



USER'S **GUIDE**
FOR **WEB APPLICATION**
FOR THE
**GENERAL PLANT
PEST SURVEILLANCE**



Inter-American Institute for Cooperation on Agriculture (IICA), 2017



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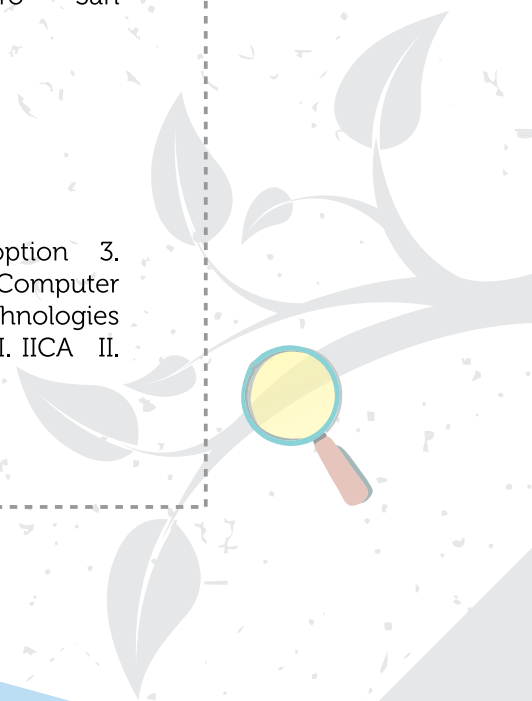
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INTRODUCTION

The application was developed with Drupal, a web application and content management framework. It is an open source framework with simple requirements and available for the most common computer architectures.

Drupal allows for a very custom configuration and extension beyond the scope of the application explained here. This guide covers the usage and administration of the specific functionality developed for general surveillance and not every possible configuration available in Drupal.

For more information regarding Drupal, we suggest starting with the online documentation available in its official site:

<https://www.Drupal.org/documentation>

Please refer to the requirements and installation section for technical requirements and the installation guide of the site.



The screenshot shows the home page of the General surveillance Information System. At the top, there is a dark blue header with a globe icon, the text "General surveillance Information System", and a "Login" button circled in red. Below the header, there are two main sections: "Phytosanitary database" and "Collaborators network". Each section has a text input field and a "Search" button labeled "Advanced search". Red arrows point from the text "Autocomplete fields" to the input fields in both sections. A red oval highlights the input fields. Below the "Collaborators network" section, there is a "Submission form for detection or suspicious of pests" with a bullet point: "Inform any pest detection or suspicion of presence. Let us know of a new pest or a change in presence of a known one." A red arrow points from the text "Submission form for detection or suspicious of pests" to the bullet point.

The home page allows to access all of the public information of the system. The text fields for "Phytosanitary database" and "Collaborators network" are autocomplete, which means that you will receive suggestions as you type. If one of those suggestions is selected, the system will load directly that selection, otherwise an advanced search will be triggered with the text input.

From that same page, users can log in to the system as well as access the submission form for detection or suspicion of pests.

PUBLIC ACCESS

PEST ADVANCED SEARCH

General surveillance Information System Login

Pests

Simple list

Search

Filters

Pest type
Choose some options

Crop
Choose some options

Affected organ
Choose some options

Phytosanitary condition
Choose some options

Apply

Tuta absoluta ← **Results**

Common name: tuta

Pest type: Insect

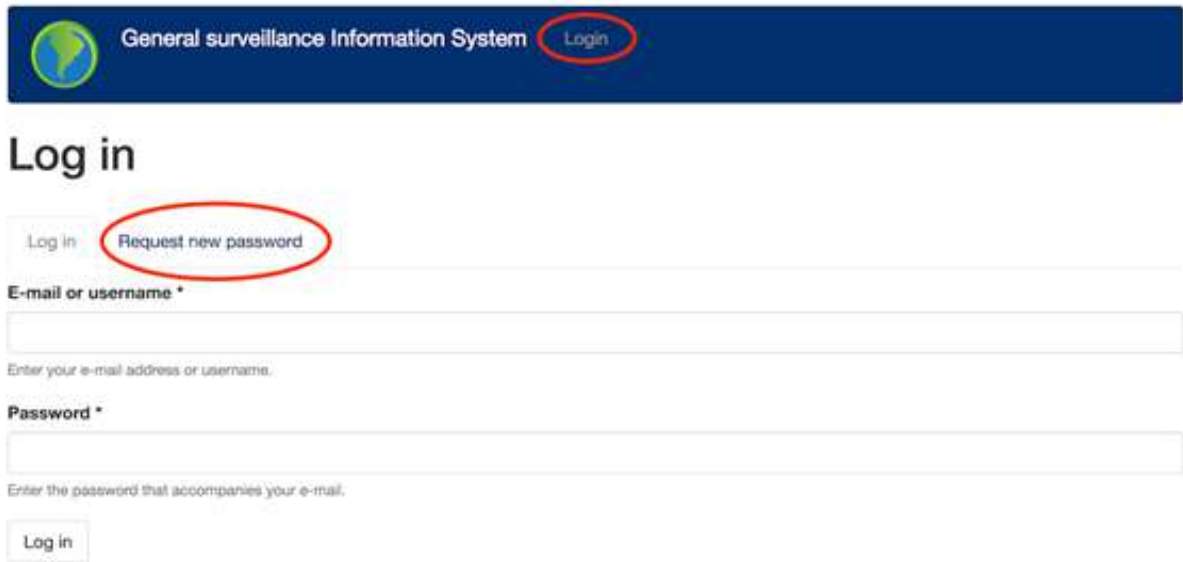
Taxonomy: Insect: Hymenoptera, Diprionidae

Read more

Pest advanced search page allows to filter pests using a combination of different fields available. The "Search" field is a free text filter that matches scientific name, common name and synonymy.

COLLABORATORS

The collaborator network data, both on the home page and on the advanced search page, work in a similar way to the pests' screens, only with related filters and results for collaborators.



General surveillance Information System [Login](#)

Log in

[Log in](#) [Request new password](#)

E-mail or username *

Enter your e-mail address or username.

Password *

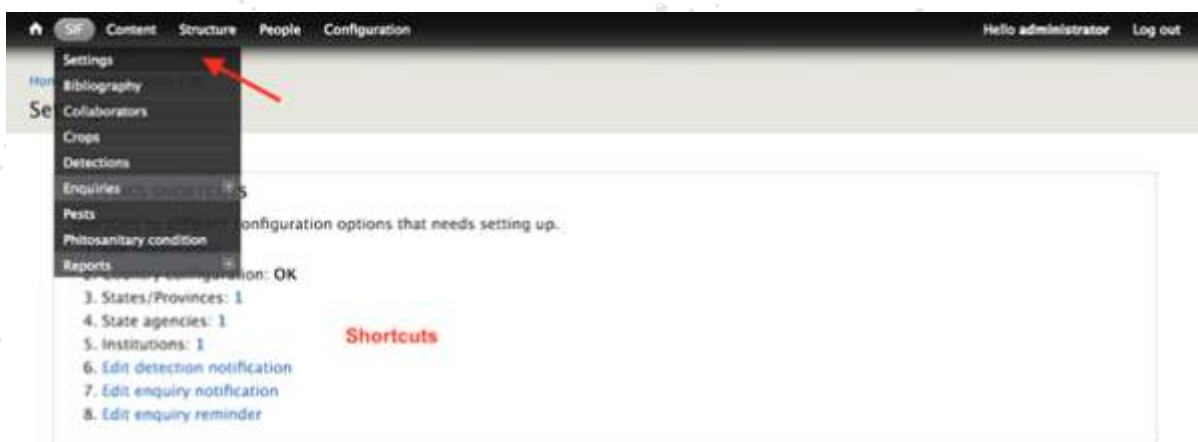
Enter the password that accompanies your e-mail.

[Log in](#)

The login screen is accessed through the "Login" link in the main menu. It is a page where you can enter you email and password given by the site administrator. It is also possible to request a new password and reset yours.

