



4F CROPS

Future Crops for Food, Feed, Fiber and Fuel

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4F CROPS Project

- ✓ The project is being funded by 7th Framework Programme (DG Research, KBBE)
- ✓ 4FCROPS is a coordination and support action project
- ✓ Grant Agreement no 212811
- ✓ The project started in the beginning of June 2008 and will last 24 months.
- ✓ The total budget is 998.520 euros
- ✓ The consortium is consisted by 12 partners (six Universities and six research organizations or institutes)

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The Consortium

Partners	Country
Center for Renewable Energy Sources - CRES (coordinator)	Greece
University of Catania - UNI.CT	Italy
Agricultural University of Athens - AUA	Greece
Institute for Energy and Environmental Research - IFEU	Germany
Agro technology & Food - A&F	Netherlands
University of Bologna - UNIBO	Italy
National Institute for Agricultural Research - INIA	Spain
University of Lisbon - UniNOVA	Lisbon
Institute of Natural Fibres - INF	Poland
University of Agricultural Science in Bucharest - UASB	Romania
National Agricultural Research Foundation - NAGREF	Greece
Baltic Renewable Energy Centre - EC BREC	Poland

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The *main aim* of the 4F CROPS project is to survey and analyze all the parameters that will play an important role in successful non-food cropping systems in the agriculture of EU27 alongside the existing food crop systems

The **expected impact** of the 4F CROPS project through its main objective is to prove that a competitive bioeconomy through the production of biofuels and biobased products is a viable option for Europe.

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Specific objectives

- ↓ To review of the **current situation of the Land Use in EU 27** (now, 2020 and 2030) and to assess the **land availability for non-food cropping systems** (WP1- Land Use in EU27).
- ↓ To assess the **cropping possibilities of the non-food crops** in the existing agricultural systems (WP2 - Cropping Possibilities).
- ↓ To carry out a comparative **cost analysis of the food and non-food crops** in short and long term consideration and to evaluate the most critical **socio-economic parameters** (WP3 - Economic analysis and socio-economics impacts)
- ↓ To evaluate of the most important environmental by means of an Environmental Impact Assessment (EIA) and a Life Cycle Analysis (LCA) and to indentify the **best options** (WP4 - Environmental analysis).

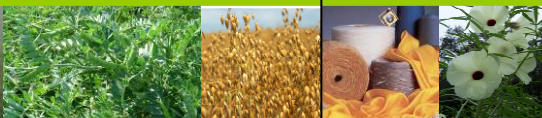
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Specific objectives

- To record the **existing policies**, the **driving forces** for the future crops and to make recommendations for measures that should be taken for the co-existence of food and non-food crops (**WP5 - Regulatory framework**).
- Development of **scenarios for promising non-food cropping alongside food cropping systems**, be defining systems' boundaries and evaluating the priorities and trends, in short and long time frameworks (**WP6 - Best practices scenarios**).
- To **disseminate the project findings** through the website development, the projects workshops, articles, presentations, fact sheets, leaflets, links with previous and on-going activities, etc. (**WP7 - Dissemination and Support actions**).

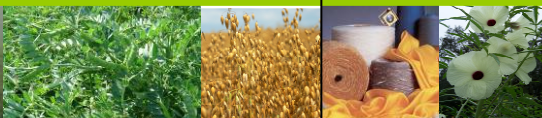
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Why there is a need for the cultivation of the non-food crops (fiber and fuel crops)?

- ⊗ The concept of using plants as non-food crops feedstock is not new, but, despite considerable investment in research and development little progress has been made in the commercial marketplace.
- ⊗ The **IENICA consortium** carried out an estimation of the potential of plants to produce non-food crops and according to them, the potential was enormous, but the markets disorganized and frequently uninformed (Schenkey, 2006).

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Why there is a need for the cultivation of the non-food crops (fiber and fuel crops)?

