



CABI Training Materials

Horticultural Science

User Guide

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Introduction

Horticultural Science is the leading database on tropical, subtropical and temperate horticultural science research. It provides access to worldwide research on horticultural crops, science and techniques through abstracts and full text documents.

The resource covers all aspects of horticultural research, including genetic resources, taxonomy, molecular biology, genetics, biotechnology, breeding, cultivars, propagation, climate, environment, soils, crop management, protected cultivation, pests, diseases, weeds, plant physiology, crop quality, postharvest treatment, storage, marketing and supply chains, and horticultural techniques and technology.

Crops covered include:

- fruits
- nuts
- vegetables
- ornamentals (including lawns and turf)
- medicinal plants
- essential oil plants
- culinary herbs
- hard fibre plants
- perennial oil crops
- beverage crops including tea, coffee and cocoa, and other plantation and industrial crops (such as plant sources of latex, sweeteners and pesticidal compounds)
- wild relatives
- wild plants
- new crops and under-utilized crops

For a more extensive description of coverage please visit our **'About' page**.

Horticultural Science includes the following information materials:

Abstracts records: Indexed records from the CAB Abstracts database relating to the subject of horticultural science

Full text articles: Links to the complete scientific record for scholarly articles hosted on the CAB Abstracts database

CAB Reviews: Comprehensive overviews and detailed reviews of the latest research, commissioned by CABI

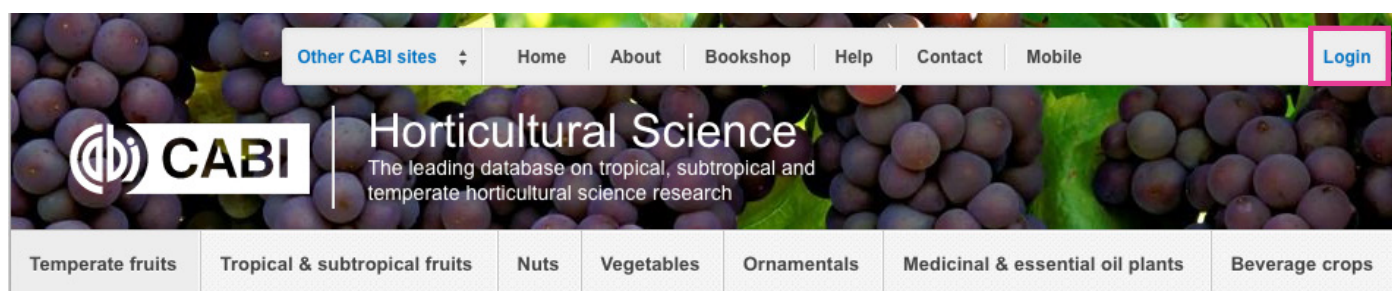
News articles: The latest news on developments in horticultural science written by subject experts, with references for further reading

The following guide has been designed for all users of Horticultural Science to highlight various features available and enable you to easily navigate the interface. It will also introduce various search techniques for new users of online databases and explain strategies that can be used when searching to return the most relevant results.

Accessing Horticultural Science

Horticultural Science is a web-based interface. To access the site visit www.cabi.org/horticulture

To sign in to the Horticultural Science click on the 'Login' button found at the top right of the site, as shown below:



There are two ways to login to the database depending on the access options your account has:

Personal credentials

IP address recognition

By personal credentials:

If you requested access to the site by a username and password please enter this in to the login box situated in the top right-hand corner of the webpage.

By IP Address:

If your institution has a subscription to Horticultural Science and you are accessing through your institution's network, Horticultural Science will recognise your IP address as a registered user and automatically log you on to the site. If you aren't automatically recognized, select 'Log in via your institution'.

Navigating the interface

The Horticultural Science interface has been designed to enable quick and comprehensive content searches. Below is an image of the homepage and the various features displayed.

The screenshot shows the Horticultural Science homepage with various features highlighted by pink lines and labels:

- Site menu:** Located at the top, it includes links for 'Other CABI sites', 'Home', 'About', 'Bookshop', 'Help', 'Contact', 'Mobile', and a 'Login' button.
- Topic pages:** A horizontal bar below the site menu lists categories: 'Temperate fruits', 'Tropical & subtropical fruits', 'Nuts', 'Vegetables', 'Ornamentals', 'Medicinal & essential oil plants', and 'Beverage crops'.
- Search bar:** A green section titled 'Search Horticultural Science' with a 'Smart searches' tab. It includes a text input for 'Enter keyword or phrase', a 'Search within topic' dropdown, a 'Filter by type' dropdown, and a 'Search' button. Below the input is a link for 'Advanced Bibliographic Search'.
- Featured content:** A section with two featured articles. The first is 'Predicting the spread of invasive spotted lanternfly' with a thumbnail image of the insect. The second is 'Shedding light on the biodiversity impacts of the tomato leafminer' with a thumbnail image of a tomato.
- My CABI account:** A green sidebar section with options: 'Create and export short lists' (with a sub-link 'Create bibliography'), 'Save Content' (with a sub-link 'Articles, books, reviews and more...'), and 'Save Searches' (with a sub-link 'Monitor the latest content').
- Content types available:** A sidebar section titled 'Content types' listing: 'Abstract', 'CAB Review', 'CABI Book Chapter Info', 'CABI Book Info', 'CABI Hosted Full Text', 'Evidence Based Research', 'Miscellaneous', and 'News Article'.
- Latest indexed articles:** A section titled 'Latest content' with tabs for 'Recent' and 'Full text'. It displays three articles:
 - Abstract:** 'The effects of super absorbent polymer application on the physiological and biochemical properties of tomato (*Solanum lycopersicum* L.) plants grown by soilless agriculture technique.' by Başak, H. (ALOKI Applied Ecological Research and Forensic Institute Ltd). Published in *Applied Ecology and Environmental Research*, 2020, 18, 4, pp 5907-5921.
 - News Article:** 'Endophyte may protect tomatoes from *Tuta absoluta* pest attack'. Trials in Brazil suggest seedling inoculation with the entomopathogenic fungus *Beauveria bassiana* could be a viable commercial option for marketing... Date: July 2020. Author(s): Alexis Rendel-Dunn.
 - CAB Review / Full Text:** 'Agricultural waste management for horticulture revolution in sub-Saharan Africa.' Agricultural activities, which basically involve the production of raw produce and subsequent value addition normally, generate substantial waste, which could be in solid, liquid or gaseous forms. In sub-Saharan Africa (SSA), the disposal of these wastes, which come from a myriad of sources of... Date: May 2020. Subjects: Agricultural production; agricultural wastes; crop production; crop yield; cultivation; fertilizers; fruits; manures; nutrients; organic fertilizers; ornamental plants; reviews; seedlings; soil fertility; vegetables; waste disposal. Author(s): Baiyeri, P. K.; Ugese, F. D.; Obalum, S. E.; Nwobodo, C. E.