INITIAL CONFIGURATIONS

The application needs some initial settings before starting to add the content explained in the following chapters. Below are the different initial settings and configurations. The application has a main settings page with shortcuts to different parts of the site in order to ease with this setup.



SITE INFORMATION

This page is to set the main site name as well as a site-wide email address that will be used for all ongoing notifications.



INITIAL CONFIGURATIONS

COUNTRY INFORMATION

From the main settings page, you can create the country node as explained below as well as edit it once created.



Create and edit country information

A country must be selected, once create it will be automatically set.

The country fields and further information into adding and administering content are explained below.

STATE/PROVINCES, GOVERNMENT AGENCIES AND INSTITUTIONS

The application needs to have some mandatory lists with enough information so that the fields explained below that relies on these lists will have information to work.

The states/provinces have an extra field for geographical coordinates. It must be filled and will be used to show pests' phytosanitary condition in a map widget. It's a simple representative coordinate of the state/province, not a specific coordinate of the pest presence.

INITIAL CONFIGURATIONS

DETECTION OR SUSPICIOUS NOTIFICATION

SETTINGS SHORTCUTS

Shortcuts to different configuration options that needs setting up.

1. Site information
2. Country configuration: OK
3. States/Provinces: 1
4. State agencies: 1
5. Institutions: 1
6. Edit detection notification 
7. Edit enquiry notification
8. Edit enquiry reminder

The content and various email parameters of the notification sent after submitting a detection or suspicious can be edited on this page. The following are the main fields:

CC RECIPIENT

The mail's carbon copy address. You may separate multiple addresses with comma.

Value

BCC RECIPIENT

The mail's blind carbon copy address. You may separate multiple addresses with comma.

Value

SUBJECT

The mail's subject.

Value *

Detection or suspicion received

BODY

The mail's HTML body. Will be formatted using the text format selected on the [settings](#) page.

Value

Dear [deteccion:field-nombre]:

We have received your submission of a detection or suspicion of [deteccion:title] in the country. We have internally registered it with an identification number

INITIAL CONFIGURATIONS

ENQUIRY NOTIFICATIONS

SETTINGS SHORTCUTS

Shortcuts to different configuration options that needs setting up.

1. Site information
2. Country configuration: **OK**
3. States/Provinces: **1**
4. State agencies: **1**
5. Institutions: **1**
6. Edit detection notification
7. Edit enquiry notification
8. Edit enquiry reminder

As with the previous notification, these are the main fields of each notification that is sent when the collaborators enquiry feature is used:

SUBJECT

The mail's subject.

Value *

[consulta:title]

MESSAGE

The mail's message body.

Value *

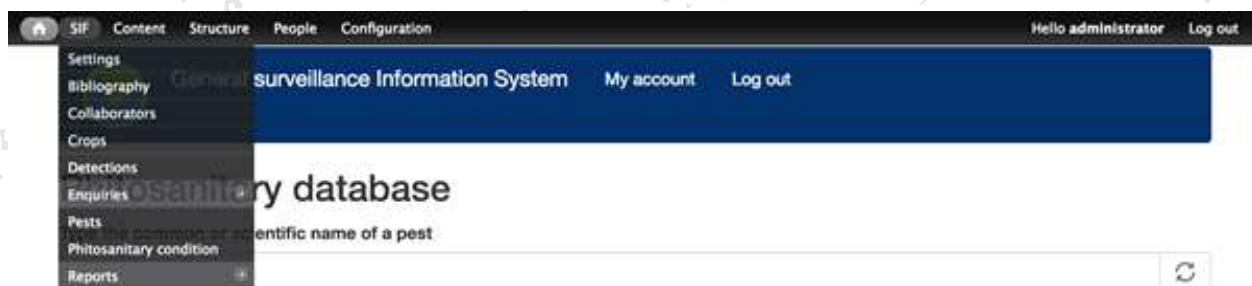
Dear collaborator,

We are pleased to invite you to access [consulta-url:value] in order to provide details in relation to the phytosanitary condition of certain pests of interest for



ADMINISTRATION

Once logged in, all of the administration options are available in the top black bar. The available items depend on the role assigned to each user. This guide covers up to the advanced administrator role, which is the one that can administer all of the features of the application.



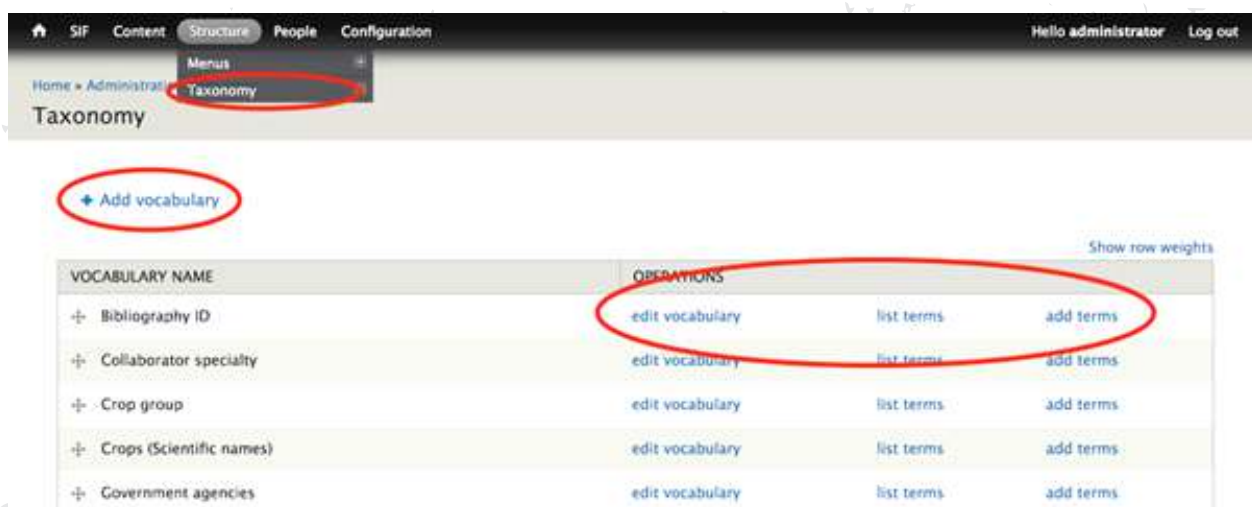
Administration pages use a different theme, simplified and better suited for administration forms.

LISTS, CATEGORIES AND TAXONOMIES

The application has different lists that can be administered independently from the content. They are used site-wide and allow to enter content preventing typing errors and properly categorizing the content.

In a Drupal application, these lists are called Vocabularies.

The application comes pre-configured with all the necessary vocabularies.



Pre-configured vocabularies:

- Crops: Scientific names for each crop. This list is used in Crops, Pests, Bibliography, Reports and enquiries.
- Specialty: The specialty of each collaborator. This list is used in collaborators.
- Crop group: This list is used in Collaborators.
- Bibliography ID: This list is used in Bibliography.
- Institution: Different institutions or publishing companies where a collaborator could belong to. This list is used in Collaborators.
- Government agencies: This list is used in Collaborators.
- Pests: Scientific names of pest. This field is used in Pests, Phytosanitary condition and bibliography.
- State/provinces: This list is used in Phytosanitary condition, Detection, Collaborators, reports and Enquiries.
- Taxonomy for each pest type and crops: Hierarchical list of taxonomies for each type of pest as well as for crops. These lists are used in Pests and Crops.

ADMINISTRATION

Creation and edition of terms on each vocabulary is the same for every vocabulary and all share the same form and general fields.

Those fields are:

- Name: Free text field.
- Relations
 - Weight: Numeric field. Lists are normally ordered alphabetically. This field allows to ordering.
 - Parents: Simple selection field. For hierarchical lists, it is possible to select the parent of each containing term.



The screenshot shows a web application interface for managing a taxonomy. The breadcrumb trail is "Home > Administration > Structure > Taxonomy > Institution/publisher". The page title is "Institution/publisher". There are "LIST" and "EDIT" buttons. The form includes a "Name" field, a "RELATIONS" dropdown menu, and a "Save" button.