The need for the cultivation of the non-food crops is supported by the following facts:

- The reform of **CAP** is going to lead to the release of agricultural arable land
- There is an **increasing need for fibers crops** (to describe the needs for biobased products)
- There is a **great need for biofuels** that will be produced from dedicated crops
- The **climate change** is going to force especially the south Europe to shift to other cultivations that will need less water, nitrogen that will have salt tolerance, in other words crops that will not need intensive cultivation

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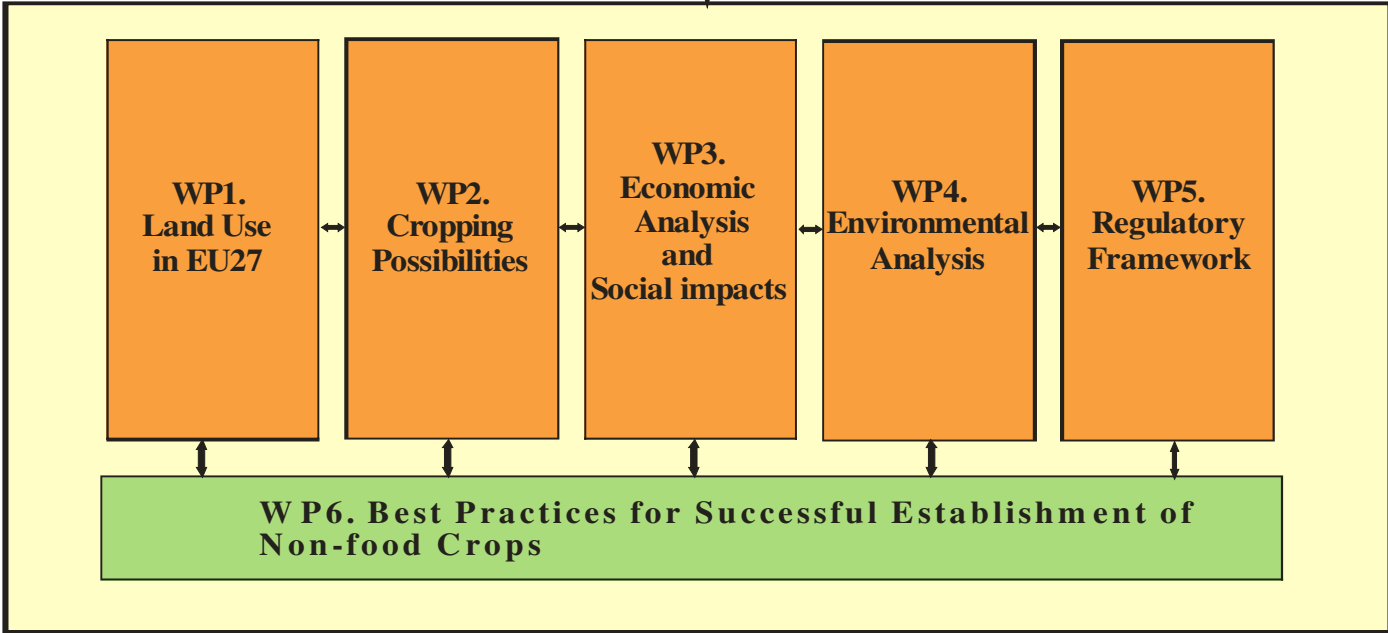
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WP8: Coordination Management and Reporting



WP7: Dissemination and Supports Actions



The concept

Apart from food and feed crops, there is need for growing non-food crops (fibre and fuel crops)



The “4F CROPS” project will

Survey and analyze all the parameters that will play an important role in a successful non-food cropping systems alongside the existing food crop system



The output of the project will be:

Formation of scenarios for successful food and non-food cropping systems taking under consideration the *technical parameters* (which crops, in which rotation systems, logistics, the role of biotechnology), *socio-economics* aspects (cost analysis, public acceptance, rural development, farmers income etc), *environmental aspects* (sustainability), *regulatory* aspects (co-existence and safety measures when crops using for both food and non-food uses).

