



EUROPEAN COMMISSION
DIRECTORATE-GENERAL
Joint Research Centre



GMO Register User Guide

A. Rana and F. Foscarini

Institute for Health and Consumer Protection
2007

EUR 22697 EN

The mission of the Institute for Health and Consumer Protection is to provide scientific support to the development and implementation of EU policies related to health and consumer protection.

The Institute for Health and Consumer Protection carries out research to improve the understanding of potential health risks posed by chemical, physical and biological agents from various sources to which consumers are exposed.

European Commission
Directorate-General Joint Research Centre
Institute for Health and Consumer Protection

Contact information

Address: Biotechnology and GMOs Unit

E-mail: JRC-BGMO@ec.europa.eu

Tel.: +39 0332 786706

Fax: +39 0332 786159

<http://ihcp.jrc.ec.europa.eu/>

<http://www.jrc.ec.europa.eu/>

Legal Notice

Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication.

A great deal of additional information on the European Union is available on the Internet.

It can be accessed through the Europa server

<http://europa.eu>

EUR 22697 EN

ISBN 978-92-79-05218-7

ISSN 1018-5593

Luxembourg: Office for Official Publications of the European Communities

© European Communities, 2007

Reproduction is authorised provided the source is acknowledged

Printed in Italy



EUROPEAN COMMISSION
DIRECTORATE GENERAL JRC
JOINT RESEARCH CENTRE
Institute for Health and Consumer Protection
Biotechnology and GMOs Unit

DG JRC – IHCP – B&GMO Unit	Version Number: 1.0
<h2>GMO Register – User Guide</h2>	

A. Rana and F. Foscarini

Table of Contents

1	Introduction	5
1.1	Scope of the Project	5
1.2	Scope of the document.....	6
1.3	Document structure	6
1.4	Abbreviations/Acronyms	7
1.5	Reference Documents	8
2	High-level functionality.....	9
2.1	Data exchange.....	9
2.2	User types supported by the system.....	11
3	Elements of the Graphical User Interface.....	12
4	Public View of the Register.....	14
4.1	Introduction.....	14
4.2	How to list all entries in the register	15
4.3	How to search for a specific entry	20
5	Restricted view of the register	22
5.1	Authenticated (Authority/COM) User	22
5.1.1	How to search for a specific entry	26
5.1.2	How to list all entries in the register	26
5.1.3	How to insert a new entry into the Register.....	26
5.1.4	How to modify an entry in the Register.....	33
5.2	Administrator	33
5.2.1	How to create a new user account or edit an existing one	34
6	System requirements.....	35

Index of Tables

Table 1: Reference Documents 8
Table 2: User types supported by the GMO Register system 11
Table 3: GUI components of all web-pages of the GMO Register..... 13

Illustration Index

Illustration 3.1: GUI components of all web-pages of the GMO Register system	12
Illustration 4.1: Public view	14
Illustration 4.2: View authorised products ordered by Applicant name	16
Illustration 4.3: View authorised products ordered by UniqueID	17
Illustration 4.4: View authorised products ordered by Organism Name	18
Illustration 4.5: Register Entry details	19
Illustration 4.6: Advanced Search window	21
Illustration 5.1: Authenticated user login page	22
Illustration 5.2: Authenticate User: My Profile	23
Illustration 5.3: Authenticated User menu	25
Illustration 5.4: Add Register Entry - General Information	27
Illustration 5.5: Add Register Entry - Insert information	28
Illustration 5.6: Add Register Entry - Detection Method information	29
Illustration 5.7: Add Register Entry - Information on lodging	30
Illustration 5.8: Add Register Entry - BCH information	31
Illustration 5.9: Add Register Entry - Files	32
Illustration 5.10: Admin login page	33
Illustration 5.11: Admin Add User	34

1 INTRODUCTION

According to Article 31(2) of Directive 2001/18/EC [DIR.2001/18], the Commission is to establish one or several register(s), for the purpose of recording the information on genetic modifications in GMOs specified in Section A, point 7 of Annex IV to that Directive.

The information to be stored in this register is listed in Commission Decision 2004/204/EC of 23rd February [COM.2004/204] laying down detailed arrangements for the operation of the registers for recording information on genetic modifications in GMOs, provided for in Directive 2001/18/EC of the European Parliament and of the Council [COM.2004/204].

In response to the aforementioned legislation requirements, DG ENV and DG JRC initiated the GMO Register project, with an objective to put in place the GMO Register system as a web-based application that supports the effective dissemination of GMO information to the general public, MS Competent Authorities (CA), and other interested parties. Furthermore, this system will take into account analogous requirements, in terms of data fields, from legislation related to international agreements (i.e. the Cartagena Protocol on biosafety) in order to help in the effective submission of GMO information to the Biosafety Clearing House.

This document contains the high level description of the functionalities implemented in the GMO Register system, as well as its User Guide. Its purpose is to provide guidance on the use of the system.

Additional documentation on the structure or functionalities of the system are available in the Functional Specification Document [GMOR.FSD.2005], in the System Design Document [GMOR.SDD.2005] and in the System Description document (in this final report).

1.1 Scope of the Project

Scope of the project is to implement a GMO register according to the requirements of [COM.2004/204] taking advantage of the experience acquired in the development of the systems that have already been implemented and are operational in the B&GMO Unit of the JRC.

The purpose of the project is to implement the Commission GMO Register as defined in Article 31(2) and further described in Annex IV of [COM.2004/204]. Such register must record and make publicly available, when not confidential, the information on GMOs products authorized in the EU, including information on genetic modifications. The types of information that must be recorded in the register are described at a high level of detail in [COM.2004/204] laying down detailed arrangements for the operation of the registers for recording information on genetic modifications in GMOs, provided for in [DIR.2001/18].

1.2 Scope of the document

The purpose of this document is to provide the User Guide for the GMO Register application. The functional specifications identified three possible roles in using the system. User guidelines are provided in this document for all the identified roles, i.e. Anonymous user, authenticated user, administrator.

1.3 Document structure

This document contains the following chapters:

Chapter 1 – Introduction: provides an introduction to the project, its scope and scope of the system. Additionally, abbreviations used throughout the document and reference documents are listed.

Chapter 2 – High Level Functionality: presents an overview of the functionality to be supported by the GMO Register system.

Chapter 3 – Elements of the Graphical User Interface: presents the elements of the Graphical User Interface, i.e. the components that are available in each screen of the application and their meaning.

Chapter 4 – Public View of the Register: contains the user guide for the public view of the register explaining how to use the functionalities associated to the non-authenticated (anonymous) user (list and search).

Chapter 5 – Restricted View of the Register: contains the user guide for the restricted view of the register explaining how to use the functionalities associated to the authenticated user (add, modify) and management of the system (administrator).

Chapter 6 – System Requirements: presents the system requirements and the platforms on which the system has been tested.

1.4 Abbreviations/Acronyms

<i>Term</i>	<i>Definition</i>
BCH	Biosafety Clearing House
CA	Competent Authority
CSS	Cascading Style Sheets
DTD	Data Type Definition
EC	European Commission
ERD	Entity-Relationship Diagram
GMO	Genetically Modified Organism
GUI	Graphical User Interface
HTTPS	Hyper Text Transfer Protocol Secure sockets
IT	Information Technology
JRC	Joint Research Centre
MS	Member State
SQL	Structured Query Language
UML	Unified Modelling Language
XHTML	eXtended HyperText Markup Language
XML	eXtensible Markup Language

1.5 Reference Documents

The reference documents are listed in Table 1.1

<i>Reference</i>	<i>Document</i>
[DIR.2001/18]	Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organism and replacing Council Directive 90/220/EEC.
[COM.2004/204]	Commission Decision 2004/204/EC of 23rd February 2004 laying down detailed arrangements for the operation of the registers for recording information on genetic modifications in GMOs, provided for in Directive 2001/18/EC of the European Parliament and of the Council
[GMOR.FSD.2005]	GMO Register – Functional Specification Document (GMO Register Intermediate Report), JRC/TN N.EUR 22263EN
[GMOR.SDD.2005]	GMO Register – System Design Document (GMO Register Intermediate Report), JRC/TN N. EUR 22263EN

Table 1: Reference Documents

2 HIGH-LEVEL FUNCTIONALITY

The scope of the GMO Register project is to implement an Information Technology (IT) system, capable to support the storage of information and related documentation of authorised GMOs in EU, and disseminate non-confidential information to the general public.