Some vocabularies may have additional fields that could/must be completed as well. For example, there's a coordinates field on the state/provinces list.

ADMINISTRATION

ADD/EDIT CONTENT

Add and edit content screens are exactly the same, only that an edit page has all of the fields with the existing information.

For each change, the application is configured to keep a revision of the content, so every content addition page had the following common form element:



The screenshot shows a form with two main sections. On the left, under the heading "Revision information", there is a sub-heading "New revision" and a large empty text area. On the right, under the heading "Revision log message", there is a large empty text area. Below the right text area, there is a small instruction: "Provide an explanation of the changes you are making. This will help other authors understand your motivations." At the bottom left of the form, there is a "Save" button.

In case you want to store a reference for the change you are making to the content, you can use the Revision message that will be displayed in the revision history of the content.

To complete with the addition or update of the content, you need to click on the Save button towards the end of the form.

▶ In case of a failed validation, error messages will be displayed at the top of the page with the affected fields in red.

▶ COUNTRY

To add/modify the country, please refer to the.

Country content type holds general information of the country. It has three vertical tabs where you can edit its fields.

The first tab has the following fields:

- Country name: Free text field.
- Coordinates: Special field that uses Google Map widget to store a geographic coordinate. You can write an address, city or location to search and store that coordinate. You can also then choose a different point by clicking on the map. The purpose of this field is to choose the center most point of the country, that will be used as the center of the map shown when viewing pests.
- Flag: File upload field. Country flag.
- Introduction: Free text field.

The second tab has the following fields, which are mainly used for reports/dossiers:

- Introduction: Free text field.
- Physical information: Free text field.
- Soil: Free text field.
- Climate: Free text field.
- Information extra: Free text field.
- NPPO: Free text field.

The third tab is for images and all are File upload fields:

- Geographic location map
- Physical map
- Soil map
- Temperature map
- Precipitation map

Pests have three vertical tabs.

The first tab has the following fields:

- Scientific name: Free text field, but the names are pulled from the pests' scientific names list explained on . It is an autocomplete field. In case a pest you are trying to add is missing you should add it on the list first.
- Common name: Multiple free text field.
- Synonymy: Multiple free text field.
- Pest type: Simple selection field.
- Taxonomy: Simple selection field. It depends on the selected pest type. The taxonomy of each type is administered independently as explained on . It is a hierarchical structure, allowing to browse the tree through different dropdowns fields.

The second tab is for adding affected organs.

This tab allows to add one or more hosts (crops) for the pest and their affected organs. It is also possible to flag the information as pending confirmation.

It has the following field:

- To be confirmed: Checkbox.
- To be confirmed because: Free text field where you can enter the reason for not being confirmed yet.
- Crops: Multiple selection field.
- Affected organ: Multiple selection field.

You are allowed to enter different combinations of crops and affected organs by using the Add another item button.

The third tab has general information fields:

- Biology: Free text field.
- Signs and symptoms / Damages: Free text field.
- Predisposing conditions: Free text field.

ADMINISTRATION

Home » Add content » Create Pest

Navigation: SIF Content Structure People Configuration Hello administrator Log out

Sub-navigation: Add content Bibliography Collaborator Crop Enquiry Page **Pest** Phytosanitary condition

Identification *

Affected organs

General information

COMMON NAME Show row weights

+ [input field]

Add another item

SYNONYMY Show row weights

+ [input field]

Add another item

Pest type *

- Bacteria
- Crustaceans
- Mites
- Fungi and pseudofungi
- Insect
- Mollusk
- Nematode
- Plant species
- Protist
- Vertebrate
- Virus or viroids

Taxonomy: Insect *

Order [dropdown menu]

This field auto completes from the pests' scientific names list

This field depends on the pest type selected

ADMINISTRATION

Home » Add content

Create Pest

Home SIF Content Structure People Configuration Hello administrator Log out

Identification *

Affected organs

General information

CROPS / AFFECTED ORGANS

To be confirmed

To be confirmed because

Optional field - it appears when the box above is checked.

+ Crops

Choose some options

Affected organ + -

<input type="checkbox"/> Botanic seeds	<input type="checkbox"/> Branches	<input type="checkbox"/> Buds	<input type="checkbox"/> Bulbs
<input type="checkbox"/> Crown	<input type="checkbox"/> Cuttings	<input type="checkbox"/> Flowers	<input type="checkbox"/> Fruits
<input type="checkbox"/> Leaves	<input type="checkbox"/> Rooted cuttings	<input type="checkbox"/> Roots	<input type="checkbox"/> Rootstock cuttings
<input type="checkbox"/> Seedlings	<input type="checkbox"/> Shoots	<input type="checkbox"/> Spike	<input type="checkbox"/> Stem
<input type="checkbox"/> Stolons	<input type="checkbox"/> Trunk	<input type="checkbox"/> Tuber	<input type="checkbox"/> Whole plant
<input type="checkbox"/> Xylem and phloem			

This button allows for different combination of crops and affected organs



▶ PHYTOSANITARY CONDITION

The pest phytosanitary condition is administered separately from the pest itself. It has the following fields:

- Pest: Free text field, but the names are pulled from the pests' scientific names list explained on . It is an autocomplete field. In case a pest you are trying to add is missing you should add it on the list first.
- State/provinces: Multiple selection field.
- Condition: Simple selection field.

The screenshot shows the 'Create Phytosanitary condition' form. The top navigation bar includes 'SIF', 'Content', 'Structure', 'People', and 'Configuration'. The user is logged in as 'Hello administrator'. The form has the following fields:

- Pest ***: A text input field with a dropdown menu open. The dropdown menu lists: Bibliography, Collaborator, Crop, Enquiry, Page, Pest, and Phytosanitary condition. The 'Phytosanitary condition' option is circled in red.
- States/provinces**: A multiple selection field with the placeholder text 'Choose some options'.
- Condition ***: A list of radio button options:
 - Absent
 - Absent quarantine pest
 - Absent quarantine pest with areas under contingency plan
 - Present quarantine pest
 - Regulated non-quarantine pest
 - Present widely distributed
 - Present with unknown distribution
 - Present only in some areas of the country

This content is to store general information about the crop that could later be used in reports and other parts of the application.

Crops has four vertical tabs where you can edit several groups of information.

The first tab has the following fields:

- Scientific name: Free text field, but the names are pulled from the crops scientific names list explained on . It is an autocomplete field. In case a crop you are trying to add is missing you should add it on the list first.
- Common name: It is a multiple free text field.
- Crop type: Multiple selection field.
- Taxonomy: Simple selection field. The taxonomy of each type is administered independently as explained on . It is a hierarchical structure, allowing to browse the tree through different dropdowns fields.

The second tab has the following fields:

- Image: File upload field.
- Introduction: Free text field.
- Taxonomy: Free text field.
- Morphological characteristics: Free text field.
- Phenology: Free text field.
- Export product: Free text field.
- Commercial varieties: Free text field.
- Crop requirements: Free text field.
- Phytosanitary surveillance system: Free text field.
- Referenced bibliography: Free text field.

The third tab has the following fields:

- Crop handling: Free text field.
- Production areas and volumes: Free text field.
- Production zones map: File upload field.
- Exported volumes: Free text field.
- Exported volumes map: File upload field.

ADMINISTRATION

The last tab has the following fields:

- Crop handling for production of propagation material: Free text field.
- Zones of propagation material production: Free text field.
- Zones of propagation material production map: File upload field.
- Propagation material exports: Free text field.
- Propagation material exports map: File upload field.

The screenshot shows the 'Create Crop' form in a web application. The 'Add content' dropdown menu is open, with 'Crop' highlighted. The form includes sections for Identification, General information, Consumption, and Propagation. The 'Crop type' section has radio buttons for Aromatics, Cereals, Fodder, Forestry, Fruits, Industrials, Oleaginous, Ornamentals, and Vegetables. The 'Taxonomy' section has a dropdown for 'Subphylum'. The 'COMMON NAME' section has a text input field and an 'Add another item' button.