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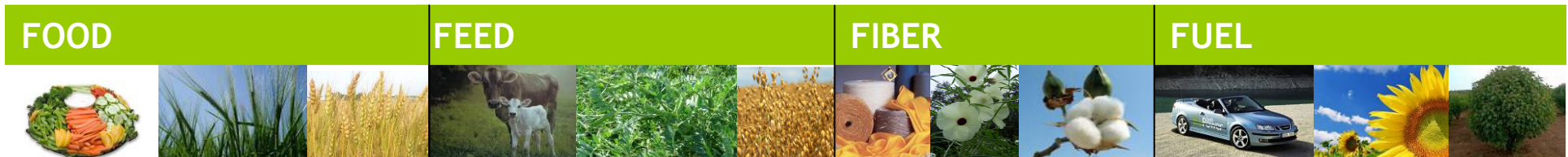
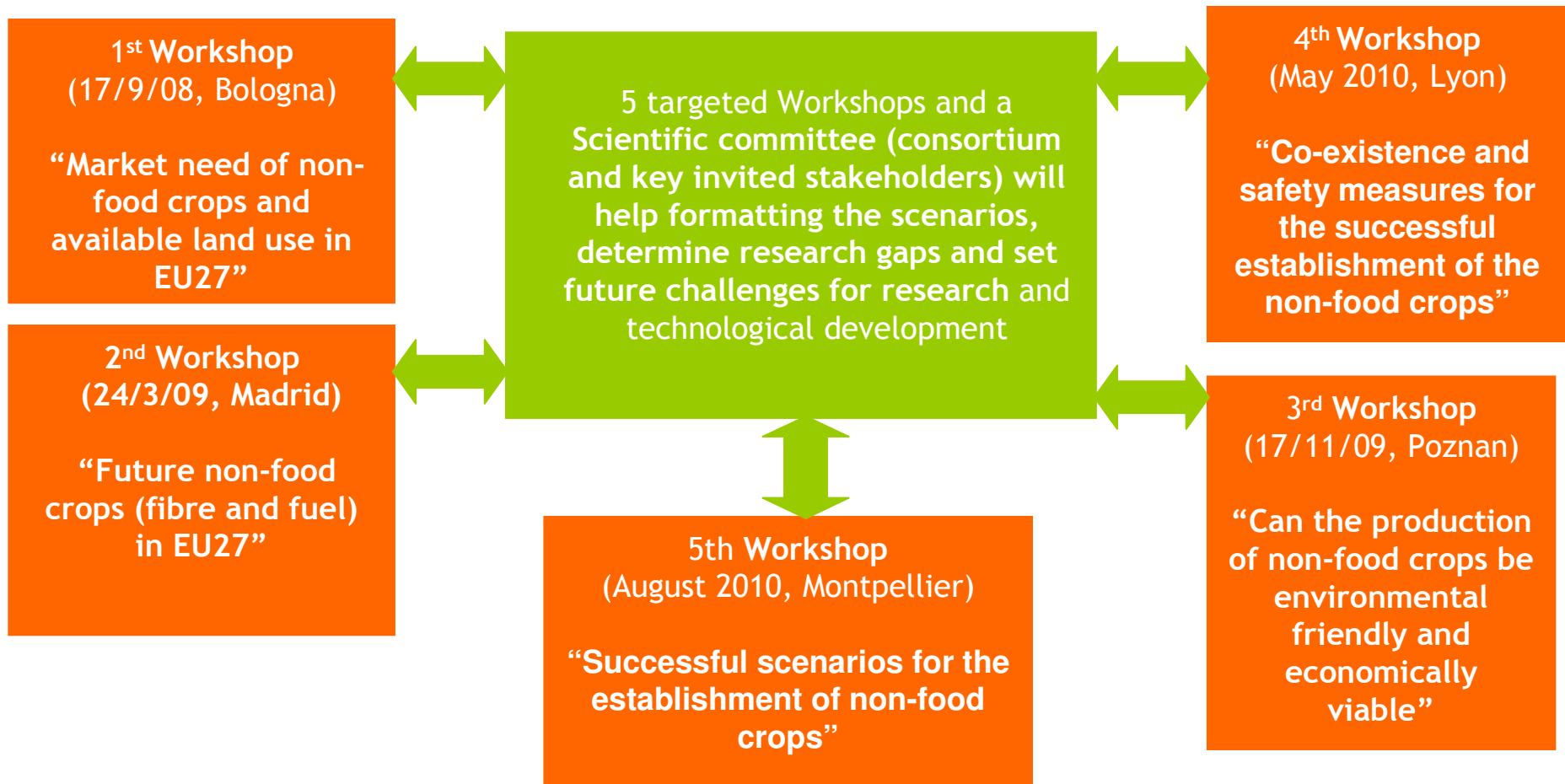
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