



Deliverable reference number and title:

## **D1.2 – Inventory of data sources**

Due date of deliverable: 31/10/17

Actual submission date: 31/1/18

### **Lead beneficiary: CRES**

Name of organization: Center for Renewable Energy Sources and Saving

Address of organization: 10<sup>th</sup> Km Marathonos Avenue, 19009 Pikermi Attikis, Greece

Beneficiaries website: [www.cres.gr](http://www.cres.gr)

### **Responsible Author**

Efthymia Alexopoulou

CRES

[ealex@cres.gr](mailto:ealex@cres.gr)

+30 210 6603382

### **Type**

**R** Document, report

**DEM** Demonstrator, pilot, prototype

**DEC** Websites, patent fillings, videos, etc.

**OTHER**

### **Dissemination Level**

**PU** Public

**CO** Confidential, only for members of the consortium (including the Commission Services)



This project receives funding from the European Community's Horizon 2020 (H2020) under the grant agreement No. 727698.

*The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the Research Executive Agency (REA) or the European Commission (EC). REA or the EC are not responsible for any use that may be made of the information contained therein.*

## Publishable executive summary

D1.2 entitled “**Inventory of the data sources**” presents the data sources that will be used in task 1.2 of the project, where the **MAGIC-CROPS database** will be developed. The sources of this inventory are the followings:

- ♦ **A long list of EU projects** working on industrial crops. In these projects the participants of the consortium either have full access either as coordinators or as project partners (e.g. 4FCROPS, Crops2Industry, FIBRA, OPTIMA, OPTIMISC, LOGISTEC, WATBIO, S2BIOM, EUROBIOREF, COSMOS, BEE, SRCplus, JATROPT, JATROMED, BIOENERGY CHAINS, HEMPSYS, EUROPRUNNING, On-cultivos, Biokenaf, Multichip, etc.) or information had been collected from their websites, from publications (articles, position papers, public deliverables, etc.) or presentations had been made for the projects.
- ♦ **Existing databases and/or inventories** had been developed from previous EU projects such as IENICA, 4FCROPS, Crops2Industry, FIBRA & S2BIOM.
- ♦ **A long list of articles on industrial crops**; in this survey emphasis had been given to the performance of the crops on growing on marginal lands, while the articles covering the whole production chain.
- ♦ **Other related sources** such as web reports and/or position papers that that have been uploaded to relevant platforms, organisations, associations such as ETBP, Plants for the Future, IEA (such as IEA task 43), OECD, FAO, JRC, AAIC, etc.

## 1 List of EU projects related to MAGIC

The **list of the projects** that have been detected as relevant to MAGIC is presented in the table below. In total **98 projects** have been detected; in 52 of them one or more of the MAGIC participants has been participated either as coordinator or partner. In the projects had not included national projects, apart from two projects: the Spanish project On-Cultivos and the French project Biomass for the Future.

Table 1: EU research projects that will be used in MAGIC-CROPS database

Acronym	Details of the projects
<b>Projects that MAGIC consortium participated and/or coordinated</b>	
1. IENICA Network (FAIR-CT96-1495; 1997-99)	<p><b>Title:</b> An interactive European network for industrial crops and their applications</p> <p><b>Crops:</b> Industrial crops</p> <p><b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/36112_en.html">https://cordis.europa.eu/project/rcn/36112_en.html</a></p>
2. IENICA Network (QLK5-CT-2000-00111; 2000-2005)	<p><b>Title:</b> The interactive European network for industrial crops for industrial crops and their applications in the changing millennium</p> <p><b>Crops:</b> in total 90 (see table 2)</p> <p><b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/58817_en.html">https://cordis.europa.eu/project/rcn/58817_en.html</a> &amp; <a href="https://www.hort.purdue.edu/newcrop/ncnu02/v5-055.html">https://www.hort.purdue.edu/newcrop/ncnu02/v5-055.html</a></p>
3. 4FCROPS (2008-10)	<p><b>Title:</b> Future Crops for Food, Fiber and Fuel</p> <p><b>Crops:</b> 15 crops (see table 3)</p> <p><b>Website:</b> <a href="http://www.cres.gr/4fcrops">www.cres.gr/4fcrops</a></p>
4. Crops2Industry (2009-12)	<p><b>Title:</b> Non-food crops-to-industry schemes in EU27</p> <p><b>Crops:</b> 24 crops (see table 4)</p> <p><b>Website:</b> <a href="http://www.cres.gr/crops2">www.cres.gr/crops2</a></p>
5. FIBRA (2012-15)	<p><b>Title:</b> Fibre crops as a sustainable source of biobased material for industrial products in Europe and China</p> <p><b>Crops:</b> <i>Cannabis sativa</i> L., <i>Linum usitatissimum</i> L., <i>Utrica dioica</i> L., <i>Hibiscus cannabinus</i> L., <i>Corchorus olitorius</i> L., <i>Boehmeria nivea</i> (L.) Gaud., <i>Panicum virgatum</i> L., <i>Miscanthus X giganteus</i>, <i>Arundo donax</i> L, Bamboo</p> <p><b>Website:</b> <a href="http://www.fibrafp7.net">www.fibrafp7.net</a></p>
6. COSMOS (2015-19)	<p><b>Title:</b> Camelina &amp; crambe oil crops as sources for medium-chain oils for specialty oleochemicals</p> <p><b>Crops:</b> <i>Camelina sativa</i> L. <i>Crambe abyssinica</i> L.</p> <p><b>Website:</b> <a href="http://cosmos-h2020.eu/">http://cosmos-h2020.eu/</a></p>
7. GRACE (2017-22)	<p><b>Title:</b> Growing advanced industrial crops on marginal lands for biorefineries</p> <p><b>Crops:</b> <i>Miscanthus x giganteus</i>, <i>Cannabis sativa</i> L.</p> <p><b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/210575_en.html">http://cordis.europa.eu/project/rcn/210575_en.html</a></p>
8. BeCOOL (2017-21)	<p><b>Title:</b> Brazil-EU cooperation for development of advanced lignocellulosic biofuels</p> <p><b>Crops:</b> <i>Cannabis sativa</i> L., <i>Crotalaria juncea</i> L., <i>Hibiscus cannabinus</i> L., <i>Sorghum bicolor</i> L., <i>Arundo donax</i> L., <i>Panicum virgatum</i> L., <i>Eucalyptus</i> spp.</p> <p><b>Website:</b> <a href="http://www.becoolproject.eu">www.becoolproject.eu</a></p>
9. FIRST2RUN (20015-18)	<p><b>Title:</b> Global process to improve <i>Cynara cardunculus</i> exploitation for energy applications</p> <p><b>Crops:</b> <i>Cynara cardunculus</i> L.</p> <p><b>Website:</b> <a href="http://www.first2run.eu">www.first2run.eu</a></p>
10. MULTIHEMP (2012-17)	<p><b>Title:</b> Multipurpose hemp for industrial bioproducts and biomass</p> <p><b>Crops:</b> <i>Cannabis sativa</i> L.</p> <p><b>Website:</b> <a href="http://multihemp.eu/">http://multihemp.eu/</a></p>
11. LOGISTEC (2012-16)	<p><b>Title:</b> Improving logistics for energy crops</p> <p><b>Crops:</b> <i>Miscanthus x giganteus</i>, <i>Panicum virgatum</i> L., <i>Sorghum bicolor</i> L., Giant reed L.</p> <p><b>Website:</b> <a href="http://www.logistecproject.eu">www.logistecproject.eu</a></p>

