The Crop Protection Compendium: information for pest risk analysis

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Abstract

The CPC is a widely used, encyclopaedic knowledge resource with comprehensive coverage of more than 10,000 agricultural and forest pests. More than 2400 pests are included in the Compendium as detailed, fully referenced and peer reviewed datasheets compiled by more than 1000 experts. The datasheets are regularly updated, and supplementary bibliographic records (including full text articles) on pests are updated weekly. Real-time updating has decreased the time taken to respond to feedback on CPC content, particularly for pest distribution and host data. The information requirements of pest risk analysis (PRA) have been assigned high priority since the inception of the CPC and consultation with plant quarantine professionals across the world has greatly influenced the pest coverage, data presentation and functionality. Datasheets include sections on taxonomy, distribution, biology and ecology, movement and dispersal, identification, detection and inspection, phytosanitary risk, impacts and control. They are illustrated with colour images and distribution maps. Powerful database searches can be used to generate lists of pests which may be filtered using criteria such as country, host or plant part affected, with linkage to datasheets. From here information can be easily located and copied directly into PRAs. The CPC includes links to other phytosanitary information resources, including a PRA tool developed through the EU-funded PRATIQUE project, and can be used alongside these sources to develop PRAs. The CPC is one of a series of Compendia web resources published by CABI. Their development is funded and guided by international groups of stakeholders made up of government departments, development assistance organizations and private companies, and their sustainability is ensured by a combination of sales revenue and funding through partnerships. Although offered for sale in developed countries, the CPC is provided at low cost, or free via donors, to stakeholders in developing countries.

Datasheets include text, pictures, distribution maps, references and a report builder.

Pest coverage

The Crop Protection Compendium (CPC) provides information on more than 10,000 pests, pathogens and weeds affecting agriculture, horticulture and forestry, many of them of quarantine importance. Of those, 2,400 of the most important pests have detailed datasheets that have been compiled by experts, edited by CABI and peer reviewed. The CPC currently comprises over 3,400 full datasheets, 22,000 basic datasheets, 250,000 abstracts, 23,000 full text articles and a glossary of 20,000 terms.

