



RFA monthly report - May/June 2008

1. Introduction

To encourage suppliers to source sustainable biofuels, the RFA requires fuel suppliers claiming Renewable Transport Fuel Certificates to submit monthly reports on the lifecycle greenhouse gas saving and the sustainability of the biofuels they supply.

We have published reporting guidance and developed a sustainability 'meta-standard' to help suppliers distinguish between the best and worst kind of biofuels. Existing feedstock standards, such as the Roundtable on Sustainable Palm Oil (RSPO), can be used to report. However, the range of standards available at present is limited, and none meet all of the criteria of the full RTFO meta-standard. It is intended that creating demand for sustainable feedstocks, will lead to further and better standards being developed.

Reporting is also seen by the Government as an essential 'stepping stone' towards a mandatory assurance scheme.

This Monthly Report provides information on the carbon and sustainability performance of renewable fuels supplied under the RTFO. The data is derived from the monthly reports on biofuels provided monthly by individual fuel suppliers. At the end of the reporting year fuel suppliers are required to provide an independent auditor's opinion on their information, and this verified information will be available in the RFA's annual report.

The carbon and sustainability data covers the *direct* impacts arising from biofuel cultivation that are potentially within the influence of companies sourcing or producing biofuels through effective supply chain management. The RFA will separately monitor the potential *indirect* impacts of biofuel production such as indirect land-use change or changes to food and other commodity prices that are beyond the control of individual suppliers (e.g. *The Gallagher Review of the indirect effects of biofuels production* which was published on 8 July 2008).

2. Content of this Monthly Report

The information in this Monthly Report includes:

- volumes of fuel by fuel type (e.g. biodiesel, bioethanol);
- volumes of fuel by source country (e.g. UK, Brazil);
- volumes of fuel by feedstock (e.g. used cooking oil, soy);
- volumes of fuel meeting sustainability standards;
- lifecycle greenhouse gas savings of fuels.

The information is provided in three sets of Excel sheets:

Graphs

Illustrates key data graphically and includes: volumes and proportions of fuel by fuel type, feedstock, and country of origin; data on the sustainability of the biofuels supplied; and percentage data capture for each category. The data is presented in both pie chart and bar chart formats.

Summary data

Provides four tables with summaries of all the road transport biofuel supplied to the UK for each fuel type, country of origin, feedstock, and previous land-use.

Detailed data

Table 5 provides more detailed data broken down by fuel type, feedstock, country of origin and previous land-use. So, for example, data is provided on the volumes of fuel and the C&S data of biodiesel obtained from oilseed rape grown in the UK on cropland, or bioethanol from Brazilian sugar cane, on cropland, and also meeting a Qualifying Standard.

The tables contain the last month's data and the graphs present data from the obligation year to date.

This data is based on information submitted monthly to the RFA by fuel suppliers, but the final audit of this data occurs annually (by 28 September each year in respect of the previous financial year's data). Revisions to the data may occur at any point up until that time. The RFA will publish a comprehensive end of year dataset using data that has been independently verified by 31 January 2010.

Each Monthly Report released by the RFA will contain one month's data on biofuels entering the UK market for those companies that are registered with the RFA. However, the exact timing of the month the data covers is different for major and minor fuel suppliers, due to the way they report data on volumes of fuel to HM Revenue and Customs (HMRC):

- Large fuel companies (typically predominately fossil fuel suppliers) report to HMRC on a 15th to 14th of the month basis.
- Smaller fuel companies (typically biofuel suppliers) report by calendar month or quarter.

This is reflected in RFA reporting as follows:

- Each Monthly Report contains:
 - o data reported by the major fuel suppliers, which report to HMRC on a 15th-14th of the month basis.
 - o data from the smaller fuel suppliers (typically biofuel suppliers) that report to HMRC on a calendar month basis.

Each Quarterly Report contains:

- o All of the above data, plus data from suppliers of relatively low volumes of road transport fuels (typically smaller biofuel suppliers) that report to HMRC on a quarterly basis.

Therefore, for this Monthly Report the tables contain data from 15 May - 14 June 2008 for large fuel companies, and 1–31 May 2008 for those smaller companies that report by calendar month; and the graphs contain data from 15 April - 14 June 2008 for large fuel companies and 15 April - 31 May for the smaller companies.

3. C&S reporting targets

The Government has set targets for three key aspects of the reporting scheme. The targets are not mandatory (and there is no penalty for failing to meet them), but illustrate the level of performance which the Government expects from fuel suppliers. The Government has said that the targets will be subject to review in the light of suppliers' performance and other developments.

<i>Annual Supplier Target</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>
<i>Percentage of feedstock meeting a Qualifying Environmental Standard</i>	30%	50%	80%
<i>Annual GHG saving of fuel supplied</i>	40%	45%	50%
<i>Data reporting of renewable fuel characteristics</i>	50%	70%	90%

The RFA expects, and Government targets recognise, the need for continuous improvement so that by 2010 comprehensive sustainability data is provided for almost all biofuels supplied to the UK. The RFA nevertheless expects companies to report to the best of their abilities from the start of the scheme.



Executive Summary

This is the Renewable Fuels Agency's (RFA) second monthly report on the supply of biofuels under the Renewable Transport Fuel Obligation (RTFO)*.

Biofuels accounted for 2.92% of UK road fuel, which brings the running total for the year to 2.53%. More biodiesel (78%) has been supplied than bioethanol (22%).

The majority of feedstock has been imported. The feedstock is known for 93% of biofuels, while both feedstock and country of origin are known for 76%. The most widely reported biodiesel feedstock was American soy (29%), and the most widely reported bioethanol feedstock was Brazilian sugarcane (78%).

In the second month, 29% of biofuels met environmental standards, compared to a target for the year of 30%. This brings the running total for the year to 24%.

