science summary

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Developing integrated weed management options for Japanese knotweed

Science Summary SC020115

Scientists from CABI have identified a natural control for Japanese knotweed, a highly-invasive non-native plant. The natural control is a psyllid sap-sucking bug, which is highly specific to knotweed. Various chemical and mechanical control methods are already in use for knotweed in the UK. The new method drastically reduces the amount of herbicide needed, thus protecting the environment while reducing costs for land managers.

The study carried out a series of experiments and showed that low infestations of the psyllid bug rendered Japanese knotweed highly sensitive to herbicide, creating an important advantage. In the past, large doses of herbicide, applied over a number of years, have been necessary to treat knotweed. This treatment has often been performed near watercourses, bringing the threat of contamination to rivers and streams. The new study showed that equivalent control could be achieved with a tenth of the concentration of glyphosate previously required.

This information will be useful to contractors and land managers. Japanese knotweed is a serious problem in a variety of habitats. It damages structures and hard surfaces, devalues development land and complicates brownfield redevelopment.

The Environment Agency maintains many miles of flood defences that are infested with Japanese knotweed. Integrated weed management techniques will allow us to improve our own control methods, reduce our use of herbicides and refine the advice we give to others.

This summary relates to information from Science Project SC020115, reported in detail in the following output(s):

Science Report produced by CABI: VM03021
Title: The biological control of Japanese knotweed – final project report December 2007

Internal Status: Released to all regions
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Project manager: Trevor Renals, Science Department

Research Collaborator: Network Rail

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