<b>12.OPTIMA</b> (2011-15)	<b>Title:</b> Optimization of perennial grasses for biomass production <b>Crops:</b> <i>Panicum virgatum</i> L., <i>Miscanthus x giganteus</i> , <i>Arundo donax</i> L., <i>Cynara cardunculus</i> L. <b>Website:</b> <a href="http://www.optimafp7.eu">www.optimafp7.eu</a>
<b>13.OPTIMISC</b> (2011-16)	<b>Title:</b> Optimizing <i>Miscanthus</i> biomass production <b>Crops:</b> <i>Miscanthus x giganteus</i> <b>Website:</b> <a href="https://optimisc.uni-hohenheim.de">https://optimisc.uni-hohenheim.de</a>
<b>14.LIBBIO</b> (2016-20)	<b>Title:</b> <i>Lupinus mutabilis</i> for Increased biomass from marginal lands and value for biorefineries <b>Crop:</b> <i>Lupinus mutabilis</i> <b>Website:</b> <a href="http://www.libbio.net">www.libbio.net</a>
<b>15.SEEMLA</b> (2016-18)	<b>Title:</b> Sustainable exploitation of biomass for bioenergy from marginal lands <b>Crops:</b> <i>Robinia pseudoacacia</i> L., <i>Pinus brutia</i> , <i>Pinus nigra</i> , <i>Salix</i> spp., <i>Miscanthus x giganteus</i> <b>Website:</b> <a href="http://www.seemla.eu">www.seemla.eu</a>
<b>16.SUNNLIB</b> (2010-14)	<b>Title:</b> Sustainable liquid biofuels from biomass biorefining <b>Crops:</b> <i>Zea mays</i> L., <i>Miscanthus x giganteus</i> , <i>Beta vulgaris</i> var. <i>Saccharifera</i> <b>Website:</b> <a href="https://www.york.ac.uk/org/cnap/SUNNLIBB/index.html">https://www.york.ac.uk/org/cnap/SUNNLIBB/index.html</a>
<b>17.PULP2BALUE</b> (2015-19)	<b>Title:</b> Processing underutilised low value sugar beet pulp into value added products <b>Crop:</b> <i>Beta vulgaris</i> L. <b>Website:</b> <a href="http://www.pulp2value.eu">www.pulp2value.eu</a>
<b>18.WATBIO</b> (2007-13)	<b>Title:</b> Development of improved perennial non-food biomass and bioproduct crops for water stressed environments <b>Crops:</b> <i>Populus</i> spp., <i>Miscanthus x giganteus</i> , <i>Arundo donax</i> L. <b>Website:</b> <a href="http://www.watbio.eu">www.watbio.eu</a>
<b>19.EUROBIOREF</b> (2010-4)	<b>Title:</b> European multilevel integrated biorefinery design for sustainable biomass processing <b>Crops:</b> Oilseeds, woody species, perennial grasses <b>Website:</b> <a href="http://www.eurobioref.org">www.eurobioref.org</a>
<b>20.FIBRACOM</b> (2013-15)	<b>Title:</b> New lightweight and nanotechnology enhanced biocomposites from lignocellulosic material <b>Crops:</b> <i>Cannabis sativa</i> L., <i>Boehmeria nivea</i> (L.) Gaud, <i>Corchorus olitorius</i> L.) and <i>Hibiscus cannabinus</i> L. <b>Website:</b> <a href="http://fibracom.physics.auth.gr">http://fibracom.physics.auth.gr</a>
<b>21.ICON</b> (2008-13)	<b>Title:</b> Industrial crops producing added value oils for novel chemicals <b>Crops:</b> Oilseeds ( <i>Crambe abyssinica</i> L.) <b>Website:</b> <a href="https://www.wur.nl/en/show/ICON-Industrial-Crops-producing-added-value-Oils-for-Novel-chemicals.htm">https://www.wur.nl/en/show/ICON-Industrial-Crops-producing-added-value-Oils-for-Novel-chemicals.htm</a>
<b>22.Grow2Build</b> (2013-15)	<b>Title:</b> Flax and hemp as building material: back on track. Connecting the entire chain, from farmer to builder <b>Crop:</b> <i>Cannabis sativa</i> L. <b>Website:</b> <a href="http://www.grow2build.eu">www.grow2build.eu</a>
<b>23.JATROPT</b> (2010-15)	<b>Title:</b> <i>Jatropha curcas</i> applied and technological research on plant traits <b>Crop:</b> <i>Jatropha curcas</i> L. <b>Website:</b> <a href="http://www.jatropt.eu">www.jatropt.eu</a> , <a href="http://cordis.europa.eu/project/rcn/94718_en.html">http://cordis.europa.eu/project/rcn/94718_en.html</a>
<b>24.JATROMED</b> (2012-16)	<b>Title:</b> Evaluation of the energy crop <i>Jatropha curcas</i> as a mean to promote renewable and sustainable energy for the Mediterranean region <b>Crop:</b> <i>Jatropha curcas</i> L. <b>Website:</b> <a href="http://www.jatromed.aua.gr">www.jatromed.aua.gr</a>
<b>25.Agro-in-log</b> (2015-18)	<b>Title:</b> Demonstration of innovative integrated biomass logistics centres for the Agro-industry sector in Europe <b>Crops:</b> <i>Medicago sativa</i> L., <i>Sorghum x drummondii</i> <b>Website:</b> <a href="http://agroinlog-h2020.eu">http://agroinlog-h2020.eu</a>
<b>26.S2BIOM</b> (2013-16)	<b>Title:</b> Delivery of sustainable supply of non-food biomass to support a "resource-efficient" Bioeconomy in Europe <b>Crops:</b> Non-food and/or energy crops <b>Website:</b> <a href="http://www.s2biom.eu">www.s2biom.eu</a>

