



## ENDURE

European Network for Durable Exploitation of crop protection strategies

Project number: 031499

Network of Excellence  
Sixth Framework Programme

Thematic Priority 5  
FOOD and Quality and Safety

### ***Deliverable DI4.8***

**Platform with information on research projects  
made available to Endure partners**

**Due date of deliverable:** M28

**Actual submission date:** M30

**Start date of the project:** January 1<sup>st</sup>, 2007

**Duration:** 48 months

**Organisation name of lead contractor:** AU

**Revision:** V1

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)	
Dissemination Level	
PU Public	X

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## Glossary

### Non-chemical plant protection

Non-chemical plant protection covers all measures carried out in order to prevent or control pathogens, pests and weeds. It does not include measures used to introduce low-risk pesticides, reduce the input of pesticides (fungicides, insecticides, herbicides etc.) or improve the effect of these, nor decision support systems to this end.

### Preventive measures

Preventive measures are measures carried out to prevent or lessen the impact of pathogens, pests and weeds such as crop rotation, healthy seed material, avoiding infection, using resistant varieties etc.

### Direct control measures

Direct control measures are measures carried out to achieve control of the pathogens, pests or weeds in the field, such as mechanical weed control, application of non-pesticide compounds, biological control etc.

## Summary

A searchable database with information about past and ongoing research projects in non-chemical plant protection in wheat, tomato, pomefruit and potatoes has been developed. At present there are 158 projects in the database, and these projects can be searched by crop, pest, region and topic. The database is available at the Endure Information Centre (EIC) at the URL <http://www.land-lab.org:8888/alps/search.xhtml>. The EIC will be accessible to public in autumn 2009; it is restricted to ENDURE members until then. The database has also an input mask to add new projects and upload documents.

A content-related survey of all projects has been already given with *Deliverable DI4.4* "Directory of relevant written and digital knowledge, resources and tools in each European state promoting sustainable alternatives to pesticides".

## Definitions

### Keywords

Crop and Pest names followed the EPPO codes (<http://www.eppo.org/>)

Region followed the Nomenclature of territorial units for statistics (NUTS)<sup>1</sup> of EUROSTAT. The keywords in the Topics-list followed the general topic-list that was agreed between the participants of working group IA4.1 and SA4.1 after the Kleinmachnow-meeting ultimo January 2009.

<sup>1</sup> [http://ec.europa.eu/comm/eurostat/ramon/nuts/basicnuts\\_regions\\_en.html](http://ec.europa.eu/comm/eurostat/ramon/nuts/basicnuts_regions_en.html)

# 1. Project database in Endure Information Centre

## 1.1. Design of database

### 1.1.1. Commons Data

Commons Data includes all basic tables, shared by all Technical Task Force (TTF) members. Here only the relevant common tables are explained.

#### 1.1.1.1. *Table Crop*

- All crops known by EIC
- Crops are described by EPPO Code

#### 1.1.1.2. *Table Pest*

- All pests known by EIC
- Pests are described by EPPO Code

#### 1.1.1.3. *Table Topic*

- The topic tree created by SA4.1

#### 1.1.1.4. *Table Region*

- European regions described by NUTS<sup>2</sup> Code
- Note that this table is currently discussed and may be changed later

#### 1.1.1.5. *Table Organization*

- A list of organisations relevant for the ENDURE network in any way
- Organisations can be part of ENDURE or not

#### 1.1.1.6. *Table Contact*

- A list of contact persons relevant for the ENDURE network
- Contacts can be members of ENDURE or not

#### 1.1.1.7. *Table Language*

- List of languages

### 1.1.2. Project Data

Project Data are those tables containing the relevant information for each record.

#### 1.1.2.1. *Table Knowledge*

- containing basic information for all records of EIC
- Knowledge can be referred by additional type tables defining a certain type of record and offering additional type-dependent information

<sup>2</sup> [http://ec.europa.eu/comm/eurostat/ramon/nuts/basicnuts\\_regions\\_en.html](http://ec.europa.eu/comm/eurostat/ramon/nuts/basicnuts_regions_en.html)

- Only projects are relevant here so table project is the only type-table, listed here.

#### **1.1.2.2. Table Project**

- Containing basic information for project records.
- Any project must define a project type
- Any project may define an according organisation

#### **1.1.2.3. Table Project\_type**

- Containing several types of projects

#### **1.1.2.4. Table Content**

- Contains the texts associated with each record
- Any content entry always have to define the enclosing knowledge record
- Any content entry always have to define the language, the text parts are written in
- Any record can have multiple contents, one for any language

### **1.1.3. Annex Data**

- Annex Data includes those tables containing the optional attachments for each record.
- Any Annex is always an instance of the types Link, Document or Literature

#### **1.1.3.1. Table Knowledge\_annex**

- Contains the associations between records and annexes
- Any record can have no or many annexes
- Any annex can be attached to no or many records

#### **1.1.3.2. Table Annex**

- Containing all annexes no matter of a certain type

#### **1.1.3.3. Table Link**

- Contains only those annexes which reference internet resources directly

#### **1.1.3.4. Table Literature**

- Contains only those annexes which references any external document that are not reachable by application

#### **1.1.3.5. Table Document**

- Contains only those annexes which references EIC-managed files

### **1.1.4. Mapping Data**

Mapping Data includes those tables used to give each record a context

#### **1.1.4.1. Table Crop\_knowledge**

- Associates a record with crops in a many-to-many relation
- Any record can be associated with no or many crops

- Any crop can be described by no or many records

#### **1.1.4.2. Table *Pest\_knowledge***

- Associates a record with pests in a many-to-many relation
- Any record can be associated with no or many pests
- Any pest can be described by no or many records