This content is to add personal information, both public and private of those that would like to be included in the collaborators network of each NPPO.

It has two vertical tabs. The first tab is for public information and every user with access to public content will be able to see that while the second tab is for private information and only those with a special permission will be able to see it.

The first tab has the following fields:

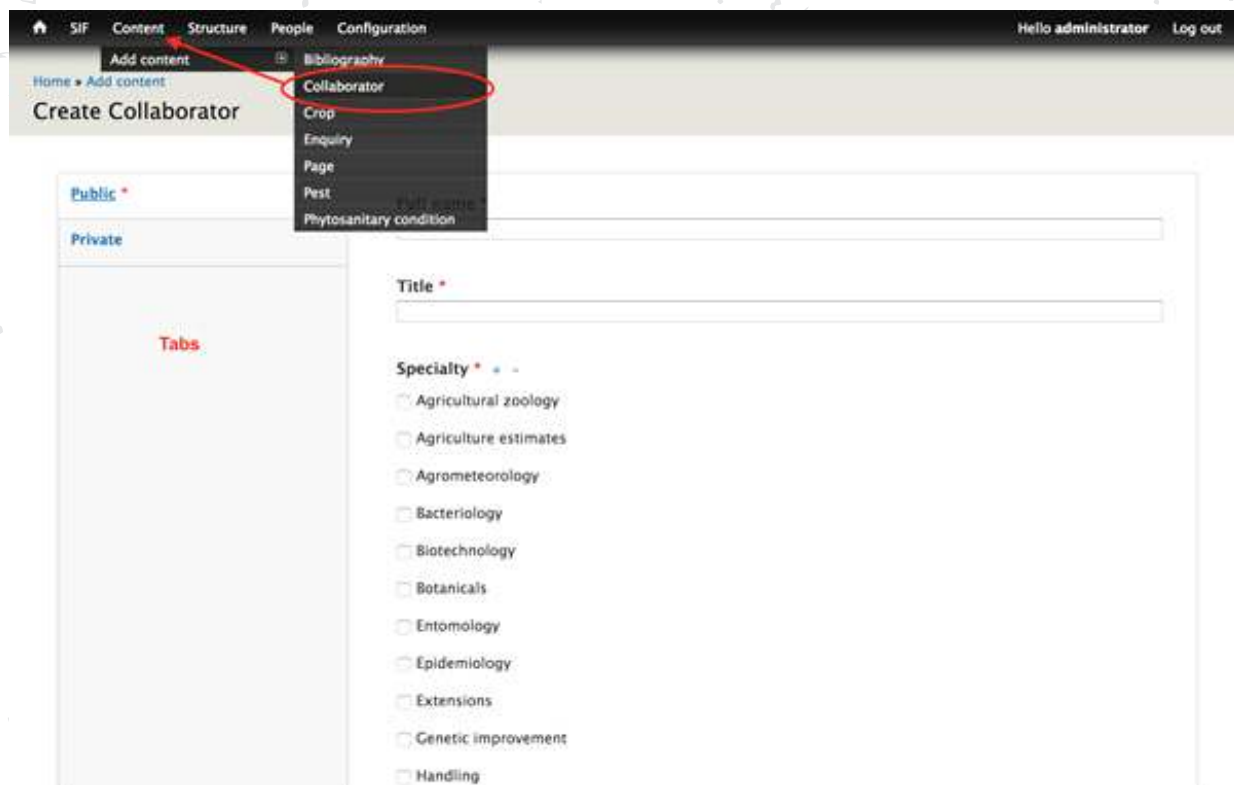
- Full name: Free text field.
- Title: Free text field.
- Specialty: Multiple selection field.
- Area of influence: Multiple selection field.
- Pest type: Multiple selection field.
- Crop group: Multiple selection field.
- Crops: Multiple selection field.
- Notes: Free text field.
- Email: Multiple free text field.
- Phone: Multiple free text field.
- Address: Multiple free text field.
- Place of residence: Simple selection field. List of states/provinces explained on .
- Government agency: Multiple selection field. List of government agencies explained on .

The second tab has the following fields:

- Private email: Multiple free text field.
- Private information: Free text field.



ADMINISTRATION



BIBLIOGRAPHY

This content allows to relate a pests and crops. This information is later used when viewing pests as well as reports. It has two vertical tabs.

The first tab has the following fields:

- Identification: Free text field. List of Bibliography ID explained on . If the input is not found on the list, a new one will be added automatically.
- Year: Simple selection field.
- Editors: Multiple free text field.
- Authors: Multiple free text field.
- Title: Free text field.

ADMINISTRATION

- Institution/publisher: Multiple selection field. List of institutions/publishers explained on .
- Chapters: Free text field.
- Pages: Free text field.
- URL: Free text field.
- Consulted date: Date field.
- ISBN/ISSN: Free text field.
- Internal reference: Free text field.
- Attachment: File upload field.

The second tab allows to add the relationship between pests and crops. Normally, bibliographies reference several pests and crops so you add it only once and add all of the pests and crops that it mentions. You are also allowed to flag a relationship as “not valid” and note a reason about it. Not valid references will not be shown on reports or pest view pages.

It has the following fields:

- Not valid: Checkbox field.
- Not valid because: Free text field. This is an optional field that appears when the box above is checked.
- Pests: Multiple selection field. The names are pulled from the pests' scientific names list explained on . It is an autocomplete field. In case a pest you are trying to add is missing you should add it on the list first.
- Crops: Multiple selection field. The names are pulled from the crops scientific names list explained on . It is an autocomplete field. In case a crop you are trying to add is missing you should add it on the list first.

You can add multiple combinations of crops and pests' relationships by using the Add another item button.

ADMINISTRATION

Home » Add content

Create Bibliography

Structure

- Add content
- Bibliography**
- Configuration
- Crop
- Enquiry
- Page
- Pest
- Phytosanitary condition

PESTS AND CROPS

Not valid or complete

PESTS

Show row weights Remove

+ [input field]

+ Add another item

CROPS

Show row weights

+ [input field]

Add another item

Add another item

ATTACHMENTS

Add a new file

Choose File No file chosen Upload

Files must be less than 2 MB.
Allowed file types: txt doc pdf xls docx.

This button allows for different relationships of pests and crops

ADMINISTRATION

CONTENT ADMINISTRATION



The application has different administrative lists with all of the content types explained above.

All lists share the same structure and functionality.



ADMINISTRATION

FILTERS

Above each table, there are several fields that allow to filter the results on the table so they can be found easily.