<b>27. Biomass futures (2009-11)</b>	<b>Title:</b> Biomass role in achieving the Climate Change & Renewables EU policy targets. Demand and Supply dynamics under the perspective of stakeholders <b>Crops:</b> Non-food and/or energy crops <b>Website:</b> <a href="http://www.biomassfutures.eu">www.biomassfutures.eu</a>
<b>28. SWEETFUEL (2009-14)</b>	<b>Title:</b> Sweet Sorghum: An alternative energy crop <b>Crop:</b> <i>Sorghum bicolor</i> L. <b>Website:</b> <a href="http://www.sweetfuel-project.eu">www.sweetfuel-project.eu</a>
<b>29. BIOCARD (2005-08)</b>	Global process to improve <i>Cynara cardunculus</i> exploitation for energy applications <b>Crop:</b> <i>Cynara cardunculus</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/docs/publications/1223/122320101-6_en.pdf">http://cordis.europa.eu/docs/publications/1223/122320101-6_en.pdf</a>
<b>30. SRCplus (2014-16)</b>	<b>Title:</b> Short rotation woody crops (SRC) plantations for local supply chains and heat use <b>Crops:</b> <i>Salix</i> spp., <i>Populus</i> spp., <i>Robinia pseudoacacia</i> L., <i>Eucalyptus</i> spp. <b>Website:</b> <a href="https://ec.europa.eu/energy/intelligent/projects/en/projects/srcplus">https://ec.europa.eu/energy/intelligent/projects/en/projects/srcplus</a> & <a href="https://www.srcplus.eu/en/">https://www.srcplus.eu/en/</a> <a href="https://www.srcplus.eu/images/SRC_Publishable_Report.pdf">https://www.srcplus.eu/images/SRC_Publishable_Report.pdf</a>
<b>31. Bioenergy Chains (2002-5)</b>	<b>Title:</b> Bioenergy chains from perennial crops in South Europe <b>Crops:</b> <i>Cynara cardunculus</i> L., <i>Panicum virgatum</i> L., <i>Miscanthus x giganteus</i> , <i>Arundo donax</i> L. <b>Website:</b> <a href="http://www.cres.gr/bioenergy_chains">www.cres.gr/bioenergy_chains</a>
<b>32. BIOKENAF (2003-6)</b>	<b>Title:</b> Biomass production chain and growth simulation model for kenaf <b>Crop:</b> <i>Hibiscus cannabinus</i> L. <b>Website:</b> <a href="http://www.cres.gr/biokenaf">www.cres.gr/biokenaf</a>
<b>33. Switchgrass for Energy (1998-2001)</b>	<b>Title:</b> Switchgrass as an alternative energy crop <b>Crop:</b> <i>Panicum virgatum</i> L. <b>Website:</b> <a href="http://www.switchgrass.nl">www.switchgrass.nl</a>
<b>34. Hempsys (2002-06)</b>	<b>Title:</b> Design, development and up-scaling of a sustainable production system for hemp textiles: an integrated quality systems approach <b>Crop:</b> <i>Cannabis sativa</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/67561_en.html">http://cordis.europa.eu/project/rcn/67561_en.html</a>
<b>35. Giant reed Network (1997-2001)</b>	<b>Title:</b> Giant reed ( <i>Arundo donax</i> L.) network. Improvement, productivity and biomass quality <b>Crop:</b> <i>Arundo donax</i> L. <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/37456_en.html">https://cordis.europa.eu/project/rcn/37456_en.html</a>
<b>36. FAIR CT96 1946 (1997-2000)</b>	<b>Title:</b> Brassica carinata: the outset of a new crop for biomass and industrial non-food <b>Crop:</b> <i>Brassica carinata</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/37448_en.html">http://cordis.europa.eu/project/rcn/37448_en.html</a>
<b>37. FAIR CT96 0512 (1996)</b>	<b>Title:</b> European energy crops overview. Up-to-date achievements on energy crops production processing and utilization in Europe <b>Crops:</b> Biomass/energy crops <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/34922_en.html">https://cordis.europa.eu/project/rcn/34922_en.html</a>
<b>38. FAIRCT973186 (1997-99)</b>	<b>Title:</b> Energy crops internetwork Biomass/energy crops <b>Crops:</b> Energy crops <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/38297_en.html">https://cordis.europa.eu/project/rcn/38297_en.html</a>
<b>39. AIRCT1916 (1997-20)</b>	<b>Title:</b> Environmental studies on sweet and fibre Sorghum sustainable crops for biomass and energy <b>Crops:</b> <i>Sorghum bicolor</i> L. <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/37443_en.html">https://cordis.europa.eu/project/rcn/37443_en.html</a>
<b>40. AIR1678 (1993-96)</b>	<b>Title:</b> Improvement of Eucalyptus management. An integrated approach: Breeding, silviculture and economics <b>Crops:</b> <i>Eucalyptus</i> spp. <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/6221_en.html">https://cordis.europa.eu/project/rcn/6221_en.html</a>
<b>41. AIR1 0294 (1992-94)</b>	<b>Title:</b> Miscanthus productivity network <b>Crops:</b> <i>Miscanthus x giganteus</i> <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/16715_en.html">https://cordis.europa.eu/project/rcn/16715_en.html</a>
<b>42. AIR1707 (1997)</b>	<b>Title:</b> Coordinated action on miscanthus <b>Crops:</b> <i>Miscanthus x giganteus</i> <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/92999_en.html">http://cordis.europa.eu/project/rcn/92999_en.html</a>

<b>43.BFF</b> (2012-20)	<b>Title:</b> Biomass for the future <b>Crops:</b> <i>Miscanthus x giganteus</i> , <i>Sorghum bicolor</i> L. <b>Website:</b> <a href="https://www6.inra.fr/biomassforthefuture_eng/">https://www6.inra.fr/biomassforthefuture_eng/</a>
<b>44.SAHYONG</b> (2011-14)	<b>Title:</b> Strengthening networking on biomass research and biowaste conversion – biotechnology for Europe India Integration <b>Crops:</b> Biomass crops <b>Website:</b> <a href="http://www.sahyog-europa-india.eu">www.sahyog-europa-india.eu</a>
<b>45.ESCORENA</b> (1974-ongoing)	<b>Title:</b> The European System of Cooperative Research Networks in Agriculture <b>Crops:</b> Fibre crops <b>Website:</b> <a href="http://www.escorena.net">www.escorena.net</a>
<b>46.EKOHEMPKON</b> (2012-18)	<b>Title:</b> Remediation of degraded land in the region of Lignite Mine Konin by cultivation of industrial hemp <b>Crops:</b> <i>Cannabis sativa</i> L. <b>Website:</b> <a href="http://www.ekohempkon.iwnirz.pl">www.ekohempkon.iwnirz.pl</a>
<b>47.VOICE</b> (2006-09)	<b>Title:</b> Vegetable oil initiative for a cleaner environment <b>Crops:</b> <i>Camelina sativa</i> L., <i>Helianthus annuus</i> L. <b>Website:</b> <a href="http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&amp;n_proj_id=3063">http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&amp;n_proj_id=3063</a>
<b>48.BioC4</b> (2015-18)	<b>Title:</b> New integrative sustainable system from C4 photosynthetic miscanthus to biological synthesis of valuable C4 compounds <b>Crops:</b> <i>Miscanthus x giganteus</i> <b>Website:</b> <a href="http://projects.au.dk/facesurplus/research-projects-1st-call/bioc4/">http://projects.au.dk/facesurplus/research-projects-1st-call/bioc4/</a>
<b>49.BIOAGROTEX</b> (2008-12)	<b>Title:</b> Development of new agrotexiles from renewable resources and with a tailored biodegradability <b>Crops:</b> <i>Cannabis sativa</i> L., <i>Linum usitatissimum</i> L. <b>Website:</b> <a href="https://cordis.europa.eu/result/rcn/56816_en.html">https://cordis.europa.eu/result/rcn/56816_en.html</a>
<b>50.INTENSE</b> (2015-18)	<b>Title:</b> Intensify production, transform biomass to energy and novel goods and protect soils in Europe <b>Crops:</b> <i>Populus nigra</i> , <i>Arundo donax</i> L. <b>Website:</b> <a href="http://projects.au.dk/facesurplus/research-projects-1st-call/intense/">http://projects.au.dk/facesurplus/research-projects-1st-call/intense/</a>
<b>51.On-Cultivos</b> (2005-12)	<b>Title:</b> An integrated approach for energy crops deployment in Spain <b>Crops:</b> Biomass crops <b>Website:</b> <a href="http://www.uncultivos.es/">http://www.uncultivos.es/</a>
<b>Other related to MAGIC projects</b>	
<b>1. Dedromass4Europe</b> (2017-22)	<b>Title:</b> Securing sustainable dendromass production with poplar plantations in European rural areas <b>Crop:</b> <i>Populus spp.</i> <b>Website:</b> <a href="http://www.dendromass4europe.eu">www.dendromass4europe.eu</a>
<b>2. MULTIBIOPRO</b> (2012-16)	<b>Title:</b> The development and evaluation of multipurpose crops as new bio refining feedstocks for the production of industrial Bioproducts and biomass <b>Crops:</b> <i>Populus spp.</i> , <i>Nicotiana glauca</i> Graham <b>Website:</b> <a href="http://www.multibiopro.eu">www.multibiopro.eu</a>
<b>3. ZELCOR</b> (2016-20)	<b>Title:</b> Zero waste ligno-cellulosic biorefineries by integrated lignin valorisation <b>Crops:</b> Lignocellulosic crops <b>Website:</b> <a href="https://www.bbi-europe.eu/projects/zelcor">https://www.bbi-europe.eu/projects/zelcor</a>
<b>4. BIOSHOP</b> flagship (2016-21)	<b>Title:</b> Innovation stepping stones for a novel European second generation bioeconomy <b>Crops:</b> Lignocellulosic crops <b>Website:</b> <a href="https://bioskoh.eu/">https://bioskoh.eu/</a>
<b>5. DRIVE4EU</b> (2014-18)	<b>Title:</b> Dandelion Rubber and inulin valorization and exploitation for Europe <b>Crops:</b> <i>Taraxacum kok-sachyz</i> <b>Website:</b> <a href="http://www.drive4eu.eu/">http://www.drive4eu.eu/</a>
<b>6. EUCALIVA</b> (2017-20)	<b>Title:</b> EUCALYPTUS LIGNIN VALORISATION FOR ADVANCED MATERIALS AND CARBON FIBRES <b>Crops:</b> <i>Eucalyptus spp.</i> <b>Website:</b> <a href="http://eucaliva.eu/">http://eucaliva.eu/</a>
<b>7. MISCOMAR</b> (2016-19)	<b>Title:</b> Miscanthus biomass options for contaminated and marginal land: quality, quantity and soil interactions