#### **1.1.4.3. Table *Topic\_knowledge***

- Associates a record with topic in a many-to-many relation
- Any record can be associated with no or many topics
- Any topic can be described by no or many records

#### **1.1.4.4. Table *Region\_knowledge***

- Associates a record with regions in a many-to-many relation
- Any record can be associated with no or many regions
- Any region can be described by no or many records

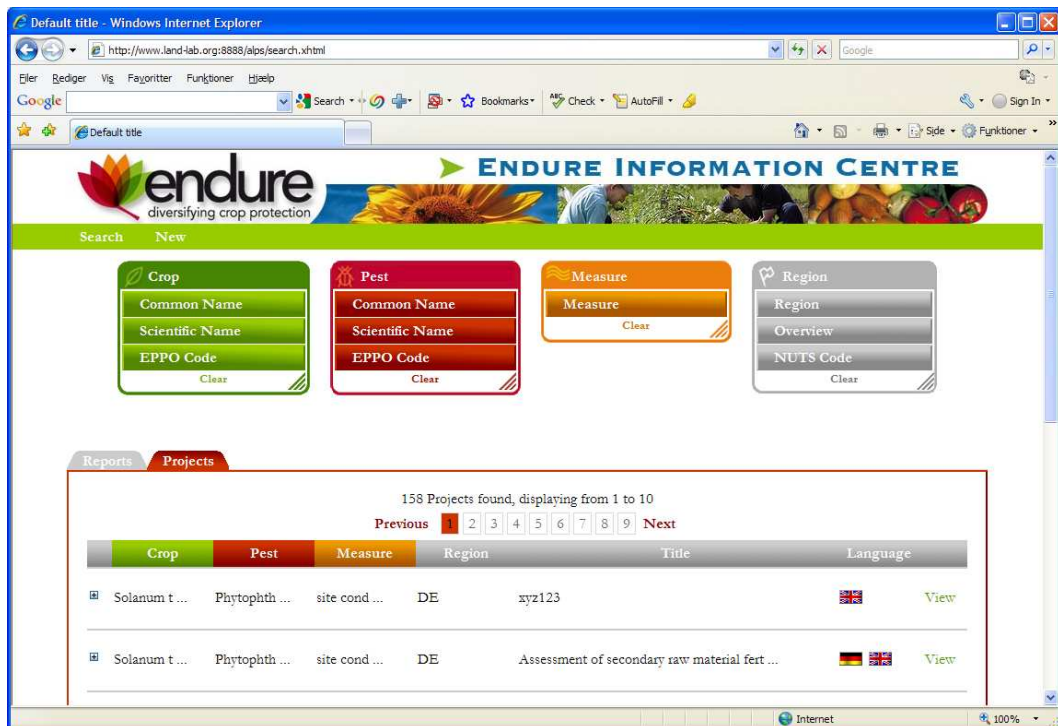
#### **1.1.4.5. Table *Expert***

- Extends an existing contact by defining this contact as an expert  
Any knowledge record has to be defined by a responsible expert

## **1.2. Doing searches at EIC**

When entering the Endure Information Centre it is possible to select between two tabs with either *Reports* or *Projects*. Here *Projects* must be selected. Initially all projects in the database are listed in the bottom window.

In the four coloured squares (green, red, orange and grey) in the upper part of the window it is possible to filter the projects according to the combinations of crop, pest, measure and region.



Default title - Windows Internet Explorer

http://www.land-lab.org:8888/aps/search.xhtml

Google

Search

endure diversifying crop protection

ENDURE INFORMATION CENTRE

Search New

Crop

Common Name

Scientific Name

EPPO Code

Clear

Pest

Common Name

Scientific Name

EPPO Code

Clear

Measure

Measure

Clear

Region

Region

Overview

NUTS Code

Clear

Reports Projects

158 Projects found, displaying from 1 to 10

Previous 1 2 3 4 5 6 7 8 9 Next

Crop	Pest	Measure	Region	Title	Language
Solanum t ...	Phytophth ...	site cond ...	DE	xyz123	View
Solanum t ...	Phytophth ...	site cond ...	DE	Assessment of secondary raw material fert ...	View