Greenhouse gas savings of 46% were achieved, compared to a Government target of 40%, bringing the running total for the year to 44%. This figure, however, excludes the emissions from indirect changes in land-use considered in the recent 'Gallagher Review'

The RFA is pleased to be able to make this second set of data available. We will continue to publish information as soon as we are able, and will be reporting company performance figures in our October quarterly report.

The data comes from monthly reports submitted by fuel suppliers to the RFA. The RFA performs checks on the data, which is also subject to an annual verification process by auditors. The RFA will publish a final, fully verified dataset at the end of year.

*The tables contain the last month's data and the graphs present data from the obligation year to date. For this Monthly Report the tables contain data from 15 May - 14 June 2008 for large fuel companies, and 1–31 May 2008 for those smaller companies that report to HMRC by calendar month; and the graphs contain data from 15 April - 14 June 2008 for large fuel companies and 15 April - 31 May for the smaller companies.



Glossary

Obligated company

- An obligated company is one that supplies > 450 000 litres/ year of relevant hydrocarbon oil road transport fuel.
- Obligated suppliers must either:
 - supply biofuels; or
 - pay into a buy-out fund; or
 - purchase certificates from other companies supplying biofuels; or
 - a combination of any of the above.

Sustainability standards

- Sustainability assurance schemes are divided into Environmental and Social Standards and these are split into three levels:
 1. RTFO sustainable biofuel meta-standard (RTFO) - this is a higher standard than most existing sustainability standards and covers seven key environmental and social principles.
 2. Qualifying Standards (QS) - meet the majority of the environmental and/or social criteria defined under the RTFO meta-standard.
 3. Benchmarked Standards - these have been benchmarked against the RTFO meta-standard but do not meet sufficient criteria to be awarded QS status.
 4. None/unknown - for where the feedstock was not certified against a standard, or the data is unavailable.
 - Suppliers can report a Benchmarked or Qualifying Standard and conduct supplementary audits to meet a QS or the RTFO meta-standard, respectively.

- Suppliers producing biofuels from by-products have no or little control over how the source feedstocks were produced. Therefore, in recognition of the use of a waste for these biofuels they are automatically awarded a QS.

Previous land-use

- This is the use of the land on which the feedstock crop was grown prior to 30 Nov 2005. There are five categories:
 1. unknown
 2. cropland
 3. grassland - agricultural use
 4. grassland - non-agricultural use
 5. forestland
- By-products e.g. used cooking oil, tallow, do not require any additional land as these are waste products from other processes.
- The previous land-use affects greenhouse gas emissions due to release of carbon stored in the soil and plants when the land is cleared and ploughed up for biofuel crops.

Carbon Intensity

- Carbon intensity is a measure of the greenhouse gas (GHG) emissions of the fuel chain from 'well-to-wheel'.
- Different GHGs have different potencies (some have a greater contribution to global warming than others).
- To account for this, all GHGs are expressed in terms of their strength relative to carbon dioxide (CO_{2e}).

Greenhouse gas emissions

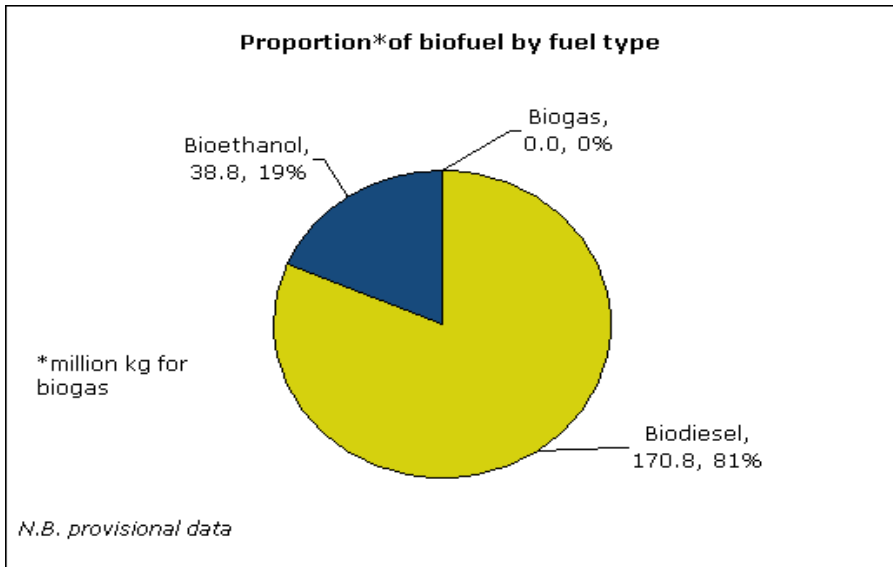
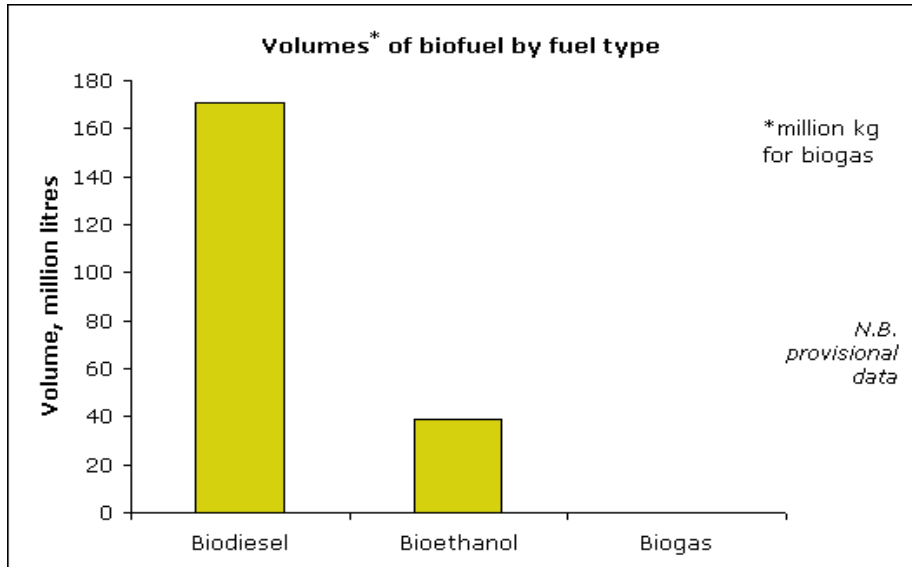
- Greenhouse gas (GHG) emissions of different biofuels can vary significantly depending on the system of cultivation, processing, and transportation of feedstock.
- The data collected takes into account GHG emissions of the fuel chain from the farm to the forecourt incorporating data on feedstock, country of origin and land-use change.
- GHG saving refers to the amount of GHGs that have not been emitted to the atmosphere due to replacing petrol and diesel with bioethanol and biodiesel, respectively.