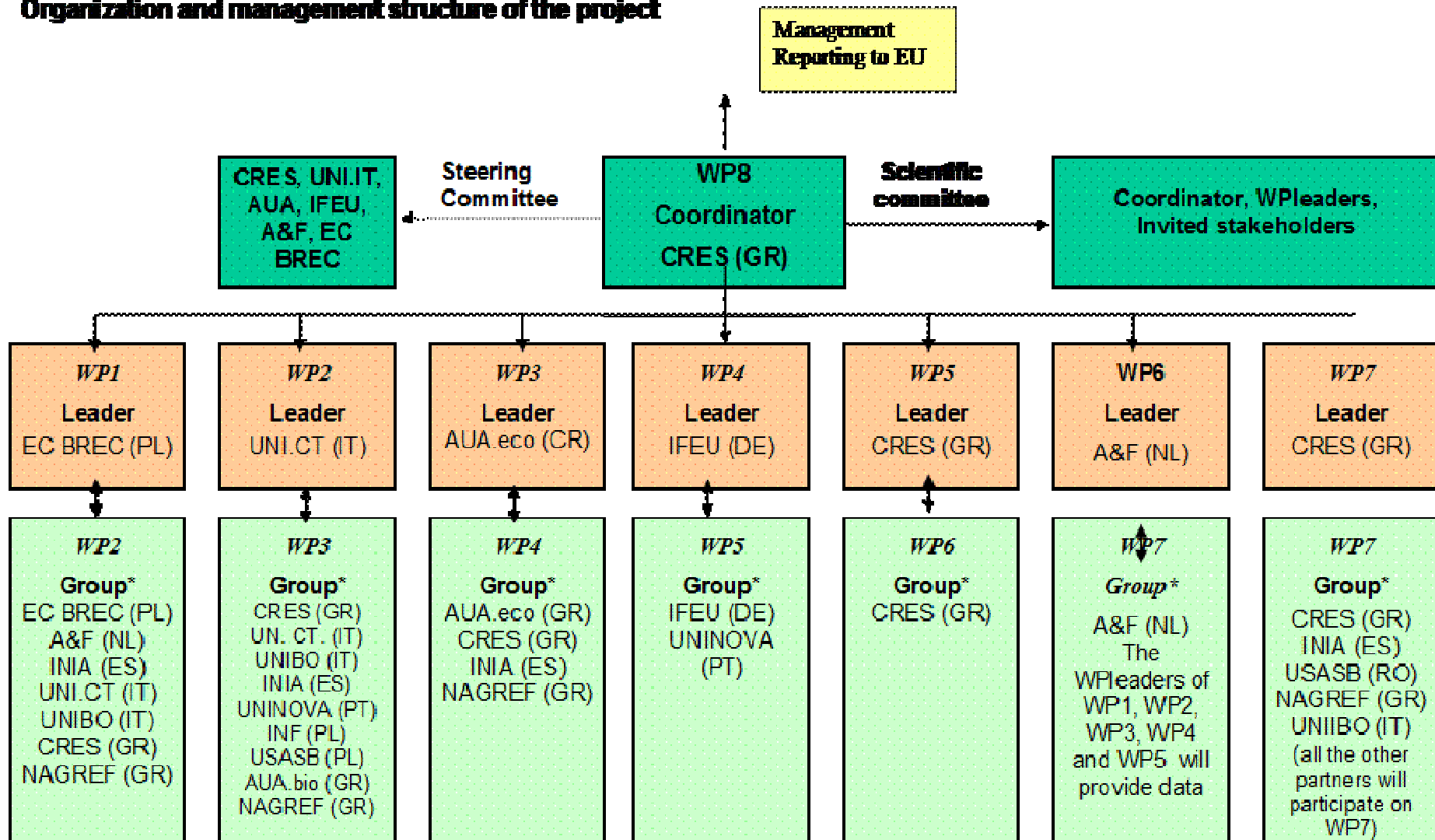
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Key element to the success of 4FCROPS have the thematic workshops and the Scientific Committee



