Llywodraeth Cymru
Welsh Government

UK Pesticides National Action Plan 2025: Working for a more sustainable future

A summary document for Welsh stakeholders

Introduction and scope

The UK Pesticides National Action Plan 2025: Working for a more sustainable future ("the NAP") sets out the strategy for managing pesticide use and minimising risk. It aims to promote the sustainable use of pesticides to minimise the risks and impacts of pesticides to human health and the environment, while ensuring pests and pesticide resistance can be managed effectively and ensuring farmers have the tools they need for food production. This is in line with the Welsh Minister's Natural Resources Policy.

Globally, agricultural pesticide use has increased by **91%** since 1990, reaching **3,441 metric kilotons (kt)** in 2020. However, in the UK, the total weight of active substance applied by farmers and growers has decreased by almost **60%** between 1990 and 2020. Despite variations due to factors like weather conditions and cropping changes, the UK maintains one of Europe's lowest pesticide usage rates. Wales accounts for around **1%** of agricultural pesticide use in the UK so our focus in Wales applies equally across agriculture, amenity and the amateur sectors.

Here's a summary of the key points of the NAP

- **Coverage and Purpose:**
  The NAP applies to the entire UK.
  It specifically relates to Plant Protection Products; these are pesticides used to protect plants and plant products from pests, disease and weeds.
  It does not cover 'biocides' like wood preservatives or disinfectants, or veterinary medicines such as sheep dip, as they fall under separate policies and regulatory requirements.
- **Approach:**
  It sets out three objectives to meet its high-level aim. These include encouraging uptake of Integrated Pest management (IPM), setting clear targets and measures to monitor use of pesticides and strengthening compliance to ensure safety and better environmental outcomes.
- **Delivery:**
  A series of actions underpin each of the three objectives. The Welsh Government has committed to the actions set out in the NAP but may also choose to supplement these with additional measures to drive even further ambition in Wales.
- **Target:**
  It introduces the first domestic reduction target for pesticides in the UK. Crucially, this is being done on the basis of potential environmental pressures rather than solely weight or volume applied. In setting a pesticides reduction target we want a target based on quantifiable outcomes, which is stretching, measurable, time bound and requires sustained action by all delivery partners. The NAP recognises that the domestic target will contribute to the Kunming-Montreal Global Biodiversity Framework Target 7 agreed at COP15.
- **Encouraging Sustainability:**
  The NAP recognises that biodiversity and insect abundance are crucial for our economic prosperity and that IPM can have significant benefits in reducing pressures and improving the environment.
- **Improving the Regulatory System:**
  It acknowledges the importance of an effective regulatory system and commits government to considering ways in which the regulatory system can be improved.
- **Existing Measures:**
  It commits government to updating best practice guidance to better support those working with pesticides.
- **Measuring progress:**
  Alongside the headline domestic, reduction target for pesticides government will continue to monitor and report against a broader framework of action-based and outcome-based indicators.
- **Future:**
  We intend to supplement the NAP with further detail that will outline our shared emerging priorities and provide a more comprehensive framework for achieving the vision for pesticides going forward.

Objectives

The NAP includes three objectives to help meet the over-arching aim of minimising the risks and impacts of pesticides to human health and the environment whilst managing pests and pesticide resistance. Each objective includes a number of actions providing a comprehensive approach for achieving the aim. Here's an overview of each objective:

1. **Encourage the uptake of integrated pest management (IPM):** This objective focuses on increasing uptake of IPM approaches by all pesticide users recognising the importance of innovation and alternatives to support IPM uptake.
2. **Set clear targets and measures to monitor pesticide use:** To demonstrate that the actions we are collectively taking are reducing the potential impact associated with pesticide use, this NAP includes the first domestic pesticide reduction target. Progress towards our domestic target and the actions set out in the NAP will be tracked as part of a wider indicator framework.
3. **Strengthen compliance to ensure safety and better environmental outcomes:** This objective centres on how we will support best practice to protect human health and the environment when using pesticides. The Codes of Practice for using plant protection products provide an important source of practical advice for those working in agriculture, amenity, horticulture and forestry sectors on how to use pesticides safely and, by doing so, to meet the legal obligations which cover the use of pesticides.