Internet 100%



Default title - Windows Internet Explorer

http://www.land-lab.org:8888/aps/search.xhtml

Google

Search

endure diversifying crop protection

ENDURE INFORMATION CENTRE

Search New

Crop

Common Name

Field crop plants

Fruit plants

Vegetable plants

Scientific Name

EPPO Code

Clear

Pest

Common Name

Scientific Name

EPPO Code

Clear

Measure

Measure

Clear

Region

Region

Overview

NUTS Code

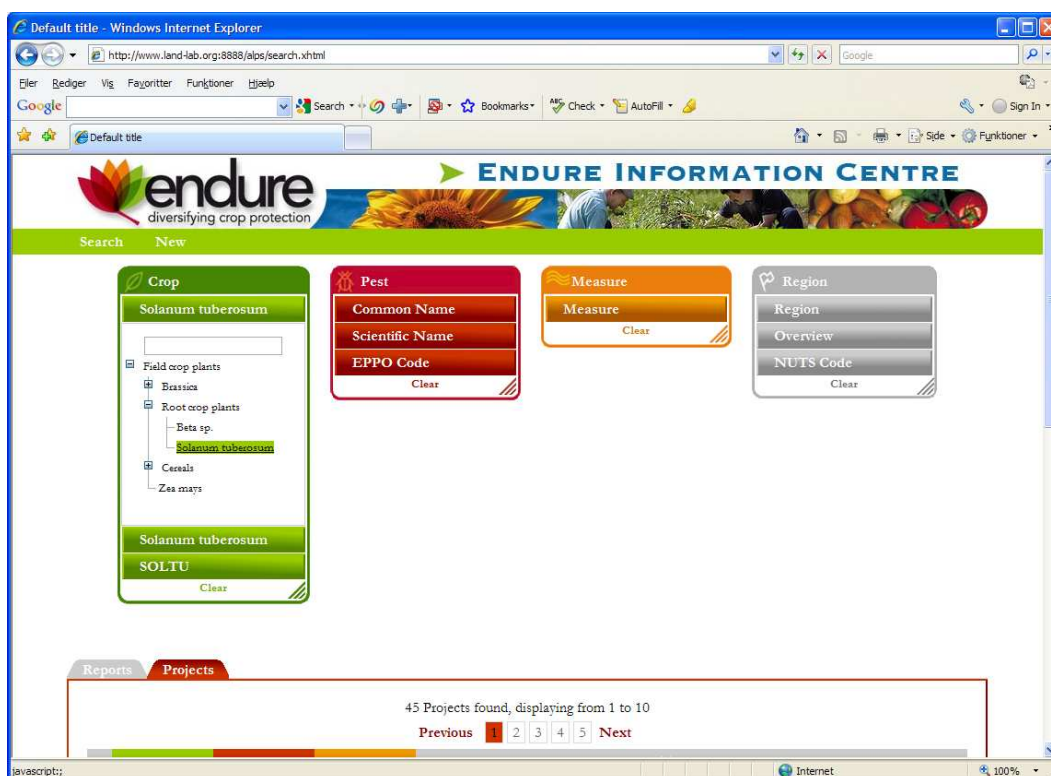
Clear

Reports Projects

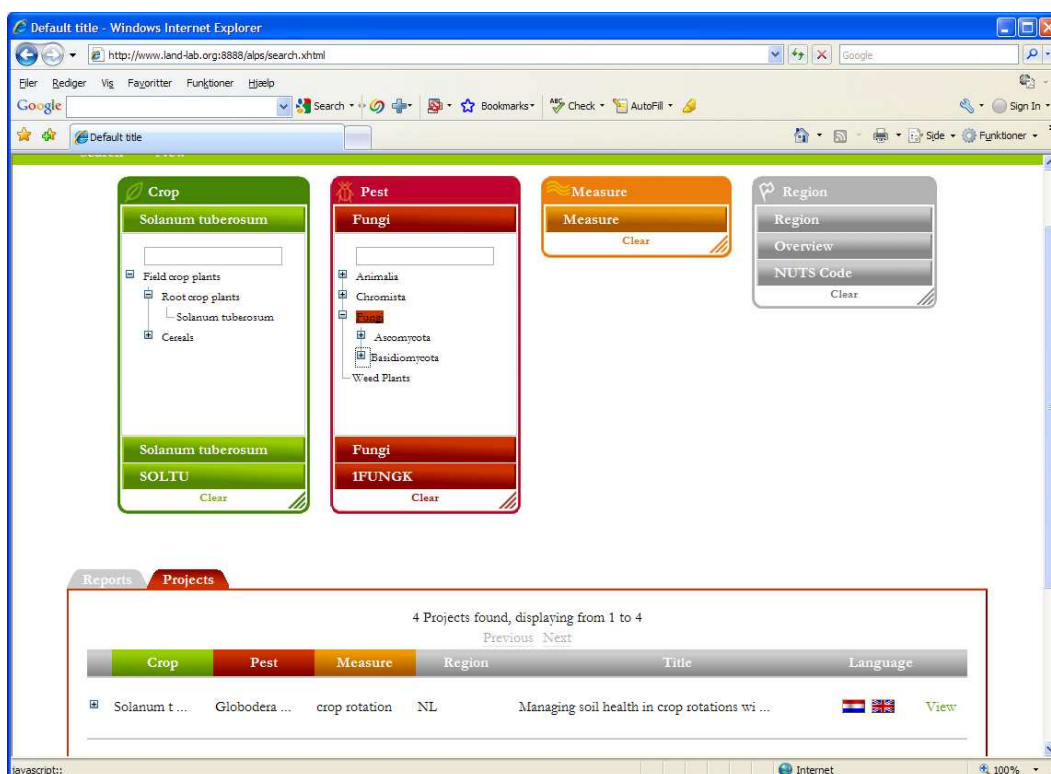
158 Projects found, displaying from 1 to 10