Accuracy level

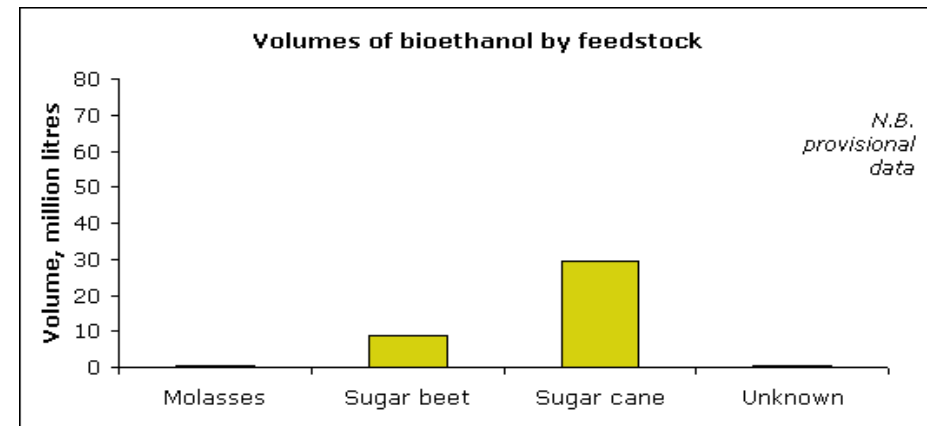
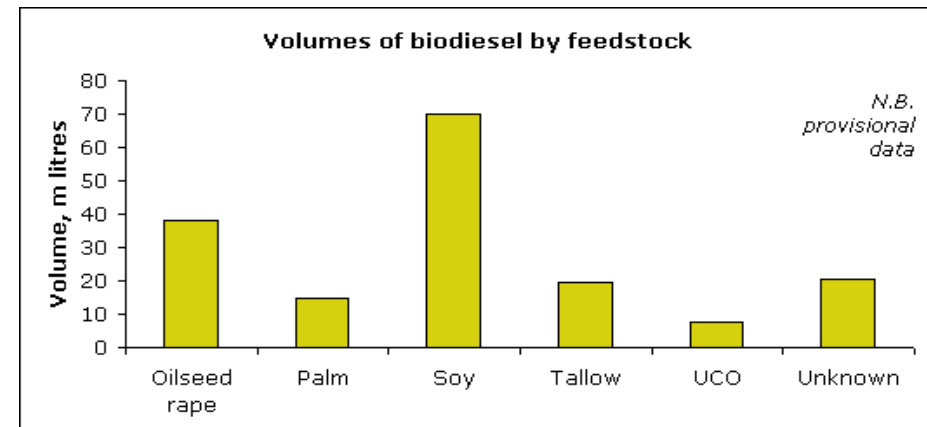
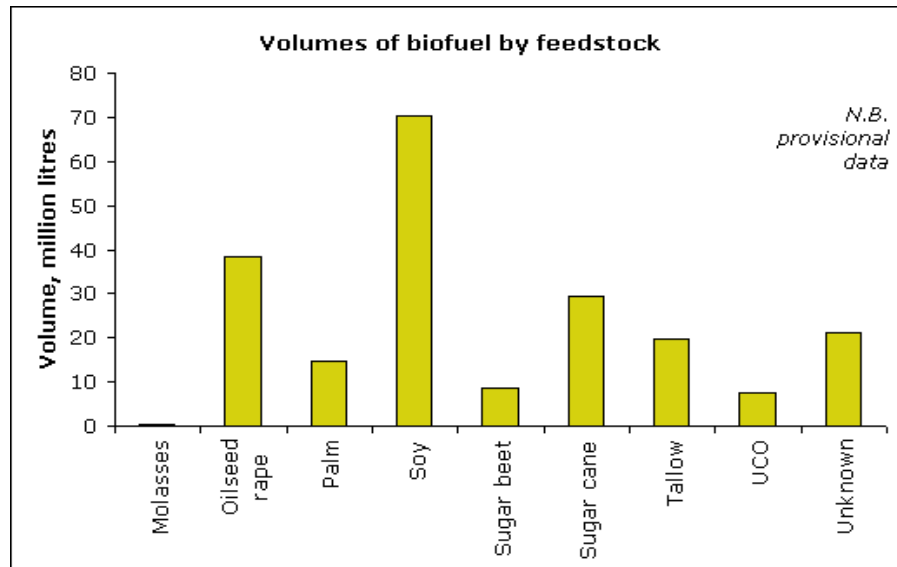
- Accuracy level is a measure of the amount of data provided by the supplier on a particular batch of biofuels.
 - This data is used for calculation of the greenhouse gas emissions of the fuel chain.
 - It ranges from 0 to 5 where 5 is the highest: -
- 0 - unknown feedstock or country of origin
 - 1 - known feedstock or country of origin
 - 2 - known feedstock AND country of origin
 - 3 - data input based on RFA-defined defaults
 - 4 - data input based on industry-defined defaults
 - 5 - 'real' data input to the fuel chain e.g. information on fertiliser inputs and crop yield of the source feedstock.

N.B. These graphs present data from the obligation year to date.

