



Public Views on Plant Health and Invasive Non-Native Species

Executive Summary

1. Introduction

- 1.1 In recognising that pests and diseases do not respect national boundaries, the Plant Biosecurity Strategy for Great Britain was published on 9th January 2023. One of the outcomes of the Plant Biosecurity Strategy for Great Britain (2023-2028) aims to deliver a society that values healthy plants. This should be met through raising awareness of the importance of healthy plants and trees and encouraging the adoption of responsible behaviours across society.
- 1.2 Recognising the similar threats and impacts caused by invasive non-native species (INNS), the Great Britain (GB) Invasive Non-Native Species Strategy was published on 27th February 2023. The strategy recognises the importance of raising awareness and understanding of the impacts of INNS among key target audiences and, where appropriate, the general public in order to bring about behaviour change where activities carry the risk of introduction or spread of INNS.

2. Research aims and methodology

- 2.1 The research was designed to better understand the Welsh public's attitude towards, understanding of, and engagement with plant and tree health, pests and diseases, and INNS in Wales. The results aim to inform Welsh Government policy, research and public engagement work to promote the importance of healthy trees and plants and encourage responsible behaviours, in line with the Plant Biosecurity Strategy for Great Britain (2023-2028).
- 2.2 The Welsh Government Plant Health and Environmental Protection Division commissioned Beaufort Research to conduct a survey of public attitudes towards plant health and the impact of INNS. The survey was distributed to a quota sample of 1,000 adults aged 16+ across Wales using an online survey panel, with fieldwork conducted between 28th February and 20th March 2022. The survey used quotas to gain a sample intended to reflect the Welsh population on demographics of age, gender, local authority and social class.

3. Key findings

Views on the loss of trees and plants due to pests and diseases, and invasive non-native species

- 3.1 Most respondents felt that all but one of the impacts of plants and trees dying or having to be removed due to pests and diseases mattered. Impacts mattered more to participants at the national level than locally.
- 3.2 Reduced air quality/more air pollution, loss of carbon capture/release of carbon from dying plants and trees, and loss of biodiversity/nature mattered more to respondents both nationally and locally. Whereas loss of shade from plants or trees dying or having to be removed due to pests and diseases mattered the least to participants (59 per cent locally and 69 per cent nationally).
- 3.3 In terms of the impacts from INNS causing damage to their local area, all impacts mattered to over 65 per cent of respondents. As with loss of plants or trees due to pests and diseases above, loss of biodiversity from INNS causing damage in their local area mattered the most to respondents. This was due to both dominant invasive species outcompeting native species and invasive species introducing new diseases. Increased risk of flooding also mattered to a high number of respondents (74 per cent). Less attractive scenery / changed look of the landscape had the lowest proportion of respondents who reported that it mattered (67 per cent).
- 3.4 Generally female respondents and those aged over 45 were more likely to report the impacts of the loss of plants and trees due to pests and diseases (locally and nationally) and impacts from the damage from INNS did matter.

The importance of pests and diseases and protection plants and trees

- 3.5 Respondents reported that the issue of plant and tree diseases was important at the personal, community, society, and global levels. Participants were most likely to state that tree and plant health was important on a global scale (81 per cent). As geographical level narrowed, the proportion of respondents reporting it to be important decreased. Sixty-seven per cent stated that tree and plant health was important to them personally.
- 3.6 Most respondents reported that protecting plants and trees was important to them (85 per cent).
- 3.7 Respondents aged 45+ were more likely to report that tree and plant health was important at all geographical scales and that protecting plants and trees from pests and diseases was important.

Risk factors to plant and tree health in Wales

- 3.8 Respondents rated knowledge, awareness, lack of incentive to adopt behaviour change, and climate change as the highest risk to plant health in Wales. Less than half of participants thought that plants sold online by domestic retailers, plant sold in a store by specialist retailers and trade imports posed the highest risk. Between 15 to 25 per cent of respondents indicated that they were unsure about the risk of trade and personal imports and the sale of plants and trees (by answering 'don't know').

Knowledge, interest and actions taken on plant health and INNS prevention

- 3.9 Respondents were most likely to take an interest in their own garden, both the health of plants and trees, and in checking for and treating pests and disease – 53 per cent and 44 per cent did this always or often. Participants were least likely to report a tree or plant they thought had a pest or disease (73 per cent reported doing this never or rarely). It is unknown whether this was due to a lack of knowledge about identifying or reporting pests or diseases or because there were no pests and diseases to report. A quarter of respondents were able to identify pests and diseases always or often.

- 3.10 Male respondents aged 16-44 were more likely to report an interest in plant health than female respondents aged 16-44, whereas the opposite was true for respondents aged 45+. Male respondents aged 16-44 were less likely to have taken action – they were more likely to report having never or rarely reported a plant which they thought had a pest or disease and donated money to groups.
- 3.11 Most respondents (94 per cent) reported not having worked with local or national groups to monitor for plant and tree pests and diseases.
- 3.12 In terms of actions to tackle INNS, participants most commonly reported having never done these actions. More than 50 per cent of respondents reported never reporting the presence of INNS, donating money to groups concerned with controlling INNS and volunteering with groups to help control INNS. These three statements relate to respondents taking action rather than knowledge of INNS so therefore may reflect barriers to act to tackle INNS. The statement relating to knowledge of basic actions to take to reduce the spread of INNS in their garden or local area applied to most respondents out of all the statements (although still to a small extent – 13 per cent reported this applying to them often). When broken down by age, respondents aged 16-44 were more likely to report that statements related to knowledge never applied to them (i.e., not having the knowledge), meanwhile respondents aged 45+ were more likely to report never having taken action
- 3.13 More than 70 per cent of respondents reported that each biosecurity measure presented to them would help reduce the spread of INNS. The biosecurity measures viewed as helping to reduce the spread of INNS the most by respondents were: guidance on how to control or eradicate invasive species; installing signage, guidance or cleaning equipment in public spaces; and promoting the use of native species in private and public places.

