Ensuring Sustainability Compliance Throughout Global Supply Chains

Peter Smith

Manager, Supply Chain Sustainability

Cargill

Grain & Oilseed Supply Chain

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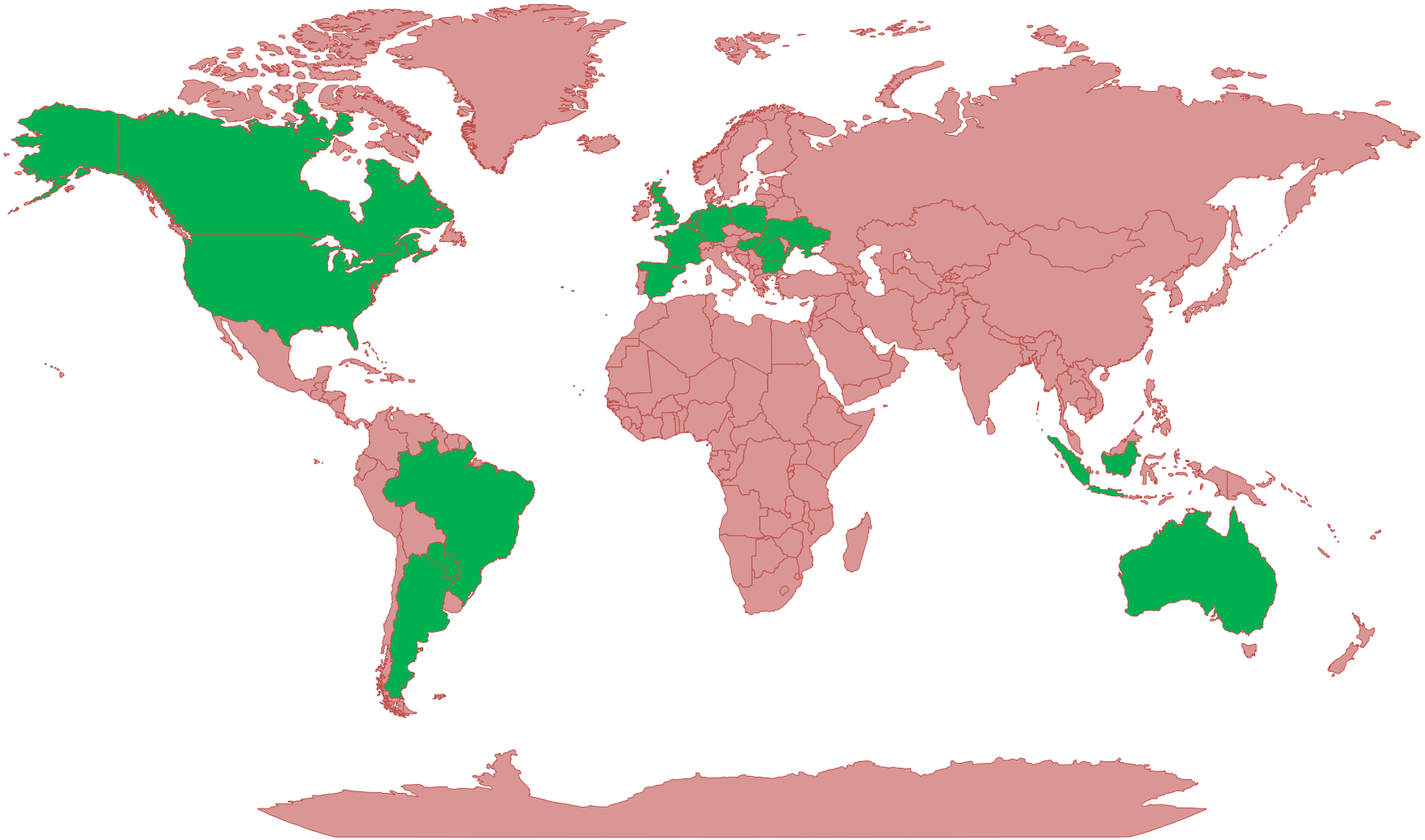
Pre - RED

- Member of RSPO
- Member of BonSucro
- Member of RTRS
- Member of Soya Moratorium

Post - RED

- 37 certificates of RED compliance
- Plants, Trading Offices, Supply Chains
- 18 countries
- Approx 2.5 million tonnes compliant feedstocks
- In-house sustainability programme for food & feed



Why such a global approach?

- EU can not provide all the raw materials for EU biofuels
- We need to find additional land, appropriate for agricultural production
- We need to become more productive on the land already used for agriculture

Whilst agricultural land demand is rising at the macro level, in some regional areas agriculture decreased through the 1990's, for example in Europe and the former Soviet Union.