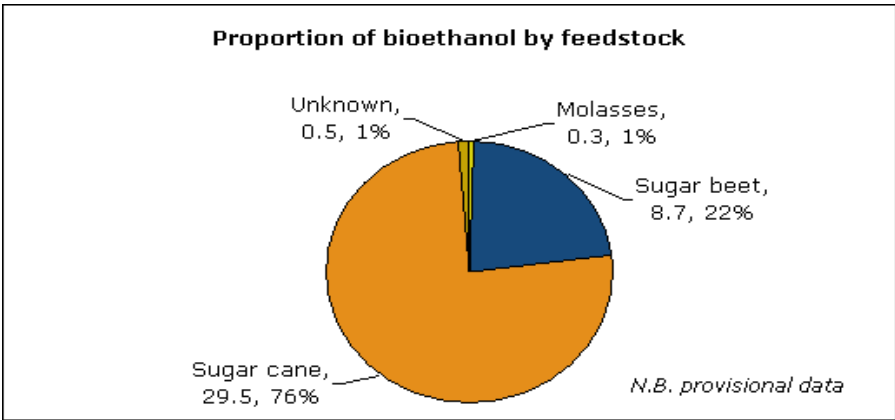
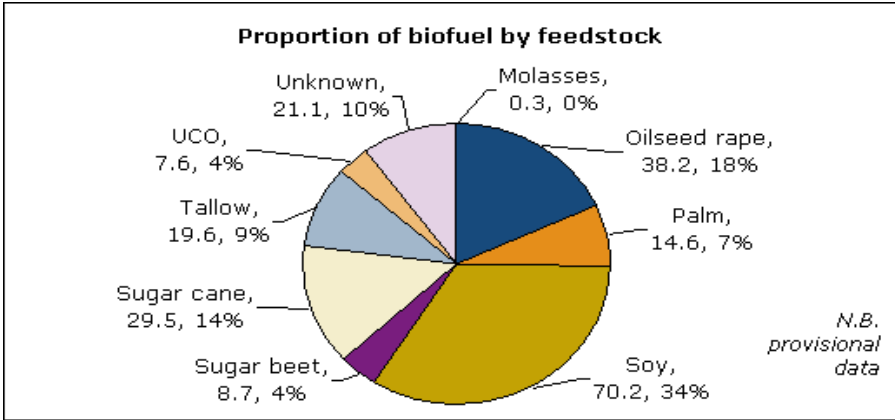
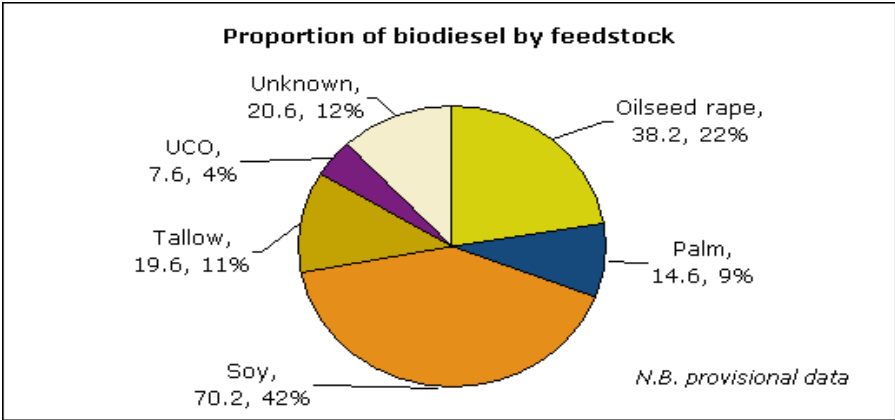
Volumes and proportions by fuel type



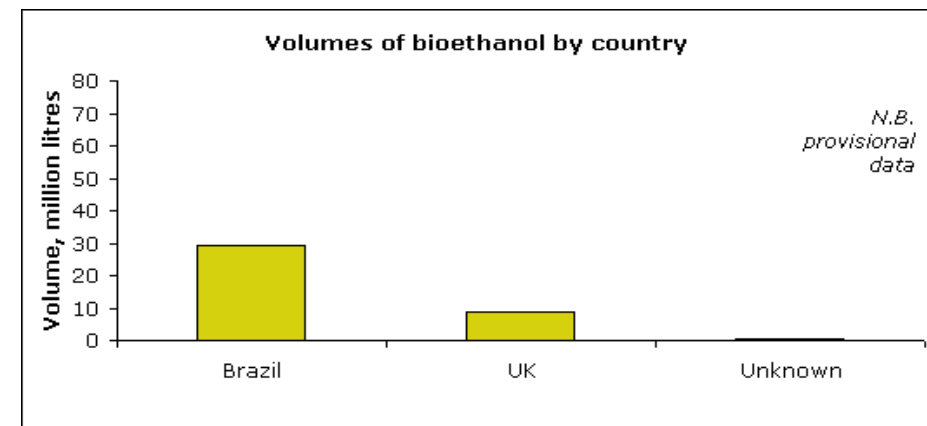
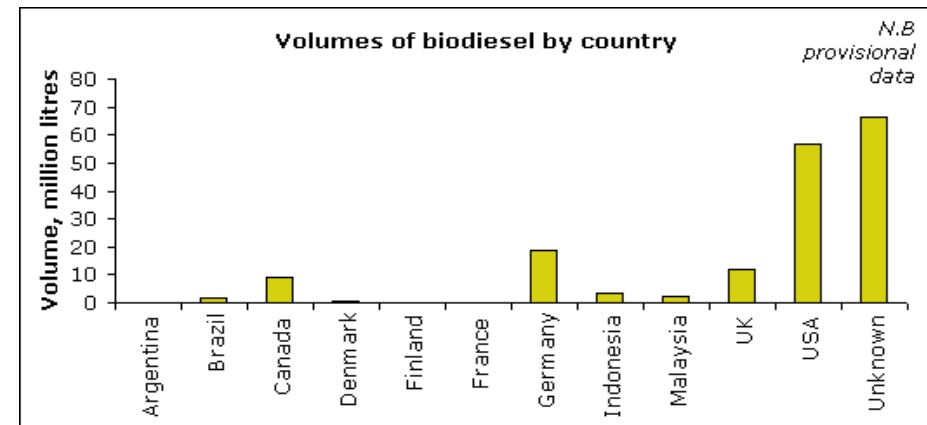
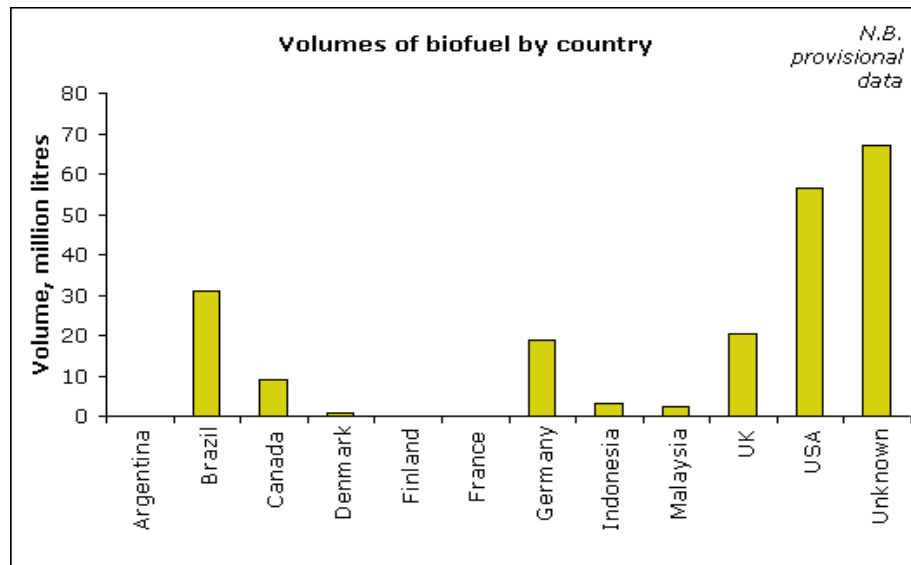
Volumes by feedstock