Internet 100%



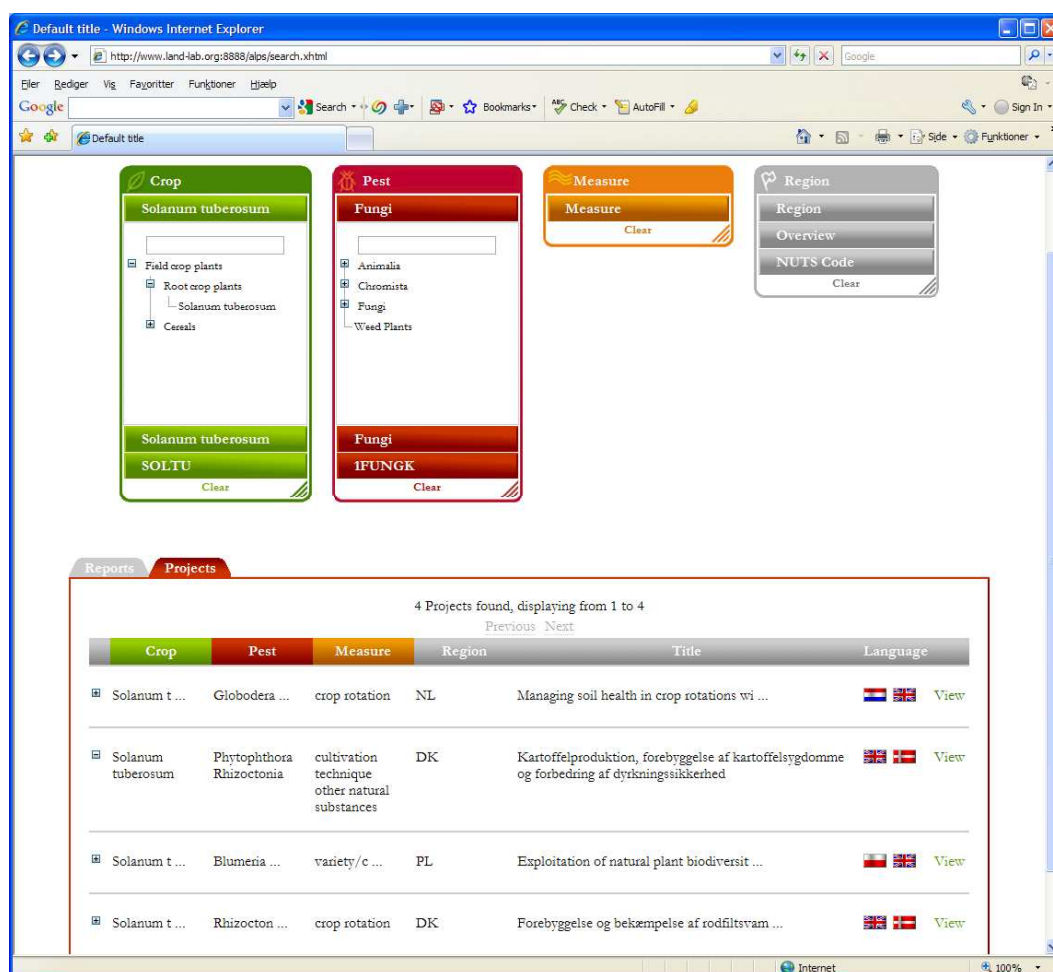


By doing stepwise filtering in the four squares it is possible to reduce the number of hits making the search easy to grasp. In this example by selecting potato (*Solanum tuberosum*) the number of hits is reduced from 158 to 45. And by selecting Fungi in the pest square, the number of hits is reduced to four (see below).





In the lower part of the window the result of the search is shown. By clicking on the + button in the left hand side it is possible to extend the information which is presented for each result. The crop/pest/measure/region combination is shown as well as the title of the project and flags of the available languages the information is presented.



### 1.3. Selecting single project for further reading

By clicking on the green View button on the right, all available information of the selected project is presented.



The title on the original language is presented, as well as the expert that uploaded the information. Under the name of the expert a one-line summary is presented. The colour-coded text indicates the crop/pest/measure combination. The map shows the region which the project has been conducted and below the map it is possible to select which language the reader wants to use (in this case either English or Danish). Below the flags a more detailed description of the project is presented.

## 1.4. Uploading information on new projects

Before it is possible to upload information of new projects, it is necessary to be registered as an expert.

Each expert who wishes to upload information needs to be registered for a certain crop(s) and pest(s). Therefore please contact **[silke.dachbrodt-saaydeh@jki.bund.de](mailto:silke.dachbrodt-saaydeh@jki.bund.de)** or **[alexander.herr@jki.bund.de](mailto:alexander.herr@jki.bund.de)** and name the crop(s) and pest(s) you wish to upload content for. Your log in will be send by e-mail.

Default title - Windows Internet Explorer

http://www.land-lab.org:8888/abs/search.html

Google

Search New

**endure**  
diversifying crop protection

**ENDURE INFORMATION CENTRE**

**Crop**  
Common Name  
Scientific Name  
EPPO Code  
Clear

**Pest**  
Common Name  
Scientific Name  
EPPO Code  
Clear

**Measure**  
Measure  
Clear

**Region**  
Region  
Overview  
NUTS Code  
Clear

**Reports Projects**

158 Projects found, displaying from 1 to 10

Previous 1 2 3 4 5 6 7 8 9 Next

Crop	Pest	Measure	Region	Title	Language
Solanum t ...	Phytophth ...	site cond ...	DE	xyz123	View
Solanum t ...	Phytophth ...	site cond ...	DE	Assessment of secondary raw material fert ...	View
Solanum t ...	Phytophth ...	site cond ...	NL	Latent tuber infections: the route from a ...	View
Solanum t ...	Phytophth ...	micro wav ...	NL	UV illumination of potato crops to preven ...	View
Solanum t ...	Globodera ...	crop rotation	NL	Managing soil health in crop rotations wi ...	View
Solanum t ...	Globodera ...	other nat ...	UK	Multitrophic interactions in the rhizosphere	View

javascript;