The GMO Register system is a standard Web-based and easy-to-use application that allows non-technical users to easily create, manage, and publish content.

The core functionality of the GMO Register system ensures the storage and online publication of information related to authorised GMOs. It is expected that information to be stored within the system will be submitted by Competent Authorities (CA).

In summary, the following functionalities are supported by the GMO Register system:

- Entering register data
- Receiving register data
- Registering the data related to GMOs authorised under Directive 2001/18/EC
- Making the data available for browsing, listing, and searching for all users, based on their access rights
- Entering data in compliance, as far as possible, with the Biosafety Clearing House specifications and with the detailed arrangements for the operation of the registers for recording information on genetic modifications in GMOs, provided for in [COM.2004/204]

The GMO Register system supports the following actor types:

- Authenticated users (Commission user and Competent Authority (CA) user)
- Anonymous user (general public)
- System administrator

2.1 Data exchange

In order to enter data into the register, two mechanisms have been implemented: a web-based graphical user interface that allows authenticated users to enter data into the system and a data upload mechanism based on the use of standard formats.

An XML schema has been defined to describe an entry in the Register. Users can upload an entry by providing the data structured according to this format.

Describing the GMO Register data using an XML syntax has the following advantages:

- Automatic parsing of the message and upload into a database;
- “Export as” XML function to be associated to existing database allows creating of the data collection in a step;
- The use of a formal Schema allows automatic validation of the data (e.g. to verify that mandatory fields are all present and have a valid data type, etc.);
- Data can be extracted from an existing database or added through an ad-hoc data entry interface;

The data collection formatted according to the specified schema can be either transmitted over a (secure) network or burned on a CD and sent via mail;

The following steps have been followed in defining an XML Schema for the GMO Register:

- Identify the data items that are required
- Identify the relationships among the data items (e.g. relationship between a GMO event and a notification or between a GMO event and a detection method, etc.)
- Define a formal data model for representing the entities (groups of data items associated to a unique object or concept) – use ERD or UML
- Define a hierarchical representation of the data model suitable for formal description using XML
- Define the XML DTD (or Schema) for the XML message

The XML schema is available in [GMOR.FSD.2005] and is also attached to this document as an annex.

2.2 User types supported by the system

Table 2.1 describes the user types to be supported by the GMO Register system, their access rights and their primary actions.

<i>User Role</i>	<i>Type</i>	<i>Access Rights</i>	<i>Primary actions</i>
Authority User	Authenticated	Limited access to GMO Register entries	Submits data related to an approved GMO
COM User	Authenticated	Limited access to GMO Register entries	Checks/modifies data related to a register entry
General Public (Anonymous)	Non Authenticated	Read-only access to “public set” of data	Obtains access to public information
Administrator user	Authenticated	Full access to the system	Administers and maintains system, manages user roles and organisations, access rights and system parameters

Table 2: User types supported by the GMO Register system

3 ELEMENTS OF THE GRAPHICAL USER INTERFACE

In order to preserve consistency, the GMO Register GUI utilises specific GUI components, to be available to users in a consistent manner for all functionalities of the application. Figure 3.1 depicts the GUI components available in all web-pages of the application.

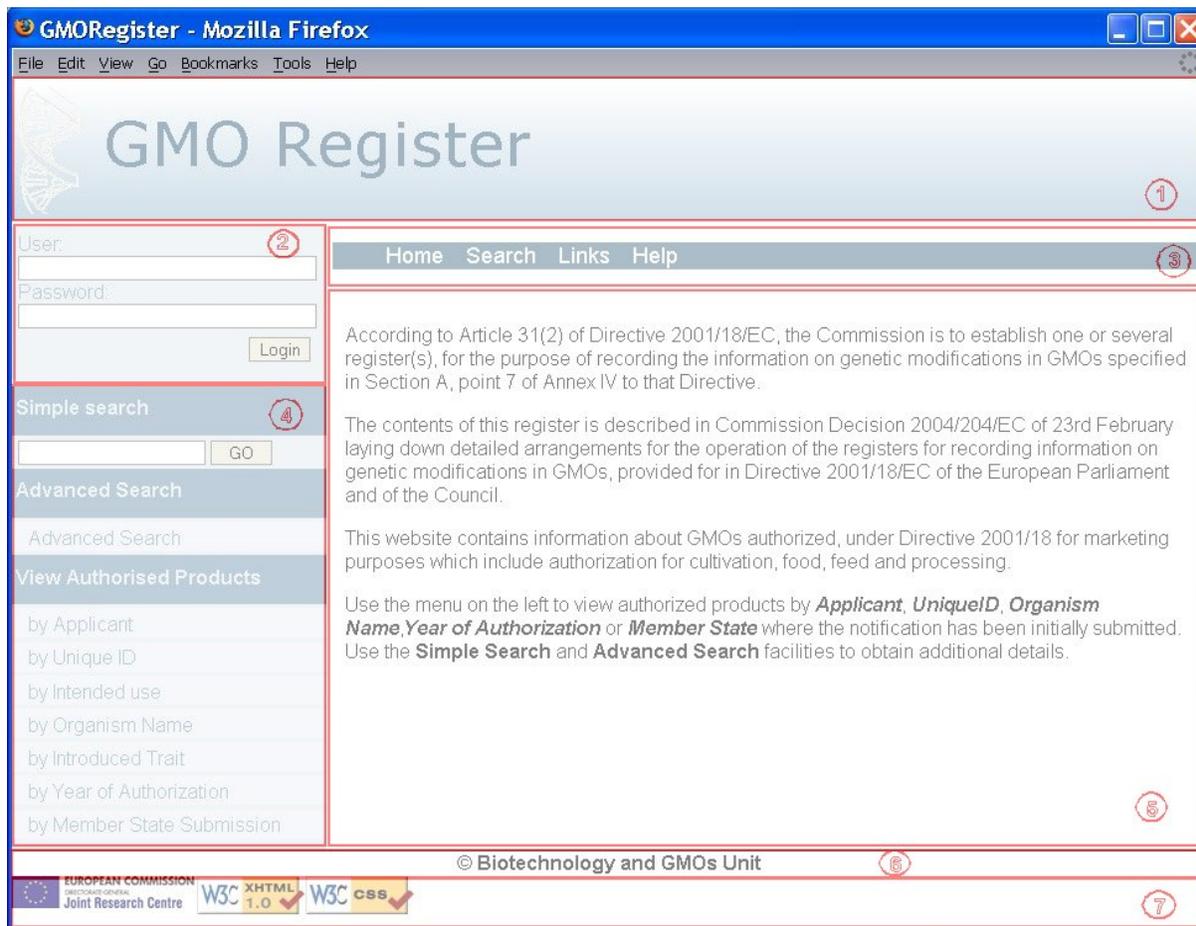


Illustration 3.1: GUI components of all web-pages of the GMO Register system

#	GUI Component Name	Purpose
1	Header	Presents the “corporate identity” of the GMO Register through a logo and eventually a banner. The “Header” component is included in all web-pages in case future requirements necessitate its use.
2	User information	Supports the functionality to users to log in the application when anonymous, or log out when authenticated. Furthermore, when a user is authenticated, the “Log in” component allows the user to view his/her preferences. This component is included in all web-pages of the application
3	Main menu	Facilitates the navigation amongst the various web-pages of the application. Depending on the access rights of an authenticated user, the “Main menu” component may present additional functionalities to the user (e.g. administrative functions). This component is included in all web-pages of the application
4	Secondary functionalities	Facilitates secondary functionalities of the application. This area includes the GUI for support of the newsletter subscription and quick search functionalities. Depending on the access rights of an authenticated user additional secondary functionalities are also included in this GUI component (e.g. administrative tasks). This component is included in all web-pages of the application
5	Main content area	Present the main content of a web-page.
6	Footer	Similarly to the “Header” component, the “Footer” is included in all web-pages of the application, providing additional information about the web site (e.g. the copyright).
7	Validators	Contain all the validations that are passed by the current web-page (e.g. Valid XHTML 1.0 Strict, Valid CSS)

Table 3: GUI components of all web-pages of the GMO Register

4 PUBLIC VIEW OF THE REGISTER

The public view of the system shows the information that are publicly available.