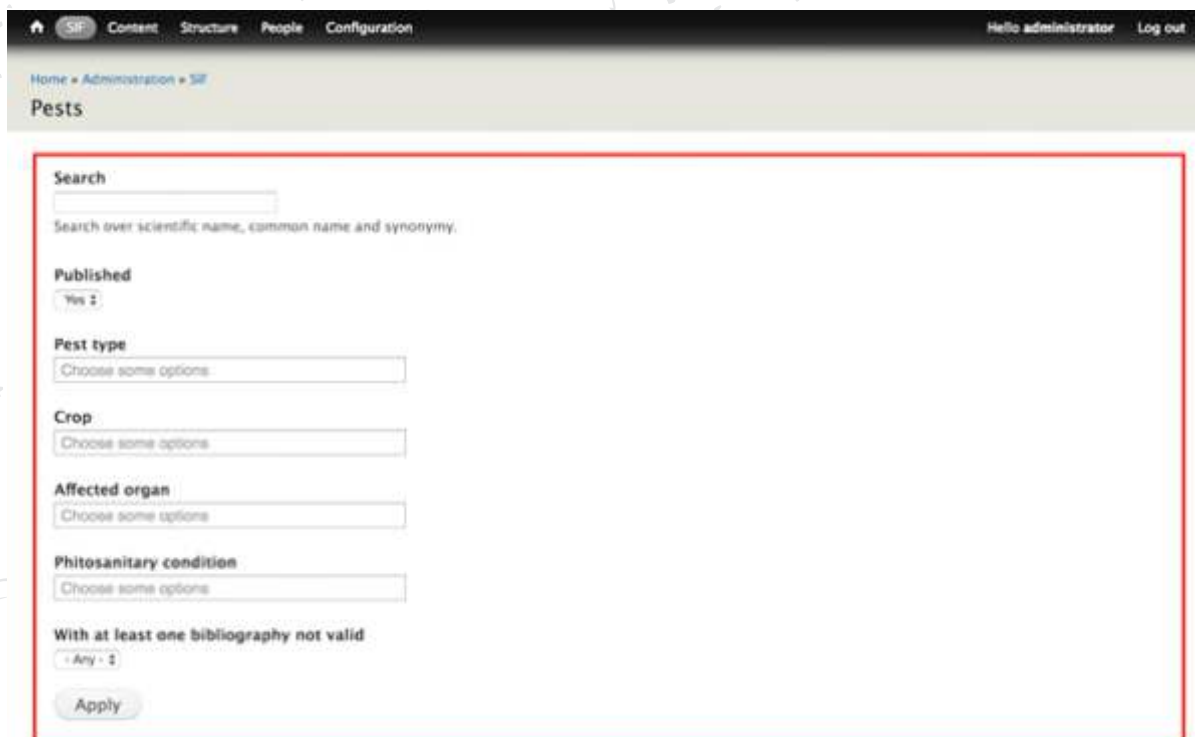
The fields that are empty will not affect the result set of the table.

The content of these fields comes from the previously explained contents.

There is a Search free text field that searches in several fields at the same time.

The free text input filters also perform partial searches, which means that the word "tetra" will find both "Tetranychus" and "Eotetranychus".

The Apply button applies all of the selected filters.



The screenshot shows the SIF administration interface. The top navigation bar includes 'SIF', 'Content', 'Structure', 'People', and 'Configuration'. The user is logged in as 'Hello administrator' and can 'Log out'. The breadcrumb trail is 'Home > Administration > SIF'. The main heading is 'Pests'. A red box highlights the filter section, which includes:

- Search:** A text input field with the instruction 'Search over scientific name, common name and synonymy.'
- Published:** A dropdown menu currently set to 'Yes'.
- Pest type:** A dropdown menu with the placeholder text 'Choose some options'.
- Crop:** A dropdown menu with the placeholder text 'Choose some options'.
- Affected organ:** A dropdown menu with the placeholder text 'Choose some options'.
- Phitosanitary condition:** A dropdown menu with the placeholder text 'Choose some options'.
- With at least one bibliography not valid:** A dropdown menu currently set to 'Any'.
- Apply:** A button to apply the selected filters.

ADMINISTRATION

RESULT TABLES

The tables show the most relevant columns of each content type, and each row is a different content.

The blue titles are links that allows to order the results by that field. Clicking it once they are ordered in ascending order and clicking it a second time, descending.

The last column is usually for action links for edit and other direct operations with a specific content.

The title column is also a link to the content page.

There's an option to download the results on a CSV file that can be opened with excel.

UPDATED	AUTHOR	TITLE	PEST TYPE	COMMON NAME	
2 days 23 hours	root@sistema.dev	Tuta absoluta	Insect	tuta	edit

OPERATIONS
- Choose an operation - Execute

Order columns Content links Action links

CSV CSV File export

TABS AND EDIT LINKS WHEN VIEWING CONTENT

When the content is viewed and the user has certain roles, it is possible to see both horizontal tabs near the title of the content and also edit links in between the content to edit related information.

Usually you will see the view tab, which is view page of the content, the edit tab and a revision tab when you have more than one revision of the content.

Tuta absoluta

The screenshot shows a content page for 'Tuta absoluta'. At the top, there are three tabs: 'View', 'Edit', and 'Revisions'. Below the tabs, there are two sections: 'Phytosanitary condition:' and 'Bibliography:'. In both sections, the '(edit)' link is circled in red. To the right of the 'Phytosanitary condition:' section, there is a map showing the locations of Córdoba, Santa Fe, and Porto Al.



Automatic generation of reports is one of the main features of the application. This tool combines all of the information added to the system in a PDF report. There are two types of reports: crops and pests.



Crop phytosanitary reports combine information about the country, pests, crops, phytosanitary condition and bibliography.

These reports are based on one single crop and you can use different parameters that affect the final report.

1. Crop

The first step is the selection of the crop, using its scientific name.

Crop *

2. Affected organ

You can select one or more affected organs. These parameters will include the pests that affects the selected crop only on the selected affected organs.

Affected organ * + -

Botanic seeds Branches Buds Bulbs Crown Cuttings Flowers Fruits Leaves Rooted cuttings Roots
 Rootstock cuttings Seedlings Shoots Spike Stem Stolons Trunk Tuber Whole plant Xylem and phloem

3. Phytosanitary condition

In a similar way, you can include pests with a specific condition.

Phytosanitary condition * + -

Absent Absent quarantine pest Absent quarantine pest with areas under contingency plan
 Present quarantine pest Regulated non-quarantine pest Present widely distributed
 Present with unknown distribution Present only in some areas of the country

4. Sections

It is possible to exclude certain sections depending on the recipient of the report.

COVER PAGE
 Include cover page

INDEX
 Include index



You can choose what information should be used from the crop content depending on the recipient of the crop.

CROP GENERAL CHARACTERISTICS

Include crop general characteristics

Consumption or propagation *

Consumption

Propagation material

You can add information of the country and a table of all the pests that match the previous parameters

CROP GENERAL CHARACTERISTICS

Include crop general characteristics

Consumption or propagation *

Consumption

Propagation material

You can include information on the NPPO that comes from the country content's field with the same name.

You have also the option to include a closure text that you can edit for specific purposes.

All of the parameters are saved for future reports in case you want to reuse them.

INFORMATION OF THE NPPO

Include information of the NPPO

- CLOSURE TEXT

You can use the following placeholder variables that will be replaced within the fields: !cultivo (crop scientific name).

Title

Text

Text format Texto plano con formato ▾ [More information about text formats](#)

TOOLS

You can include the general bibliography of the crop, a free text field on the crop content. The actual bibliography related to the pests are always referenced on the report when adding pests to it.

GENERAL BIBLIOGRAPHY

Include general bibliography

Finally, you can choose to add the different content IDs within the system. This allows you to quickly identify the content that needs to be changed in case there are modifications needed for the report.

ADVANCED OPTIONS

Include Node IDs in the report
Enable to include the node IDs between brackets. This could be useful to find the content quickly.

Generate

Once you are ready setting all of the parameters, you can start building the report with the Generate button. The application will show a progress bar and once it finishes, it will show a status message with a link to download the report.

 The report has been successfully generated, you can download it by [clicking here](#).

The report is in PDF. Any necessary modification should be added/changed within the application and then generate an updated report. The purpose is to avoid quick modification outside of the application and promote keeping the application up to date.

Finally, the same as with the other report, you can choose to add the different content IDs within the system. This allows you to quickly identify the content that needs to be changed in case there are modifications needed for the report.

▼ **ADVANCED OPTIONS**

Include Node IDs in the report
Enable to include the node IDs between brackets. This could be useful to find the content quickly.

Generate

Once you are ready setting all of the parameters, you can start building the report with the Generate button. The application will show a progress bar and once it finishes, it will show a status message with a link to download the report.

✓ The report has been successfully generated, you can download it by [clicking here](#).

The report is in PDF. Any necessary modification should be added/changed within the application and then generate an updated report. The purpose is to avoid quick modification outside of the application and promote keeping the application up to date.

ENQUIRIES

The purpose of this tool is to be able to quickly send enquiries to the collaborators present in the application so they can easily provide the necessary feedback.

NEW ENQUIRY

To start a new enquiry, you have to use the Create enquiry link of the administration menu or the tab present within the main enquiry page.



The application has a wizard that allows you to create a new enquiry step by step.