Proportions by feedstock

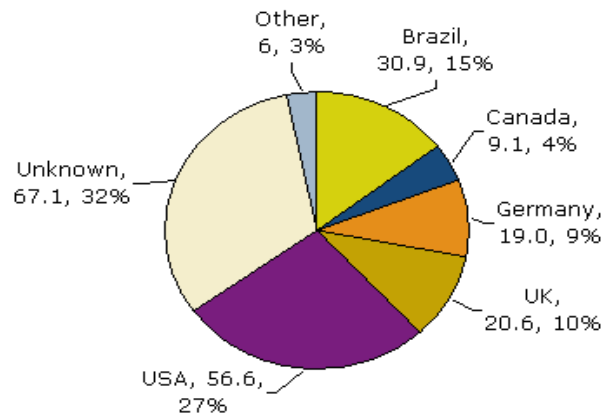


Volumes by country

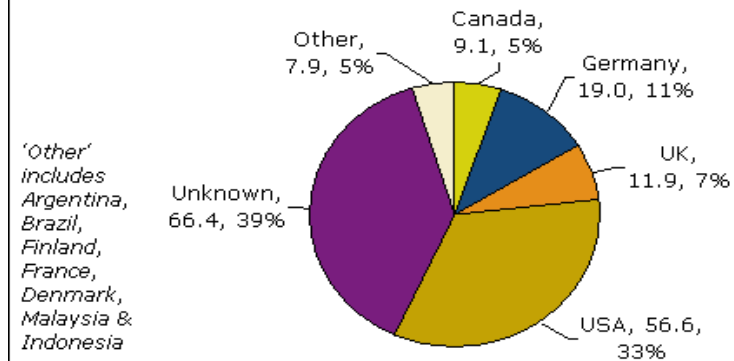


Proportions by country

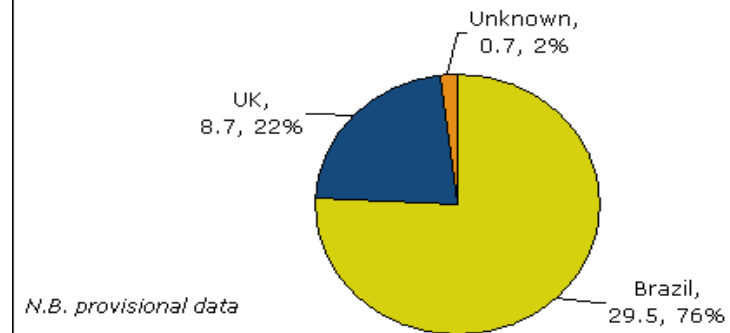
Proportion of biofuel by country



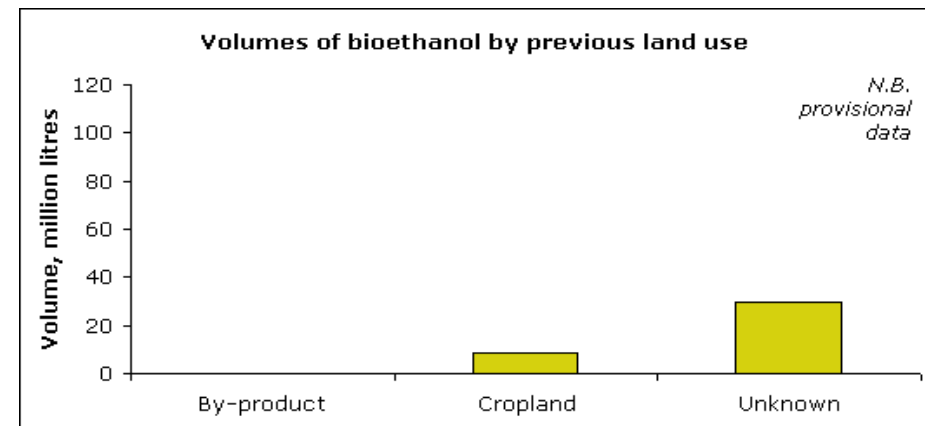
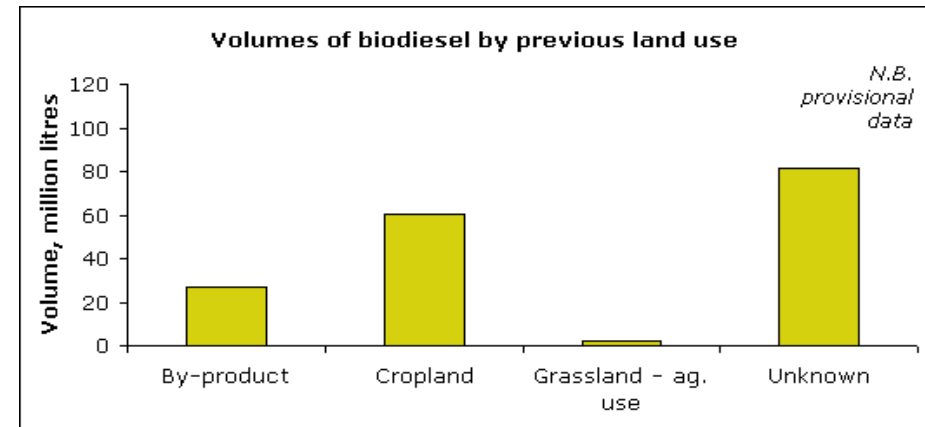