No authentication is necessary to access to this part of the system.



Illustration 4.1: Public view

4.1 Introduction

The public view represents the component of the system that is available to all user roles.

Without authenticating themselves, users in all user roles can access this portion of the system and perform basic search and list functionalities.

4.2 How to list all entries in the register

The simplest way to retrieve information about the entries in the GMO Register is by listing them using the panel on the left side.

By clicking on the menu items provided in the left menu under the “View Authorised products” label, the user will be presented with the list of all the entries in the system in the main view of the window (fig. 4.2)¹.

The list of the entries in the register can be ordered according to seven possible criteria:

1. by the name of the Applicant who has received an authorisation for the GMO described in that specific entry;
2. by the UniqueID associated to the GMO described in that specific entry;
3. by the intended use for which the authorisation has been granted (BCH code);
4. by the name of the organism;
5. by the introduced trait (BCH code);
6. by year in which the authorization has been granted;
7. by Member State which received the initial submission (Lead CA).

The following figures show the results of the operation described above for list criteria 1, 2 and 4.

¹ The data shown in these figures is fake data that has been used for test purposes only.

The screenshot shows the GMO Register interface in a Mozilla Firefox browser window. The page title is "GMO Register". On the left, there are login fields for "User:" and "Password:" with a "Login" button. Below that are search options: "Simple search" with a "GO" button, and "Advanced Search" with a link to "Advanced Search". A "View Authorised Products" section lists search criteria: "by Applicant", "by Unique ID", "by Intended use", "by Organism Name", "by Introduced Trait", "by Year of Authorization", and "by Member State Submission". The main content area is titled "View Last Autorised Products by Applicant" and includes the instruction "Select a row and click on the 'Details' button to view additional information." Below this is a table with 8 columns: Applicant, Organism Name, Unique ID, Notification #, Introduced, Intended U, Date, and Member State. Three rows of data are shown, each with a "Details" button below it.

	Applicant	Organism Name	Unique ID	Notification #	Introduced	Intended U	Date	Member State
1	AgroBiotek	Soy - Soybe	ABK-4321@-5	C/DE/01/01	Pest resista	Food (hums	Wed May 31	GERMANY
2	Biotech Corn	Zea mays -	BIO-@1234-5	C/ES/01/01			Tue Feb 29	SPAIN
3	Maxyield I	Cotton - Co	MYC-@1@@7-3	C/IT/02/02	Pest resista	Processing	Sat May 31	ITALY

© Biotechnology and GMOs Unit

Illustration 4.2: View authorised products ordered by Applicant name

The results of the list operation are shown in a table where only a summary of the information available for each entry in the register is provided.

Namely, these summary information include:

- **Applicant**
- **Organism Name**
- **UniqueID**
- **Notification Number**
- **Introduced Trait**
- **Intended use**
- **Date of approval**
- **Member State (LCA)**

The screenshot shows the 'GMO Register' website interface. At the top, there is a navigation bar with 'Home', 'Search', 'Links', and 'Help'. Below this, the main heading is 'View Last Authorised Products by Unique ID'. A sub-heading reads 'Select a row and click on the "Details" button to view additional information.' Below this is a table with the following data:

	Unique ID	Applicant	Organism Name	Notification #	Introduced	Intended U	Date	Member State
1	ABK-43210-5	AgroBiotek	Soy - Soybe	C/DE/01/01	Pest resista	Food (hums	Wed May 31	GERMANY
2	BIO-01234-5	Biotech Com	Zea mays -	C/ES/01/01			Tue Feb 29	SPAIN
3	MYC-01007-3	Maxyieald I	Cotton - Co	C/IT/02/02	Pest resista	Processing	Sat May 31	ITALY

Below the table is a 'Details' button. On the left side of the page, there are search options: 'Simple search' with a 'GO' button, and 'Advanced Search' with a link to 'Advanced Search'. Below these are 'View Authorised Products' options: 'by Applicant', 'by Unique ID', 'by Intended use', 'by Organism Name', 'by Introduced Trait', 'by Year of Authorization', and 'by Member State Submission'. At the bottom, there are logos for the European Commission, Joint Research Centre, W3C XHTML 1.0, and W3C CSS.

Illustration 4.3: View authorised products ordered by UniqueID

The screenshot shows the GMO Register website interface. At the top, there is a search bar and a navigation menu with links for Home, Search, Links, and Help. Below the search bar, there is a login section with fields for User and Password, and a Login button. To the left, there are sections for Simple search and Advanced Search. The main content area is titled 'View Last Authorised Products by Organism Name' and includes a table with the following data:

	Organism N°	Applicant	Unique ID	Notification #	Introduced	Intended U	Date	Member St.
1	Cotton - Co	Maxyieald I	MYC-01007-3	C/IT/02/02	Pest resista	Processing	Sat May 31	ITALY
2	Soy - Soybe	AgroBiotek	ABK-43210-5	C/DE/01/01	Pest resista	Food (hums	Wed May 31	GERMANY
3	Zea mays -	Biotech Cor	BIO-01234-5	C/ES/01/01			Tue Feb 29	SPAIN

Below the table, there is a 'Details' button. At the bottom of the page, there are logos for the European Commission Joint Research Centre, W3C XHTML 1.0, and W3C CSS.

Illustration 4.4: View authorised products ordered by Organism Name

In order to view the details available for a register entry, the user must select an entry and click on the “Details” button.

When this operation is performed a new page is displayed in the main content area (Fig 4.5). This page contains the five sections into which the information related to a GMO register entry is grouped.

These are:

- **Details concerning the Notifier and responsible person**
- **General information concerning the GMO**
- **Information on the insert**
- **Information concerning the identification and detection method**
- **Information on lodging, storage and supply of samples**