Overall, these objectives address key aspects of sustainable pest management, including education and training, incentivising lower-risk options, and ensuring regulatory compliance.

Objective 1: Encourage uptake of integrated pest management (IPM)

IPM is a holistic approach which carefully considers all available plant protection methods and keeps the use of conventional chemical pesticides and other forms of intervention to levels that are ecologically and environmentally justified and which minimises risks to human health and the environment.

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.

Objective 2: Set clear targets and measures to monitor use of pesticides

Our target takes account of the chemical properties of pesticides as well as the quantity used. Simply focusing on the quantity of pesticides applied (in weight) and the area they are applied over ignores variation in the chemical properties of the active substances applied and their potential impacts on the environment. Importantly, we will keep this target under review and monitor progress. Alongside measuring achievement against the target, we will also measure progress against a number of action-based indicators, for example the number of IPM plans completed, availability of biopesticides, and numbers of professional PPP users who have completed training.

Actions to monitor use of pesticides

Action 11

Contact organisations responsible for collecting the underlying data behind the indicators included in the previous NAP to determine any potential to update, improve or replace the existing indicators.

Action 12

All four governments to hold discussions with internal and external partners, for example HSE and UK Environmental Regulators, to agree an indicator framework, and to develop a plan for production of monitoring reports (on who will input, how they will be reviewed and quality assured).

Action 13

Assess progress against the target, reviewing the available evidence to assess whether the minimum target level should be adjusted to maintain a stretching level of ambition.

Action 14

Publish biennial reports on results of the indicator monitoring, including progress against the PLI target.

Objective 3: Strengthen compliance to ensure safety and better environmental outcomes

We want to support awareness and understanding of the legal requirements in relation to the sale and use of pesticides to ensure good levels of compliance across all sectors. We will update the Codes of Practice for users and for suppliers to reflect current regulatory standards established by the Directive 2009/128/EC on the sustainable use of pesticides (SUD) and better support those working with pesticides.

Official Controls Regulations

The Official Controls (Plant Protection Products) Regulations 2020 create an obligation on certain businesses (e.g.: pesticide manufacturers, distributors, suppliers) and any professional pesticide user to register with their relevant Competent Authority. Defra manages these registrations on behalf of Welsh Ministers for Wales. The register enables regulators to deliver a programme of risk-based inspection visits (both to those who have registered and who are yet to register). More information is available at: www.gov.wales/official-controls-plant-protection-products-regulation-2020-html

Actions to build and strengthen compliance

Action 15

Commission an evidence project to review where data from a range of indicators and metrics can further inform a risk-based approach to compliance.

Action 16

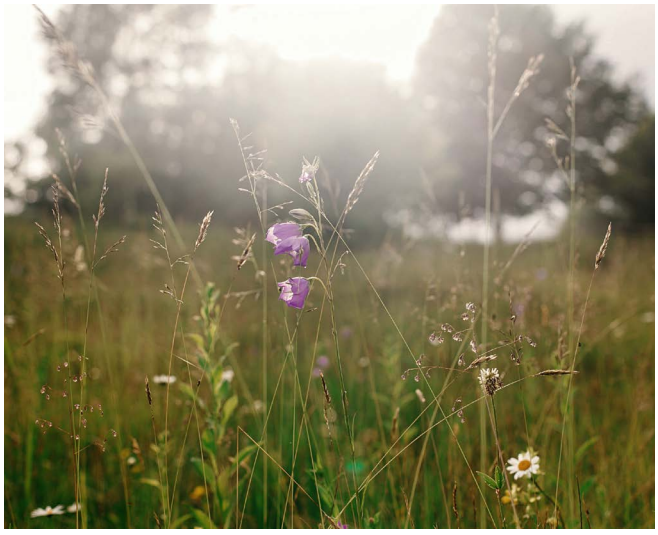
Review how membership of industry/assurance schemes might be taken into account as part of assessing users' risk profiles, so inspections are better targeted.