Researching and receiving information on plant and tree pests and diseases

- 3.14 Seventy-five per cent of respondents had not actively searched or asked for information on plant and tree pests and diseases. Fifty-three per cent of respondents had not recalled ever seeing, reading or hearing about plants and tree pests and diseases. This indicates that respondents did not need to actively search for information in order to see, hear or read about plant and tree pests and diseases.
- 3.15 Of those that had viewed information on plant and tree pests and diseases, almost fifty per cent agreed that information was easy to find and easy to understand. Respondents aged 45+ were more likely than respondents aged 16-44 to report that information was easy to find and understand.
- 3.16 Generally, respondents in managerial, administrative or professional occupations (social grade ABC1) were more likely than those in manual labour jobs, casual work, unemployed seeking state benefits or on state pension (social grade C2DE) to agree with statements relating to researching and receiving information on plant and tree pests and diseases.

Factors preventing taking action to benefit plant/tree health

- 3.17 Findings suggest that most respondents believed plant health was important. Sixty-three per cent of respondents reported that not caring, or the belief that plant diseases have no real impact on them did not prevent them from taking action.
- 3.18 Not knowing what actions to take, not having the resources (e.g. money) to do what is needed and not having the authority to do what is needed were the factors most likely to prevent respondents from taking action.
- 3.19 Male respondents and respondents aged 16-44 were more likely to report barriers that prevented them from taking action on plant health than female respondents and respondents aged 45+.
- 3.20 Social grade, which is determined by occupation and employment status, influenced responses to the following statements: I am physically unable to help, I don't have the resources (e.g. money to do what is needed and I don't have the time. It is hypothesised that the statements which are

impacted by social grade are influenced by an underlying relationship between the resources described in the statements (time, money, health) and occupation or employment status. Respondents in manual labour jobs, in casual work, unemployed seeking state benefits or on state pension (social grade C2DE) were more likely to state that lack of resources and lack of authority prevented them from taking action than respondents in managerial, administrative and professional occupations (social grade ABC1).

- 3.21 Older respondents were more likely to report that they were physically unable to help and that time did not prevent them from taking action.

Review of existing evidence

- 3.22 Following survey analysis and interpretation, a rapid non-exhaustive review of existing evidence was carried out to understand whether key findings from the survey were reflected in the wider evidence base.
- 3.23 Generally, there was limited evidence related to how different characteristics impacted on issues related to climate and environment and literature also suggests more research is needed (NHS Wales and Bangor University, 2022). Some recent research has indicated that females were more likely to take an interest in issues surrounding climate change which broadly fits with the pattern of findings within this report.

4. Conclusions

- 4.1 Most respondents reported that plant and tree health was important across geographical scales, particularly at the global level. Protecting plants and trees was also viewed as important by respondents.
- 4.2 Generally, most impacts of loss of trees and plants due to pests and diseases (nationally and locally) and damage from INNS on the local area mattered to respondents. In particular, poorer air quality and greater levels of carbon in the atmosphere resulting from loss of plants and trees due to pests and diseases, increased levels of flooding as a result of INNS damage and loss of biodiversity resulting from both loss of trees due to pests and diseases and from damage to INNS on the local area.
- 4.3 Respondents appeared to lack knowledge of certain risks on plant health, reporting this as most likely to prevent them from taking action. Findings therefore indicate that improving awareness of plant and tree pests and diseases and knowledge of how to take action might be beneficial.
- 4.4 Most respondents had not worked with groups to monitor for plant and tree pests and diseases, actively searched for information or recalled having seen, read or heard about plant and tree pests and diseases. Although most respondents did not seem to be interested in actively researching plant health, just over 40 per cent recall receiving information on this.
- 4.5 Respondents reported that guidance, signage and promoting native species would help the most to control or eradicate invasive species.
- 4.6 Respondents aged 45+ and female respondents were more likely to report that statements mattered or were important or helpful than respondents aged 16-44 and male respondents. Male respondents were more likely to report barriers to taking action to support plant health. It would be beneficial to explore the gender difference identified in the sample further to identify whether and how to engage men in actions to promote plant health.
- 4.7 Respondents aged 16-44 were more likely to report lack of knowledge of plant health, pests and diseases and prevention methods which might indicate an opportunity to target resources to promote knowledge. Younger respondents were more likely to take action, however, volunteering, donating and working with groups to monitor pests and diseases. More segmentation could be undertaken to explore this further. Younger respondents were also less likely to report barriers

preventing action to benefit plant and tree health and were more likely to be concerned about climate change.

- 4.8 Social grade (i.e. occupation level) and region of respondent did not appear to impact answers substantially, apart from issues that could be linked to consequences of occupation or income. For instance, respondents with manual labour or casual jobs, state pensioners and those receiving state welfare were more likely to report that lack of resources (money, time) impeded them from taking action. Respondents with managerial, administration or professional jobs were more likely to actively search for or recall seeing information about plant and tree pests and diseases than respondents in manual or casual jobs, claiming state welfare or state pensioners.

Recommendations for future research

- 4.9 To build on the findings from this survey, it is recommended that these findings are explored qualitatively to understand some of the reasons behind the response patterns and to test the findings further. This would support achieving the biosecurity strategy outcome of “a society that values plants” through understanding levels of awareness and how best to promote awareness, knowledge and the ability and motivation to take action.

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Views expressed in this report are those of the researchers and not necessarily those of the Welsh Government

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Mae'r ddogfen yma hefyd ar gael yn Gymraeg.

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