Simple site searches

Horticultural Science offers a simple site search using a variety of basic search techniques to search content across the whole of the site, such as Boolean operators and Phrase searching. These search techniques can be found in the [search techniques reference table](#).

Conducting general site searches

A general site search conducts a search across all the various types of content and topics available in Horticultural Science. It will return a broad range of search results that will include all material types from all subject areas. It can be a useful place to begin a search.

To conduct a general site search, enter your keyword or phrase into the box located in the search bar of the home page and click the 'Search' button:

The screenshot shows the top of the Horticultural Science website. There are two tabs: 'Search Horticultural Science' (active) and 'Smart searches'. Below the tabs, it says 'Access to over 1.6 million abstracts and more than 111,000 full text documents in the CABI full text repository'. The search bar contains the text 'Enter keyword or phrase'. To the right of the search bar are two dropdown menus: 'Search within topic' and 'Filter by type'. To the right of these is a 'Search' button. Below the search bar is a link: 'Advanced Bibliographic Search →'.

Conducting filtered site searches

A filtered site search can be used to limit a search to specific subjects or types of content on the Horticultural Science site. This will return a narrower range of search results and is particularly useful if you are trying to limit searches to particular areas or material types. You can limit the searches using a single filter or both simultaneously.

To conduct a filtered site search, enter your terms in to the box located in the search bar of the home page. Click on the filter options to the right of the search box and select the categories you would like to limit the search to. The checkbox indicates which categories have been selected. The image below shows the examples for both the topic and type filters:

This screenshot shows the search bar with the 'Search within topic' dropdown menu open. The dropdown menu is titled 'Limit to selected topics' and contains a list of topics with checkboxes: Beverage crops, Medicinal and essential oil plants, Nuts, Ornamentals, Temperate fruits, Tropical and subtropical fruits, and Vegetables. The 'Search' button is visible to the right of the dropdown menu.

This screenshot shows the search bar with the 'Filter by type' dropdown menu open. The dropdown menu is titled 'Limit to selected content types' and contains a list of content types with checkboxes: Abstract, CAB Review, CABI Book Chapter Info, CABI Book Info, CABI Hosted Full Text, Evidence Based Research, Miscellaneous, and News Article. The 'Search' button is visible to the right of the dropdown menu.

Viewing search results

The returned results will be displayed on the search results page as shown below. The figure below the search box indicates the number of returned results from your search string query. Below this will show any filtered categories that were selected for the search. To remove the filters simply click the X next to the filtered term. The search results are displayed in the box below and can be ordered by most recently indexed or relevance, using the 'Sort Order' box on the right-hand side. At the top and bottom of the search results screen there are also options to vary the number of records displayed on the current page.

The screenshot shows the CABI search results page for the query 'tomato plant'. The page has a green header with 'Search Horticultural Science' and 'Smart searches' tabs. Below the header, it states 'Access to over 1.6 million abstracts and more than 111,000 full text documents in the CABI full text repository'. The search box contains 'tomato plant' and there are buttons for 'Search within topic', 'Filter by type', and 'Search'. Below the search box, there is a link to 'Advanced Bibliographic Search'. A banner for signing up for the Plant Science e-newsletter is visible. The main results area shows '100,964 results found' and a list of filters: 'type: Abstract' and 'type: CABI hosted Full text'. On the right, the 'Refine Results' section includes 'Sort Order' (Relevance, Date (Recent First), Date (Oldest First), Alphabetical (A to Z)), 'Author' (Jones, J. B. (274), Scott, J. W. (201), Kumar, S. (193), Tüzel, Y. (191), Colvine, S. (186), MORE RESULTS...), and 'Geographical Location' (USA (6,790), India (4,949), Italy (2,567), Africa South of Sahara (1,899), Brazil (1,848), MORE RESULTS...). The 'Search results' section shows a list of results, with the first result highlighted: 'Tomato ontology feature detection system based on binocular vision and deep learning.' The record type is 'Abstract' and 'Full Text'. The abstract introduction is '[Objective] A tomato ontology feature detection system based on binocular vision and deep learning was designed to realize the automatic non-destructive detection of tomato ontology features, providing technical support for the integration of water and fertilizer and intelligent agriculture...'. The bibliographic information is: 'Author(s) Li Qi; Qiang Hua', 'Publisher Guangxi Academy of Agricultural Sciences, Nanning, China', and 'Citation Journal of Southern Agriculture, 2020, 51, 1, pp 237-244'. At the bottom, there is a link to 'View full text article'.

Number of records

Filtered categories

Results display options

Below is an example of an article header from the returned results. You can see the resource type, the article title, the leading sentence of the article abstract and further bibliographic information for the record. If the full text article is available a button is displayed which gives access to the full text article.

The detailed view of a search result record shows the following elements:

- Record type:** Abstract Full Text
- Article title:** ☆ Tomato ontology feature detection system based on binocular vision and deep learning.
- Abstract introduction:** [Objective] A tomato ontology feature detection system based on binocular vision and deep learning was designed to realize the automatic non-destructive detection of tomato ontology features, providing technical support for the integration of water and fertilizer and intelligent agriculture....
- Bibliographic information:**
 - Author(s) Li Qi; Qiang Hua
 - Publisher Guangxi Academy of Agricultural Sciences, Nanning, China
 - Citation Journal of Southern Agriculture, 2020, 51, 1, pp 237-244
- Link to full text:** View full text article →

When clicked, the article title will take you to the record page listing the full bibliographic details of the record as shown below.

[Next: Effects of LED light source on survival rate of tomato grafting and... >>](#)
[Return to Search Results](#)

Abstract

Tomato ontology feature detection system based on binocular vision and deep learning.

[View full text article →](#)

Abstract

[Objective] A tomato ontology feature detection system based on binocular vision and deep learning was designed to realize the automatic non-destructive detection of tomato ontology features, providing technical support for the integration of water and fertilizer and intelligent agriculture. [Method] A total of 4000 tomato images were collected as research samples, and the main organs (plant, stem, flower and fruit) of tomato were detected by using the algorithm based on SSD mobile net convolution neural network. Based on the binocular vision image measurement algorithm, the plant height, stem diameter, fruit diameter and leaf area of each organ target area were extracted. [Result] SSD MobileNet network model was used to train and test the research samples, and the trained model was used to identify and locate the tomato organs. The results showed that the detection accuracy of the system for tomato plants, stems, flowers, fruits and leaves was 98.5%, 99.0%, 99.5%, 99.5% and 98.0% respectively. Secondly, the image measurement algorithm based on binocular vision was used to measure the tomato ontology features. Experiment showed that the relative errors of the system for measuring the plant height, stem diameter, fruit diameter and leaf area of tomato could be controlled within the range of 1.5%, 1.0%, 1.2% and 1.3% respectively, which could realize the accurate detection of tomato ontology features. Compared with common systems, the system had a greater robustness and accuracy. The whole system has been running stably in tomato greenhouse for half a year, and has completed the whole life cycle of tomato ontology feature detection. It could save the data in the database, which realized the automatic and non-destructive monitoring of tomato ontology feature. [Suggestion] Following suggestions are proposed: optimizing the characteristic shielding problem, enriching training data sets, optimizing network model, improving recognition rate and robustness. Establishing tomato characteristic data sharing cloud platform to realize early warning of tomato blight. Determining the relationship between ontology characteristics and tomato growth, in order to quickly judge fertilization amount, realize automatic and precise fertilization of greenhouse tomato.