Action 17

Ensure guidance on the use of PPPs, in particular, the 'Codes of practice for using plant protection products' (and the 'Code of practice for suppliers of pesticides to agriculture, horticulture and forestry'), are updated to be current, remain clear and easily accessible, support compliance and embed IPM as a key part of our long-term approach to pest control.

Action 18

Engage with online marketplaces to discuss findings of research regarding online sales of professional PPPs, and approaches to increasing visibility of the legal requirements of their use for the general public.



Integrated Pest Management (IPM) – Key Principles and a case study

Integrated Pest Management (IPM) aims to minimise reliance on chemical pesticides by integrating a variety of pest management strategies that are effective, environmentally friendly, and sustainable in the long term.

IPM is a comprehensive approach to controlling, weeds, and diseases that emphasises sustainable and environmentally friendly practices. Weeds, invertebrate pests and diseases are usually referred to as 'pests'. This includes insects, molluscs, nematodes, arachnids, fungi, viruses, bacteria and plants. Here's a breakdown of what IPM means in practice:

1. **Prevention:** Focuses on preventing pest populations from building up through cultural methods like crop rotation, growing pest-resistant varieties, and hygiene. This includes regular cleaning of machinery and equipment, disposing of diseased crop residues. Establishing habitats such as hedgerows and wildlife areas, to provide feed, shelter and nesting sites to encourage natural predators.
2. **Monitoring:** Involves regular inspection, pest identification, and assessment of pest populations to determine if any control measures are necessary. Effective monitoring ensures that pesticides are only used when needed and are applied correctly.

3. **Thresholds:** Relies on scientifically sound thresholds to determine when pest populations or damage levels exceed acceptable limits, triggering the need for control measures. The emphasis is on control rather than eradication, as some pest levels may be tolerable and beneficial for ecosystems.
4. **Intervention and Control:** Selects control methods based on effectiveness and risk, prioritising sustainable physical, biological, and non-chemical methods primarily. This includes hand weeding, mechanical weeding, physical barriers such as netting, biological control agents, and biopesticides. Chemical pesticides are used as a last resort and at necessary levels to minimise the negative impacts to non-target species.
5. **Managing Resistance:** Pesticide resistance occurs when the pest develops a tolerance to a frequently used pesticide and as consequence is not killed. There are a range of strategies that can be implemented to manage resistance when repeated pesticide applications are necessary. This includes rotating pesticides with different modes of action, using a physical control method or using a biopesticide.
6. **Review and Evaluation:** Regularly reviews the effectiveness of pest control measures to assess and adjust strategies as needed. This may involve developing and annually reviewing IPM plans tailored to specific situations.

Case Study

400-ha arable farm, managed by J Llewellin & Co

The Llewellin family has farmed Trewarren since 1955. The introduction of IPM has allowed the Llewellin family to grow crops productively and profitably while improving soil health and the natural environment – with crop yields maintained, or in the case of oilseed rape, increased.

Three-quarters of Trewarren Farm is used for arable crop production, including wheat, winter oilseed rape and beans. The IPM practices introduced on the farm include cover cropping, reduced tillage and crop rotation to support beneficial insects, and break pest, weed and disease cycles. Pest monitoring and GPS technology are used to ensure chemical inputs are targeted and proportionate, with insecticides only used when pest populations exceed thresholds.

The farm has seen a significant improvement in soil health since IPM techniques were introduced, which has in turn had a dramatic effect on populations of birds and beneficial insects. A recent count of ladybirds revealed five different species, and a butterfly count identified 12 different kinds. Because the soil is disturbed as little as possible, populations of deep burrowing worms have increased, and the soil's water filtration properties have improved. The family has also planted hedges and ponds for irrigation and to provide habitats for wildlife and pollinators.

