Sweet Sorghum: an alternative energy crop

From 2009-01-01 to 2014-06-30, closed project

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR 5 120 946,20</td>
<td>KBBE-2008-3-1-02 - Sweet sorghum – An alternative energy crop for biofuel production in semi-arid and temperate regions – SICA (Latin America, South Africa, India)</td>
</tr>
<tr>
<td>EU contribution:</td>
<td></td>
</tr>
<tr>
<td>EUR 2 967 975</td>
<td></td>
</tr>
<tr>
<td>Coordinated in:</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
</tr>
</tbody>
</table>

Objective

Increasing world market prices for fossil fuels, driven by limited reserves, growing demand and instability in producing regions, now render renewable fuels economical. Such fuels are also a pathway to reducing GHG emissions and mitigating climate change. Bio-ethanol from crop plants is a promising, partial solution to sustainably satisfy the energy demand for road transport. The success of bio-ethanol from sugarcane in Brazil demonstrates proof of concept but cannot be transferred to water-limited or temperate environments. Sweet sorghum, as a source of either fermentable free sugars or lignocellulosics, has many potential advantages, including: high water, nitrogen and radiation use efficiency; broad agro-ecological adaptation; rich genetic diversity for useful traits; and the potential to produce fuel feedstock, food and feed in various combinations. Fuel-food crops can thereby help reconciling energy and food security issues. This project will breed for improved cultivars and hybrids of sorghum for temperate, tropical semi-arid and tropical acid-soil environments by pyramiding in various combinations, depending on region and ideotype, tolerance to cold, drought and acid (Al-toxic) soils; and high production of stalk sugars, easily digestible biomass and grain (WP 1-3). Molecular-genetic and physiological breeding support is given by WP4, and agro-ecological adaptation and sustainable practices are developed by WP5. Other WPs (6, 7, 8) provide for integrated technology and impact assessments including economics, dissemination and coordination. The Consortium is composed of 10 members from France (leader), Italy, Germany, Brazil, India, Mexico and South Africa, including a seed company. Research involves structured participation of stakeholders, including policy makers. Project outcomes will be new germplasm, sustainable practices and commodity chain concepts adapted to each target region. The duration of the project is 5 years.

Related information

Result In Brief

Developing sorghum crop as a source for biofuels

Report Summaries

Final Report Summary - SWEETFUEL (Sweet Sorghum: an alternative energy crop)
Coordinator

CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LEDEVELOPPEMENT - C.I.R.A.D. EPIC
RUE SCHEFFER 42
75016 PARIS
France

EU contribution: EUR 506 825

Activity type: Research Organisations

Administrative contact: Daniel Sannie
Tel.: +33 4 67 61 55 12
Fax: +33467614455
Contact the organisation

Participants

INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS
N/A
502 324 ANDHRA PRADESH
India

EU contribution: EUR 382 500

Activity type: Research Organisations

Administrative contact: Rajesh Agrawal
Tel.: +91 40 30713071
Fax: +91 40 30713074
Contact the organisation

EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA EMBRAPA
PRQ ESTACAO BIOLOGICA PQEB EDIFICIO SEDE PLANO PILOTO
70770901 BRASILIA
Brazil

EU contribution: EUR 374 050

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Administrative contact: Robert Schaffert
Tel.: +55 31 3779 1076
Fax: +55 31 3779 1088
Contact the organisation
KWS SAAT AG
Grimsehlstrasse 31
37555 EINBECK
Germany

**EU contribution:** EUR 263 500

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

**Administrative contact:** Robert Heidhues
Tel.: +49 5561 311 351
Fax: +49 5561 311 540

Contact the organisation

IFEU - INSTITUT FUR ENERGIE UND UMWELTFORSCHUNG HEIDELBERG GMBH
IM WEIHER 10
69121 HEIDELBERG
Germany

**EU contribution:** EUR 347 800

**Activity type:** Research Organisations

**Administrative contact:** Guido Reinhardt
Tel.: +49 6221 4767 31
Fax: +49 6221 4767 19

Contact the organisation

ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA
VIA ZAMBONI 33
40126 BOLOGNA
Italy

**EU contribution:** EUR 268 250

**Activity type:** Higher or Secondary Education Establishments

**Administrative contact:** Andrea Monti
Tel.: +39 347 9709397
Fax: +39 51 2096241

Contact the organisation

UNIVERSITA CATTOLICA DEL SACRO CUORE
Largo Agostino Gemelli 1
20123 MILANO
Italy

**EU contribution:** EUR 253 250

**Activity type:** Higher or Secondary Education Establishments

**Administrative contact:** Libero Ranelli
Tel.: +39 0523 599122
Fax: +39 0523 599124

Contact the organisation
AGRICULTURAL RESEARCH COUNCIL (ARC)  
1134 Park Street, Hatfield  
0083 PRETORIA  
South Africa  
EU contribution: EUR 206,375

Activity type: Research Organisations  
Administrative contact: Piet Van Der Merwe  
Tel.: +27 18 299 6215  
Fax: +27 18 293 0682  
Contact the organisation

Universidad Autonoma de Nuevo Leon  
Av. Universidad s/n  
66428 San Nicolas de los Garza  
Mexico  
EU contribution: EUR 187,250

Activity type: Higher or Secondary Education Establishments  
Administrative contact: Nora Luisa Salas De La Rosa  
Tel.: +52 81 83294032  
Fax: +52 81 83763076  
Contact the organisation

WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG  
SYLVENSTEINSTRASSE 2  
81369 MUENCHEN  
Germany  
EU contribution: EUR 178,175

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)  
Administrative contact: Christine Meyer-Haege  
Tel.: +49 89 720 12 719  
Fax: +49 89 720 12 791  
Contact the organisation

Subjects  
Agriculture

Last updated on 2019-07-16  
Retrieved on 2019-08-17

© European Union, 2019