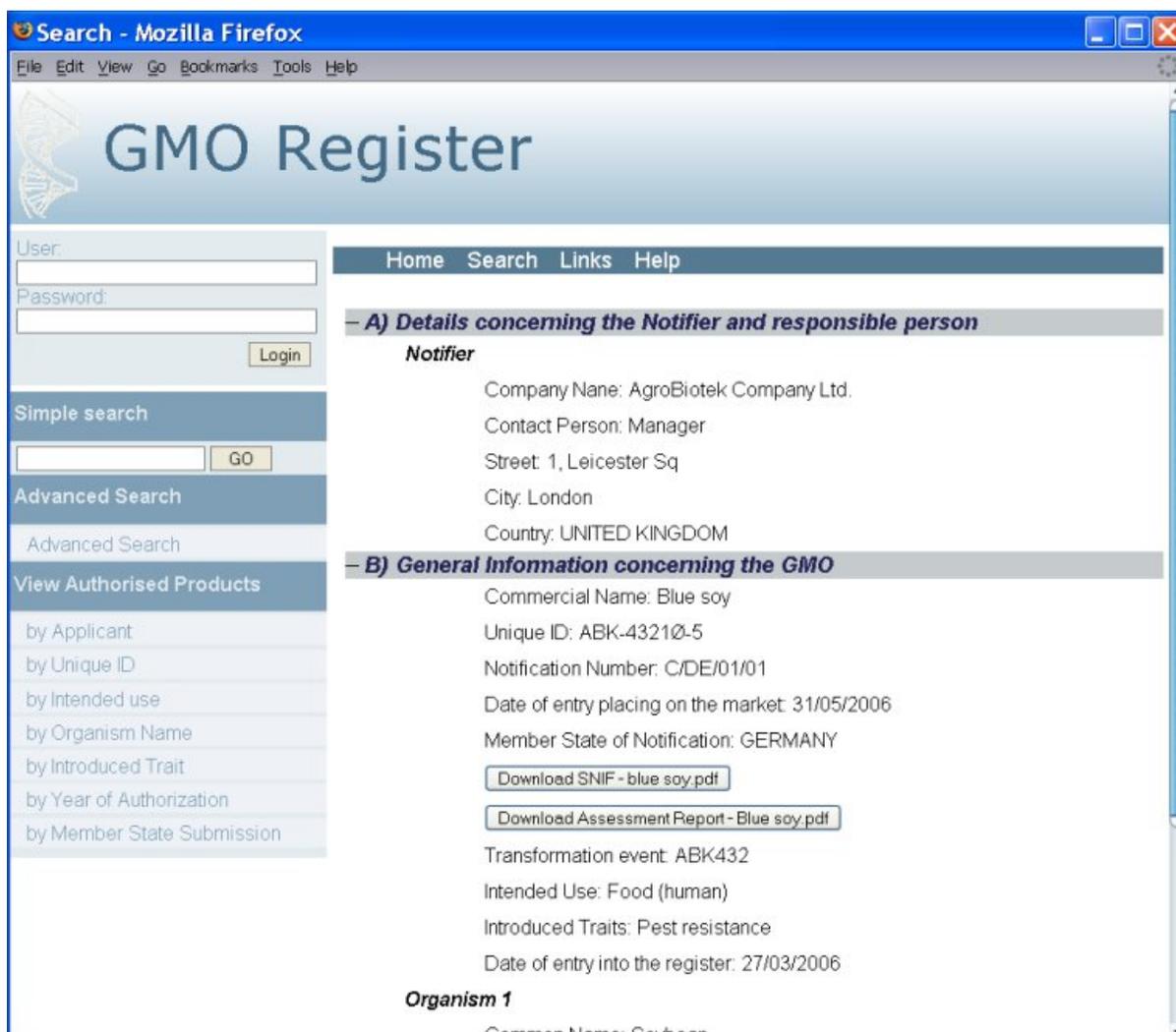


Illustration 4.5: Register Entry details

Each of these sections can be expanded to display the details of the information contained in each of them. When they are expanded, the “+” sign beside the name of the section is changed into a “-” indicating that the section has been expanded and that the information that follows belongs to that specific section. If the “+” signs changes into a “-” sign and no information appears below the label of the section, it means that no information is available for that section.

These sections and their contents are based on the data items described in chapter 4 of the Functional Specifications [GMOR.FSD.2005].

Users are given the option to download the content of the entry as a PDF file which is generated on the fly by the system with the information contained in all the sections.

4.3 How to search for a specific entry

The system provides two types of search mechanisms:

- simple search
- advanced search

The **Simple Search** can be started by specifying a search term in the input field under the label “Simple Search” in the left menu.

The term specified in the input field is searched in the “Country”, “Organism name”, “UniqueID”, “Intended use” and “Introduced trait” sections of the database and the results are displayed in a table in the main content window.

Details about the entry can be displayed as described in the section above on listing entries.

The **Advanced Search** is activated by selecting this option on the left menu bar. A form which details all fields in the database is provided in the main content area. Users can specify values for each input field and search for all or for any of the selected parameters.

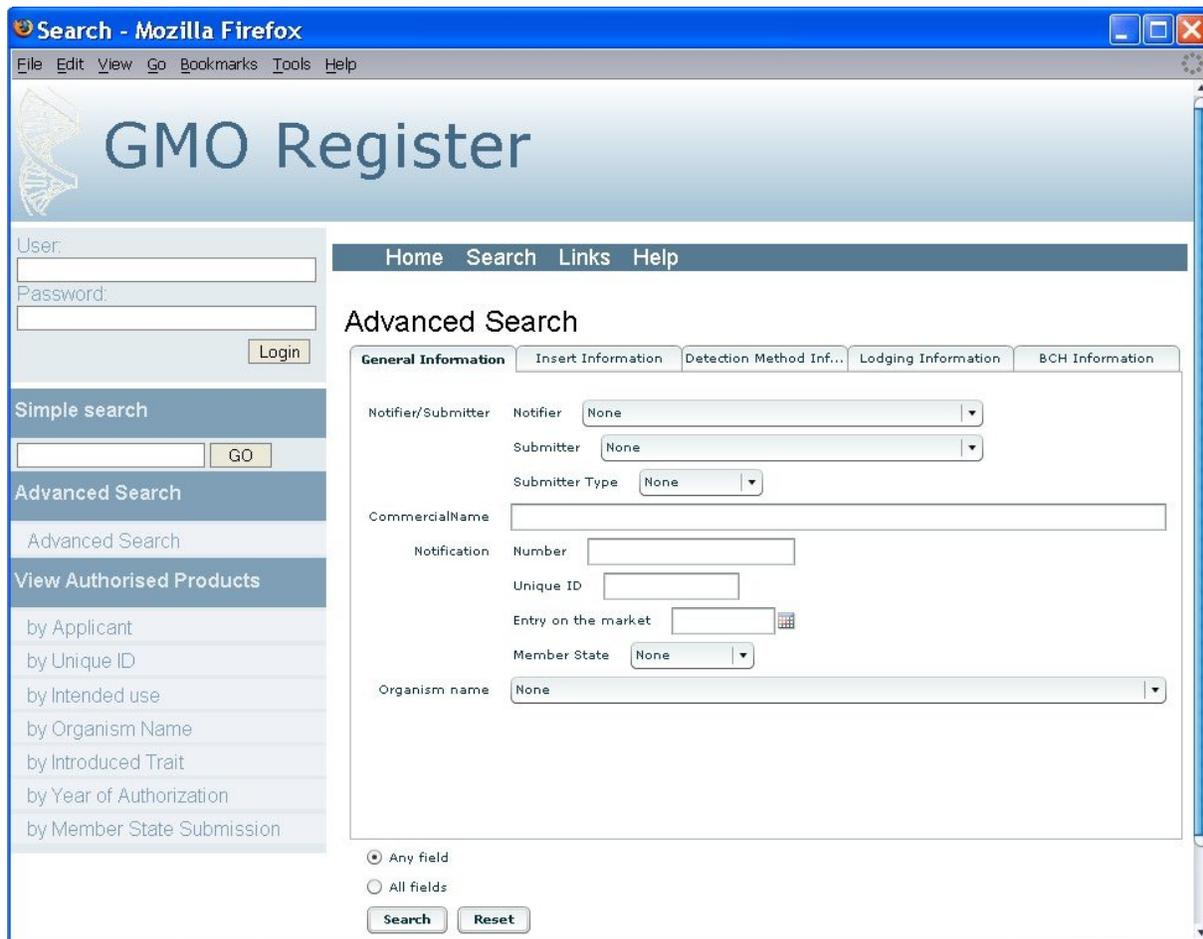


Illustration 4.6: Advanced Search window

5 RESTRICTED VIEW OF THE REGISTER

The restricted view of the register is available for authenticated users only, i.e. for Competent Authority, Commission users and administrator.

This view can be accessed only by specifying username and password in the login input fields on the top part of the left menu.

When the login function is activated, the communication protocol between the client (browser) and the server is switched to HTTPS and thus secured.

5.1 Authenticated (Authority/COM) User

When a user logs in, the environment in figure 5.1 is displayed.



The screenshot shows the GMO Register web application in a Mozilla Firefox browser window. The page title is "GMO Register". The user is logged in as "User: CA1" with the role "authority user". The navigation menu includes "Home", "Authority/COM", "Search", "Links", and "Help". The main content area displays information about the register, including a reference to Article 31(2) of Directive 2001/18/EC and a description of the register's contents. The left sidebar contains search and navigation options: "Simple search" with a search box and "GO" button, "Advanced Search", and "View Authorised Products" with a list of filters: "by Applicant", "by Unique ID", "by Intended use", "by Organism Name", "by Introduced Trait", "by Year of Authorization", and "by Member State Submission". The footer includes the European Commission logo, the Biotechnology and GMOs Unit logo, and W3C XHTML 1.0 and CSS 2.1 validation logos.

