

**GREEN POWER**  
**Feeds Your Engine**



## **2<sup>nd</sup> VegOil**

# **Demonstration of 2<sup>nd</sup> Generation Vegetable Oil Fuels in Advanced Engines**

## **Workpackage 6 Fuel Standard Development**

### **Deliverable N°6\_2: Proposal for a vegetable oil standard**

## **Public report**

Delft, 2011-12-20

prepared by:

NEN

John Deere, VWP, Waldland, FRCUMA

PO Box 5059

Tel.: +31-152690326 / Fax: +31-152690207

Email: [energy@nen.nl](mailto:energy@nen.nl) / Partner website: [www.nen.nl](http://www.nen.nl)

Project website: [www.2ndVegOil.eu](http://www.2ndVegOil.eu)

*This publication has been produced with financial support of the European Commission in the frame of the FP7 Seventh Framework Programme under the grant agreement N° TREN/FP7EN/219004/"2ndVegOil".*

*The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Communities. The European Commission is not responsible for any use that may be made of the information contained therein.*



Under the 2ndVegOil project a CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2011-10-11, the constitution of which was supported by CEN following the public call for participation made on 2011-01-27.

The Secretariat of Workshop 56, is held by the Netherlands Standardization Institute (NEN). A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN-CENELEC Management Centre. These organizations were drawn from the following organizations:

ACRO-KHLim, Belgium	MatureDevelopment., the Netherlands
Bearth Energy Solutions, the Netherlands	VZW Zonnewindt / PPO.Be, Belgium
EPPOA, France	Solaroilsystems, the Netherlands
FR Cuma Rhône-Alpes, France	VWP, Germany
IESPM, France	Waldland, Austria
John Deere, Germany	

The final internal review round for this CWA was started on 22 September 2010 (first phase) and on 18 January 2011 (second phase) and was successfully closed on 22 June 2011. The final draft was submitted to public enquiry on 30 June 2011 and the overall endorsement of the text being finalised on 11 October 2011. The final text of the CWA was submitted to CEN, after confirmation of consensus by all participants, for publication on 13 November 2011. The document was officially published on 21 December 2011 – a copy of its cover and table of contents is enclosed with this document. This means that the project has not only resulted in a proposal but already a fairly final oil specification.

The CEN Workshop Agreement specifies those properties of pure plant oil (PPO) that are at least necessary to achieve smooth deployment of this fuel in diesel engines with/without exhaust gas after-treatment, compatible for PPO combustion. In this document two pure plant oil fuel classes are defined. These are effectively tailored towards use in diesel engines without and diesel engines with exhaust gas after treatment (catalyst, filter). Both classes are intended for, but not limited to, use in heavy duty vehicles ). The specification is valid at the point of delivery.

Since experience for long term and failure free use of PPO compatible combustion engines is limited, the CWA is not yet a comprehensive specification, but more limited to specific properties. Only those properties that are seen as necessary for minimum quality requirements in the current technical discussion have been included. Any oil seeds can equally be used for the production of PPO, when the produced plant oil fulfils all individual requirements of the properties and limits mentioned in this workshop agreement.

This document lays down properties and values for the use of PPO at present deemed necessary, along with the test methods for these properties to be applied. Application of the in this document defined PPO for vegetable oil compatible combustion engines is only allowed





when warranties have been given accordingly from the engine or equipment manufacturer. Further properties can be included in later versions of this document as they become available from successful technical and analytical test results.

In CWA 16379:2011 all relevant characteristics, requirements and test methods are specified. These specifications are relevant for the driveability of the vehicles and are currently known to prevent harm to the vehicles and their powertrains. National adaptations of this document may choose differently based on local conditions and / or updated knowledge. Climate dependent requirements of this document may vary according to national situations.

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its members.

The CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. Enquiries can be made via [www.cencenelec.eu](http://www.cencenelec.eu) or via the Workshop Secretariat at [energy@nen.nl](mailto:energy@nen.nl).

With the cautionary notes as presented above, CWA 16379 can be used by economic operators and authorities if they wish so. Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN-CENELEC Management Centre. Within a period of three year, or earlier, based on indications from users or from the workshop participants, CEN will review the status and content of the CWA.