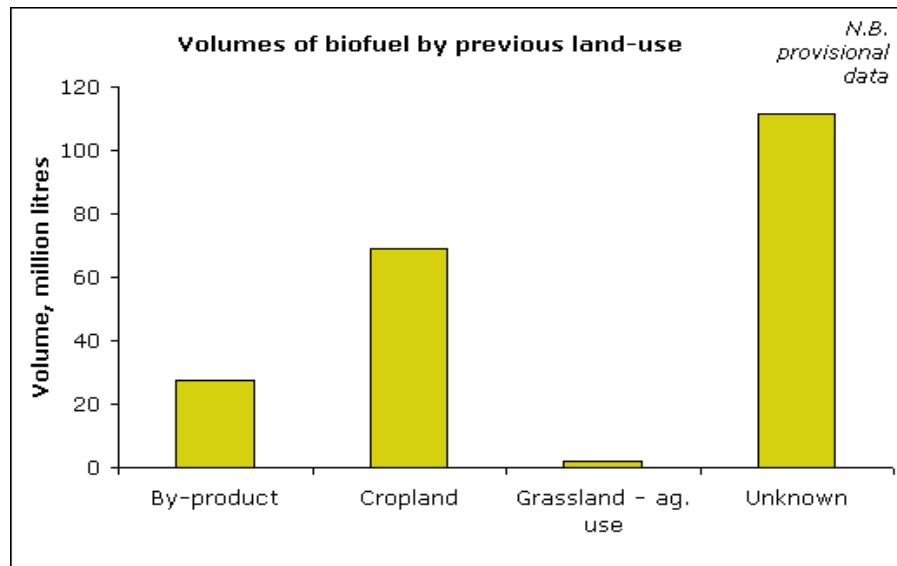
Proportion of biodiesel by country



Proportion of bioethanol by country

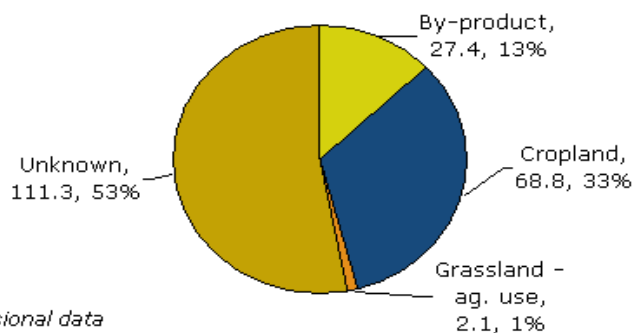


Volumes by previous land-use

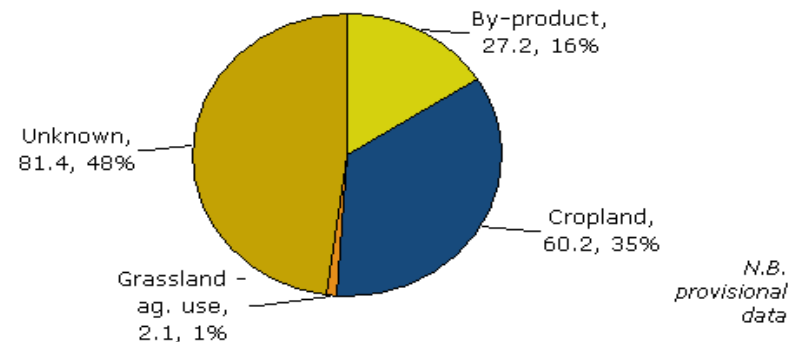


Proportions by previous land-use

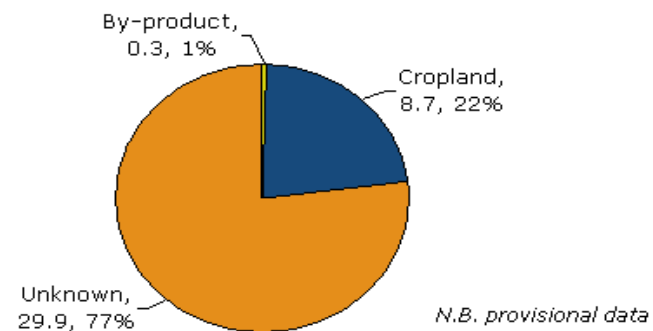
Proportion of biofuel by previous land-use