Illustration 5.1: Authenticated user login page

An additional item is available in the upper menu bar (“**Authority/COM**”), by selecting this menu item, a new menu is displayed in the left part of the window. This new menu provides access to the functionalities available for the authenticated users.

On top of the left menu, authenticated users can access the information associated to their profile and, if necessary, modify them. This functionality provides also the possibility for authenticate users to modify their password.



The screenshot shows a web browser window titled "Personal Info - Mozilla Firefox". The page header includes the "GMO Register" logo and a navigation menu with "Home", "Authority/COM", "Search", "Links", and "Help". The user is logged in as "User: CA1" with the role "authority user". The profile section shows "Name: Name_CA1", "Surname: Surname_CA1", "e-mail:", "Organization Name: Competent Authority", and "Country: * SPAIN". There are "Update" and "Reset" buttons. The password section includes "Old Password:", "New Password:", and "Again the new:" fields, with "Change password" and "Reset" buttons. The footer contains the European Commission logo, W3C XHTML 1.0 and CSS 2.1 logos, and the text "© Biotechnology and GMOs Unit".

Illustration 5.2: Authenticate User: My Profile

The left menu for authenticated users (authority/COM) provides the following section:

1. Register
2. Contacts
3. Organisms
4. Techniques
5. Recipient/Donors

6. Controlled Vocabulary
7. Simple Search

Sections 2, 3, 4, 5 provide the same functionalities, i.e.:

- add
- manage
- delete

These functionalities are used to create components of a Register Entry. A component of the Register Entry must be created before it can be used in a register entry. A component can be deleted only if it has not been yet used in a register entry, otherwise it can only be modified. This is not allowed in order to avoid inconsistencies in the database.

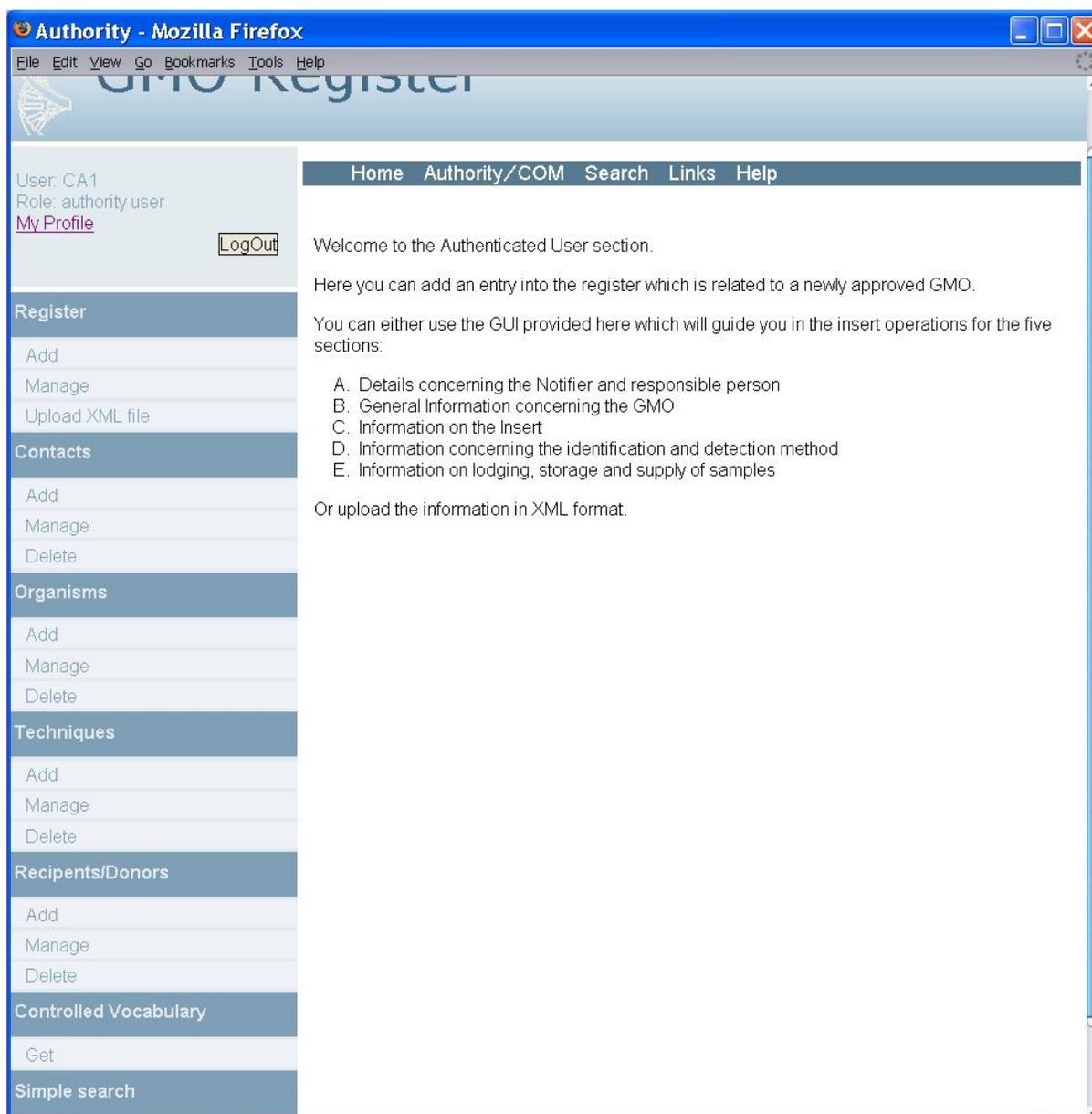


Illustration 5.3: Authenticated User menu

5.1.1 How to search for a specific entry

By clicking on the “Search” item in the top menu bar, users can change the menu on the left and access the menu that is available in the non authenticated mode. From this menu, they can select the Simple Search or the Advanced Search functionalities in the same way as described in section 4 of this document.

5.1.2 How to list all entries in the register

By clicking on the “Search” item in the top menu bar, users can change the menu on the left and access the menu that is available in the non authenticated mode. From this menu, they can select the functionalities associated to the menu item “View Authorised Products” in the same way as described in section 4 of this document.

5.1.3 How to insert a new entry into the Register

Before inserting a new entry in the register, the following components must be already available:

- Notifier
- Organism
- Transformation techniques (for BCH data items only)
- Recipient/Donors (for BCH data items only)

These components will be available in the respective drop-down menus when a new register entry is created. “Transformation techniques” and “Recipient/Donors” are components that are useful in completing the data fields for a BCH submission. They are not strictly required for a GMO Register entry (see [GMOR.FSD.2005]).

After creating these components, a new Register entry is created by selecting “Add” in the section “Register” in the left menu.

Tabs in the main content area allow users to insert data for each section of a register entry. Ad-hoc tabs are provided for additional information on BCH items and to upload Assessment Reports or SNIF files (files cannot be larger than 15 MB).

Information about the Detection Method can be given in text form or a URL to a place where further details can be obtained can also be specified. Users can indicate the type of information provided at the indicated URL in the field “URL Description”.

Users can upload files associated to the register entry they are creating. When doing so, they must select the file by clicking on the “Choose” button and locate the file, then in order to update the file

onto the system, they must click on the “Upload” button. An indication will be given by the system that the file has been uploaded.

Users can save register entries as drafts, if additional information need to be added in a second time or if parts of it need to be modified. Register entries saved as draft are not visible in the public view.

An entry should not be saved as draft until all tabs have been completed.

When a register entry is complete, users can publish the entry which will become visible also in the public view.

The following figures illustrate the add entry functionality. The data shown in these figures is fake data that has been used for test purposes only.