Internet 100%

Default title - Windows Internet Explorer

http://www.land-lab.org:8888/abs/detail.html?knowledge=5008&rvn=6

Google

Search New

**endure**  
diversifying crop protection

**ENDURE INFORMATION CENTRE**

## Potato production, prevention of diseases and increasing production security

by preben klarskov hansen

A study of prevention of potato diseases by cultural practises

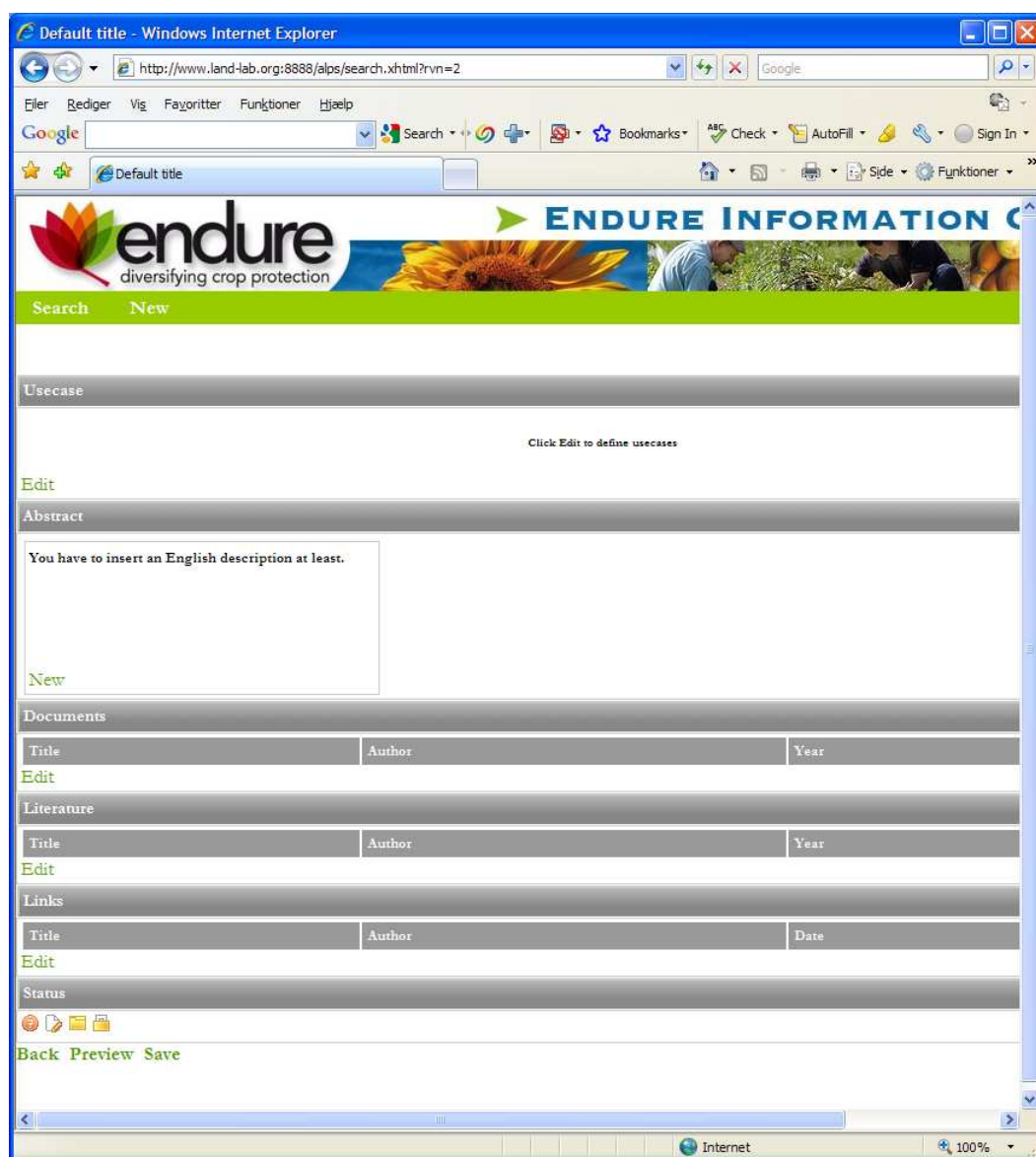
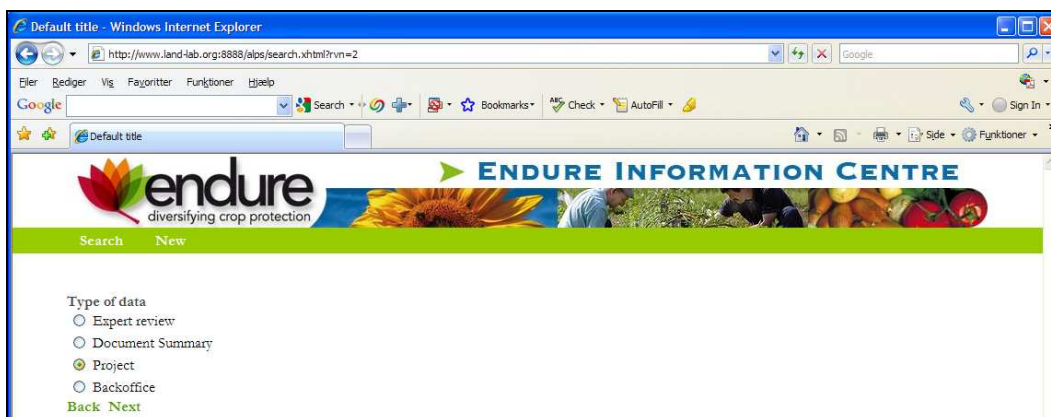
- **Solanum tuberosum / Potato (SOLTU)**
- **Phytophthora / Phytophthora (IPHYTG)**
- **Rhizoctonia (anamorphic genus) / Rhizoctonia (IRHIZG)**
- **cultivation technique**
- **other natural substances**

DANMARK

It is the purpose of the project to aid innovation, research and development in the potato production business by development of preventive strategies such as cultural methods (planting, harvesting), biological and chemical methods which can assist in limiting the attack of rhizoctonia and phytophthora and thereby increase the safety of the production.