Organization and management structure of the project



WP1. Land Use in EU27, WP2. Cropping possibilities, WP3. Economic analysis and socio-economic impacts, WP4. Environmental analysis, WP5. Regulatory framework, WP6. Best practice scenarios, WP7. Dissemination and WP8. Coordination, management and reporting

Management of 4FCROPS

- **A Steering Committee (SC)** was nominated made up of Work Packages Leaders and the Coordinator.
- Additionally, to the **Steering Committee** a **Scientific Committee** was proposed in the kick-off meeting and is consisted from the members of the whole consortium and selected invited key players that play an important role to the development of the non-food crops in EU27. The invited key players plays a very important role in the key thematic workshops an in 4FCROPS success.

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4FCROPS Scientific committee

Steering Committee

Dr. Efi Alexopoulou, CRES
Dr. Ewa Ganko, EC BREC,
Prof. Luciano Cosentino, UNICT
Prof. Peter Soldatos, AUA.eco
Dr. Guido Reinhardt, IFEU
Dr. Wolter Elbersen, A&F

Invited stakeholders

Dr. Ralph Sims, IEA Bioenergy
Dr. Uli Shurr, FZ-JUELICH
Dr. Thomas Dworak, Ecologic Institute
Prof. Jesus Fernandez, UPM
Dr. Katri Pahkala, MTT
Prof. Melvyn Askew, Census-Bio
Dr. Neil Harker, LACOMBE-CANADA
Dr. Rainer Jannsen, WIP
Dr. Werner Koerbitz, ABI
Dr. Eleftheria Athanasiadou, CHIMAR
Dr. Luigi Pari, Entecra
Prof. Anfrea Lazzeri, UNIPI
Mr. Nikos Chatziyiannis, Pellets
Dr. Massimo Veccheit, CETA
Dr. Gail Taylor, SOTON
Dr. Valerio Zuccini, KEFI ITALIA
Dr. Efthimios Efthimiadis, Bios Agrosystems
Dr. Alex Gablenz, Elaion Company
Dr. Francis Marti, INRA
Dr. Christina Molinero, ACCIONA
Dr. Serge Braconnier, CIRAD
Dr. Nicola di Virgillio, IBEMET

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Dissemination and Twinning opportunities

- ⊗ At the end of December 2008 **4FCROPS** was selected by DG Research for **twinning opportunities with Canada**. The first meeting of this action took place in Montreal (February 2008) with the participation of 12 European and 9 Canadian projects.
- ⊗ In the beginning of March 2009 **4FCROPS** was selected for **twinning opportunities with Argentina and MERCOSUR projects**. The first meeting of this action took in Buenos Aires in May 2009.

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EU projects participated in Canada and Argentina twinning

The EU projects for Canada twinning are:
4FCROPS, AQUATERRE, FORBIOPLAST,
ENERGYPOPLAR, EU-Pearls, ICON, DISCO,
RENEWALL, Lipoyeasts, Oxygreen

The EU projects for Argentina twinning are:
4FCROPS, SWEETSFUEL,
MycRed, TriticeaeGenome, VALORAM

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Actions of 4FCROPS in Canada twinning

It was created a special place in the project website www.4fcrops.eu with the title EU-Canada twinning and there were uploaded:

- the list of the projects (EU and CANADA) with all the contact details
- the agenda of the Montreal workshop and
- a two page text that presenting the concept of the twinning and the general actions

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Next actions for EU-Canada twinning

- The information about the twinning that existing in the www.4fcrops.eu will be updated according to the findings of the second workshop in Pisa (the projects have been changed, actions that have been done, etc.).
- It is proposed to create a website for this twinning (for instance www.eu-canada.eu) and to upload there all the useful information that will be collected or have already been collected so far or to put this information in a place of cordis (that with a password the participants in this action can download the needed material).

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Thank you very much for your attention.

Efi Alexopoulou (ealex@cres.gr)

More information about the project can be found in the project website www.4fcrops.eu

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