[View full text article →](#)

[Next: Effects of LED light source on survival rate of tomato grafting and... >>](#)
[Return to Search Results](#)

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Abstract details

Author(s)
[Li Qi; Qiang Hua](#)

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[Journal of Southern Agriculture](#)
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Guangxi Academy of Agricultural Sciences Nanning China

Language of Text
[Chinese](#)

Language of Summary
English

Organism descriptor(s)
[Solanum lycopersicum](#)

Descriptor(s)
[accuracy](#)
[algorithms](#)
[automation](#)
[databases](#)
[detection](#)
[diameter](#)
[flowers](#)
[fruits](#)
[height](#)
[leaf area](#)
[leaves](#)
[monitoring](#)
[neural networks](#)
[nondestructive testing](#)
[plant height](#)
[precision agriculture](#)
[stems](#)
[tomatoes](#)

Bibliographic information

Metadata

As well as the full abstract the page will also include the full bibliographic information and indexing keywords that were assigned to the record during the indexing process. This can be found under the 'Abstract details' panel on the right of the page.

All these terms are hyperlinks which will take you directly to a search result for that term. The example below shows a section of the 'Abstract details' panel. In this example we have clicked on the author name "Li Qi". This has performed a site search using the search string "au: Li, Qi" which has returned all records this author has contributed to.

The screenshot shows the 'Abstract details' panel on the left, highlighting the author 'Li Qi: Qiang Hua'. The main search interface on the right shows a search for 'author:"Li Qi"' in the 'Search Horticultural Science' section. The search results show 67 results found. The first result is 'Tomato ontology feature detection system based on binocular vision and deep learning' by Li Qi, Qiang Hua, published in the Journal of Southern Agriculture, 2020, 51, 1, pp 237-244. The right sidebar shows 'Refine Results' with options for Sort Order (Relevance, Date, Alphabetical) and Geographical Location (China, Ningxia, Beijing, Jiangxi, Yunnan).

Smart Searches

To help you search for literature in common or key topics of interest, our subject experts have created predefined search strings. These have been created using complex search techniques such as field tags and multiple Boolean operators to return the most relevant results. To access these, click on the 'Smart searches' tab above the search bar as shown below:

The screenshot shows the 'Smart searches' tab selected in the 'Search Horticultural Science' section. The interface displays a list of predefined search topics organized in three columns. The topics include:

- Antioxidant composition of berry fruits
- Automated systems for citrus fruit sorting and grading
- Beverage crops: Cocoa
- Beverage crops: Coffee
- Beverage crops: Hops
- Beverage crops: Tea
- Beverage crops: Yerba mate
- Biocontrol of nematodes in horticultural crops
- Coffee cropping systems in Ethiopia
- Cultivation, composition, properties and marketing of acai
- Dwarfing rootstocks for cherries
- Effects of biofertilizers on crop yield
- Effects of climate change on grapes in Europe
- Effects of methylcyclopropene on fresh-cut produce
- Effects of mycorrhizal fungi on growth of mint
- Effects of pruning, training and growth regulators on flowering and fruit set in mangoes
- Effects of salinity on water use efficiency
- Effects of soil and water contamination in tea plantations
- Evaluating lawns and turf for drought resistance and response
- Gene expression in strawberry fruit ripening
- Genetic resources of Prunus species
- Growth regulators for fruit thinning
- In vitro propagation of orchids
- Indigenous vegetables
- IPM of cocoa frosty pod rot
- Options for controlling Panama disease in bananas
- Ornamentals: Chrysanthemums
- Ornamentals: Conifers
- Ornamentals: Cut flowers and cut foliage
- Ornamentals: Lawns and turf
- Ornamentals: Orchids
- Ornamentals: Pelargoniums
- Ornamentals: Rhododendrons and azaleas
- Ornamentals: Roses
- Pesticide residue contamination in aubergines
- Phytophthora root rot tolerance in avocado rootstocks
- Protected cultivation of tomatoes
- Research on organic production of cashew nuts
- Role of transcription factors in fruit ripening
- Studies on Brazil nuts in the Amazon region
- Subtropical fruits: Citrus species
- Subtropical fruits: Olives
- Taxonomy of Artemisia species
- Temperate fruits: Apples
- Temperate fruits: Apricots
- Temperate fruits: Cherries
- Temperate fruits: Grapes
- Temperate fruits: Kiwifruits and other Actinidia species
- Temperate fruits: Peaches and nectarines
- Temperate fruits: Pears
- Temperate fruits: Ribes species
- Temperate fruits: Rubus species
- Temperate fruits: Strawberries
- Temperate fruits: Vaccinium species
- Trace elements in mushrooms and other edible fungi
- Tropical fruits: Annona species
- Tropical fruits: Bananas and plantains
- Tropical fruits: Mangoes
- Tropical fruits: Melons and watermelons
- Tropical fruits: Pawpaws
- Tropical fruits: Pineapples
- Use of essential oils from Lamiaceae for controlling beetles
- Vase life of cut flowers and cut foliage

This will show you a list of smart searches that are available. To conduct a smart search, click on the topic of your choice. The screenshot below shows you the results for the smart search “Dwarfing rootstocks for cherries”.

Search Horticultural Science

Smart searches

My CABI

Access to over 1.6 million abstracts and more than 111,000 full text documents in the CABI full text repository

rootstock (cherries OR "Prunus avium" OR "Prunus cerasus") (dwarf OR dwarfing)

Search within topic

Filter by type

Search

Advanced Bibliographic Search

>>> Sign up to receive our Plant Science e-newsletter, book alerts, and offers <<<

796 results found

12345678910

Results per page: 10

Search results

Results

Mark: All / None

Abstract

☆ **Planting density and size-controlling rootstocks influence the performance of montmorency tart cherry (*Prunus cerasus* L.).**

Two multi-year experiments were conducted to determine the influence of planting density and rootstocks on the performance of Montmorency tart cherries (*Prunus cerasus* L.). Using a constant between-row spacing of 4.5 m, three in-row tree spacings of 4, 3 and 1.5 m were tested with five rootstocks:...

Author(s)

Cline, J. A.

Publisher

NRC Research Press, Ottawa, Canada

Citation

Canadian Journal of Plant Science, 2020, 100, 1, pp 16-28

Abstract

☆ **Combining fruit quality and main antioxidant attributes in the sour cherry: the role of new clonal rootstock.**

In 2018 and 2019, we evaluated the influence of seven clonal rootstocks (Colt, MaxMa 14, Krymsk 6, Adara, Cigancica, Gisela 5 and Gisela 6) with different vigour on the total phenolic content (TPC), total flavonoid content (TFC), total anthocyanin content (TAc), total antioxidant capacity (TAC) and ...