The breakdown of pest coverage is: insects (40%), fungi (18%), weeds (17%), viruses (9%), bacteria (5%), nematodes (5%) and molluscs, vertebrates and diseases of unknown aetiology (6%).
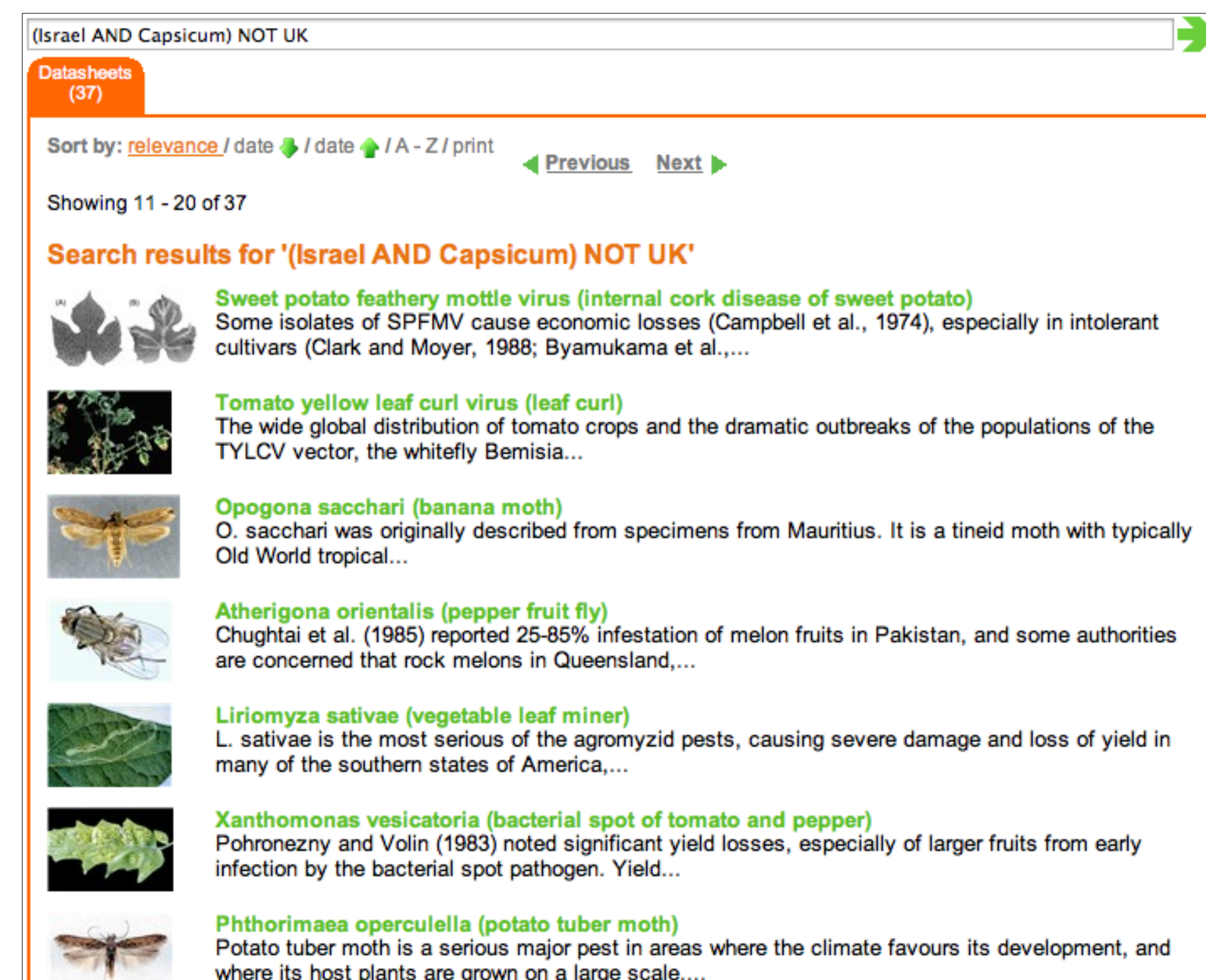
Pest datasheets are hyperlinked to datasheets on crops, timber trees and the other plant hosts they attack, the countries in which they have been reported and their natural enemies. The cited references are also linked to abstracts and full text where possible.

Datasheet sections cover:

Names and taxonomy	Means of movement and dispersal
Summary of invasiveness	Seedborne aspects
Description	Natural enemies
Geographical distribution	Impact
History of introduction and spread	Diagnosis
Risk of introduction	Detection and inspection
Habitat	Similarities to other species
Host range	Prevention and control
Symptoms	References
Biology and ecology	