On each step, you are able to go to the next one and the previous one. You can also cancel the creation and once you reach the last step, you can eventually submit it.



1. General initial filters

The first step has the initial filters that could help on the following steps.

- If you select a crop, pests and collaborators will be preselected in the steps 3 and 4.
- If you select a pest type, pests and collaborators will be preselected in the steps 3 and 4.

These two parameters can be used together, preselecting pests and collaborators that matches both criteria.

1. General initial filters » 2. Collaborators initial filters » 3. Pests » 4. Collaborators

PESTS AND COLLABORATORS INITIAL FILTERS

These filters help by pre-selecting pests and collaborators on the next steps. In the case of no filters, they can be added manually.

Crops

None

Pest type

- Bacteria
- Crustaceans
- Mites
- Fungi and pseudofungi
- Insect
- Mollusk
- Nematode
- Plant species
- Protist
- Vertebrate
- Virus or viroids

You can also add a duration to the enquiry.

DURATION

From *

Date

2016-12-30

E.g., 2016-12-30

Until *

Date

2017-01-30

E.g., 2016-12-30



2. Collaborators initial filters

These parameters allow you to fine tune the preselection of collaborators in the last step.

1. General initial filters » 2. Collaborators initial filters » 3. Pests » 4. Collaborators

COLLABORATORS INITIAL FILTERS

These filters help by pre-selecting collaborators on the next steps. In the case of no filters, they can be added manually.

Crops group

None ▾

This is a special filter that will pre-select every collaborator of a certain group on top of the ones pre-selected by other filters.

Area of influence

Choose some options

Place of residence

Choose some options

3. Pests

Then you need to select the pests you want collaborators to send responses for. This will be preselected based on the previous steps but you can remove and add new ones as necessary.

1. General initial filters » 2. Collaborators initial filters » 3. Pests » 4. Collaborators

Pests *

Tuta absoluta ✕

There could be pre-selected pests based on previous filters. You can add and remove more as necessary.

4. Collaborators

The last step is to select the collaborators you want to send the enquiry to. As with pests, this field will be preselected based on previous steps and you can add and remove as necessary.

Collaborators *

Agencia Nacional (1) ✕

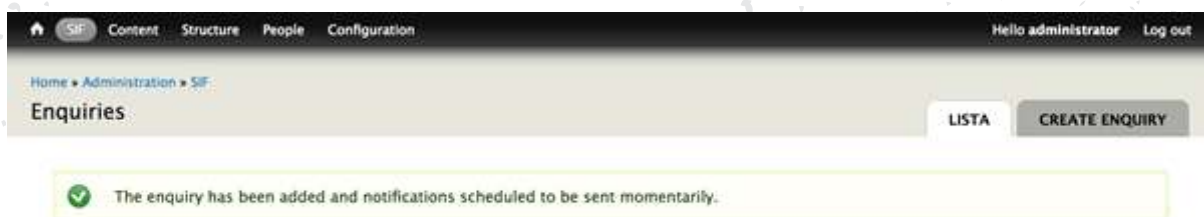
There could be pre-selected collaborators based on previous filters. You can add and remove more as necessary.

The number between parenthesis shows the number of enquiries recently sent to the collaborators, allowing you to decide if you want to send that many enquiries to the same collaborators.

5. Submit

When you submit the enquiry, the information will be stored internally and both notifications and reminders will be sent automatically.

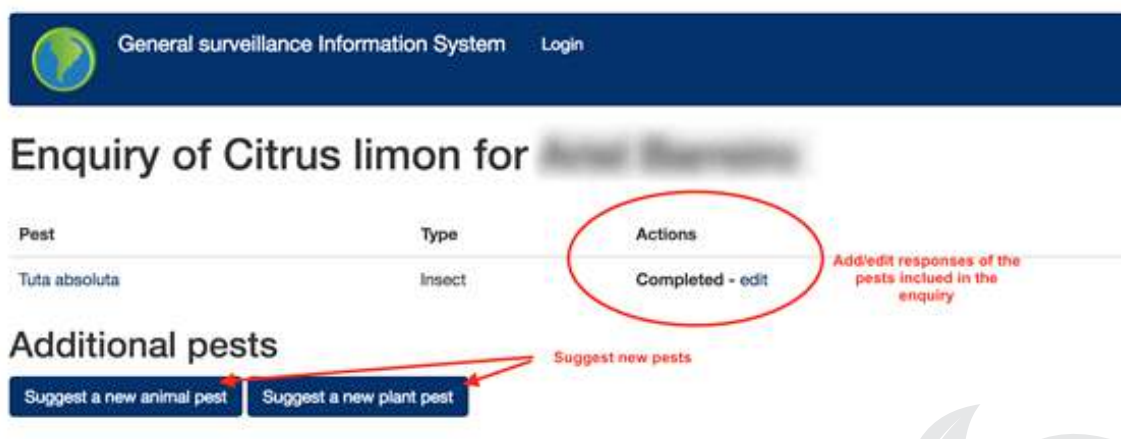
You will see the following status message:



RESPONSES

Collaborators will receive an email with a specially crafted link. It is a unique link for each collaborator, so they don't have to have an account on the system. This also prevents having one collaborator adding information in place of another one.

Following the link, you will see a page similar to



There are two different responses, one for animal pests and another one for plant pests.

Both response forms have common fields and specific ones.

The common fields are:

- Presence: Simple selection field.
- States/provinces: Multiple selection field.
- Affected organ: Multiple selection field.
- Notes: Free text field.
- Bibliography: Free text field.

The specific fields for plant pests are:

- Prevalence: Simple selection field.
- Incidence: Simple selection field.
- Severity: Simple selection field.

The specific fields for animal pests are:

- Abundance: Simple selection field.
- Damage level: Simple selection field.

ADMINISTERING RESPONSES

The responses can be accessed through tables the same way as with any other content as explained in the chapter.



REQUIREMENTS AND INSTALLATION

The application was developed using Drupal, an open source web and content management framework, using version 7 - <https://www.Drupal.org/>. It's a PHP framework that stores everything on a database.

DISK SPACE

You need a minimum of 60 MB for the code, with enough extra space to store all of the attachment and database. It is recommended not to have less than 15 or 20 GB in order for the applications to scale comfortably.

WEB SERVER

The application can be installed on most of the web servers available, including Apache, Nginx, Microsoft IIS or any other as long as it supports execution of PHP scripts.

Apache is the preferred and recommended web server which works on any of the major operating system available like Windows, Linux, Unix, etc.

DATABASE

MySQL or similar. The alternatives that are 100% compatible are:

- MySQL 5.0.15/MariaDB 5.1.44/Percona Server 5.1.70 or higher with PDO support
- PostgreSQL 8.3 or higher with PDO support
- SQLite 3.3.7 or higher

PHP

Drupal works with PHP version 5.2.5 or higher. The current most stable supported version is 5.6.26.

Drupal 7 was recently released with full support for PHP 7.x, but there could be third party modules used that might still not be fully compatible.

REQUIREMENTS AND INSTALLATION

INSTALLATION AND CONFIGURATION

These steps assume knowledge about the chosen web server administration and that is already properly set up to run PHP scripts on a specific URL.

1. Copy the code to the configured site root folder.
2. Recommended: On apache web servers, it is important that the `mod_rewrite` module is installed and enabled. This module allows for cleaner and better URLs.
3. Create a MySQL database or similar.
4. Important: Load the database with the database dump provided. Although Drupal can be installed on an empty database, the one provided comes with many features and customizations necessary for the application to work.
5. Edit the file `<root>/sites/default/settings.php` and configure the details to access the database.
6. Make sure the web server has write permission to `<root>/sites/default/files`.

GOOGLE MAPS API KEY

The application uses Google Maps to show both the phytosanitary condition on a map when viewing pests as well as for adding coordinates to States/provinces and countries.

For that, it is necessary that you configure an API key of your own.