Author(s)

Milošević, T.; Milošević, N.; Mladenović, J.

Publisher

Elsevier Ltd, Amsterdam, Netherlands

Citation

Scientia Horticulturae, 2020, 265,

Abstract

☆ **Genome-wide identification and characterization of ABC transporters in nine Rosaceae species identifying *MdABCG28* as a possible cytokinin transporter linked to dwarfing.**

ATP-binding cassette (ABC) transporters constitute a large, diverse, and ubiquitous superfamily that is involved in a broad range of processes. The completion of genome sequencing provides an opportunity to understand the phylogenetic history of the ABC transporter superfamily among Rosaceae...

Author(s)

Feng Yi; Sun Qiran; Zhang GuiFen; Wu Ting; Zhang XinZhong; Xu XueFeng; Han ZhenHai; Wang Yi

Publisher

MDPI AG, Basel, Switzerland

Citation

International Journal of Molecular Sciences, 2019, 20, 22, pp 5783

Refine Results

Sort Order

Relevance
Date (Recent First)
Date (Oldest First)
Alphabetical (A to Z)

Author

Lang, G. A. (65)
Webster, A. D. (35)
Hrotko, K. (34)
Blažková, J. (32)
Hlušíčková, I. (31)
MORE RESULTS...

Geographical Location

Germany (80)
USA (64)
UK (55)
Belgium (39)
Italy (37)
MORE RESULTS...

Item Type

Journal article (635)
Conference paper (243)
Annual report (49)
Book (39)
Miscellaneous (32)
MORE RESULTS...

Language

English (455)
German (68)
not specified (51)
French (45)
Russian (37)
MORE RESULTS...

Organisms

Prunus (773)
Prunus avium (405)
Malus (157)
Prunus cerasus (142)
Pyrus (117)
MORE RESULTS...

Note: To narrow results further you can either use the ‘Refine Results’ panel to the right-hand side of the page, or add terms manually to the end of the predefined search string.

8

Advanced searching

Field searching

The search box for Horticultural Science also allows you to conduct advanced field searching using the index field tags.

Field searching is a technique by which users can search for keyword terms in specific indexing fields. These indexing fields are used when adding a bibliographic record to CAB Direct e.g. Abstract title, author. Each indexing field has an associated field tag which can be used in conjunction with search keywords to return a more precise set of results.

Below is a list of the indexing fields and their associated tag:

Common search fields

Description	Field Tag
Abstract	ab
Author affiliation	aa
Descriptor	de
Organism Descriptor	od
Geographic Locator	gl
Broad term	up
Identifier	id
Publication source	do
Publisher	publisher
CABICODE	cc
Conference	ct
Language	la
Publication type	it
Year	yr
Record number	pa
DOI	oi
ISSN	sn
ISBN	bn

Additional search fields

Description	Field Tag
Additional Authors	ad
Author Affiliation	aa
CAS Registry Numbers	ry
Conference Dates	cd
Conference Title	ct
Corporate Author	ca
Country of Publication	cp
Descriptors	de
Digital Object Identifier	oi
Document Editors	ed
Document Title	do
Email	em
English Item Title	et
Non English Item Title	ft
Geographic Location	gl
Identifiers	id
ISBN	bn
ISSN	sn
Item Type	it
Language(s) of Summary	ls
Language(s) of Text	la
Location of Publisher	lp
Main Abstract	ab
Organism Descriptors	od
Pan Number	pa
Personal Author	au
Personal Author Variants	av
Publisher	pb
CABI Product Code	sc
Up-posted Descriptors	up
Web URL	ur
Year of Publication	yr

To conduct a field search, type the associated field tag (must be lowercase) into the search box followed by a colon. Next enter your search term/s. Field searching can also be conducted using the variety of simple search techniques outlined previously such as multiple word searches and Boolean operators. Below are some examples:

Single word search: de: "climate change"

Multiple word search: de: "climate change" AND gl:italy

Searching with perenthesis: de: ("climate change" OR "global warming") AND gl:italy

Index Terms or “Descriptors”

If you are looking only for important papers on a particular subject, where you want a high level of relevance, you should restrict your search to one or more of the CABI indexing or ‘Descriptor’ fields. Every record on the database is indexed with terms that describe all the important concepts within a paper. The index terms may be added to one of five different indexing fields. The indexing fields that CABI uses are:

Fields	Tags	Description	Example
Organism Descriptor	od:	The Organism Descriptor field is used for animal and plant	od:"Prunus persica"
Geographic Location	gl:	Geographic Location field is used for country and other geographic names	gl:Germany
Descriptor	de:	The Descriptor field is used for all the “other” terms that are neither animal, plant nor geographic	de:global warming
Broad Term (Up-posted Term)	up:	The broad term is used to search for more general terms of a subject as defined in CAB Thesaurus	up:Africa
Identifier	id:	This field is used for non-preferred index terms	id: lipins

Please note: When searching the organism descriptor all animals are indexed with their scientific names, except for common livestock species. However, plants are indexed with both their scientific and their common names.

Super indexes

‘Super indexes’ allow users to search multiple indexes across related fields. They are useful tools for users if they are unsure which fields they need to specify when trying to conduct advanced field searching. They can be searched in the same way as other fields as the super indexes have their own field tag associated to them. Horticultural Science also has three super indexes.

The first two super indexes (shown in the table below) are used when searching bibliographic information relating to either the article title or the article authors. The table below shows the field tag, field indexes that are searched and an example of a search.

Super index name	Super index field tag	Fields searched	Search string example
Title	title:	English title Foreign title	Title: phytophthora
Author	author:	Personal author Author variant Additional author Document editor Corporate author	Author: Kumar

The third super index is called the subject index. It is used when searching for the indexing terms or metadata assigned to each resource record. The table below shows the field tag, field indexes that are searched and an example of a search.

Super index name	Super index field tag	Fields searched	Search string example
Subject	subject:	Descriptor Geographic location Organism descriptor Identifier	Subject: alkaloids

CABICODES

In addition to adding index terms to a record, broad concepts are also “indexed” with a classification system known as CABICODES. The CABICODES are a hierarchical list of classification codes that divide the subject coverage of the CAB Direct database into 23 major sections. Each section then includes a series of codes that divides that subject into more specific subjects. The codes are typically used for subjects that would be difficult to describe with keywords alone. Below are a selection of the CABICODES for horticulture and their associated topic areas.

For a full list of CABICODES and their topic areas visit the [CABICODE list](#).

