Diffusion of a sustainable EU model to produce 1st generation ethanol from sweet sorghum in decentralised plants

Contract number: IEE/09/902/Sl2.558298
Project duration: from 15th May 2010 to 15th August 2012
Partnership ...and sweet sorghum

**Italy**
- CETA – Centre for theoretical and applied ecology
- INIPA

**Greece**
- REACM-Anatoliki S.A. – Regional energy agency of Central Macedonia
- Agricultural cooperative of Halastra

**Spain**
- Cartif Foundation
- ADABE – Association for the diffusion of biomass

......and....

**... sweet sorghum as ethanol crop**
- High efficiency in the use of water (WUE) and solar radiation (RUE)
- High yields in biomass (10-35 t/ha, as dry basis) and ethanol (1.5-6.1 t/ha)
- Short cycle (90-120 days), compatible with the rotation with other arable crops
Activities and achieved results – 1st part

- Visits around the world to refine the EU model
  - At agricultural institutes, technology suppliers and existing plants processing sweet sorghum in 1st generation ethanol in India, Peru, Spain

- Discussion of the EU model at the national level
  - 15 national technical workshops
  - 3 national administrative workshop
  - 3 national intersectorial workshop

- Discussion within the consortium to finalize the EU model in terms of:
  - applicability in Italy, Greece and Spain
  - transferability in the countries, which are not included in the consortium and are suitable to the sweet sorghum growth
    - France, Portugal, Hungary, Croatia, Bulgaria

- Discussion with 668 stakeholders !!!!
Activities and achieved results – 2nd part

- **Training of the stakeholders**
  - Specific courses for each profile
    - Farmers
    - Representatives of seeds companies
    - Fuel processors and representatives of SMEs
    - Investors
    - Policy makers, representatives of public authorities and energy agencies

- **92 courses**
  - 71 for farmers, 3 for representatives of seeds companies, 3 for fuel processors and representatives of SMEs, 5 for investors, 6 for policy makers, representatives of public authorities and energy agencies, 4 for agricultural associations
  - **Trained 1,487 stakeholders !!!!**
Activities and achieved results – 3\textsuperscript{rd} part

\begin{itemize}
  \item **Esse Community**
    \begin{itemize}
      \item Network to connect the stakeholders in the ethanol sector
      \item http://esse-community.eu
    \end{itemize}
  \item Services offered through the Esse Community
    \begin{itemize}
      \item technical assistance through the Centre of Excellence
      \item downloads of the tools of the project (e.g. manuals, newsletters, brochure)
      \item articles about the ethanol market
      \item “Virtual library” about specific documents for the registered members
      \item diffusion of events
    \end{itemize}
\end{itemize}
Activities and achieved results – 4th part

- Communication in reviews and journals
  - 3 scientific papers in international reviews
    - Proceeding of the 19th European Biomass Conference and Exposition in Berlin, 2011
    - Proceeding of the XIX International Symposium on Alcohol Fuel in Verona, 2011
  - 3 national scientific papers
  - 22 popular and technical articles at national scale

- Communications in conferences
  - 3 national conferences in Italy, Greece and Spain
  - International final conference in Greece
  - Presentation of the Sweethanol project in other 10 conferences

- Communication through the Sweethanol Website
  - http://sweethanol.eu
Achievement of the objectives

- **Specific objectives**
  - “The know-how diffusion about the sustainable EU model”
  - **The EU model has been treated in total with 2,732 people !!!**
  - “The daily updating through the network building and the supply chain coordination”
  - **331 members in the Esse Community and more than 43,000 accesses during the project lifetime !!!**

- **Strategic objectives**
  - “The change in the structure of the EU market”
    - The project has operated in this direction
  - “The increased awareness about sweet sorghum as ethanol crop”
  - The 1st generation ethanol produced from sweet sorghum is sustainable in accordance with the Directive 2009/28/EC:
    - **GHGs emission saving is in the range 66-82% !!!**
Centre of Excellence

- **Contacts after the end of the project:**

- **CETA**
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  - Mr. Denis Picco
  - Ms. Alessia Vecchiet

- **INIPA**
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- **Cartif**
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- **ADABE**
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- **REACM**
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- **Agricultural cooperative of Halastra**
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