A new IPM Planning Tool for Scottish growers

Policy Brief

https://www.planthealthcentre.scot/scottish-ipm-assessment-plan

Scottish IPM Assessment Plan

Purpose

To protect arable crops from yield and quality losses from pests (invertebrate pests, weeds and diseases) in Scotland where there is a heavy reliance on pesticides. Integrated pest management (IPM) is a holistic approach to pest management that maximises profitability and minimises negative impacts on the environment. IPM aims to reduce reliance on pesticides and, therefore, promoting IPM is identified as a key action in support of a National Action Plan.

Given the diverse range of pests that threaten arable crops in Scotland, and the equally broad range of control measures that can be potentially used, the challenge for us was how to compare such different approaches and develop a common measure against which changes could be judged. A previous IPM plan was developed in 2016 and hosted on the Scottish Governments website. It served to introduce growers to the concepts of IPM and allowed them to list the measures they employed but lacked quantitative metrics and so had limited value in driving or demonstrating improvements as only simple metrics, such as number of growers completing the plan, could be collected.

To drive improvements and develop a new metric, we surveyed farmers across the UK and Ireland in a project funded outwith the Plant Health Centre, to identify factors associated with good practices and explore any barriers to IPM uptake. Through surveys and workshops, researchers created a way of measuring IPM adoption and identified what motivates high scoring farmers and the practices they have in common. This has opened-up opportunities for the further adoption of IPM practices and helped us tailor our knowledge exchange activities to the methods we know have most impact.

Results

We used the responses from the UK/Ireland surveys and workshops to develop a scoring system and to test IPM uptake. From this, a new IPM planning tool was developed to replace the existing IPM plan and, in doing so, we took the opportunity to move it to the Plant Health Centre website, with the Plant Health Centre funding the move. As well as enabling annual reporting on metrics, this will allow us to tailor knowledge exchange on IPM to the methods we know will have most impact. For example, in the initial survey we found those best adopters preferred to receive IPM advice from the more impartial sources such as independent agronomists, crop walks/open days and discussion groups. In the future, we will use the IPM plan to further develop knowledge exchange strategies. It could also be used by government schemes or other initiatives to promote IPM adoption, which recognise the importance of farmers actively engaging with IPM experts.

Benefits

We fully expect the new IPM plan to encourage growers to increase their uptake of IPM practices, bringing greater resilience in crop and farming systems to pests, and leading to more stable yields and prices. The reduced risk from pests, in turn, will lead to reduced impact from pesticides and other agronomic practices on the environment, supporting safer and more sustainable food production systems.

Completion of an IPM plan is a requirement of UK crop quality assurance schemes such as Scottish Quality Crops and Red Tractor, and completion of the new plan will be a requirement from Winter 2020/21. The IPM metric can be applied annually, which will allow us to monitor changes in practice, and evaluate the success of our IPM research and knowledge exchange efforts.

As our research shows that a farmer's familiarity with IPM is a necessary precursor to IPM adoption, in future our emphasis should be on delivering current, evidence based IPM advice to growers through robust field trialling and effective communication of key messages. Our knowledge exchange strategies will help to promote the relationships between advisers and farmers but also other stakeholders in the supply chain who influence pest management decisions e.g. processors, retailers and consumers. A fully co-operative approach is needed to support behavioural change in the farmers and greater adoption of IPM practices. Hosting the new plan on the Plant Health Centre's website allows us to track improvements and tailor knowledge exchange in response. It will also help us keep policy colleagues informed on IPM practices in Scotland and the opportunities and barriers to uptake as they present. The data is securely held and will not be used to identify individuals. We anticipate the core questions in the tool will remain, but that it will be adapted annually to capture new developments and practices. The current tool covers arable crops, with grassland tools and potato tools in development.

Project Partners

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Web link

The new IPM planning tool for Scotland is available online on Scotland's Plant Health Centre's website: https://www.planthealthcentre.scot/scottish-ipm-assessment-plan

Reference publication

The plan has been based on "Measuring the unmeasurable? A method to quantify adoption of integrated pest management practices in temperate arable farming systems" by Creissen et al., 2019, Pest Management Science, 75, 3144-3152 with funding from Scottish Government Strategic Research programme, Rural Business Research (England), Department of Agriculture, Food and the Marine (Ireland) and Department of Agriculture, Environment and Rural Affairs (Northern Ireland). (https://doi.org/10.1002/ps.5428). This was led by Henry Creissen and Fiona Burnett of SRUC, Steven Kildea of Teagasc and Philip Jones of University of Reading. Thanks go to all who collaborated.

Video: https://www.youtube.com/watch?v=UJfOHeBOEig&feature=youtu.be

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