FF000 Plant Science (General)

FF003 Horticultural Crops (From March 2000)

FF005 Field Crops (From March 2000)

FF007 Forage and Fodder Crops (From March 2000)

FF020 Plant Breeding and Genetics

FF030 Plant Morphology and Structure

FF040 Plant Composition

FF060 Plant Physiology and Biochemistry

FF061 Plant Nutrition

FF062 Plant Water Relations

FF100 Plant Production

FF150 Plant Cropping Systems

FF160 Plant Propagation

FF170 in vitro Culture of Plant Material

FF400 Mycorrhizas and Fungi of Economic Importance; Symbiotic Nitrogen Fixation (Discontinued March 2000)

FF500 Weeds and Noxious Plants

FF600 Pests, Pathogens and Biogenic Diseases of Plants (Discontinued March 2000)

FF610 Viral, Bacterial and Fungal Diseases of Plants (From March 2000)

FF620 Plant Pests (From March 2000)

FF700 Plant Disorders and Injuries (Not caused directly by Organisms)

FF800 Plant Toxicology

FF900 Environmental Tolerance of Plants

The CABICODES can be searched just like any other field tag. Two field tags are assigned to the CABICODE field and these are described below. Please note, as with other field tags, CABICODES must be entered in lowercase.

Field tag	Definition	Example
cc:	Allows users to search the index of the alphanumerical assigned code e.g. FF160	cc: FF160
cabicode:	Allows users to search both the alphanumerical assigned code index as above and the CABI code title index e.g. Plant Propagation	cabicode: FF160 or cabicode: Plant Propagation

Topic pages

Topic pages enable you to focus searching on specific areas of Horticultural Science. The topic page can be selected from the horizontal menu bar shown in the screen shot below. These topic pages are structured in a similar format as the homepage but only include content items that refer to the selected topic, such as Temperate Fruits, in this example. Therefore, the news carousel and latest content section on the Temperate Fruits topic page will only show recent articles that refer to temperate fruits. The green underline in the horizontal topic page menu and the page title indicate which topic page you are currently viewing.

The screenshot displays the CABI Horticultural Science website interface. At the top, a horizontal menu bar lists various horticultural topics: Temperate fruits, Tropical & subtropical fruits, Nuts, Vegetables, Ornamentals, Medicinal & essential oil plants, and Beverage crops. The 'Temperate fruits' option is highlighted with a green underline. Below the menu bar, the page title 'Temperate fruits' is displayed. The main content area includes a search bar with the text 'Enter keyword or phrase' and a 'Search' button. To the right of the search bar is a 'Refine Results' panel with sections for 'Sort Order' (Relevance, Date (Recent First), Date (Oldest First), Alphabetical (A to Z)), 'Author' (Webster, A. D. (788), Sansavini, S. (710), Costa, G. (557), Wang, Y. (513), Brunelli, A. (478), and MORE RESULTS...), and 'Geographical Location' (USA (22,921), Italy (14,481), China (8,210), USSR (8,086), France (6,763), and MORE RESULTS...). The 'Latest content' section features a featured article titled 'Study of the drying behavior of solar dryer and proximate analysis of the dried pear (*Pyrus communis*) and peach (*Prunus persica*)'. The article is by Adil Altaf, Zhu Min, Zhu XinKai, Aamir Saeed, Muhammad Aleem, Sadia Gull, Shahid Hussain, Aatiqa Masoom, and Quan Ma, published in the Pakistan Journal of Agricultural Sciences, 2020, 57, 5, pp 1413-1420. A 'View full text article' button is provided at the bottom of the article.

Topic page title

Topic page menu bar

Refine results panel

Latest content for selected topic

When conducting a search from a topic page, the relevant option is automatically selected from the topic filter section as shown below. This means that any search conducted from the topic page will limit searches to only content relating to that subject.

The screenshot shows the search interface of the CABI Horticultural Science website. A 'Limit to selected topics' dialog box is open, displaying a list of topics with checkboxes. The 'Temperate fruits' checkbox is checked, while the others are unchecked. The topics listed are: Beverage crops, Medicinal and essential oil plants, Nuts, Ornamentals, Temperate fruits, Tropical and subtropical fruits, and Vegetables. The background shows the search bar and the 'Refine Results' panel.

Limit to selected topics

☐ Beverage crops ☒ Temperate fruits

☐ Medicinal and essential oil plants ☐ Tropical and subtropical fruits

☐ Nuts ☐ Vegetables

☐ Ornamentals

Refine options

On the right side of the topic page there is a 'Refine Results' panel. 'Sort Order' allows you to organise the display of the results alphabetically or by date or relevance. The 'Refine Results' panel also allows users to refine content even further using the following index fields:

- Author
- Geographic location
- Item type
- Language
- Organisms
- Subject topics

Author ^

[Webster, A. D. \(788\)](#)

[Sugar, D. \(274\)](#)

[Sansavini, S. \(170\)](#)

[Oliveira, C. M. \(163\)](#)

[Tagliavini, M. \(162\)](#)

+ MORE RESULTS...

Each field is listed in a separate box in the refine results pane. These can be collapsed by using the 'up arrow' in the field box header. Blue text indicates the keyword and the bracketed number indicate the amount of records associated with it.

Clicking on a blue keyword conducts a search on that keyword. For example, below we can see that by clicking on the author "**Webster, A. D.**" listed in the author field box, a filtered search is generated limiting results to that author. This is displayed in the filter display at the top of the results page.

Author ^

[Webster, A. D. \(788\)](#)

[Sugar, D. \(274\)](#)

[Sansavini, S. \(170\)](#)

[Oliveira, C. M. \(163\)](#)

[Tagliavini, M. \(162\)](#)

+ MORE RESULTS...

781 results found

Topic: Temperate fruit crops Author: Webster, A. D.

1 2 3 4 5 6 7 8 9 10 Results per page: 10

Search results Results

Mark: All / None

Abstract

☆ [Rootstocks used for fruit crops in Chile: an overview.](#)

The development of the Chilean fruit industry has been remarkable in the last 30 years. The fruit crop area currently planted is more than 210 000 ha, mainly in the north-central and central area of the country (between parallels 25° and 35° South latitude). The climate in this area is mild with...

Author(s) Sotomayor, C.; Castro, J.
Publisher International Society for Horticultural Science (ISHS), Leuven, Belgium
Citation *Acta Horticulturae*, 2004, No.658(1), pp 287-291

Refine Results

Sort Order

[Relevance](#)

[Date \(Recent First\)](#)

[Date \(Oldest First\)](#)

[Alphabetical \(A to Z\)](#)

Author ^

[Sugar, D. \(270\)](#)

[Sansavini, S. \(169\)](#)

[Tagliavini, M. \(162\)](#)

[Janick, J. \(160\)](#)

[Corelli-Grapadelli, L. \(158\)](#)

+ MORE RESULTS...

