ISCC Technical Committee South America
6th meeting
Porto Alegre, September 10, 2014

ISCC, ISCC PLUS and Non GMO module –
Developments in South America

Dr Jan Henke
ISCC System GmbH
Weissenburgstr. 53
D-50670 Köln
www.iscc-system.org
e-mail: info@iscc-system.org
ISCC offers solutions for different markets

**Energy**
- Biofuels
- Bioliquids
- (Solid biomass)

**Waste & Residues**
- UCO
- Animal fat
- Spent bleaching earth
- Palm sludge oil
- …

**Food**
- Cereals
- Sugar
- Vegetable oils (canola / rape, soy, palm)
- Potatoes
- …

**Feed**
- Canola / rape meal
- Soy meal
- DDGS
- …

**Chemicals**
- Sugar
- Vegetable oils
- Starch
- Cellulose
- …

- ISCC EU
- ISCC DE
- ISCC PLUS

- ISCC EU (with Guidance Waste & Residues)
- ISCC DE 36th BlmSchV
- ISCC PLUS

- ISCC PLUS
- ISCC PLUS
- ISCC PLUS
Distribution of the 74 currently valid certificates in South America. Argentina and Brazil are leading

* Numbers as of September 01, 2014
Numbers of ISCC certificates per ISCC System*

74 certificates are currently valid

* Numbers as of September 01, 2014
Each certificate may be valid for more than one type of operation
Types of operations certified in Brazil*

* Numbers as of September 01, 2014
Each certificate may be valid for more than one type of operation
Types of operations certified in Argentina*

* Numbers as of September 01, 2014
Each certificate may be valid for more than one type of operation
Types of operations certified in South America (without Argentina and Brazil)*

* Numbers as of September 01, 2014
Each certificate may be valid for more than one type of operation
NGOs and civil society are requesting sustainable biomass production not only for biofuels but all other applications

- Soil erosion & degradation
- Hazardous chemicals
- Rainforest destruction
- Hunger and malnutrition
- Poor working conditions

Source: WWF, March 2010 and May 2012
Leading companies have responded to public demand and developed company-specific or market-specific sustainability requirements.
The challenge: How can sustainability principles and criteria be applied in real supply chains – voluntary systems represent a balanced solution

<table>
<thead>
<tr>
<th>Voluntary</th>
<th>Mandatory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contractual agreement</strong></td>
<td><strong>Legal obligation</strong></td>
</tr>
<tr>
<td>- Sustainability requirements as supplement to contractual terms and conditions</td>
<td>- Sustainability requirements defined by law/regulation</td>
</tr>
<tr>
<td>- Compliance and verification quality subject for discussion</td>
<td>- Does normally only reflect minimum requirements as based on a political compromise</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voluntary certification system</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Sustainability requirements defined by an independent certification scheme</td>
<td>- Verification by an independent and accredited certification body</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost</th>
<th>Credibility</th>
<th>One level playing field</th>
<th>Impact and cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>😊</td>
<td>😊</td>
<td>😊</td>
<td>😊</td>
</tr>
<tr>
<td>😞</td>
<td>😞</td>
<td></td>
<td>😞</td>
</tr>
</tbody>
</table>

© ISCC System GmbH: For personal use only. Reproduction and distribution is prohibited.
**ISCC PLUS offers high standard of ISCC certification for food, feed and bioplastics – Add-ons provide customized solutions**

<table>
<thead>
<tr>
<th>ISCC PLUS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application</strong></td>
<td>All kinds of biomass for food, feed, bioplastics etc.</td>
</tr>
<tr>
<td><strong>Core requirements</strong></td>
<td>Compliance with high ISCC sustainability standard</td>
</tr>
<tr>
<td></td>
<td>• Sustainability criteria on farm level</td>
</tr>
<tr>
<td></td>
<td>• GHG emissions on farm level</td>
</tr>
<tr>
<td></td>
<td>• Chain of Custody requirements</td>
</tr>
<tr>
<td></td>
<td>• Quality management</td>
</tr>
<tr>
<td><strong>Voluntary Add-ons</strong></td>
<td>Customized solutions for companies</td>
</tr>
<tr>
<td></td>
<td>• Environmental management and biodiversity</td>
</tr>
<tr>
<td></td>
<td>• Classified chemicals</td>
</tr>
<tr>
<td></td>
<td>• GHG emission (downstream farm level)</td>
</tr>
<tr>
<td></td>
<td>• Consumables of a production process</td>
</tr>
<tr>
<td></td>
<td>• Non-GMO</td>
</tr>
</tbody>
</table>
ISCC PLUS provides a pragmatic tool set for sustainable bio-based material supply chains – utilizing an already certified supply infrastructure