Use of the CPC in PRA

The CPC was designed to address the requirements of pest risk analysis (PRA). Various relevant lists are presented in the datasheets such as pests by country, pests by host and hosts by pest.
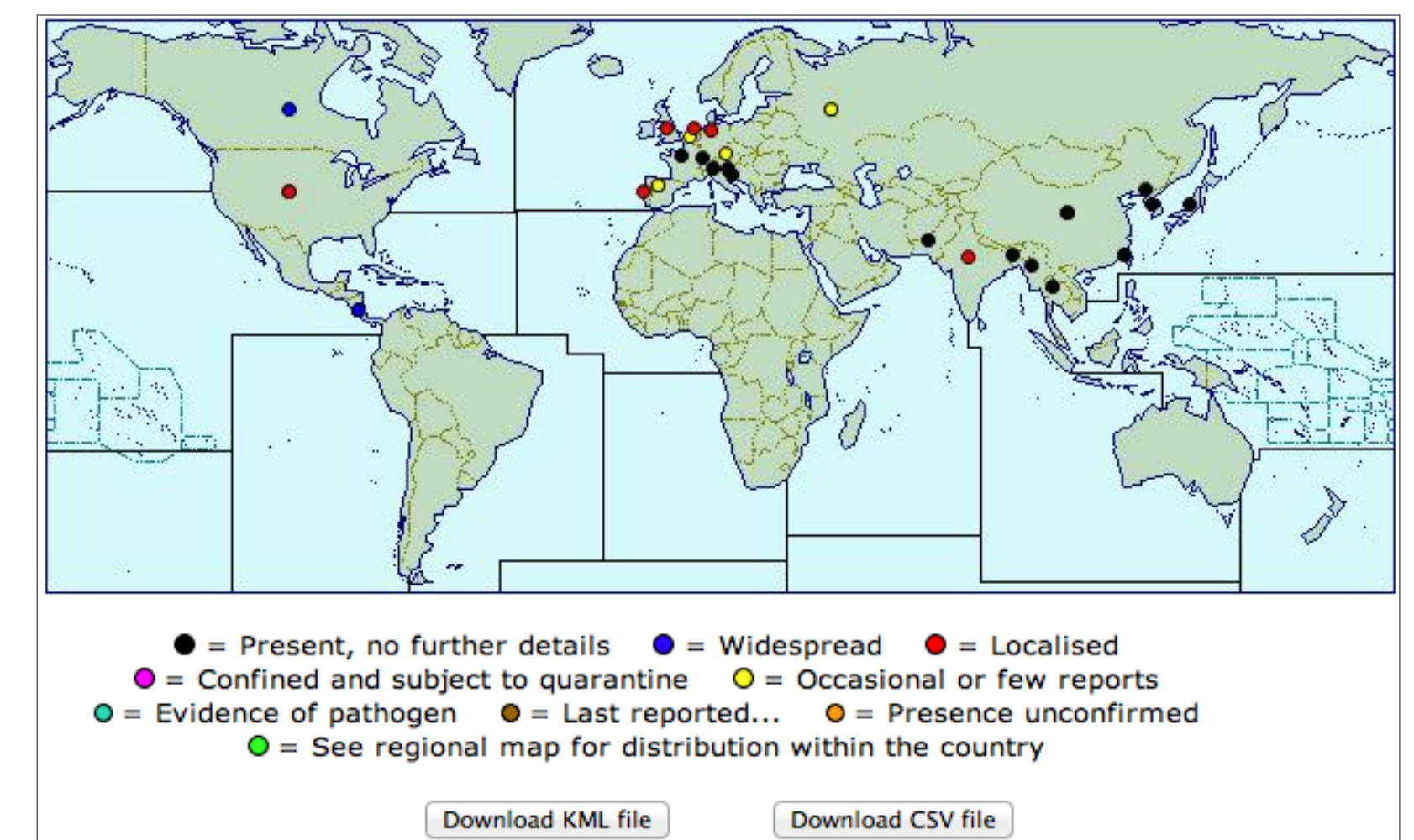

A powerful database search can be used to generate a list of pests which are associated with a commodity pathway and not present in the PRA area – the first stage of a PRA according to ISPM 11 (2013).

The risk assessor can link to datasheets of the potential quarantine pests for further referenced information to determine the likelihood of entry, establishment, spread and impacts. Sections on Detection and Inspection and Prevention and Control also provide some help towards selecting appropriate risk management interventions. CPC information can then be cut and pasted directly into reports to assist with documentation of the PRA.