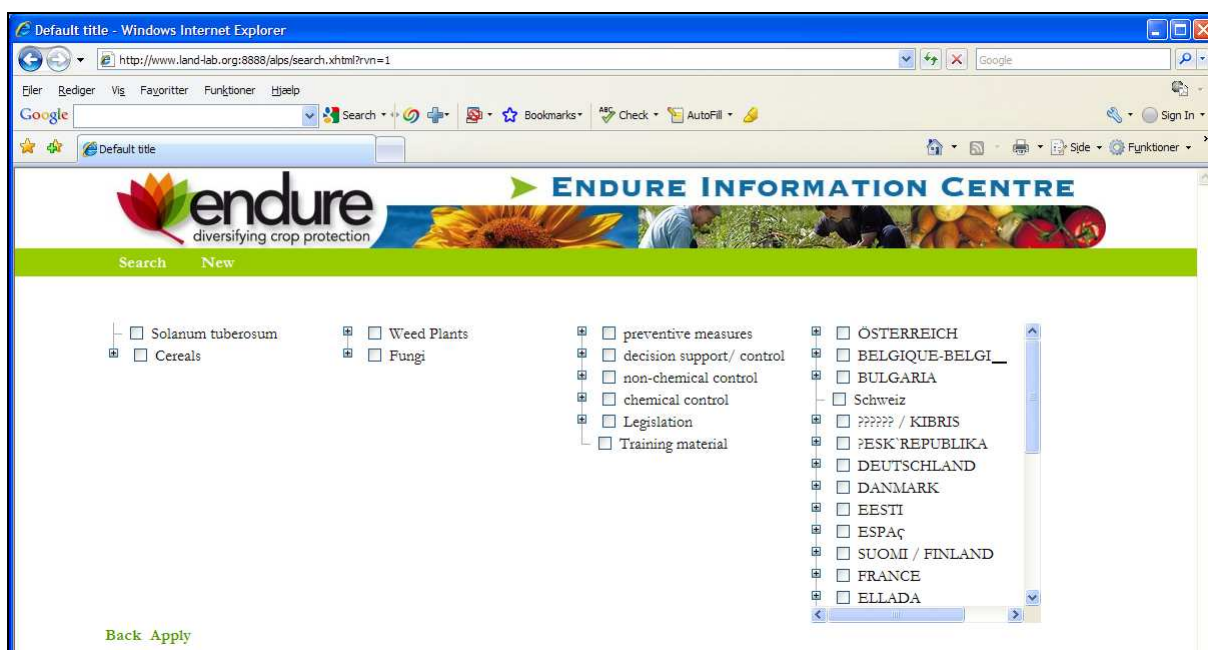
Internet 100%

In the top left side of the page it is possible to upload new information. By pressing the “new” bottom the user is asked which type of data that will be uploaded, use the “project” bottom, and press “next.”