Geographical Location ^

[USA \(56\)](#)

[Hungary \(48\)](#)

[Italy \(44\)](#)

[Japan \(42\)](#)

[UK \(42\)](#)

My CABI

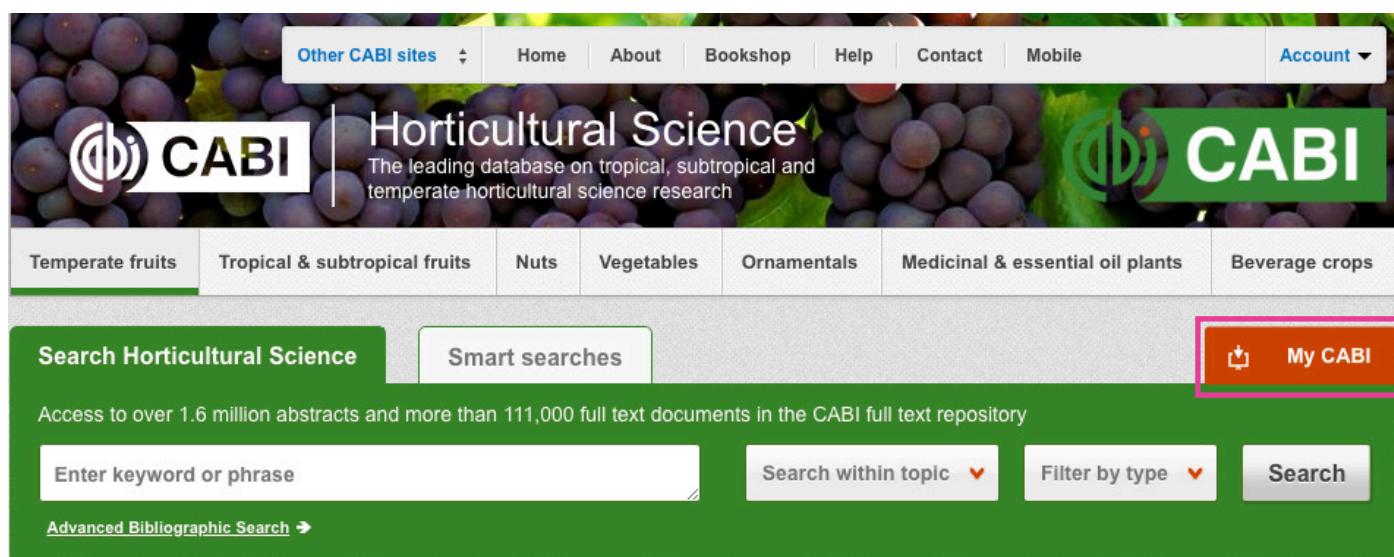
The My CABI feature improves search functionality for users allowing users to:

- Combine and save searches
- Save records
- Export citations
- Create alerts

To gain the full functionality of My CABI and for the system to record and recall your searching activity you must be signed in. It is therefore recommended that you sign in to My CABI at the beginning of all your search sessions on Horticultural Science.

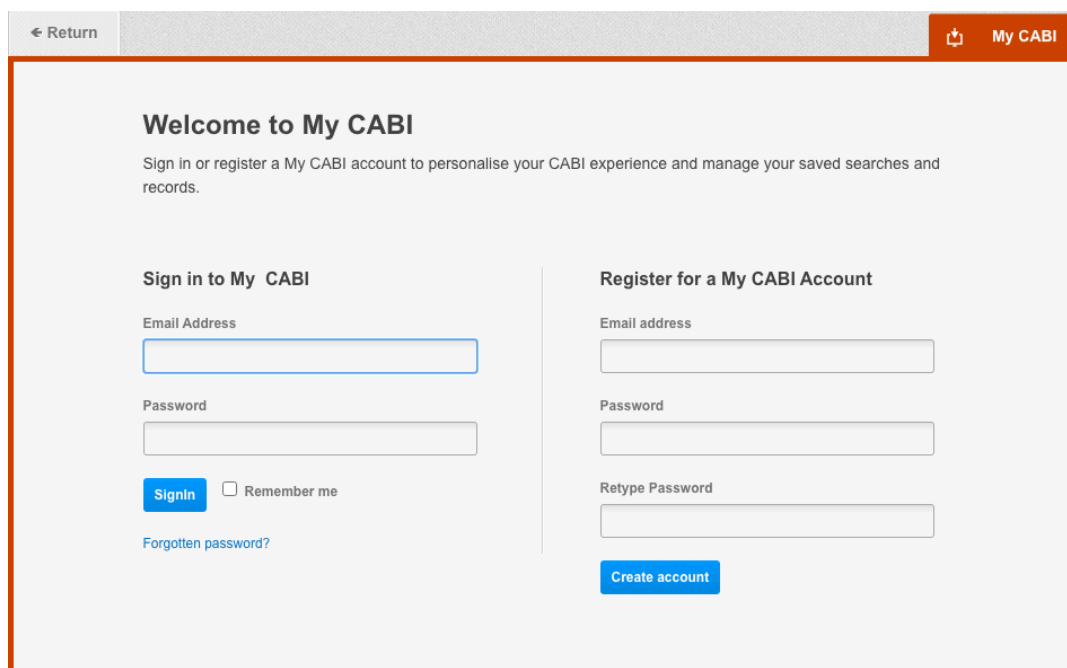
Creating a My CABI account

Before you can access the features of My CABI you first need to create an account. Click on the 'My CABI' button in the top right-hand corner of the search box as shown below:



The screenshot shows the CABI Horticultural Science website. The top navigation bar includes links for 'Other CABI sites', 'Home', 'About', 'Bookshop', 'Help', 'Contact', 'Mobile', and 'Account'. Below this is a banner with the CABI logo and the text 'Horticultural Science: The leading database on tropical, subtropical and temperate horticultural science research'. A category bar lists 'Temperate fruits', 'Tropical & subtropical fruits', 'Nuts', 'Vegetables', 'Ornamentals', 'Medicinal & essential oil plants', and 'Beverage crops'. The main search area has a green background with a search bar, 'Smart searches' button, and a 'My CABI' button highlighted with a pink box. Below the search bar, it states 'Access to over 1.6 million abstracts and more than 111,000 full text documents in the CABI full text repository'. There are input fields for 'Enter keyword or phrase', 'Search within topic', 'Filter by type', and a 'Search' button. A link for 'Advanced Bibliographic Search' is also present.

This will direct you to the sign-in page as shown below. The left-hand side of the page allows users already registered to sign in. The right-hand side of the page allows new users to register for an account. Once registered, fill in your unique credentials to sign in.



The screenshot shows the 'Welcome to My CABI' page. It has a header with a 'Return' link and a 'My CABI' button. The main content area is divided into two sections: 'Sign in to My CABI' and 'Register for a My CABI Account'. The 'Sign in' section includes fields for 'Email Address' and 'Password', a 'Signin' button, a 'Remember me' checkbox, and a 'Forgotten password?' link. The 'Register' section includes fields for 'Email address', 'Password', and 'Retype Password', and a 'Create account' button.

The image below shows the My CABI page. At the top of the display box are different tabs to display the different types of search activities. By default, the display automatically shows your recent searches. To the left-hand side of the page there is also an option to sign out or change your account password. To permanently remove a search from your recent search display click on the remove button on the right.

