlikely to be suitable hosts for *T. sinensis* due to insufficient resource
- No *T. sinensis* have emerged from non-target galls



The most abundant oak galls in late summer and Autumn are three species of spangle gall

Acknowledgements

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