The screenshot shows the 'GMO Register' web application in a Mozilla Firefox browser window. The user is logged in as 'ca2' with the role 'authority user'. The main navigation menu includes 'Home', 'Authority/COM', 'Search', 'Links', and 'Help'. The left sidebar contains navigation links for 'Register', 'Contacts', 'Organisms', 'Techniques', and 'Recipients/Donors'. The main content area is titled 'Add register entry' and features several tabs: 'General Information..', 'Insert Information', 'Detection Method I...', 'Lodging Informatio..', 'BCH Information', and 'Files'. The 'General Information..' tab is active, displaying a form with the following fields:

- Notifier: Agrobiotek Company Ltd. - Manager - UNITED KINGDOM - 1, Leicester Sq - London
- Submitter Name: None
- Submitter Type: Distributor
- CommercialName: Blue soy
- Notification Number: C/DE/01/01
- Unique ID: ABK-4321@-5
- Entry on the market: 31/05/2006
- Member State: GERMANY
- Organism name: Citrullus lanatus - Watermelon, Gossypium - Cotton, Lepidotheca suaveolens - Pineapple Weed, Leptospermum laevigatum - Australian Myrtle, Leptospermum scoparium - Tea Tree, Malus domestica - Domestic Apple, Populus tremuloides - Aspen, Soy - Soybean

At the bottom of the form are three buttons: 'Save Draft', 'Insert', and 'Reset'.