	<b>Crops:</b> <i>Miscanthus x giganteus</i> <b>Website:</b> <a href="http://www.miscomar.eu">www.miscomar.eu</a>
8. FLHEA (2013-15)	<b>Title:</b> Flax and hemp advanced fibre based composites <b>Crops:</b> <i>Linum usitatissimum</i> L., <i>Cannabis sativa</i> L. <b>Website:</b> <a href="http://www.flhea.eu/">http://www.flhea.eu/</a>
9. ITAKA (2012-16)	<b>Title:</b> Initiative Towards sustainable Kerosene for Aviation <b>Crops:</b> <i>Camelina sativa</i> L. <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/106229_es.html">https://cordis.europa.eu/project/rcn/106229_es.html</a>
10. EUPEARLS (2008-12)	<b>Title:</b> EU-based Production and Exploitation of Alternative Rubber and Latex Sources <b>Crops:</b> <i>Parthenium argentatum</i> , <i>Taraxacum kok-sachyz</i> <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/87956_en.html">http://cordis.europa.eu/project/rcn/87956_en.html</a>
11. SSUCHY (2017-21)	<b>Title:</b> Sustainable structural and multifunctional bio-composites from hybrid natural fibres and bio-based polymers <b>Crops:</b> <i>Cannabis sativa</i> L. <b>Website:</b> <a href="https://bbi-europe.eu/projects/ssuchy">https://bbi-europe.eu/projects/ssuchy</a>
12. CORE-JETFUEL (2013-16)	<b>Title:</b> Coordinating research and innovation of jet and other sustainable aviation fuel <b>Crops:</b> Oil crops <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/108976_en.html">http://cordis.europa.eu/project/rcn/108976_en.html</a>
13. GRASSMARGINS (2011-15)	<b>Title:</b> Enhancing biomass production from marginal lands with perennial grasses <b>Crops:</b> <i>Miscanthus x giganteus</i> , <i>Dactylis glomerata</i> L., <i>Festuca arundinaceae</i> L., <i>Phalaris arundinaceae</i> L. <b>Website:</b> <a href="https://www.facebook.com/grassmargins/">https://www.facebook.com/grassmargins/</a>
14. SustainFARM (2015-18)	<b>Title:</b> Innovative and sustainable intensification of integrated food and non-food systems to develop climate-resilient agro-ecosystems in Europe. <b>Crops:</b> <i>Salix</i> spp. <b>Website:</b> <a href="http://www.sustainfarm.eu">http://www.sustainfarm.eu</a>
15. PBBNet (2014-19)	<b>Title:</b> Plant Biomass Biorefinery Network <b>Crops:</b> Lignocellulosic crops <b>Website:</b> <a href="http://gtr.rcuk.ac.uk/projects?ref=BB%2FL013738%2F1">http://gtr.rcuk.ac.uk/projects?ref=BB%2FL013738%2F1</a>
16. SUPRABIO (2010-14)	<b>Title:</b> Sustainable products from economic processing of biomass in highly integrated biorefineries <b>Crop:</b> <i>Salix</i> spp. <b>Website:</b> <a href="http://www.suprabio.eu/">http://www.suprabio.eu/</a>
17. BIOMOB (2011-13)	<b>Title:</b> Biomass mobilisation <b>Crops:</b> Biomass crops <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/92999_en.html">http://cordis.europa.eu/project/rcn/92999_en.html</a>
18. BIOAGROTEX (2008-12)	<b>Title:</b> Development of new agrotexiles from renewable resources and with a tailored biodegradability <b>Crops:</b> <i>Cannabis sativa</i> L., <i>Linum usitatissimum</i> L. <b>Website:</b> <a href="http://www.bioagrotex.eu">http://www.bioagrotex.eu</a> <a href="https://cordis.europa.eu/project/rcn/89311_en.html">https://cordis.europa.eu/project/rcn/89311_en.html</a>
19. SUSTOIL (2010-11)	<b>Title:</b> Developing advanced Biorefinery schemes for integration into existing oil production/transesterification plants <b>Crops:</b> <i>Brassica napus</i> L., <i>Helianthus annuus</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/87800_en.html">http://cordis.europa.eu/project/rcn/87800_en.html</a>
20. BIOCOMP (2005-8)	<b>Title:</b> New classes of engineering composite materials from renewable resources <b>Crops:</b> Fibre crops <b>Website:</b> <a href="http://cordis.europa.eu/result/rcn/50984_en.html">http://cordis.europa.eu/result/rcn/50984_en.html</a>
21. BIOTOP (2008-10)	<b>Title:</b> Biofuels assessment on technical opportunities and research needs for Latin America <b>Crops:</b> Oil & lignocellulosic crops <b>Website:</b> <a href="http://www.wip-munich.de/en/component/content/article/99-projects/96-biotop.html">http://www.wip-munich.de/en/component/content/article/99-projects/96-biotop.html</a> & <a href="https://cordis.europa.eu/project/rcn/86248_en.html">https://cordis.europa.eu/project/rcn/86248_en.html</a>
22. EPOBIO (2005-7)	<b>Title:</b> Realising the economic potential of sustainable resources - bioproducts from non-food crops <b>Crops:</b> <i>Brassica napus</i> L., <i>Crambe abyssinica</i> L. <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/78614_en.html">https://cordis.europa.eu/project/rcn/78614_en.html</a>