Please go to <https://developers.google.com/maps/documentation/javascript/get-api-key?hl=en> and follow the instructions to get an API key, and then add it to the settings.php file mentioned above: `$conf['geolocation_googlemaps_api_key'] = 'API_KEY';`

REQUIREMENTS AND INSTALLATION

APPLICATION CREDENTIALS

Super administrator/root

User: root

Password: root

Advanced administrator

User: administrator

Password: administrator

Simple administrator

User: admin

Password: admin

Important! Please change these passwords once the system is ready to be used.



EXTENSIBILITY AND INFORMATION FOR DEVELOPERS

As was mentioned previously, the application was made in Drupal, an open source web application.

The application was delivered with all of the third-party modules that are downloaded and updated from <http://Drupal.org> as well as all of the custom modules created specifically for this application.

This section are guidelines to know the code file structure, with pointers to more advanced configurations that could be needed in a short term to extend or improve the application for each NPPO.

This section is aimed to technical resources with advanced experience in web application administration, PHP developers and if possible, Drupal developers.

DETECTION OR SUSPICIOUS NOTIFICATION

The file structure follows Drupal standards. Third-party modules are available in:

`<root>/sites/all/modules/contrib`

Custom modules are in:

`<root>/sites/all/modules/custom`

Themes are responsible of the look and feel of the site, third-party ones are in:

`<root>/sites/all/themes/contrib`

and the specific themes for the application are in:

`<root>/sites/all/themes/custom`

SPECIFIC MODULES

- `bootstrap_chosen`: Adapts the styles of chosen, a third party javascript library for the public theme based on bootstrap.
- `informes`: Report generation module.
- `node_info_permissions`: Custom permission module to show author information on nodes.
- `srif`: Main module of the application, with common functions and alterers.
- `srif_bibliografia`: Configurations and logic for bibliography.
- `srif_consultas`: Configurations and logic for collaborators.
- `srif_core`: Main configurations.
- `srif_cultivos`: Configurations and logic for crops.
- `srif_deteccion`: Configurations and logic for detections.
- `srif_informes`: Configurations for reports.
- `srif_plagas`: Configurations and logic for pests.
- `srif_referentes`: Configurations and logic for collaborators.

SPECIFIC THEMES

- `srif_admin`: Admin theme based on the default admin Drupal theme, with some small tweaks.
- `srif_public`: Public access theme, minimalist and simple using Bootstrap - <http://getbootstrap.com/>.

ROLES AND PERMISSIONS

You need an advanced admin role or higher.

Drupal has a very granular permissions system. It allows you to define new roles and assign different permissions to each role.

The application comes pre-configured with the following roles:

- `super admin`: An administrator role that has every available permission. This role matches permissions of the root user.
- `advanced admin`: An advanced role that allows to configure all of the application features explained in this guide.
- `simple admin`: A simple administration role for content and users.
- `full content`: A role to administer every content within the application as well as a permission to remove content.
- `content`: A simple role to administer content but it is only allowed to remove each user's' content.

There are also two default roles in the system.

- `Anonymous user`: Everyone that access the web application without being logged in.
- `Authenticated user`: Every user that has a username and password regardless of the role.

EXTENSIBILITY AND INFORMATION FOR DEVELOPERS

Roles

Home > Administration > People > Roles

People

LIST PERMISSIONS

Permissions Roles Role assign

Show row weights

NAME	OPERATIONS
+ anonymous user (locked)	edit permissions
+ authenticated user (locked)	edit permissions
+ super admin	edit role edit permissions
+ advanced admin	edit role edit permissions
+ simple admin	edit role edit permissions
+ full content	edit role edit permissions
+ content	edit role edit permissions

Add role

Save order

On the roles administration page, you can create a new role, edit permissions and change the order of the roles.

EXTENSIBILITY AND INFORMATION FOR DEVELOPERS

Permissions

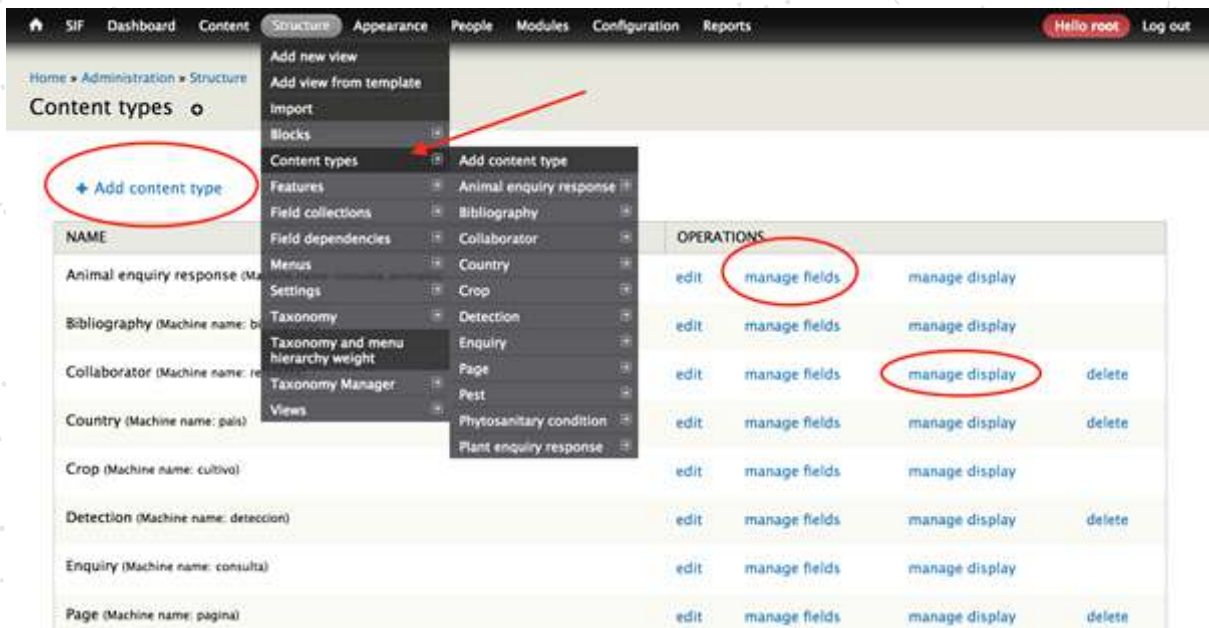
PERMISSION	ANONYMOUS USER	AUTHENTICATED USER	SUPER ADMIN	ADVANCED ADMIN	SIMPLE ADMIN	FULL CONTENT	CONTENT
Administration menu							
Access administration menu Display the administration menu at the top of each page.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Flush caches Access links to flush caches in the administration menu.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Display Drupal links Provide Drupal.org links in the administration menu.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

On the permissions page, there is a matrix where you can edit which permissions are assigned to each role by clicking on each checkbox.

EXTENSIBILITY AND INFORMATION FOR DEVELOPERS

CONTENT TYPE AND FIELDS

You need a super admin role or the root user.



The screenshot shows the Drupal administration interface. The top navigation bar includes links for SIF, Dashboard, Content, Structure, Appearance, People, Modules, Configuration, and Reports. The user is logged in as 'root'. The breadcrumb trail is 'Home > Administration > Structure'. The main heading is 'Content types'. A dropdown menu is open, showing options like 'Add new view', 'Add view from template', 'Import', 'Blocks', 'Content types', 'Features', 'Field collections', 'Field dependencies', 'Menus', 'Settings', 'Taxonomy', 'Taxonomy and menu hierarchy weight', 'Taxonomy Manager', and 'Views'. The 'Add content type' link is circled in red. Below the dropdown, a table lists content types with their names and operations. The 'manage fields' and 'manage display' links in the operations column are also circled in red.

NAME	OPERATIONS
Animal enquiry response (Machine name: animal-enquiry-response)	edit manage fields manage display
Bibliography (Machine name: bibliography)	edit manage fields manage display
Collaborator (Machine name: collaborator)	edit manage fields manage display delete
Country (Machine name: pais)	edit manage fields manage display delete
Crop (Machine name: cultivo)	edit manage fields manage display
Detection (Machine name: deteccion)	edit manage fields manage display delete
Enquiry (Machine name: consulta)	edit manage fields manage display
Page (Machine name: pagina)	edit manage fields manage display delete

Drupal allows you to define new content types and change options and behavior of each one.