- New system users can benefit from already ISCC certified raw material and supply chains
- For bio-based material only those parts of a supply chain which has not been ISCC certified, needs to prepare for an audit
- Certification process is straight forward with moderate costs in the order of 0.02% to 0.2% of the material value
ISCC PLUS supports and works closely with companies and initiatives to promote sustainability for food, feed and chemicals

• ISCC PLUS (including the add-ons environmental management and biodiversity and classified chemicals) is recognised as fully compliant with Unilever’s principles for sustainable agriculture

• ISCC is supporter of the Sustainable Agriculture Initiative, SAI.

• ISCC is a recommended scheme to prove compliance with the requirements of the Consumers Goods Forum

• ISCC is recognized by INRO – German Initiative for the Sustainable Supply of Raw Materials for the Industrial Use of Biomass.

• ISCC participates in the Green Deal – Initiative from Dutch authorities and chemical companies to implement sustainability criteria for biobased polymer products

• ISCC cooperates with idh – the sustainable trade initiative
85 ISCC PLUS certificates have been issued since March 2012

* Numbers as of September 01, 2014
European consumers, retailers and companies from the food, feed and bioplastics industry are increasingly asking for non GMO biomass

Non-GMO soybean oil announced by Cargill as consumer demand for non-toxic food skyrockets

Trading for non-GMO soybean meal soars in Europe
Grows from zero to 25% in one year: suppliers receiving requests from other regions

Europe’s growing appetite for meat products from animals fed non-GMO feed has created a rapid demand for non-GMO soybean meal. According to AgJournal, the current demand for non-GMO soybean meal has increased by nearly 25% of the European market. As a result, suppliers are seeing an influx of requests for non-GMO soybean meal from companies in other regions.

Non-GM lecithin supply struggling to keep up with demand

Global non-GMO market could reach $800bn by 2017; demand not unanimous

German Supermarket Giants Demand Return to GMO-Free Fed Poultry
Demand for non-GMO animal feed growing exponentially

Posted on Tue 2 Sep, 2014

By Ken Roseboro
Published: September 1, 2013
2013/14 Brazil, Argentina and Paraguay belonged to the most important producers of soy bean and soy meal for the European market

Total export of soy:
- 44.8 Mio. t soy bean
- 14.0 Mio. t soy meal
- 1.4 Mio. t soy oil
- 8.5 Mio. t soy bean
- 27.0 Mio. t soy meal
- 4.4 Mio. t soy oil
- 4.3 Mio. t soy bean

Total import of soy:
- 12.7 Mio. t soy bean
- 18.7 Mio. t soy meal

Source: Meo Carbon Solutions (2014) based on USDA Foreign Agricultural Service, July 2014
The price premium for non-GM soy meal from Brazil increased within the last two years.

Price soy meal non GM vs. GM
€/t

Source: EST (Effizient Soja Toasten)
The price premium for non-GM soy meal from Brazil increased within the last two years.
Some companies require the use of non-GM feed from the Danube region
Within the last six years, soy bean production in Europe was doubled. Main driver is the increased demand for non GMO soy bean

Source: FAO (2014); *data not including Russia
To help our customers proving compliance with these arising requirements for non-GMO material, ISCC is developing non GMO add-ons
Next step: ISCC PLUS add-ons for non GMO are currently in a public consultation phase. Stakeholders are invited to provide feedback

<table>
<thead>
<tr>
<th>ID</th>
<th>Add On</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISCC PLUS 205-03</td>
<td>Non GMO for food and feed</td>
</tr>
<tr>
<td>ISCC PLUS 205-04</td>
<td>Non GMO for technical markets</td>
</tr>
<tr>
<td>ISCC PLUS 205-05</td>
<td>Additional guidance for GMO / Non GMO material</td>
</tr>
</tbody>
</table>

- Documents for ISCC Public consultation on Non GMO add-on as well as all information needed for feedback are available at the ISCC homepage:
  
  www.iscc-system.org

- End of public consultation phase: 15.10.2014
Become part of the ISCC family. www.iscc-system.org