<b>23.TOSSI (2006-8)</b>	<b>Title:</b> Towards sustainable sugar industry in Europe <b>Crops:</b> <i>Beta vulgaris</i> L. <b>Website:</b> <a href="http://www.ekohempkon.iwnirz.pl/">http://www.ekohempkon.iwnirz.pl/</a> <a href="http://cordis.europa.eu/result/rcn/87775_en.html">http://cordis.europa.eu/result/rcn/87775_en.html</a>
<b>24.CANEBIOFUEL (2009-11)</b>	<b>Title:</b> Conversion of sugarcane biomass into ethanol <b>Crop:</b> <i>Saccharum spp.</i> <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/90103_en.html">http://cordis.europa.eu/project/rcn/90103_en.html</a>
<b>25.CARMINA (1998-2001)</b>	<b>Title:</b> Calendula as agronomic raw material for industrial applications <b>Crops:</b> <i>Calendula officinaris</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/48152_en.html">http://cordis.europa.eu/project/rcn/48152_en.html</a>
<b>26.AIR32480 (1995-97)</b>	<b>Title:</b> Crambe abyssinica, a comprehensive programme - 1995-1997- AIR32480 <b>Crops:</b> <i>Crambe abyssinica</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/29537_en.html">http://cordis.europa.eu/project/rcn/29537_en.html</a>
<b>27.BIOELECTRICITY CROPS (2006)</b>	<b>Title:</b> BIOELECTRICITY CROPS -Big scale demonstration of energy crops utilisation for bioelectricity generation - 2006-2015 -13421 <b>Crops:</b> <i>Brassica carinata</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/86908_en.html">http://cordis.europa.eu/project/rcn/86908_en.html</a>
<b>28.CREFF (2008-11)</b>	<b>Title:</b> Cost reduction and efficiency improvement of Short Rotation Coppice Salix spp., <b>Crops:</b> <i>Populus spp.</i> <b>Website:</b> <a href="https://www.hs-rottenburg.net/fileadmin/user_upload/Forschung/Forschungsprojekte/Biomass/Era-Net/ERA-Net-Abschlussbericht.pdf">https://www.hs-rottenburg.net/fileadmin/user_upload/Forschung/Forschungsprojekte/Biomass/Era-Net/ERA-Net-Abschlussbericht.pdf</a>
<b>29.AIR (2018-20)</b>	<b>Title:</b> Aeroponic Inulin and Rubber <b>Crop:</b> <i>Taraxacum kok-saghyz</i> <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/209394_en.html">http://cordis.europa.eu/project/rcn/209394_en.html</a>
<b>30.TEXFLAX (2001-3)</b>	<b>Title:</b> Processing/ cultivation of short fibre flax for high value textile end uses <b>Crop:</b> <i>Linum usitatissimum</i> L. <b>Website:</b> <a href="http://www.dmu.ac.uk/research/research-faculties-and-institutes/art-design-humanities/team/projects/textflax.aspx">http://www.dmu.ac.uk/research/research-faculties-and-institutes/art-design-humanities/team/projects/textflax.aspx</a>
<b>31.DICRA (1999-2002)</b>	<b>Title:</b> Diversification with crambe; an industrial oil crop - 1999-2002 - FAIR984333 <b>Crop:</b> <i>Crambe abyssinica</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/48250_en.html">http://cordis.europa.eu/project/rcn/48250_en.html</a>
<b>32.GEIE-Euroricin (1992-96)</b>	<b>Title:</b> Covering European needs of castor oil using community grain <b>Crop:</b> <i>Ricinus communis</i> L. <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/16529_en.html">https://cordis.europa.eu/project/rcn/16529_en.html</a>
<b>33. FAIR984460 (1999-2000)</b>	<b>Title:</b> The development of Euphorbia lagascae as a new oil crop within the European Community <b>Crop:</b> <i>Euphorbia lagascae</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/48274_en.html">http://cordis.europa.eu/project/rcn/48274_en.html</a>
<b>34. QLK5-CT-2000-00111 (2001-4)</b>	<b>Title:</b> The interactive European network for industrial crops and their applications in the changing millennium <b>Crops:</b> Industrial Crops <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/58817_en.html">http://cordis.europa.eu/project/rcn/58817_en.html</a>
<b>35. BRST985500 (1999-2002)</b>	<b>Title:</b> Hemp as building material for energy efficient wooden houses <b>Crops:</b> <i>Cannabis sativa</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/47029_en.html">http://cordis.europa.eu/project/rcn/47029_en.html</a>
<b>36.EMAP (2011-14)</b>	<b>Title:</b> Edible, Medicinal and Aromatic Plants <b>Crops:</b> Medicinal crops <b>Website:</b> <a href="https://cordis.europa.eu/project/rcn/97347_en.html">https://cordis.europa.eu/project/rcn/97347_en.html</a> <a href="https://link.springer.com/article/10.1007%2Fs11240-012-0159-0">https://link.springer.com/article/10.1007%2Fs11240-012-0159-0</a>
<b>37. AIR32178 (1995-98)</b>	<b>Title:</b> Alternative oil-seed crops - Camelina sativa <b>Crop:</b> <i>Camelina sativa</i> L. <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/29498_en.html">http://cordis.europa.eu/project/rcn/29498_en.html</a>
<b>38. FAIR950260 (1996-99)</b>	<b>Title:</b> High quality oils, proteins and bioactive products for food and non-food purposes based on biorefining of cruciferous oilseed crops. <b>Crops:</b> Brassicaceae <b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/31217_en.html">http://cordis.europa.eu/project/rcn/31217_en.html</a>

<b>39.SIDATIM (2015-18)</b>	<p><b>Title:</b> Novel pathways of biomass production: assessing the potential of <i>Sida hermaphrodita</i> and valuable timber trees</p> <p><b>Crop:</b> <i>Sida hermaphrodita</i> L.</p> <p><b>Website:</b> <a href="http://projects.au.dk/facesurplus/research-projects-1st-call/sidatim/">http://projects.au.dk/facesurplus/research-projects-1st-call/sidatim/</a></p>
<b>40.AGRE0061 (1991-94)</b>	<p><b>Title:</b> The whole crop biorefinery project</p> <p><b>Crops:</b> <i>Brassica napus</i> L.</p> <p><b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/7638_en.html">http://cordis.europa.eu/project/rcn/7638_en.html</a></p>
<b>41.CANEBIOFUEL (2009-11)</b>	<p><b>Title:</b> Conversion of sugarcane biomass into ethanol</p> <p><b>Crop:</b> <i>Saccharum spontaneum</i></p> <p><b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/90103_en.html">http://cordis.europa.eu/project/rcn/90103_en.html</a></p>
<b>42.FORESTSPECS (2009-12)</b>	<p><b>Title:</b> Wood Bark and Peat Based Bioactive Compounds, Speciality Chemicals, and Remediation Materials: from Innovations to Applications</p> <p><b>Crops:</b> Woody species</p> <p><b>Website:</b> <a href="http://cordis.europa.eu/result/rcn/149969_en.html">http://cordis.europa.eu/result/rcn/149969_en.html</a></p>
<b>43.VOSFA (1994-97)</b>	<p><b>Title:</b> Vegetable oils with specific fatty acids</p> <p><b>Crops:</b> <i>Lesquerella fendleri</i>, <i>Euphorbia lagascae</i> L., <i>Calendula officinalis</i> L., <i>Lunaria annua</i> L.</p> <p><b>Website:</b> <a href="http://cordis.europa.eu/result/rcn/21152_en.html">http://cordis.europa.eu/result/rcn/21152_en.html</a></p>
<b>44. EN3B0040 (1986-89)</b>	<p><b>Title:</b> Improvement of plant type and biomass productivity to <i>Helianthus tuberosus</i> L.</p> <p><b>Crops:</b> <i>Helianthus tuberosus</i> L.</p> <p><b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/13104_en.html">http://cordis.europa.eu/project/rcn/13104_en.html</a></p>
<b>45. 814 ICT-COST (1991-96)</b>	<p><b>Title:</b> Crop development for cool and wet regions of Europe</p> <p><b>Crops:</b> <i>Phalaris arundinaceae</i> L., <i>Miscanthus x giganteus</i>, <i>Cannabis sativa</i> L.</p> <p><b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/20079_en.html">http://cordis.europa.eu/project/rcn/20079_en.html</a></p>
<b>46.SONCA (1991-5)</b>	<p><b>Title:</b> Seed oils for new chemical applications</p> <p><b>Crops:</b> <i>Euphorbia lagascae</i> L., <i>Cuphea viscosissima</i>, <i>Helianthus annuus</i> L.</p> <p><b>Website:</b> <a href="http://cordis.europa.eu/project/rcn/2831_en.html">http://cordis.europa.eu/project/rcn/2831_en.html</a></p>