From here you can also manage fields for each content type, allowing you to change and add new fields. Drupal supports different types of fields (text, numeric, date, link, etc.) and you can also add more allowed values to some lists fields, like pest type.



EXTENSIBILITY AND INFORMATION FOR DEVELOPERS

REPORTS TEMPLATES

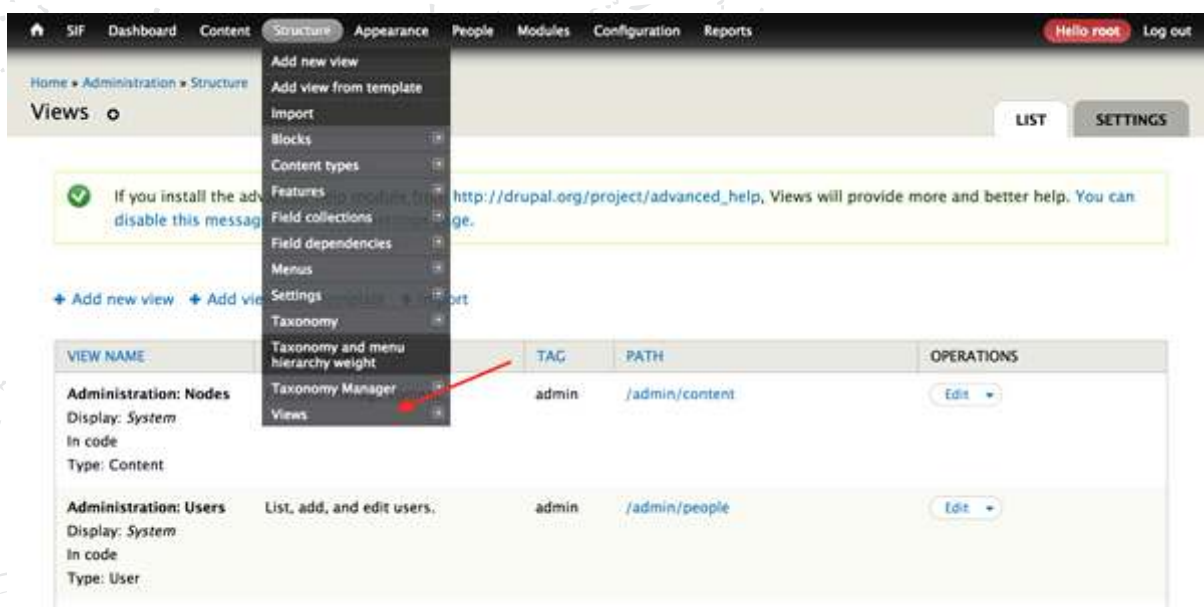
Reports are generated by the "informes" module as explained above. The structure and styling of the reports can be modified by editing certain files on the administration theme present in `<root>/sites/all/themes/custom/srif_admin`.

The files that you need to change to alter the reports' format are:

- `informes.css`: CSS styles global file.
- `informes-*.tpl.php`: All of the files that starts with `informe-` and ends with `.tpl.php` are template files of the reports.

VIEWS

You need a super admin role or the root user.



VIEW NAME	TAG	PATH	OPERATIONS
Administration: Nodes Display: System In code Type: Content	admin	/admin/content	Edit
Administration: Users Display: System In code Type: User	admin	/admin/people	Edit

Every administration and public lists available within the application were configured using views. It's a very important module that allows you to create different pages with list of contents. Within this you can change the current views as well as add new ones.

RULES

You need a super admin role or the root user.

Home » Administration » Configuration » Workflow

Rules

[+ Add new rule](#) [+ Import rule](#)

Reaction rules, listed below, react on selected events on the site. Each *conditions* that must be met for the actions to be executed. You can also use Rules and other parts of your site. See [the online documentation](#) for more information on how to use Rules.

FILTER:

Active rules

NAME	EVENT	STATUS	OPERATIONS
Detection-user notification Machine name: rules_detection_user_schedule, Weight: 0	After saving new content of type <i>Detection</i>	Custom	edit disable clone delete export

Inactive rules

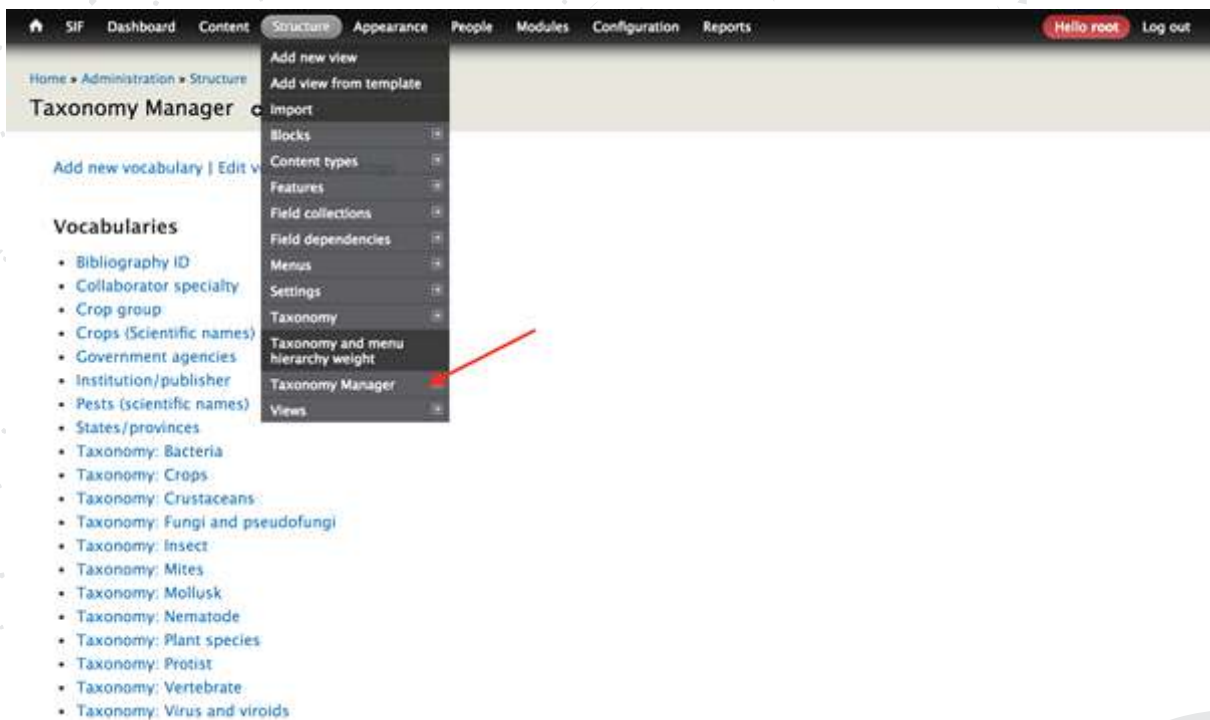
NAME	EVENT	STATUS	OPERATIONS
There are no inactive rules.			

There's another important Drupal module that allows you to define workflow rules. Within this part of the site you can have the application do certain actions when certain events happen as well as adding conditions to it. Applications notifications for certain features are configured with Rules.

EXTENSIBILITY AND INFORMATION FOR DEVELOPERS

TAXONOMY MANAGER

You need a super admin role or the root user.



There's an advanced administration module for taxonomies (lists). This is a third party module and allows for a better administration of hierarchical lists as well as providing an option to add several terms at once.

Although all what this module do can be done with the standard administration as previously explained, it's a very useful module for advanced administrators and developers.

REFERENCES

- <https://www.Drupal.org/>
- <https://www.Drupal.org/docs/7>

USER'S **GUIDE**
FOR **WEB APPLICATION**
FOR THE
**GENERAL PLANT
PEST SURVEILLANCE**