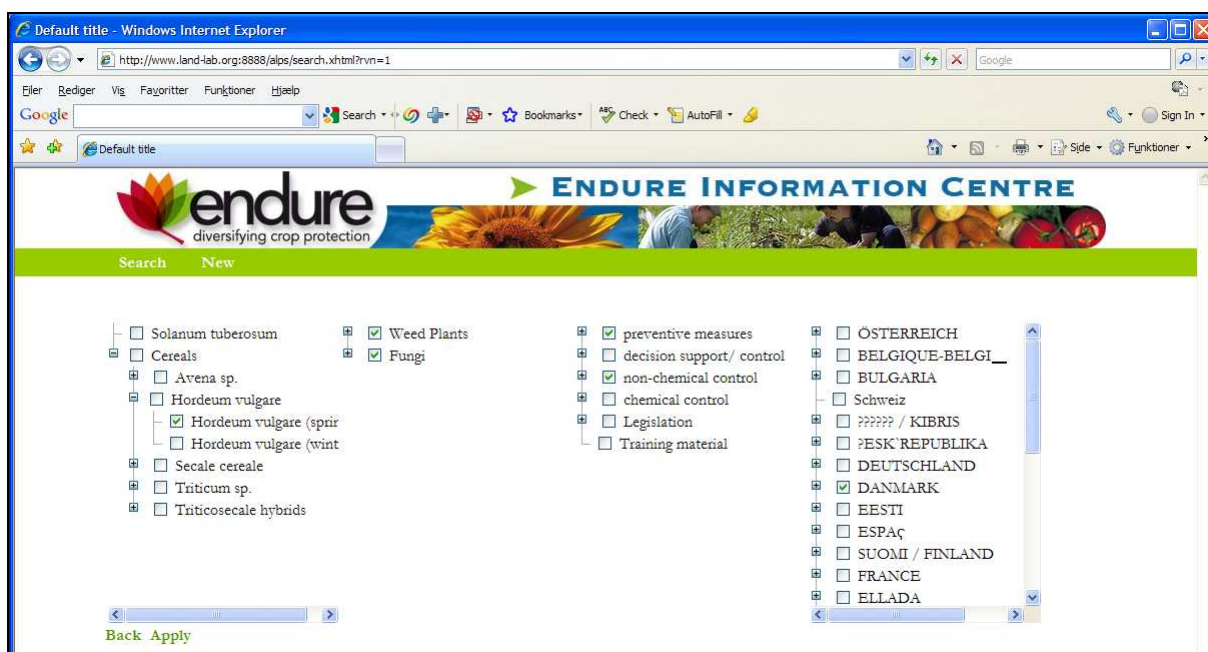




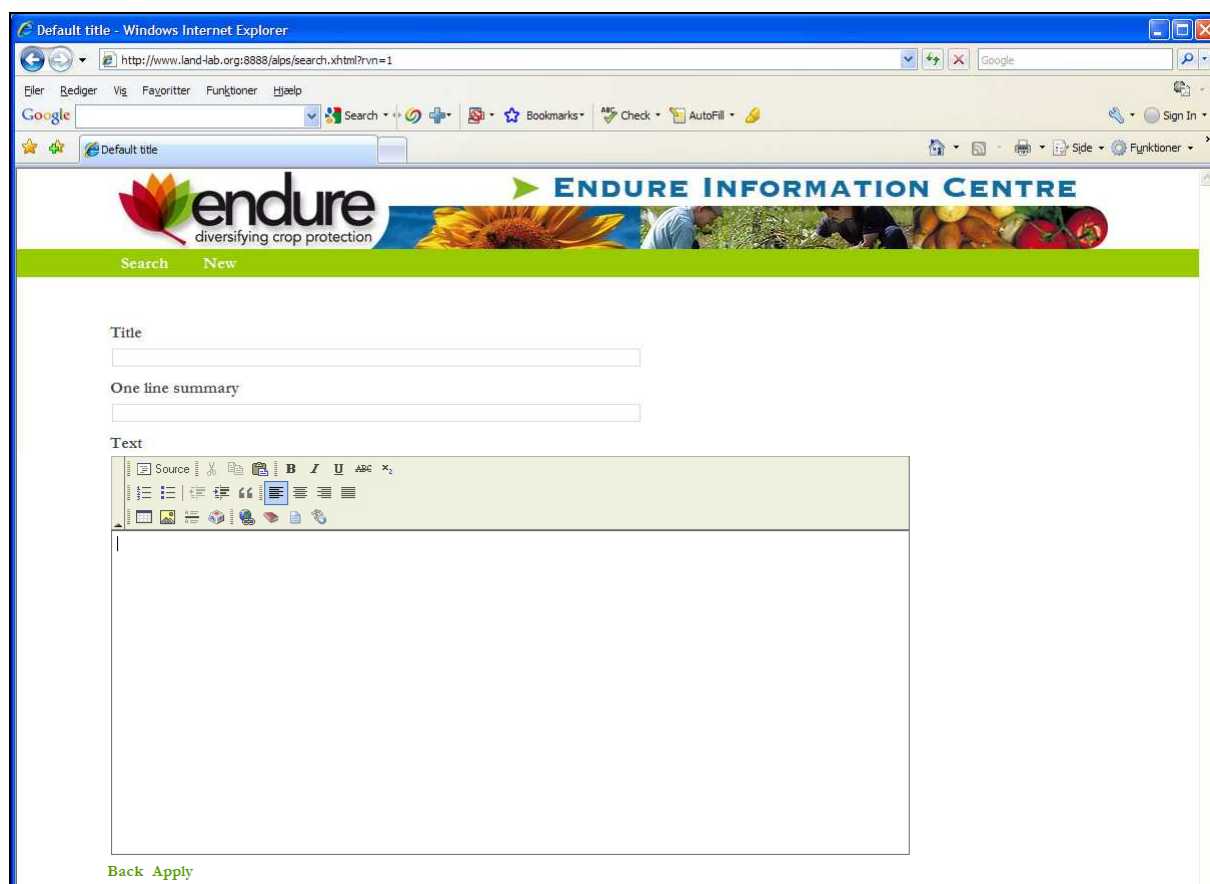
By pressing edit in the “usecase” -part of the window following windows appear.



Select crop, pest, topic and region by marking the squares. And press apply.



Next step is to give an English title, one line summary and a description.