## 2 Existing databases and/or inventories

The **existing databases and/or inventories** that will be used are those that have been developed in the projects: **IENICA** (Table 2: 90 crops; no available online), **4FCROPS** (Table 3: 15 crops; [www.cres.gr/4fcrops](http://www.cres.gr/4fcrops)), **Crops2Industry** (Table 4: 34 crops; [www.cres.gr/crops2](http://www.cres.gr/crops2)), **FIBRA** (switchgrass, giant reed, miscanthus, industrial hemp, kenaf, flax; [www.fibrafp7.net](http://www.fibrafp7.net)) and **S2BIOM** (9 crops: switchgrass, giant reed, miscanthus, willow, poplar, eucalyptus, reed canary grass, cardoon and sorghum; [www.s2biom.eu](http://www.s2biom.eu)).

**Table 2: List of the *industrial crops* in the IENICA data-base**

	Common name	Latin name	Family	Origin	Category
1	Abyssinian mustard or crambe	<i>Crambe abyssinica</i>	Brassicaceae	native in the Mediterranean area	Oilseed
2	Amaranth	<i>Amaranthus retroflexus</i> L.	Amaranthaceae	native to the tropic Americas	Specialty
3	Artemisia (or Mugworts)	<i>Artemisia vulgaris</i> L.	Asteraceae	native to temperate Europe	Herbaceous perennial plant
4	Bluebur	<i>Lappula squarrosa</i>	Boraginaceae	native to Europe	Specialty
5	Bog-myrtle	<i>Myrtica gale</i> L.	Myricaceae	native to northern and western Europe	Specialty
6	Calendula	<i>Calendula officinalis</i> L.	Asteraceae	native to southern Europe	Specialty
7	Canary grass	<i>Phalaris canariensis</i> L.	Poaceae	native in the Mediterranean area	Lignocellulosic
8	Caraway	<i>Carum cavri</i> L.	Apiaceae	native in Europe	Specialty
9	Caper spurge	<i>Euphorbia lathyris</i> L.	Euphorbiaceae	native in south Europe	Specialty
10	Cardoon	<i>Cynara cardunculus</i> L.	Asteraceae	native in the Mediterranean area (perennial)	Lignocellulosic (& multipurpose)
11	Castor	<i>Ricinus communis</i> L.	Euphorbiaceae	native in the Mediterranean area (annual or perennial)	Oilseed crop
12	Catmint	<i>Nepela racemose</i>	Lamiaceae	Native of Turkey and Iran (perennial)	Specialty
13	Chamomile	<i>Matricaria chamomilla</i> L.	Asteraceae	All over Europe (annual)	Specialty
14	Chicory	<i>Cichorium intybus</i> L.	Asteraceae	Native in Europe	Specialty
15	Clary sage	<i>Salvia sclarea</i> L.	Lamiaceae	Native of north of Mediterranean (biennial or perennial)	Specialty
16	Comfrey	<i>Symphytum officinale</i> L.	Boraginaceae	Native of Europe	Specialty
17	Common	<i>Antirrhinum majus</i> L.	Plataginaceae	Native of Europe	Specialty

snapdragon		(annual or biennial)			
18	Coriander	<i>Coriandrum sativum</i> L.	Apiaceae	Native of southern Europe	Specialty
19	Cuphea	<i>Cuphea viscosissima</i>	Lythraceae	Native of USA	Oilseed
20	Dill	<i>Anethum graveolens</i> L.	Apiaceae	Native of the Mediterranean region	Specialty
21	Echinacea	<i>Echinacea purpurea</i>	Astereaceae	Native of north America	Specialty
22	Echium	<i>Echium vulgare</i> L.	Boraginaceae	Native of most Europe	Specialty
23	Elder	<i>Sambucus nigra</i> L.	Adoxaceae	Native of most Europe	Specialty
24	Eruca	<i>Eruca sativa</i>	Brassicaceae	Native of the Mediterranean region	Specialty
25	Evening primrose	<i>Oenothera biennis</i> L.	Onagraceae	Native of USA	Specialty
26	Ethiopian mustard	<i>Brassica carinata</i>	Brassicaceae	Native of Africa	Oilseed
27	Feverfew	<i>Tanacetum parthenium</i> L.	Astereaceae	Can be found in Europe	Specialty
28	Fennel	<i>Foeniculum vulgare</i>	Apiaceae	Native of the Mediterranean	Specialty
29	Fenugreek	<i>Trigonella foenum-graecum</i> L.	Fabaceae	Native of Mediterranean region	Specialty
30	Field scabious	<i>Knautia arvensis</i> L.	Caprifoliaceae	Can be found throughout Europe	Specialty
31	Flax	<i>Linum usitatissimum</i> L.	Linaceae	Can be cultivated throughout Europe	Oilseed and/or fiber crop
32	Foxglove	<i>Digitalis purpurea</i> L.	Plantaginaceae	Native of temperate regions of Europe	Specialty
33	Giant reed	<i>Arundo donax</i> L.	Poaceae	Native of Mediterranean region	Lignocellulosic
34	Gold of pleasure	<i>Camelina sativa</i> L.	Brassicaceae	Can be found throughout Europe	Oilseed
35	Hawksbeard	<i>Crepis alpina</i> L.	Asteraceae	Can be found in the Mediterranean region	Specialty
36	Hemp	<i>Cannabis sativa</i> L.	Cannabinaceae	It can be cultivated throughout Europe	Lignocellulosic and multipurpose
37	Henna	<i>Lawsonia inermis</i> L.	Lythraceae	Native of northern Africa (tree)	Specialty
38	Herbane	<i>Hyoscyamus niger</i> L.	Solanaceae	Originated from Eurasia	Specialty
39	Honesty	<i>Lunaria annua</i> L.	Brassicaceae	Native of the Balkans	Oilseed
40	Ironweed	<i>Vernonia</i> spp.	Asteraceae	Africa, Asia, America	Oilseed
41	Jasmine	<i>Jasminum officinale</i> L.	Oleaceae	Mediterranean region	Specialty
42	Jerusalem artichoke	<i>Helianthus tuberosus</i> L.	Asteraceae	Native of Americas	Specialty
43	Jojoba	<i>Simmondsia chinensis</i>	Simmondsiaceae	Native of north	Specialty