Illustration 5.4: Add Register Entry - General Information



Illustration 5.5: Add Register Entry - Insert information

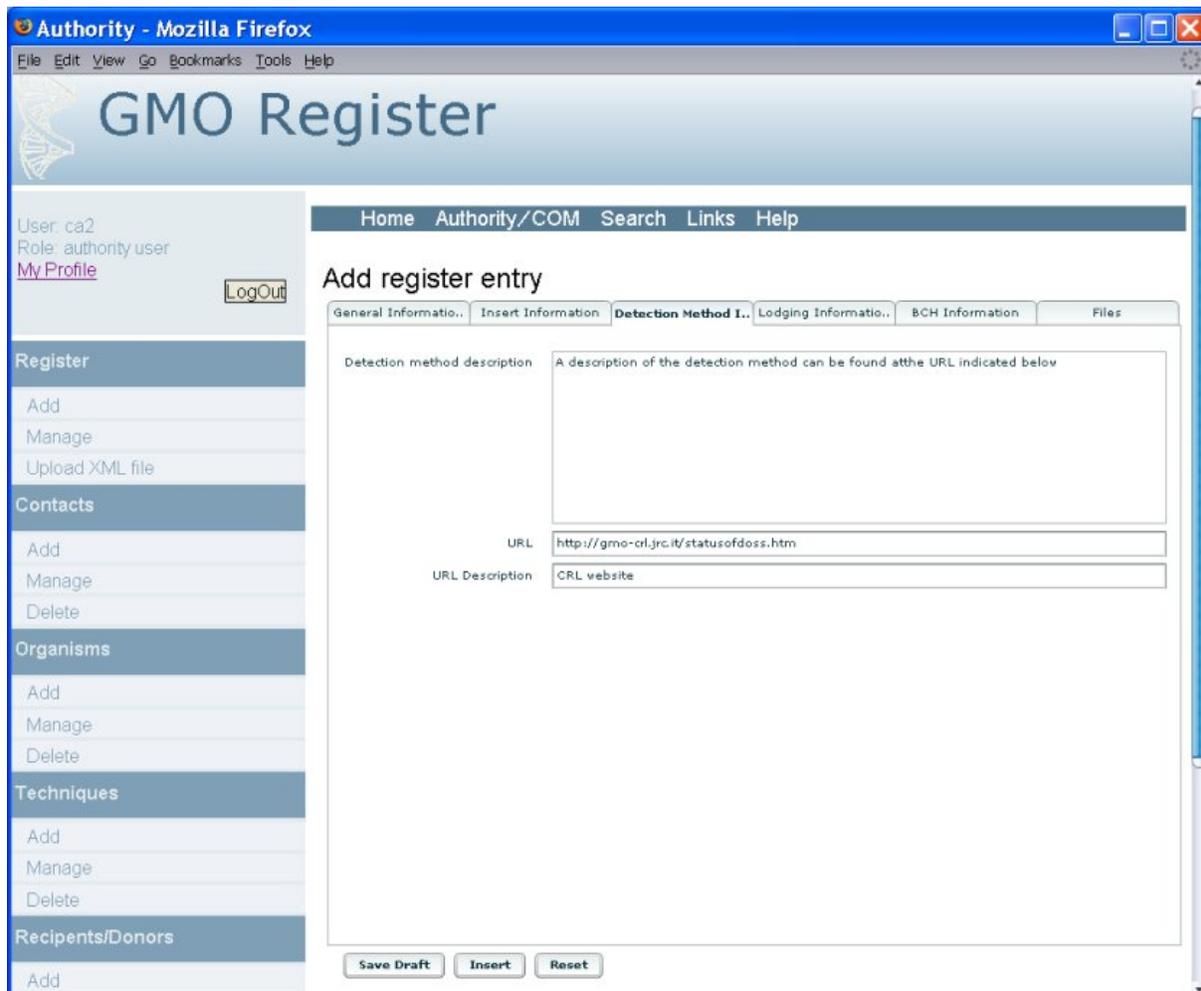


Illustration 5.6: Add Register Entry - Detection Method information

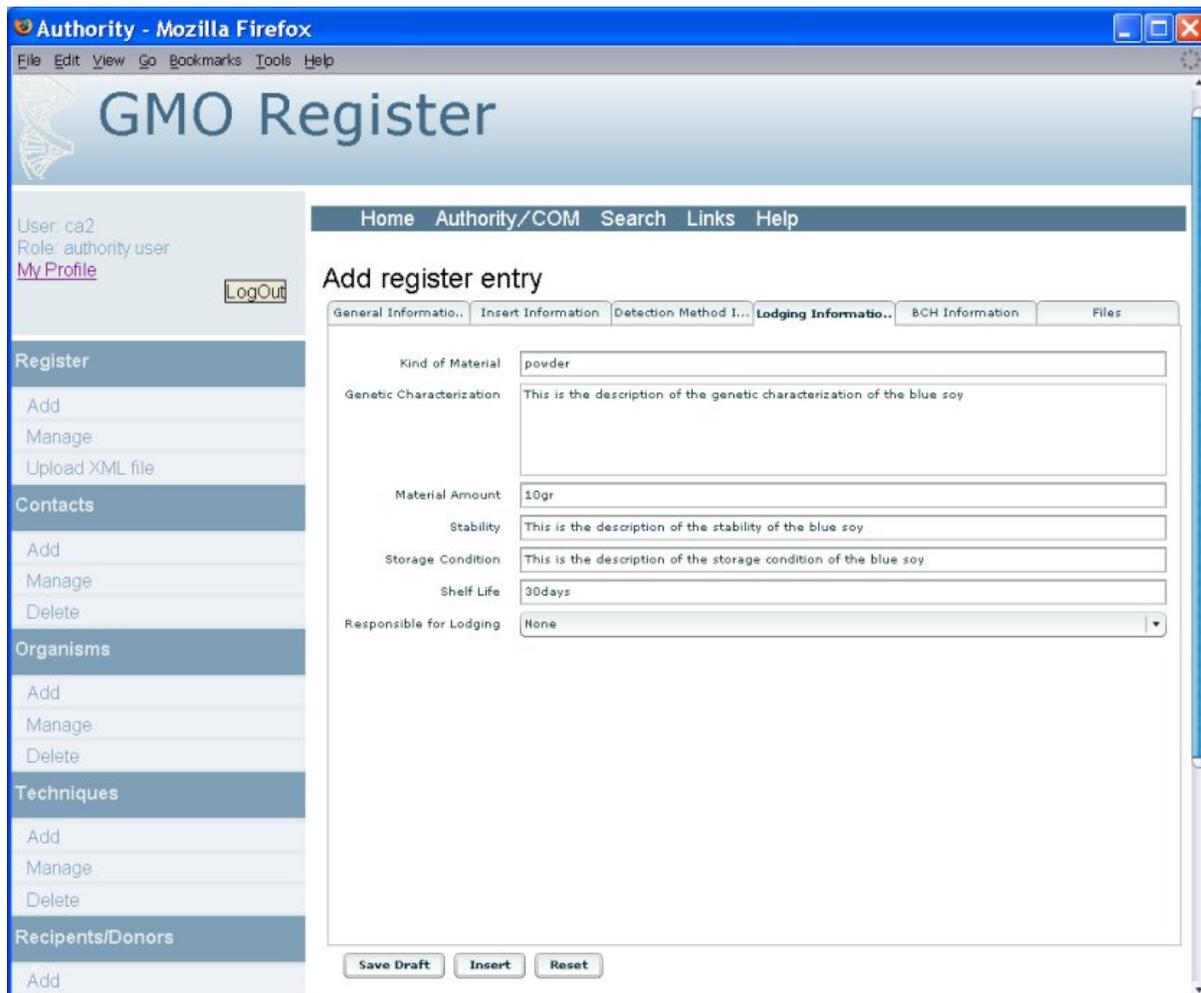


Illustration 5.7: Add Register Entry - Information on lodging

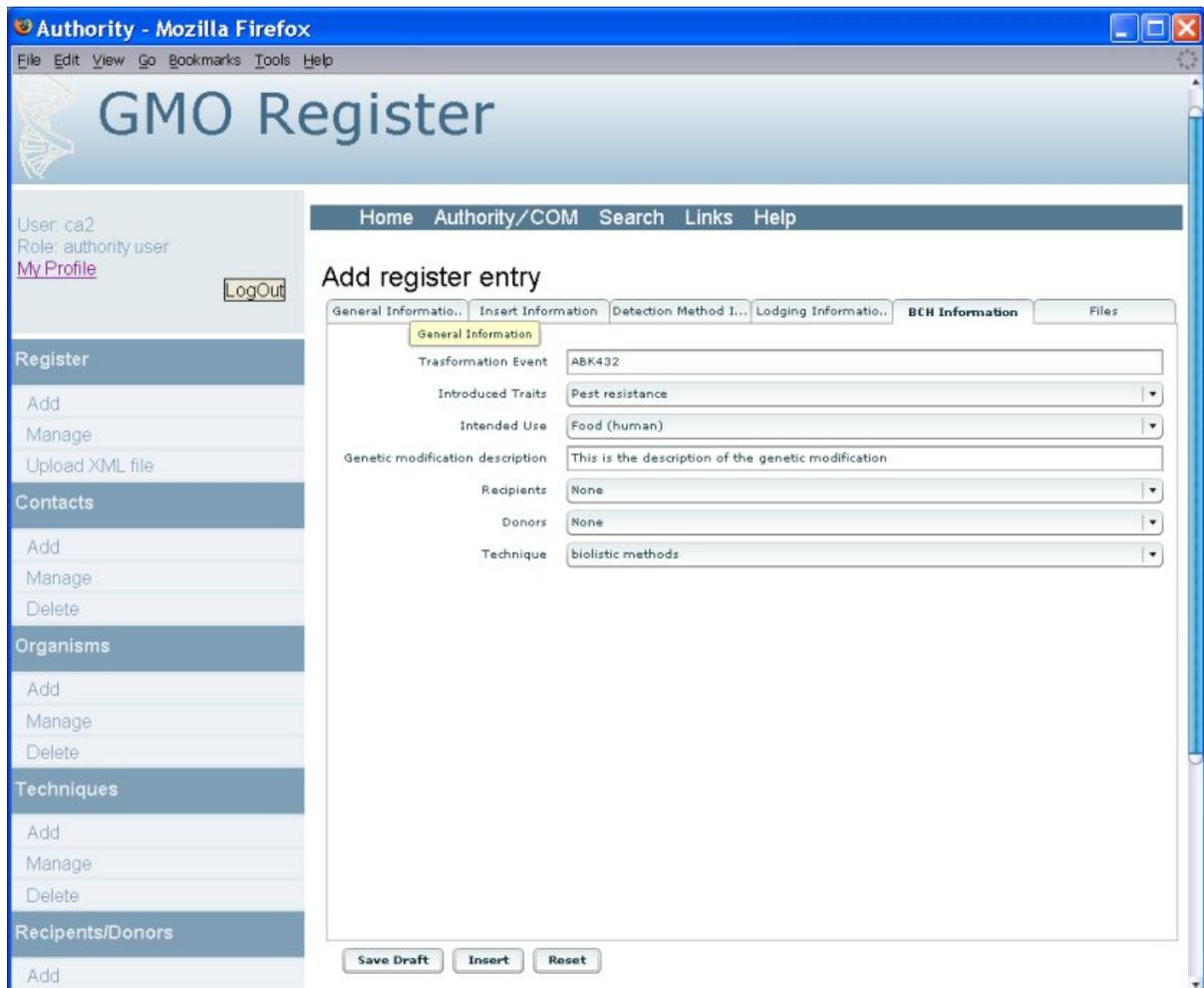


Illustration 5.8: Add Register Entry - BCH information

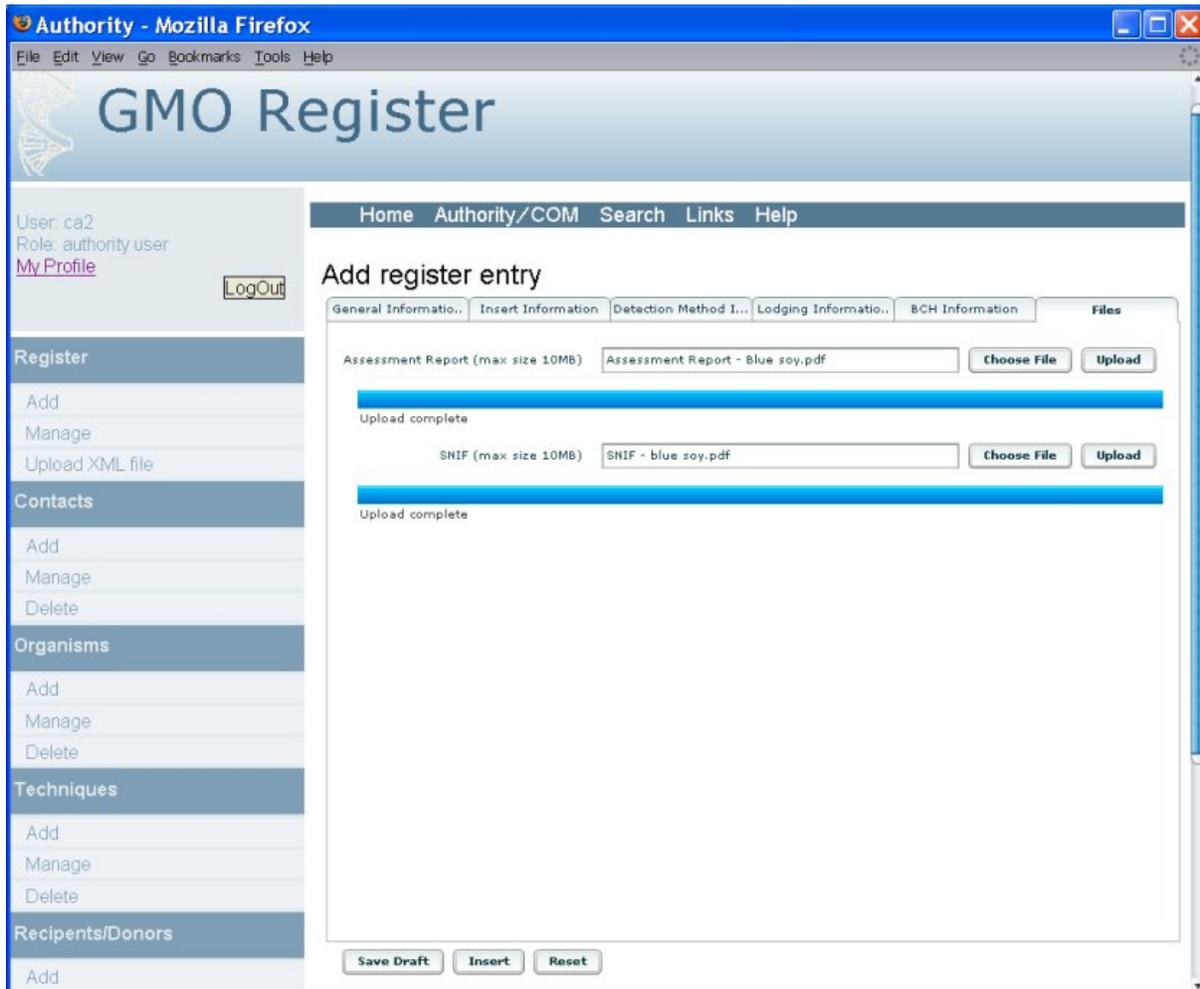


Illustration 5.9: Add Register Entry - Files

5.1.4 How to modify an entry in the Register

In order to modify an entry, authenticated users must select the “Manage” option and specify the “UniqueID” of the entry that they want to modify.

5.2 Administrator

When an administrator logs in, the environment in figure 5.10 is displayed.

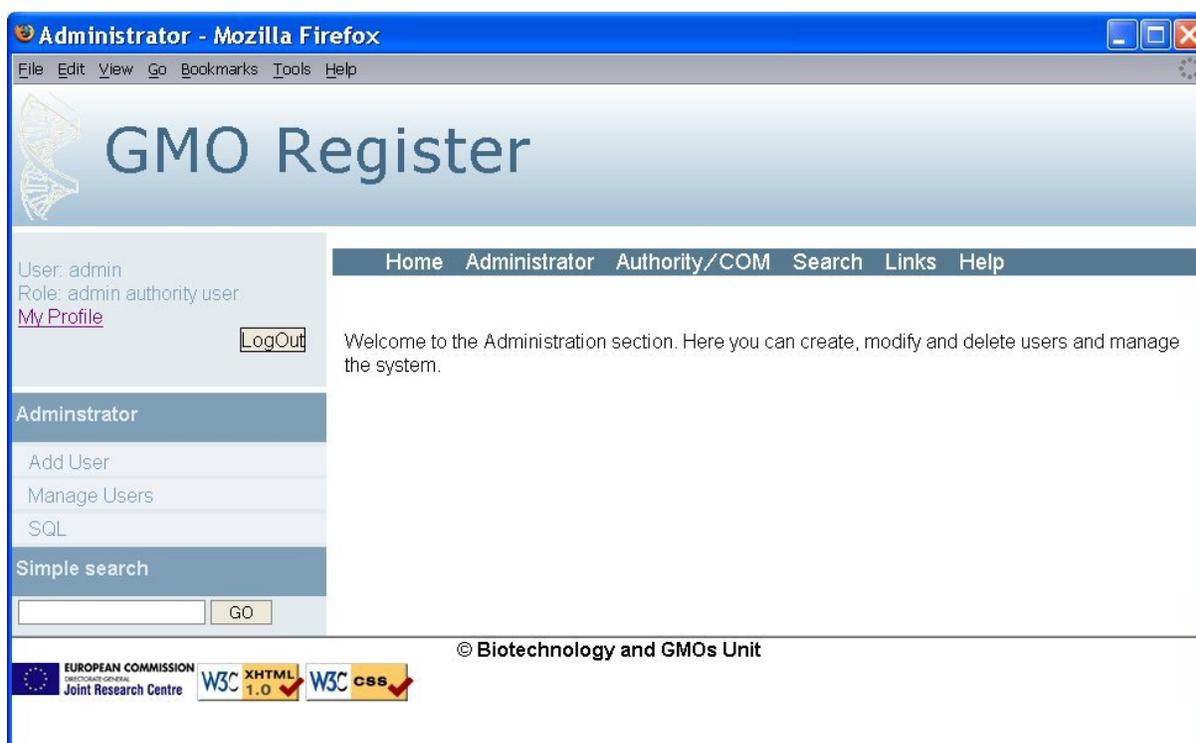


Illustration 5.10: Admin login page

An additional item is available in the upper menu bar (“Administrator”), by selecting this menu item, a new menu is displayed in the left part of the window. This new menu provides access to the functionalities available for the administrator.

On top of the left menu, administrators can access the information associated to their profile and, if necessary, modify them. This functionality provides also the possibility for administrators to modify their password.

The left menu for administrators provide the necessary functionalities to add new users and to modify the data associated to existing users.

Administrators can also directly query the database using the SQL language.

5.2.1 How to create a new user account or edit an existing one

Administrators can create a new user by selecting the “Add user” option or can modify data associated to an existing one by selecting the “Manage user” option and specifying the login name of the user whose profile needs to be modified.

The screenshot shows the 'Administrator - Mozilla Firefox' window. The browser's address bar shows the URL. The page title is 'GMO Register'. The user is logged in as 'admin' with the role 'admin authority user'. The navigation menu on the left includes 'Administrator', 'Add User', 'Manage Users', 'SQL', and 'Simple search'. The main content area has a navigation bar with 'Home', 'Administrator', 'Authority/COM', 'Search', 'Links', and 'Help'. The 'User Information' form is the primary focus, with fields for 'Login', 'Name', 'Surname', 'e-mail', 'Organization Name', 'Sector', and 'Country'. The 'Country' field is set to 'SPAIN'. There are also checkboxes for 'user', 'Authority', and 'Administrator', and 'Update' and 'Reset' buttons. Below the form is a 'Change user password' section with fields for 'New Password' and 'Again the new', and 'Update' and 'Reset' buttons. The footer contains logos for the European Commission, W3C, and CSS, and the text '© Biotechnology and GMOs Unit'.

