

PHC2018/07 – Policy Summary on ‘The Use Of Mobile Technology To Enhance Plant Health Monitoring And Awareness In Scotland’

Sebastian Raubach and Jennie Brierley: The James Hutton Institute

The Use of Mobile Technology to Enhance Plant Health Monitoring and Awareness in Scotland

Plant health is a major issue worldwide with many pests and diseases threatening different plant-based sectors, such as forestry, agriculture, environment and horticulture.

This report reviews and compares existing mobile software applications, essentially websites and smartphone apps, based on a range of criteria to find good candidates for facilitating plant health awareness and monitoring in Scotland. We found that, despite having a common goal, contributing towards plant health, the available tools differ significantly in their focus and scope. Two excellent examples of mobile software applications currently in use in the UK reflect this diversity. One being a comprehensive website to monitor pest and disease threats in the forestry sector (TreeAlert) the other a smartphone app developed in response to a very specific threat (Asian Hornet Watch). These tools are interactive and are supported in terms of maintenance, data curation and if necessary appropriate action is taken, maximising the likelihood of controlling or eliminating outbreaks of new pests and diseases. Both tools currently function across the UK, and either could be adapted for other sectors/threats specific to Scotland if required.

The underpinning information and technologies are available to develop new websites and smartphone apps or indeed adapt or expand existing ones, either to support other plant health sectors or in direct response to specific new threats in Scotland. However, if interactive functions are incorporated into a mobile software application it is essential that resources to underpin the processing and management of data are available. The larger the coverage in terms of hosts and threats, the larger the commitment in terms of resources to ensure that the usability, sustainability and value of the system is secured.

Conclusion

- The diverse requirements between and within sectors means no single mobile software application is suitable for all plant health needs.
- This was reflected in stakeholder engagements which revealed that stakeholders interact with plant health issues in a diverse range of ways.
- There are excellent examples of mobile software applications which could be adapted for other sectors/specific threats if required.
- If interactive functions are incorporated into a mobile software application, it is essential that resources to underpin the processing and management of data are available.
- With respect to new threats, there is no single online resource with identification keys and the ability to submit a report on a suspected sighting of a pest or pathogen. Indeed, the signposting of 'how to' and 'who to' submit potential sightings of new pests and diseases is vague, and consequently 'what to do' following a suspected finding of a new pest or disease is often not clear.