			e	America	
44	Kenaf	<i>Hibiscus cannabinus</i> L.	Malvaceae	Can be cultivated in the south Europe	Lignocellulosic (Fiber)
45	Lallemantia	<i>Lallemantia iberica</i> L.	Lamiaceae	Southeastern Europe	Specialty
46	Lavender	<i>Lavandula angustifolia</i> L.	Lamiaceae	Native of the Mediterranean region	Specialty
47	Lesquerella	<i>Physaria fendleri</i>	Brassicaceae	Originate from usa; can be cultivated in Europe	Oilseed
48	Lupin	<i>Lupinus alpus</i> L.	Fabaceae	Cultivated in the Mediterranean region	Carbohydrate
49	Madder	<i>Rubia tinctorum</i> L.	Rubiaceae	Can be found in south Europe	Specialty
50	Maize	<i>Zea mays</i> L.	Poaceae	Cultivated in south Europe	Carbohydrate
51	Marigold	<i>Tagetes</i> spp.	Asteraceae	Native of north and south America	Oilseed
52	Marsh grass	<i>Spartina anglica</i>	Poaceae	Originated from Britain	Lignocellulosic (perennial grass)
53	Meadowfoam	<i>Limnanthes alba</i>	Limnanthaceae	Native of USA	Oilseed
54	Milk thistle	<i>Silybum marianum</i> L.	Asteraceae	Native of south Europe	Lignocellulosic (&oilseed)
55	Milkweed	<i>Asclepias</i> spp.	Asclepiadaceae	Native of Americas	Specialty
56	Miscanthus	<i>Miscanthus</i> spp.	Poaceae	Origin from Asia, can be cultivated in Europe	Lignocellulosic (perennial grass)
57	Mugwort	<i>Artemisia</i> spp.	Asteraceae	Some species are native to Europe	Specialty
58	Myrtle	<i>Myrtus communis</i> L.	Myrtaceae	It can be found in South Europe	Specialty
59	Nasturtium	<i>Tropaeolum majus</i> L.	Tropaeolaceae	Originated from South America	Specialty
60	Neem	<i>Melia azedarach</i> L.	Meliaceae	Native of India	Lignocellulosic (woody crop)
61	Nettle	<i>Urtica dioica</i> L.	Utricaceae	Native of Europe	Lignocellulosic (Fiber crop)
62	Oats	<i>Avena sativa</i> L.	Poaceae	Cultivated throughout Europe	Carbohydrate
63	Rapeseed	<i>Brassica napus</i> L.	Brassicaceae	Cultivated widely in Europe	Oilseed
64	Peppermint	<i>Mentha spicata</i> L.	Lamiaceae	Native of Europe	Specialty
65	Poppy	<i>Papaver somniferum</i> L.	Papaveraceae	Native of Mediterranean region	Specialty
66	Potato	<i>Solanum tuberosum</i> L.	Solanaceae	Native of USA (cultivated widely in EU)	Carbohydrate
67	Quinoa	<i>Chenopodium quinoa</i>	Amaranthaceae	Has been cultivated in many EU countries	Oilseed

Deliverable 1.2

Title: Inventory of the data sources



68	Rain daisy	<i>Dimorphotheca pluvialis</i> L.	Asteraceae	Native of South Africa	Oilseed
69	Ramie	<i>Boehmeria nivea</i> L.	Utricaceae	Originated from China	Lignocellulosic (fiber crop)
70	Reed canary grass	<i>Phalaris arundinaceae</i> L.	Poaceae	It has been distributed in Europe	Lignocellulosic (perennial grass)
71	Rocket	<i>Eruca sativa</i>	Brassicaceae	Native to the Mediterranean region	Specialty
72	Rose	<i>Rosa</i> spp.	Rosaceae	Throughout Europe	Specialty
73	Safflower	<i>Carthamus dictorius</i> L.	Asteraceae	Can be cultivated in south and central Europe	Oilseed
74	Sage	<i>Salvia officinalis</i> L.	Lamiaceae	Native of the Mediterranean region	Specialty
75	Sea buckthorn	<i>Hippophae rhamnoides</i> L.	Elaeagnaceae	Native of Europe	Specialty
76	Sesbania	<i>Sesbania</i> spp.	Fabaceae	Around 60 species worldwide	Specialty
77	Scutellaria	<i>Scutellaria albida</i>	Lamiaceae	In most temperate regions worldwide	Specialty
78	Sisal	<i>Agave sisalana</i>	Asparagaceae	Native of Mexico	Lignocellulosic (fiber crop)
79	Sugar beets	<i>Beta vulgaris</i> L.	Amaranthaceae	Cultivated in Mediterranean	Carbohydrate
80	Sunflower	<i>Helianthus annus</i> L.	Asteraceae	Cultivated in Mediterranean	Oilseed
81	Switchgrass	<i>Panicum virgatum</i> L.	Poaceae	It can be cultivated in the whole EU.	Lignocellulosic (perennial grass)
82	Thyme	<i>Thymus vulgaris</i> L.	Lamiaceae	Native of South Europe	Specialty
83	Turnip	<i>Turnip rapa</i> L.	Brassicaceae	Temperate climates	Specialty
84	Valerian	<i>Valeriana officinalis</i> L.	Caprifoliaceae	Native of Europe	Specialty
85	Viper's bugloss	<i>Echium vulgare</i> L.	Boraginaceae	Native of Europe	Specialty
86	Yellow weed	<i>Reseda luteola</i> L.	Resedaceae	Native of Eurasia	Specialty
87	Wild wheat	<i>Triticum spelta</i> L.	Poaceae	Cultivated in central Europe	Carbohydrate
88	Woad	<i>Isatis tindoria</i> L.	Brassicaceae	It can be found in Europe	Specialty
89	Yarrow	<i>Achillea millefolium</i> L.	Asteraceae	North of Europe	Specialty
90	Yew	<i>Taxus baccata</i> L.	Taxaceae	Native of central and south Europe	Specialty

**Table 3: List of the industrial crops (fibre and fuel) that had been studied in 4FCROPS project ([www.cres.gr/4fcrops](http://www.cres.gr/4fcrops))**