Default title - Windows Internet Explorer

http://www.land-lab.org:8080/elps/search.xhtml?vm=1

Eller Rediger Vis Favoritter Funktioner Hjælp

Google Search Bookmarks Check AutoFill Sign In

Default title

**endure** diversifying crop protection **ENDURE INFORMATION CENTRE**

Search New

Title

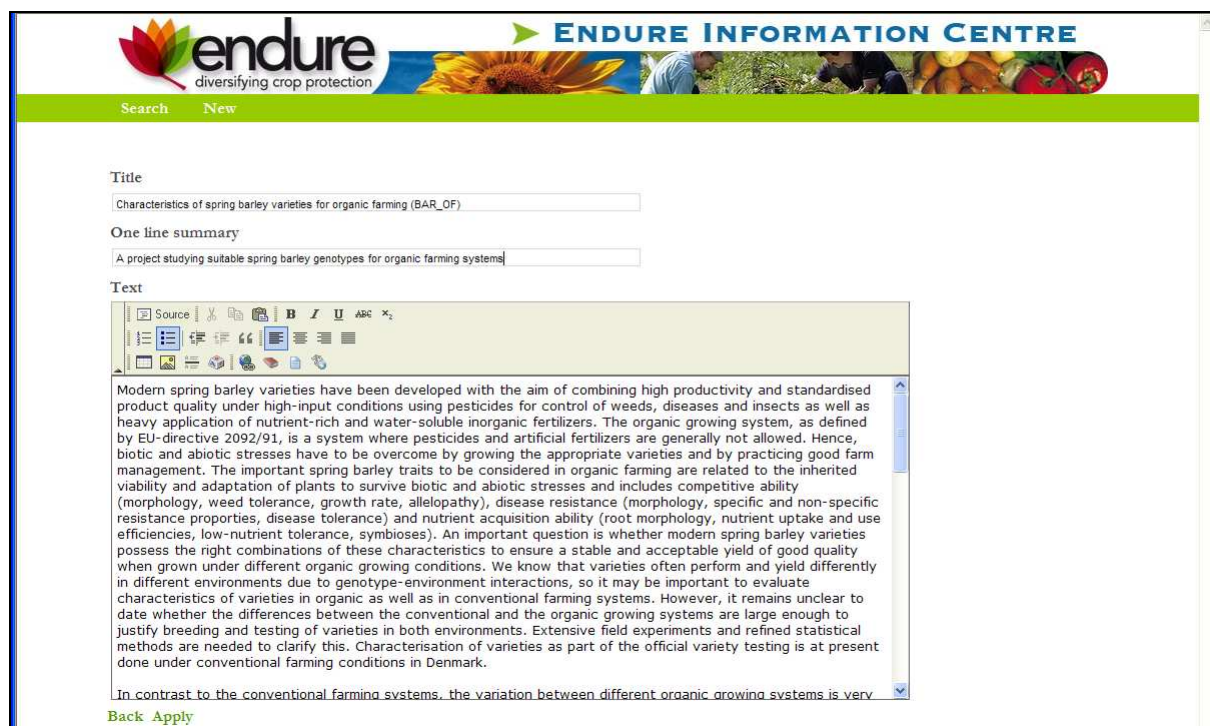
One line summary

Text

Source [Icons] B I U ABC x<sub>2</sub>

Back Apply

Just fill in the different boxes and press apply.



**endure** diversifying crop protection **ENDURE INFORMATION CENTRE**

Search New

Title

Characteristics of spring barley varieties for organic farming (BAR\_OF)

One line summary

A project studying suitable spring barley genotypes for organic farming systems

Text

Source [Icons] B I U ABC x<sub>2</sub>

Modern spring barley varieties have been developed with the aim of combining high productivity and standardised product quality under high-input conditions using pesticides for control of weeds, diseases and insects as well as heavy application of nutrient-rich and water-soluble inorganic fertilizers. The organic growing system, as defined by EU-directive 2092/91, is a system where pesticides and artificial fertilizers are generally not allowed. Hence, biotic and abiotic stresses have to be overcome by growing the appropriate varieties and by practicing good farm management. The important spring barley traits to be considered in organic farming are related to the inherited viability and adaptation of plants to survive biotic and abiotic stresses and includes competitive ability (morphology, weed tolerance, growth rate, allelopathy), disease resistance (morphology, specific and non-specific resistance properties, disease tolerance) and nutrient acquisition ability (root morphology, nutrient uptake and use efficiencies, low-nutrient tolerance, symbioses). An important question is whether modern spring barley varieties possess the right combinations of these characteristics to ensure a stable and acceptable yield of good quality when grown under different organic growing conditions. We know that varieties often perform and yield differently in different environments due to genotype-environment interactions, so it may be important to evaluate characteristics of varieties in organic as well as in conventional farming systems. However, it remains unclear to date whether the differences between the conventional and the organic growing systems are large enough to justify breeding and testing of varieties in both environments. Extensive field experiments and refined statistical methods are needed to clarify this. Characterisation of varieties as part of the official variety testing is at present done under conventional farming conditions in Denmark.

In contrast to the conventional farming systems, the variation between different organic growing systems is very

Back Apply

If you want to give a description in another language you may press “edit” in the “further description” box.

Default title - Windows Internet Explorer

http://www.land-lab.org:8888/alps/search.xhtml?rvm=1

Google

Search New

**endure** diversifying crop protection

**ENDURE INFORMATION CENTRE**

Usecase

Crop	Pest	Measure	Region
Hordeum vulgare (spring)	Fungi Weed Plants	non-chemical control preventive measures	DANMARK

Edit

Abstract

Characteristics of spring barley varieties for organic farming (BAR\_OF)

Modern spring barley varieties have been developed with the aim of combining high productivity and standardised product quality under high-input condi...

You may insert further descriptions.

Edit New

Documents

Title	Author	Year

Edit

Literature

Title	Author	Year

Edit

Links

Title	Author	Date

Edit

Status

Back Preview Save

Udført

Internet 100%

Here you must select language.

Default title - Windows Internet Explorer

http://www.land-lab.org:8888/alps/search.xhtml?rvm=1

Google

Search New

**endure** diversifying crop protection

**ENDURE INFORMATION CENTRE**

Danish

Back Choose



Default title - Windows Internet Explorer

http://www.land-lab.org:8888/alsps/search.xhtml?rvn=1

Google

Google

Search

Bookmarks

Check

AutoFill

Sign In

Default title

endure  
diversifying crop protection

ENDURE INFORMATION CENTRE

Search New

Usecase

Crop	Pest	Measure	Region
Hordeum vulgare (spring)	Fungi Weed Plants	non-chemical control preventive measures	DANMARK

Edit

Abstract

Egenskaber ved sorter af vårbyg

I det økologiske dyrkningssystem, som det defineres i EU-direktiv 2002/91, har vortenes konkurrenceevne over for ukrudt, deres sygdomsresistens...

Edit Remove

Characteristics of spring barley varieties for organic farming (BAR\_OF)

Modern spring barley varieties have been developed with the aim of combining high productivity and standardised product quality under high-input condi...

Edit

You may insert further descriptions.

New

Documents

Title	Author	Year

Edit

Literature

Title	Author	Year

Edit

Links

Title	Author	Date

Edit

Status



Back Preview Save

Internet 100%

When you have input all relevant data, just press “save” and the project is available in the database.

# Annex

## Project scheme