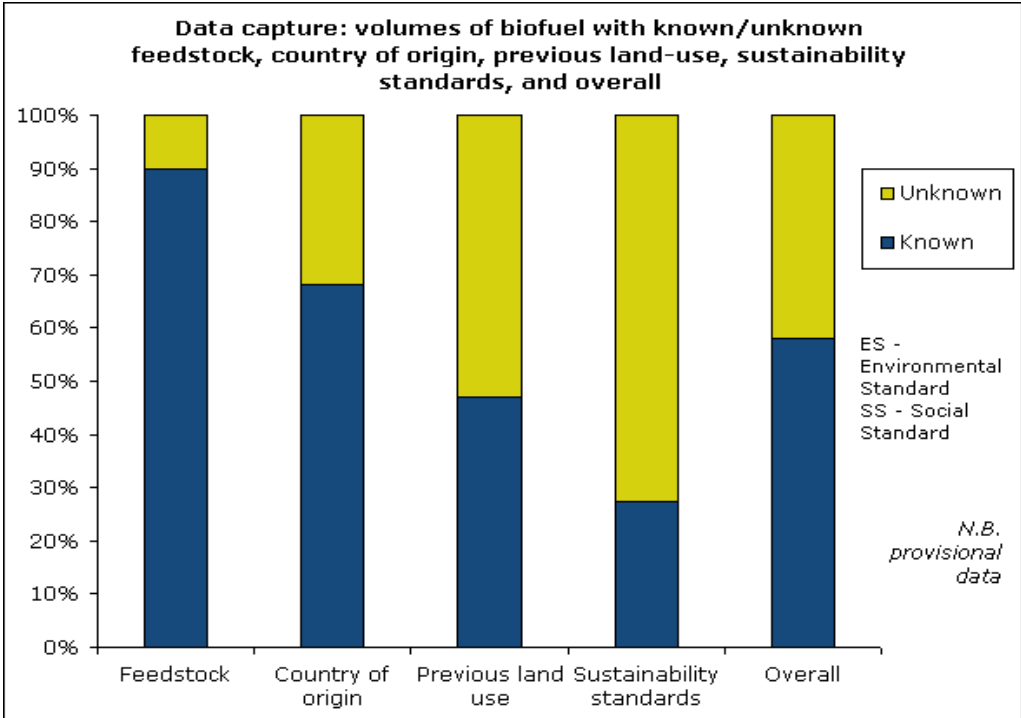
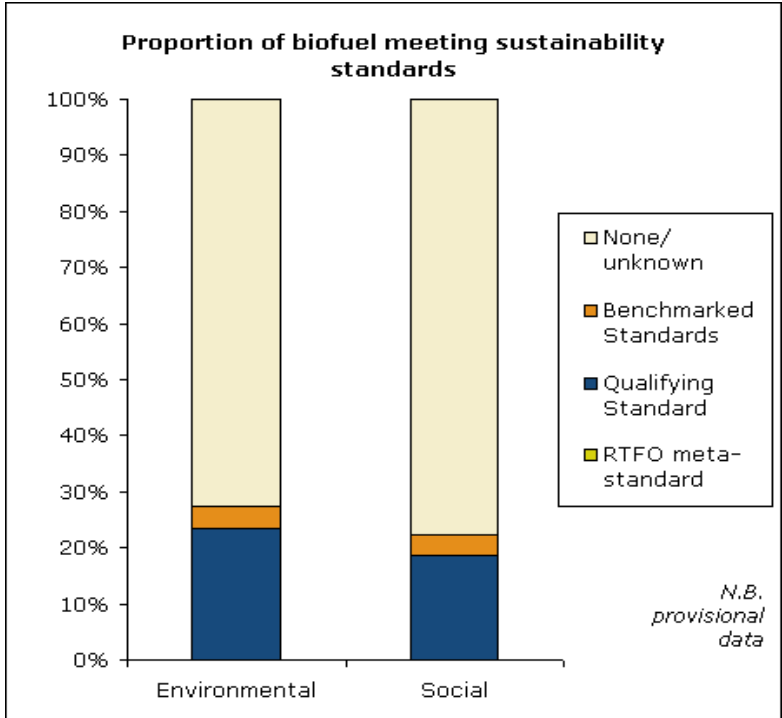
Proportion of biodiesel by previous land use