CPC updating

The Compendium benefits from real-time updating, allowing for weekly updates of new distribution and host records from the CAB Abstracts database, and a timely response to new information and feedback. The subset of abstracts relevant to crop pests is updated weekly from CAB Abstracts and many now include full text.
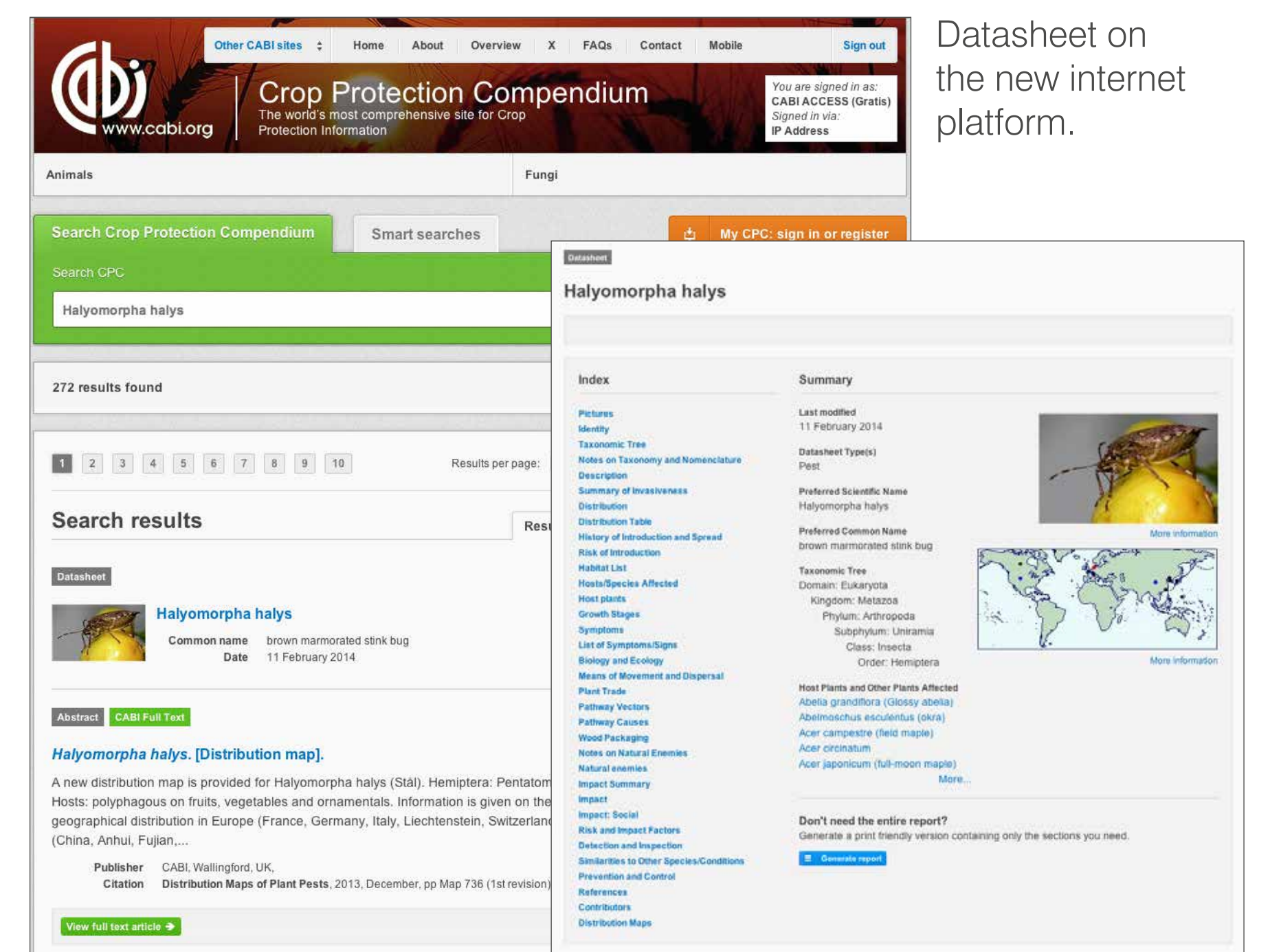
Pest distributions are regularly updated with new information from key sources like IPPC, EPPO PQR and CABI/EPPO maps. Distribution data can be exported for use in other mapping programs.