Science and technology underpin many of the farm's IPM practices. GPS technology has allowed the farm to reduce inputs and increase efficiency through automatic sprayer shut-off, and field mapping by soil type and nutrition means crops can be drilled using variable seed rates to get even plant establishment. The resistance scores of seed varieties are carefully considered, to minimise vulnerability to disease.

Target

The NAP introduces the first domestic reduction target for pesticides in the UK. The target is based on the Pesticide Load Indicator (PLI), which takes account of the chemical properties of pesticides as well as the quantity used. Twenty environmental indicators are used to determine the overall PLI. Currently the PLI only applies to the agricultural arable sector, which accounts for around 90% of overall use of pesticides in agriculture and horticulture in the UK. The target is **to reduce each of the 20 PLI components by at least 10% by 2030**, taking figures for 2018 as a baseline.

The domestic target will also contribute to the Kunming-Montreal Global Biodiversity Framework Target 7 agreed at COP15, to reduce the overall risks from pesticides and highly hazardous chemicals by at least half by 2030.

Measuring Progress

Alongside the headline target based on the Pesticide Load Indicator, a broader framework of indicators will be monitored. This might include:

- Number of Integrated Pest Management (IPM) plans completed.
- Availability of Biopesticides.
- Number of professional pesticide users who have completed training schemes.

We propose to maintain monitoring of the indicators used in the previous 2013 indicator framework to show how we are progressing against objectives within the SUD, updating and expanding on these to clearly demonstrate progress.

Useful links

Action Plan for Pollinators in Wales	www.gov.wales/sites/default/files/publications/2019-04/action-plan-for-pollinators-review-and-future-actions-en.pdf
AHDB Integrated pest management hub	www.ahdb.org.uk/integrated-pest-management-ipm-hub
Biodiversity deep dive: recommendations	www.gov.wales/biodiversity-deep-dive-recommendations
Chemicals and Pesticides Provisional Common Framework	www.gov.uk/government/publications/chemicals-and-pesticides-provisional-framework
Equipment inspection for pesticide users	www.gov.wales/equipment-inspection-pesticide-users
Farming connect	www.businesswales.gov.wales/farmingconnect/
Global Biodiversity Framework	www.cbd.int/gbf
HSE Pesticides	www.hse.gov.uk/pesticides/index.htm
HSE Pesticides databases	www.hse.gov.uk/pesticides/databases/index.htm
Natural resources policy	www.gov.wales/natural-resources-policy
Nature recovery action plan	www.gov.wales/nature-recovery-action-plan
Official Controls (Plant Protection Products) Regulations 2020	www.gov.wales/official-controls-plant-protection-products-regulations-2020
Pesticide Regulation post Brexit	The HSE website provides a summary of the regulatory position post EU Exit. www.hse.gov.uk/pesticides/brexit.htm#legislative
Pesticide usage surveys	www.pusstats.fera.co.uk/home
Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	www.legislation.gov.uk/uksi/2017/407/contents/made
Welsh Government Pesticides webpages	www.gov.wales/pesticides
Code of practice for Using Plant Protection Products (England and Wales)	www.gov.wales/pesticides-code-practice
Code of Practice for Suppliers of Pesticides to Agriculture, Horticulture and Forestry (Great Britain)	www.hse.gov.uk/pesticides/using-pesticides/codes-of-practice/index.htm
Welsh Government's Sustainable Farming Scheme	www.gov.wales/sustainable-farming-scheme-guide

Background information

Adamson, Hannah, Carla Turner, Eleanor Cook, Henry E. Creissen, Andy Evans, Sarah Cook, Mark Ramsden, et al. 2020. Review of Evidence on Integrated Pest Management. Final Report, Defra.

Creissen, Henry, Philip Jones, Richard Tranter, Robbie Girling, Stephen Jess, Fiona Burnett, Michael Gaffney, Fiona Thorne, and Steven Kildea. 2021. "Identifying the drivers and constraints to adoption of IPM among arable farmers in the UK and Ireland." Pest Management Science 4148-4158.

Simply Sustainable Integrated Pest Management