Crop type	Crops selected per climatic zone of Europe
<b>Oilseeds</b>	<b>Rapeseed</b> ( <i>Brassica napus</i> L. var. <i>oleifera</i> D.C.), for the climatic areas nemoral, continental, atlantic north and south <b>Sunflower</b> ( <i>Helianthus annuus</i> L.) for Mediterranean north <b>Ethiopian mustard</b> ( <i>Brassica carinata</i> A. Braun) for Mediterranean south
<b>Fiber</b>	<b>Hemp</b> ( <i>Cannabis sativa</i> L.) for Nemoral, Atlantic north, Lusitanian, Mediterranean south and north <b>Flax</b> ( <i>Linum usitatissimum</i> L.) for Continental, Atlantic central, Mediterranean north
<b>SRC</b>	<b>Poplar</b> ( <i>Populus</i> spp.) for Mediterranean north, Lusitanian, Atlantic central <b>Willow</b> ( <i>Salix humilis</i> Marsh.) for Nemoral, Atlantic north, Continental <b>Eucalyptus</b> ( <i>Eucalyptus</i> spp.) for Mediterranean south and north
<b>Lignocellulosic</b>	<b>Reed canary grass</b> ( <i>Phalaris arundinacea</i> L.) for Nemoral, continental and Atlantic north <b>Miscanthus</b> ( <i>Miscanthus x giganteus</i> Greef. et Deu. for all climatic zones of Europe <b>Switchgrass</b> ( <i>Panicum virgatum</i> L.) for all climatic zones of Europe <b>Giant reed</b> ( <i>Arundo donax</i> L.) for Mediterranean north and south <b>Cardoon</b> ( <i>Cynara cardunculus</i> L. var. <i>altilis</i> ) for Mediterranean north and south
<b>Sugar</b>	<b>Sweet Sorghum</b> ( <i>Sorghum bicolor</i> L. Moench) for Lusitanian, Mediterranean south and north <b>Sugar beet</b> ( <i>Beta vulgaris</i> L.) for Continental and Atlantic north

**Table 4: List of the industrial crops that had been studied in Crops2Industry project ([www.cres.gr/crops2](http://www.cres.gr/crops2))**

	Common name	Latin name	Family	Origin
<b>Oilseed crops</b>				
1	<b>Calendula</b>	<i>Calendula officinalis</i> L.	Asteraceae	native to southern Europe
2	<b>Caper spurge</b>	<i>Euphorbia lathyris</i> L.	Euphorbiaceae	native in south Europe (annual or biennial)
3	<b>Cardoon</b>	<i>Cynara cardunculus</i> L.	Asteraceae	native in the Mediterranean area (perennial)
4	<b>Castor</b>	<i>Ricinus communis</i> L.	Euphorbiaceae	native in the Mediterranean area (annual or perennial)
5	<b>Cotton seed</b>	<i>Gossypium</i> spp.	Malvaceae	Cultivated widely in south Europe
6	<b>Abyssinian mustard or crambe</b>	<i>Crambe abyssinica</i>	Brassicaceae	native in the Mediterranean area
7	<b>Cuphea</b>	<i>Cuphea viscosissima</i>	Lythraceae	Native of USA
8	<b>Ethiopian mustard</b>	<i>Brassica carinata</i>	Brassicaceae	Native of Africa
9	<b>Honesty</b>	<i>Lunaria annua</i> L.	Brassicaceae	Native of the Balkans
10	<b>Jatropha</b>	<i>Jatropha curcas</i> L.	Euphorbiaceae	Native to American tropics

11	<b>Flax</b>	<i>Linum usitatissimum</i> L.	Linaceae	Can be cultivated throughout Europe
12	<b>Rapeseed</b>	<i>Brassica napus</i> L.	Brassicaceae	Cultivated widely in Europe
13	<b>Safflower</b>	<i>Carthamus dictorius</i> L.	Asteraceae	Can be cultivated in south and central Europe
14	<b>Sunflower</b>	<i>Helianthus annus</i> L.	Asteraceae	Cultivated in Mediterranean
<b>Fiber crops</b>				
1	<b>Banana</b>	<i>Mussa spp</i> L.	Musaceae	Only in the most south parts of Europe
2	<b>Flax</b>	<i>Linum usitatissimum</i> L.	Linaceae	Can be cultivated throughout Europe
3	<b>Giant reed</b>	<i>Arundo donax</i> L.	Poaceae	Native of Mediterranean region
4	<b>Hemp</b>	<i>Cannabis sativa</i> L.	Cannabinaceae	It can be cultivated throughout Europe
5	<b>Kenaf</b>	<i>Hibiscus cannabinus</i> L.	Malvaceae	Can be cultivated in the south Europe
6	<b>Loofah</b>	<i>Loofah cylindrical</i>	Curcubitaceae	Very popular in China and Vietnam
7	<b>Miscanthus</b>	<i>Miscanthus spp.</i>	Poaceae	Origin from Asia, can be cultivated in Europe
8	<b>Nettle</b>	<i>Urtica dioica</i> L.	Urticaceae	Native of Europe
9	<b>Reed canary grass</b>	<i>Phalaris arundinaceae</i> L.	Poaceae	It has been distributed in Europe
10	<b>Yucca</b>	<i>Yucca gloriosa</i> L.	Asparagaceae	It can be found in Mediterranean region
<b>Carbohydrate crops</b>				
1	<b>Casava</b>	<i>Manihot spp</i> L.	Euphorbiaceae	
2	<b>Potato</b>	<i>Solanum tuberosum</i> L.	Solanaceae	Native of USA (cultivated widely in EU)
3	<b>Sugar beets</b>	<i>Beta vulgaris</i> L.	Amaranthaceae	Cultivated in Mediterranean
4	<b>Sweet sorghum</b>	<i>Sorghum bicolor</i> L.	Poaceae	Can be cultivated in south Europe
5	<b>Maize</b>	<i>Zea mays</i> L.	Poaceae	Cultivated in south Europe
<b>Specialty crops</b>				
1	<b>Calendula</b>	<i>Calendula officinalis</i> L.	Asteraceae	Native of S. Europe
2	<b>Echinacea</b>	<i>Echinacea purpurea</i>	Asteraceae	Native of N. America
3	<b>Lavender</b>	<i>Lavandula angustifolia</i> L.	Lamiaceae	Native of the Mediterranean region
4	<b>Peppermint</b>	<i>Mentha spicata</i> L.	Lamiaceae	Native of Europe
5	<b>Ribwort/plantain</b>	<i>Plantago lanceolata</i> L.	Plantaginaceae	Native of Eurasia



### 3 List of relevant articles

A **long list of articles** on industrial crops has been collected and studied. This list of the relevant articles will be included in the MAGIC-CROPS database and is being included in **D1.5** (Handbook with factsheets); 10-20 references per crop (for a total number of 38 industrial crops).

### 4 Other relevant sources

Other relevant sources for the MAGIC-CROPS database, apart from the ones listed above (projects, relevant databases, articles) are relevant reports/position papers that have been published on relevant platforms, organisations, associations that listed below:

- **Plants for the Future**; latest publications: <http://www.plantetp.org/about/latest-publications>
- **The Association for the Advancement of Industrial Crops (AAIC)**; resources: <http://www.aaic.org/resources.html>
- **Platform for Biofuels (ETBP)**; latest publications: <http://www.etipbioenergy.eu/value-chains/feedstocks/agriculture>
- **ERANET Bioenergy**; latest publications: <https://www.eranetbioenergy.net/publications>
- **Bioeconomy Knowledge Centre**; <https://biobs.jrc.ec.europa.eu/>
- **IEA Bioenergy Task 43** "Biomass Feedstocks for Energy Markets"; publications: <http://task43.ieabioenergy.com/iea-publications/>
- **Join Research Centre**; publications list: <https://ec.europa.eu/jrc/en/publications-list>
- **Common Agricultural Policy**; [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy\\_en](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy_en)
- **FAO** organisation; Climate, Biodiversity, Land and Water Department <http://www.fao.org/about/who-we-are/departments/climate-biodiversity-land-water/en/>
- **OECD**; Library: <https://www.oecd-ilibrary.org/>