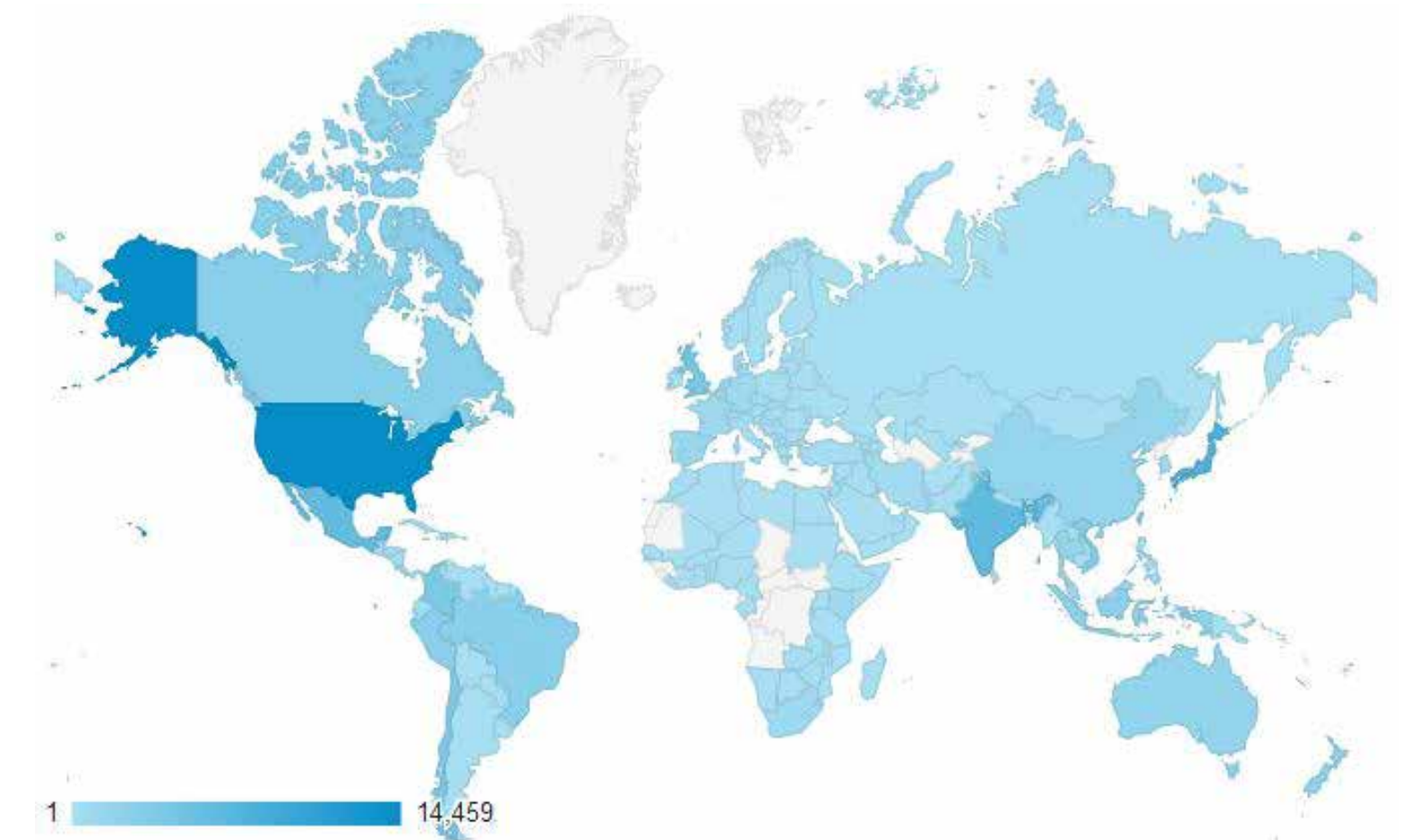

Pest distribution data covers country (subnational region), status, references, notes, invasiveness, origin (native or exotic) and dates of introduction or eradication (where available).

Future development

The CPC is migrating to a new internet platform and will be optimised for mobile devices. This development offers improved navigation and searching, and a personalised user area for saving searches.

Datasheet on the new internet platform.

Visits by country: the CPC is used in more than 70 countries.