Illustration 5.11: Admin Add User

The item “Manage users” is used to change the profile associated to a user or to disable an account. A similar screen is presented to the administrator as the one in fig. 5.5.

6 SYSTEM REQUIREMENTS

On the client side the system requirements are:

- A web browser
 - Mozilla Firefox 1.0.x and above
 - MS Internet Explorer 6.x and above
- Macromedia Flash Player (at least version 8 is required for authenticated users)

The system has been tested on the following platforms:

Windows XP

- Mozilla Firefox 1.5.x
- Macromedia Flash Player 8
- MS IE 6.x

Linux (SuSE 10)

- Mozilla Firefox 1.0.x
- Konqueror 3.4.2

MacOSX

- Mozilla Firefox 1.5.x
- Safari 1.2

European Commission

EUR 22697 EN – DG Joint Research Centre, Institute for Health and Consumer Protection

Title: GMO Register User Guide

Authors: A.Rana, F. Foscarini

Luxembourg: Office for Official Publications of the European Communities

2007 – 39 pp. – 21 x 29,7 cm

EUR - Scientific and Technical Research series; ISSN 1018-5593

ISBN 978-92-79-05218-7

Abstract

According to Article 31(2) of Directive 2001/18/EC [DIR.2001/18], the Commission is to establish one or several register(s), for the purpose of recording the information

on genetic modifications in GMOs specified in Section A, point 7 of Annex IV to that Directive. The information to be stored in this register is listed in Commission

Decision 2004/204/EC of 23rd February [COM.2004/204] laying down detailed arrangements for the operation of the registers for recording information on genetic modifications in GMOs, provided for in Directive 2001/18/EC of the European Parliament and of the Council [COM.2004/204]. In response to the aforementioned legislation requirements, DG ENV and DG JRC initiated the GMO Register project, with an objective to implement a web-based system that could be used as the Community Register for GMOs.

This document contains the high level description of the functionalities implemented in the GMO Register application, as well as its User Guide. Its purpose is to provide guidance on the use of the system to end users.

The mission of the JRC is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies. As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union. Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.