This is significant as such agricultural land may be used for biofuel production without competing with food use, or causing displacement and indirect land-use change, even against a global backdrop of increased demand.

Extracted from:
The Gallagher Review
of the indirect effects of
biofuels production

Our certification guarantees

- No damaging land-use-change
  - No destruction of land with high carbon stocks (Including Wetlands and Peat Land)
  - No destruction of land with high biodiversity Value (Including primary forest)
- Minimum GHG savings
- Traceability (By Mass Balance chain of custody)
  - Every tonne of product delivered has a document trail leading back to the individual producing farmer

How many producing oil wells in the world?

Approximately 900,000

Source: Oil Industry Statistics, Gibson Consulting

This is less than ¼ of the total number of farmers

In Romania
Approximately 3.9 million

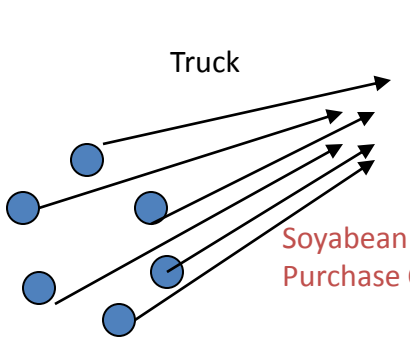
Source: Eurostat

Total farmer producers

- EU 14 million
- South America 21 million
- North America 2.3 million
- Australia 0.14 million

Complex Supply Chains

Typical Supply Chain



Truck

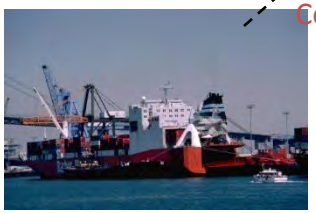
Soyabean Purchase Contract

Northern Brazil Farmers

Cargill Elevator

Barge

Delivery Note



Santerem Port

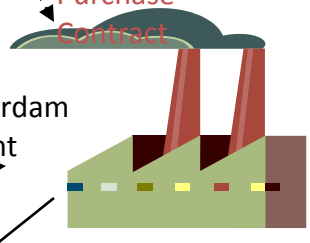
Sales Contract

Soyabean Purchase Contract

Soyabean Sales Contract

Cargill Geneva

Soyabean Purchase Contract



Cargill Amsterdam Crushing Plant

B/L

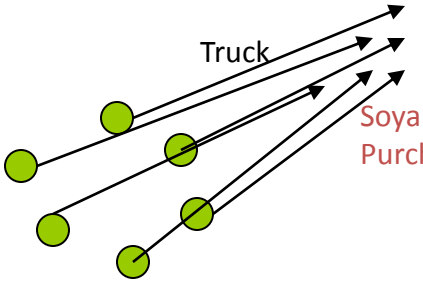
Barge

Soya Oil Sales Contract

Soya Oil Purchase Contract Delivery Note

Cargill Ghent Biodiesel

Ship



Truck

Soyabean Purchase Contract

Southern Brazil Farmers

Cargill Elevator

Rail

Delivery Note

Santos Port

Sales Contract

SME sales Contract RED Cert

Coaster

Fuel blender

GHG Data

- Grandfather clause expires April 2013
- No EC recognised GHG calculator (such as Biograce) available
- Lack of non-EU cultivated corn default value
- Delay in approval member states cultivation reports
- Differences amongst voluntary scheme guidelines & member states on GHG reporting approaches
  - For example, Bulgaria only calculates rape & sunflower, omitting wheat or corn. For wheat or corn ethanol, German implementation allows for the use of default values, but voluntary schemes such as ISCC EU do not.
    - We can deliver into German ethanol market under ISCC DE using defaults, but to deliver into other MS we need ISCC EU which requires us to provide disaggregated calculations.