The screenshot shows the 'My CABI' interface. At the top, there's a navigation bar with links: Other CABI sites, Home, About, Bookshop, Help, Contact, Mobile, and an Account dropdown. Below this is a banner for 'Horticultural Science' with the tagline 'The leading database on tropical, subtropical and temperate horticultural science research'. A category bar lists: Temperate fruits, Tropical & subtropical fruits, Nuts, Vegetables, Ornamentals, Medicinal & essential oil plants, and Beverage crops. The main content area is titled 'My CABI' and includes links for Sign out, Refresh, and Change password. It features four tabs: Recent searches, Saved searches, Saved records, and Selected records. The 'Recent searches' tab is active, showing a table of search results. The table has columns for 'Select all', 'Results', 'Save search', and 'Remove'. Two searches are listed: 'rootstock (cherries OR "Prunus avium" OR "Prunus cerasus") (dwarf OR dwarfing)' with 796 results, and '<no query>' with 268,407 results. The 'Remove' button for the first search is highlighted with a red box.

Select all	Results	Save search	Remove
<input type="checkbox"/> rootstock (cherries OR "Prunus avium" OR "Prunus cerasus") (dwarf OR dwarfing)	796	+	×
<input type="checkbox"/> <no query> Topics: Temperate fruits	268,407	+	×

Combining searches

Combined searches are a useful tool for when compiling long and complex search strings which contain multiple Boolean operators and parentheses. To simplify the process and minimise the chance of input errors, this function allows the user to perform two or more separate searches and combine them with either the AND, OR and NOT Boolean operators.

In the example below, we can see in the 'Recent searches' tab two searches have recently been conducted. These two have been selected using the checkbox and the AND Boolean operator has been chosen from the combined search options.

Any filters used during the searches as explained previously are displayed underneath the search string.

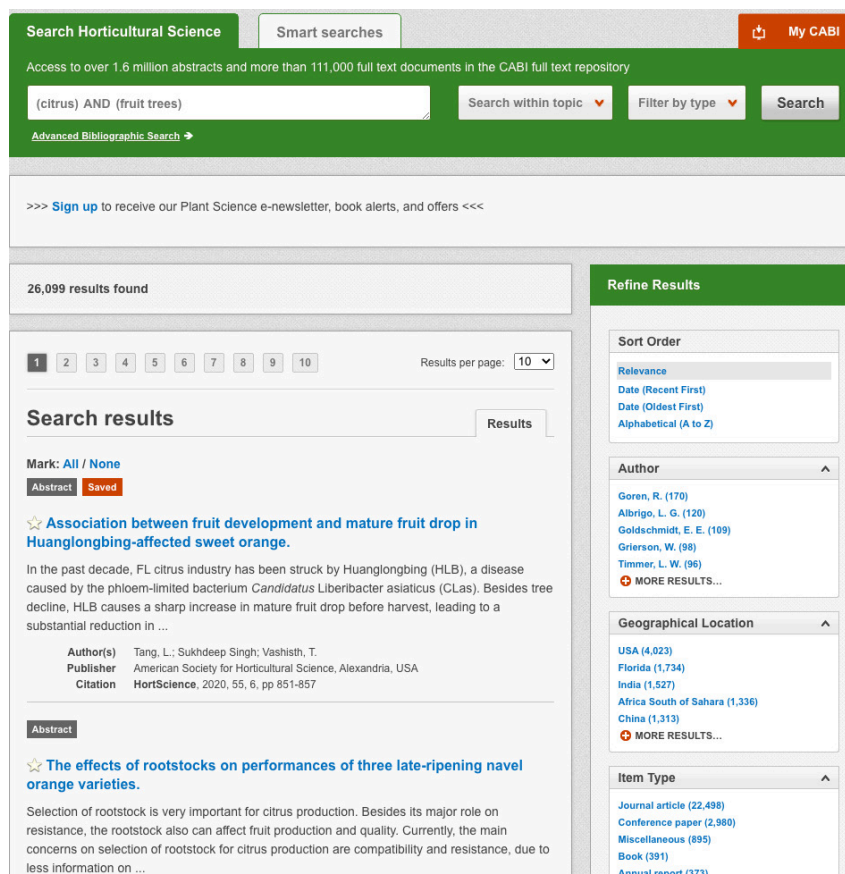
This screenshot shows the 'My CABI' interface with the 'Recent searches' tab selected. A red box highlights the 'Combine Selected Searches' section, which includes radio buttons for OR (Expand), AND (Include), and NOT (Exclude). The 'AND (Include)' option is selected. Below this, a table lists two searches: 'citrus' and 'fruit trees'. Both searches have their 'Select all' checkboxes checked. The 'Remove' button for each search is highlighted with a red box. Annotations on the left side of the image point to the 'Combine Selected Searches' section and the 'Selected searches' table.

Combining search options

Selected searches

Select all	Results	Save search	Remove
<input checked="" type="checkbox"/> citrus	67,059	+	×
<input checked="" type="checkbox"/> fruit trees	111,427	+	×

Once your options have been selected perform the search by clicking the 'Search' button. This will conduct the search and direct you to the results page as shown below. You can see that the search string of the two combined searches is displayed in the search box. By combining these searches with the AND operator we have limited the results further. Alternatively, by using this feature with the OR operator we can also expand results.



Search Horticultural Science Smart searches My CABI

Access to over 1.6 million abstracts and more than 111,000 full text documents in the CABI full text repository

(citrus) AND (fruit trees) Search within topic Filter by type Search

Advanced Bibliographic Search →

>>> Sign up to receive our Plant Science e-newsletter, book alerts, and offers <<<

26,099 results found

1 2 3 4 5 6 7 8 9 10 Results per page: 10

Search results Results

Mark: All / None Abstract Saved

☆ Association between fruit development and mature fruit drop in Huanglongbing-affected sweet orange.

In the past decade, FL citrus industry has been struck by Huanglongbing (HLB), a disease caused by the phloem-limited bacterium *Candidatus Liberibacter asiaticus* (CLas). Besides tree decline, HLB causes a sharp increase in mature fruit drop before harvest, leading to a substantial reduction in ...

Author(s) Tang, L.; Sukhdeep Singh; Vashisth, T.
Publisher American Society for Horticultural Science, Alexandria, USA
Citation HortScience, 2020, 55, 6, pp 851-857

Abstract

☆ The effects of rootstocks on performances of three late-ripening navel orange varieties.

Selection of rootstock is very important for citrus production. Besides its major role on resistance, the rootstock also can affect fruit production and quality. Currently, the main concerns on selection of rootstock for citrus production are compatibility and resistance, due to less information on ...

Refine Results

Sort Order

Relevance
Date (Recent First)
Date (Oldest First)
Alphabetical (A to Z)

Author

Goren, R. (170)
Albrigo, L. G. (120)
Goldschmidt, E. E. (109)
Grierson, W. (98)
Timmer, L. W. (96)
MORE RESULTS...