Province	City	Port Termina	Transhipment point	VOL ##	VOL #	Moda	DISTANCE Elevator to Transhipment	DISTANCE Transhipment to Port	Biome	GHG
São Paulo	Birigui	TEAG - Guarujá	-	####	###	Truck	0	590	Brazilian Savana	35%
São Paulo	Colina	TEAG - Guarujá	-	####	###	Truck	0	495	Brazilian Savana	37%
São Paulo	Guaira	TEAG - Guarujá	-	####	###	Truck	0	540	Brazilian Savana	36%
São Paulo	Mairinque	TEAG - Guarujá	-	####	###	Truck	0	150	Atlantic forest	47%
São Paulo	Guarujá	Guaruja	-	####	0	Truck	0	60	Atlantic forest	49%
Minas Gerais	Catalão	Guarujá	-	0	###	Truck	0	805	Brazilian Savana	29%
Minas Gerais	Chapada	Guarujá	-	0	###	Truck	0	870	Brazilian Savana	27%
Minas Gerais	Cristalina	Guarujá	-	0	###	Truck	0	990	Brazilian Savana	24%
Minas Gerais	Vianópolis	Guarujá	-	0	###	Truck	0	1050	Brazilian Savana	22%
Minas Gerais	Brasilia	Guarujá	-	0	###	Truck	0	1140	Brazilian Savana	20%
Minas Gerais	Conceição das Alagoas	Guarujá	-	####	0	Truck	0	580	Brazilian Savana	35%
Goias	Jataí Novo	T-39 Santos	-	0	387	Truck	0	989	Brazilian Savana	24%
Goias	Montividiu	T-39 Santos	-	0	793	Truck	0	1018	Brazilian Savana	23%
Goias	Água Boa	TEAG - Guarujá	-	####	###	Truck	0	1563	Brazilian Savana	9%
Goias	Alô Brasil	TEAG - Guarujá	-	0	###	Truck	0	1820	Brazilian Savana	2%
Goias	Bom Jesus - Bagel	TEAG - Guarujá	-	0	282	Truck	0	850	Brazilian Savana	28%
Goias	Canarana	TEAG - Guarujá	-	####	###	Truck	0	1641	Brazilian Savana	6%
Goias	Chapadão do Céu	TEAG - Guarujá	-	####	###	Truck	0	1037	Brazilian Savana	23%
Goias	Cruzeiro - Bagel	TEAG - Guarujá	-	0	###	Truck	0	890	Brazilian Savana	27%
Goias	Jataí Novo	TEAG - Guarujá	-	####	###	Truck	0	989	Brazilian Savana	24%
Goias	Montividiu - Ouro Verde	TEAG - Guarujá	-	0	###	Truck	0	1018	Brazilian Savana	23%
Goias	Rio Verde	TEAG - Guarujá	-	0	###	Truck	0	963	Brazilian Savana	25%
Goias	Santa Helena - União	TEAG - Guarujá	-	####	###	Truck	0	931	Brazilian Savana	26%
Goias	Vicentinópolis	TEAG - Guarujá	-	0	###	Truck	0	894	Brazilian Savana	27%
Goias	Rio Verde	TEAG - Guarujá	-	0	###	Truck	0	963	Brazilian Savana	25%
Goias	FOBS- Alto Araguaia	Guarujá	Alto Araguaia	####	0	Rail	150	1403	Brazilian Savana	42%
Goias	Alô Brasil	Guarujá	Alto Araguaia	0	###	Rail	940	1403	Brazilian Savana	20%
Goias	Canarana	Guarujá	Alto Araguaia	0	###	Rail	824	1403	Brazilian Savana	23%
Goias	Água Boa	TEAG - Guarujá	São Simão	####	###	River	1015	760	Brazilian Savana	21%
Goias	Alô Brasil	TEAG - Guarujá	São Simão	0	###	River	698	760	Brazilian Savana	30%
Goias	Canarana	TEAG - Guarujá	São Simão	####	###	River	1094	760	Brazilian Savana	19%

Unintended Consequences of Conformance with Voluntary Schemes

- Inefficient supply chains
  - Increased costs
  - Increased emissions

- Disincentive for farmers to join voluntary schemes
  - Burdensome annual audits
  - Forced to market their products at a time to satisfy mass balance time-limits, rather than at a time to satisfy their own requirements

Benefits & Costs

Obligated suppliers

- Over half of obligated suppliers consulted said the RTFO had no impact on expenses
- Others reported positive or negative impacts
- Employ between half and one full time person to administrate RTFO
- Verification costs typically in the range £10-20k

From "Impacts of RTFO on UK business": RFA presentation, January 2011

Farmers/Producers

- Implement the sustainability at farm level
- Incur the costs of doing so

Supply Chain

- Creates and administers Mass Balance
- Creates efficiencies to reduce costs and GHG emissions
- Assumes the financial risks of the obligated suppliers

Fair distribution of the costs & benefits

- Farmer/producers look for incentives to sign-up to voluntary compliance schemes
- EU biofuels consume less than 10% of global grains and oilseeds
- Farmer/producers have alternative markets
- Beneficiaries in the supply chain must also bear the costs
- A fair distribution of costs & benefits throughout the supply chain is the only way we will achieve 2020 targets


Thank You