Geographical Location

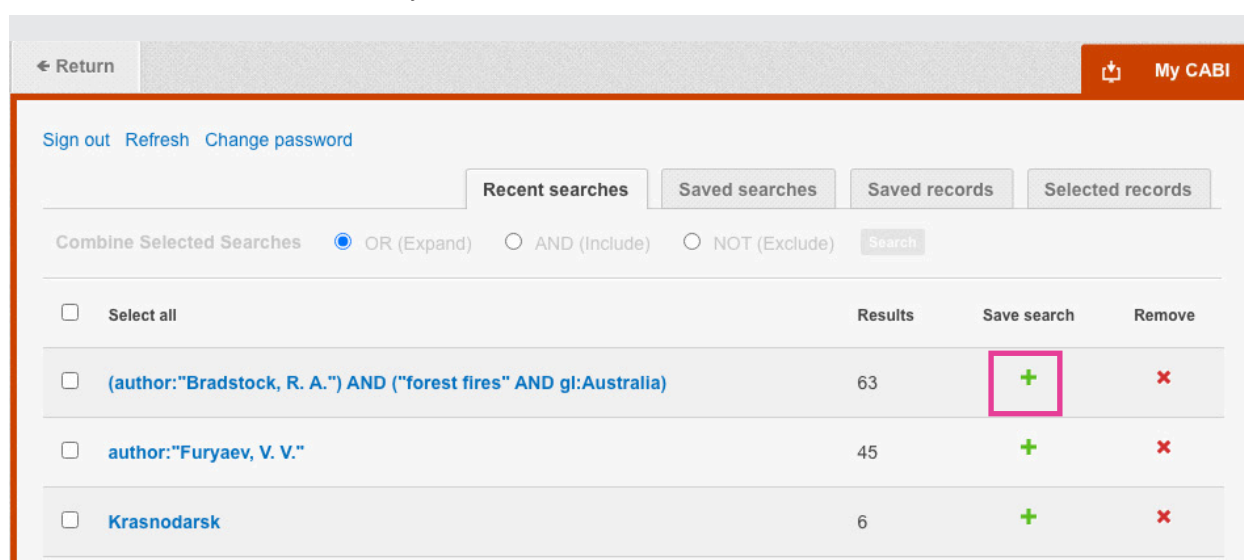
USA (4,023)
Florida (1,734)
India (1,527)
Africa South of Sahara (1,336)
China (1,313)
MORE RESULTS...

Item Type

Journal article (22,498)
Conference paper (2,980)
Miscellaneous (895)
Book (391)
Annual report (373)

Saving searches and creating alerts

For searches conducted on a regular basis, you can save searches for future reference in My CABI. To save a search visit the 'Recent searches' tab from the My CABI and click on the save search button.



Return My CABI

Sign out Refresh Change password

Recent searches Saved searches Saved records Selected records

Combine Selected Searches OR (Expand) AND (Include) NOT (Exclude) Search

Select all	Search string	Results	Save search	Remove
<input type="checkbox"/>	(author: "Bradstock, R. A.") AND ("forest fires" AND gl:Australia)	63	+	×
<input type="checkbox"/>	author: "Furyaev, V. V."	45	+	×
<input type="checkbox"/>	Krasnodarsk	6	+	×



To view your saved searches, click on the 'Saved searches' tab. This allows you to conduct a saved search by clicking on the blue search string displayed. For each saved search there is also an option to set up an RSS feed which automatically notifies you when new records relating to that search string are added to the Horticultural Science site. These notifications can be viewed through RSS readers such as Microsoft Outlook and Feedly. To find out more about RSS and how to setup an account with an RSS reader [read more here](#). To set up an RSS feed for your search string click on the RSS feed button.

Return
My CABI

Sign out Refresh Change password

Recent searches Saved searches Saved records Selected records

Combine Selected Searches
☒ OR (Expand)
☐ AND (Include)
☐ NOT (Exclude)
Search

<input type="checkbox"/> Select all	Results	RSS	Remove
<input type="checkbox"/> (citrus) OR (fruit trees)	152,388		

Saving and exporting records

My CABI also allows you to save individual article records for future reference and export these to reference management software to create your own bibliographies or reference lists. To save a record to the saved records repository you must first be signed into My CABI before conducting searches. When you have signed in and carried out a search, each record in the displayed results will have a 'Save to My CABI' button on the bottom right of the record. Click this button to save the record.


Mark: All / None

Abstract

★ Association between fruit development and mature fruit drop in Huanglongbing-affected sweet orange.

In the past decade, FL citrus industry has been struck by Huanglongbing (HLB), a disease caused by the phloem-limited bacterium *Candidatus Liberibacter asiaticus* (CLas). Besides tree decline, HLB causes a sharp increase in mature fruit drop before harvest, leading to a substantial reduction in ...

Author(s) Tang, L.; Sukhdeep Singh; Vashisth, T.
Publisher American Society for Horticultural Science, Alexandria, USA
Citation HortScience, 2020, 55, 6, pp 851-857

 Save to My CABI

To view your saved records, go to My CABI and click on the saved records tab. This will display the title of all saved records. To view a specific record, click on the title. Records can be removed individually by using the 'X' button. To delete multiple records, select the checkboxes next to the records and click the 'Remove records' button as shown below.


Citations can also be exported to reference management software in an RIS file format. To export citations, select the records you would like to be included in the reference list using the checkboxes and click the 'Export citations' button as shown below. You can also email or print records.

Return
My CABI

Sign out Refresh Change password

Recent searches Saved searches Saved records Selected records

☒ Remove records
☒ Export citations
☒ Email records
☒ Print records

<input type="checkbox"/> Select all	Remove
<input type="checkbox"/> Association between fruit development and mature fruit drop in Huanglongbing-affected sweet orange.	

Appendix A: Search techniques

Search technique	Example	Description	Function	Reason to use
Single word search	irrigation	Searches using a single word term	Returns a broad range of results for a particular word/topic	Provides a broad overview of a scientific area of interest
Boolean search	irrigation AND yield	Searches using the operators AND, OR and NOT	Performs searches on multiple concepts that provides specific keyword searching for an area of interest that can include or exclude other concepts	Allows the user to conduct more controlled searching. Can be used to omit homophones
Phrase searching	"climate change"	Use quotation marks before and after a multiple word phrase	Returns results only containing the entire phrase	Narrows searching to records that only contain the whole phrase
Parentheses	"gene expression" AND (ripening OR scenesence)	Searches using keywords, Boolean operators and parentheses.	Used for searches that contain multiple Boolean operators to define the correct search logic	Refines searches with Boolean operators further to provide limited search results
Truncation & wild cards	mulch* and weed*	Uses the symbols * and ? in keyword search	Using the * returns results with different word stems for the root word Using the ? symbol allows users to specify unknown characters	The * allows users to broaden results to keywords with differing word stems e.g. pop* = popular, population, etc. The ? returns results using a keyword that may differ in spelling