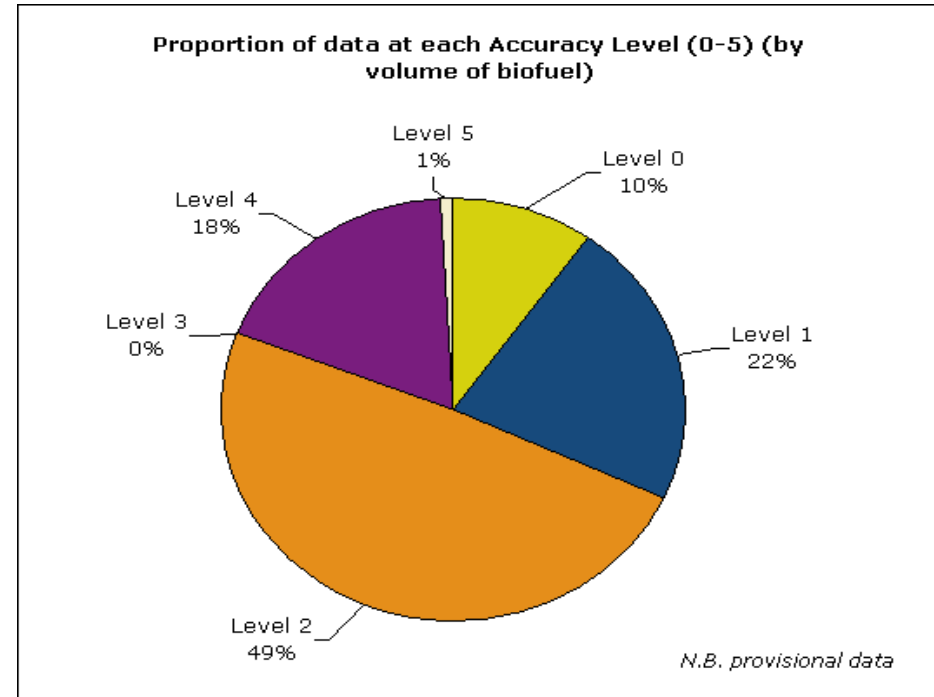
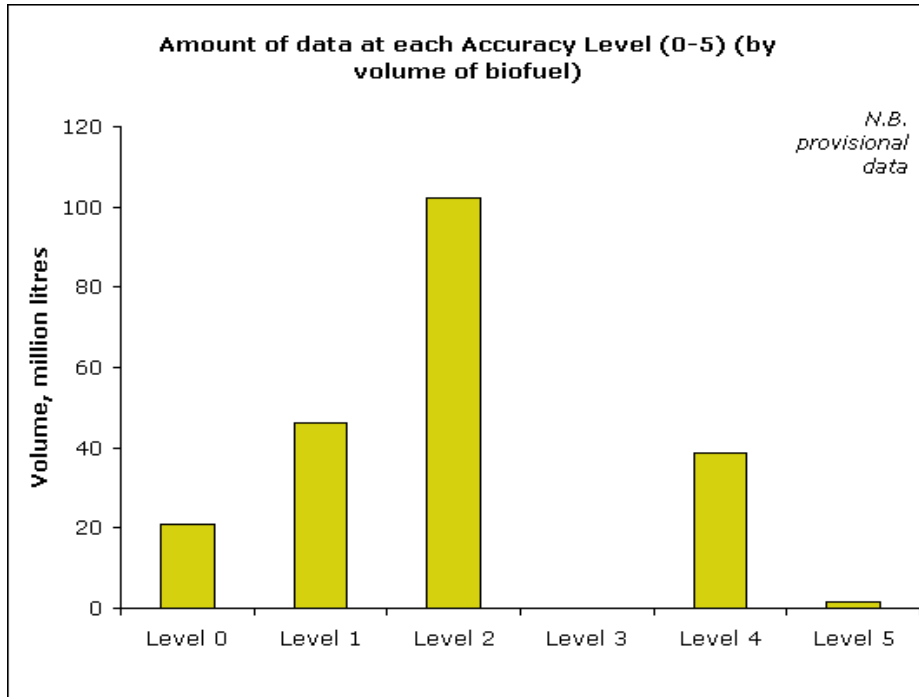


Proportion of bioethanol by previous land use

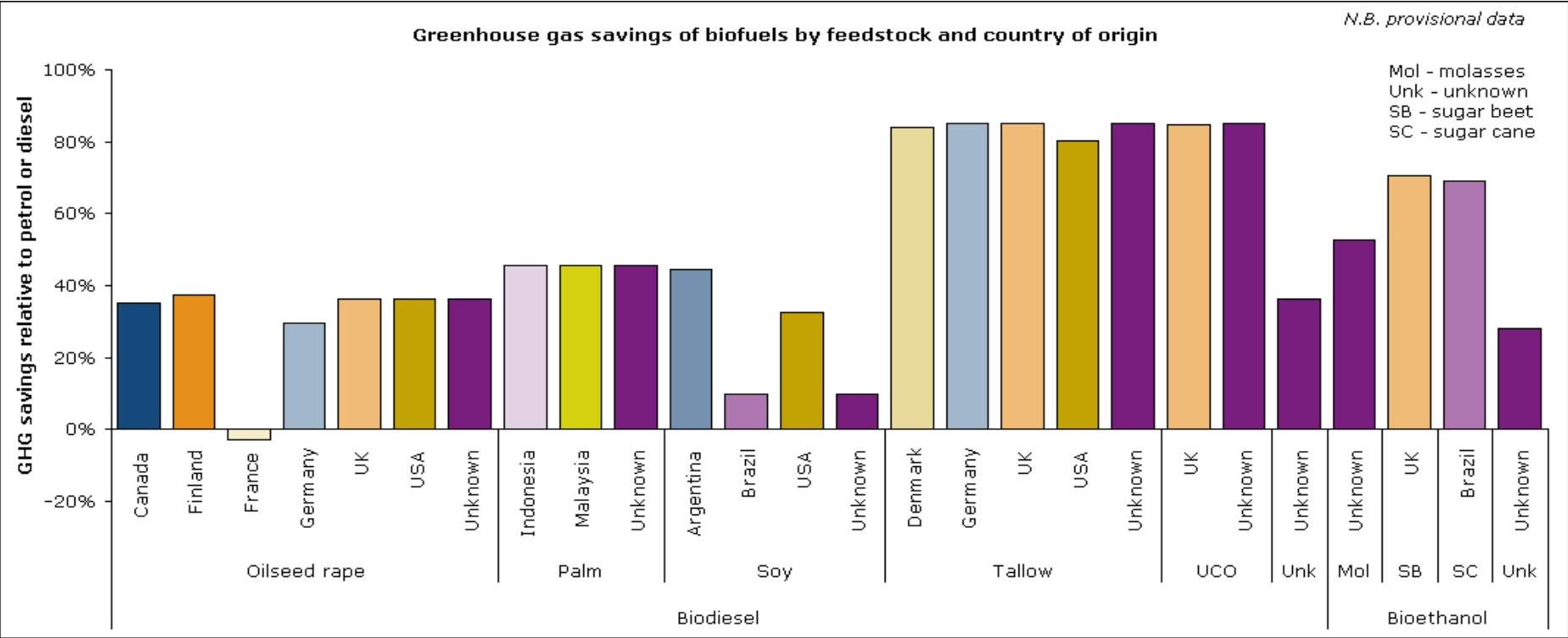


Sustainability, data-capture and accuracy





Greenhouse gas savings



Volume by feedstock and country

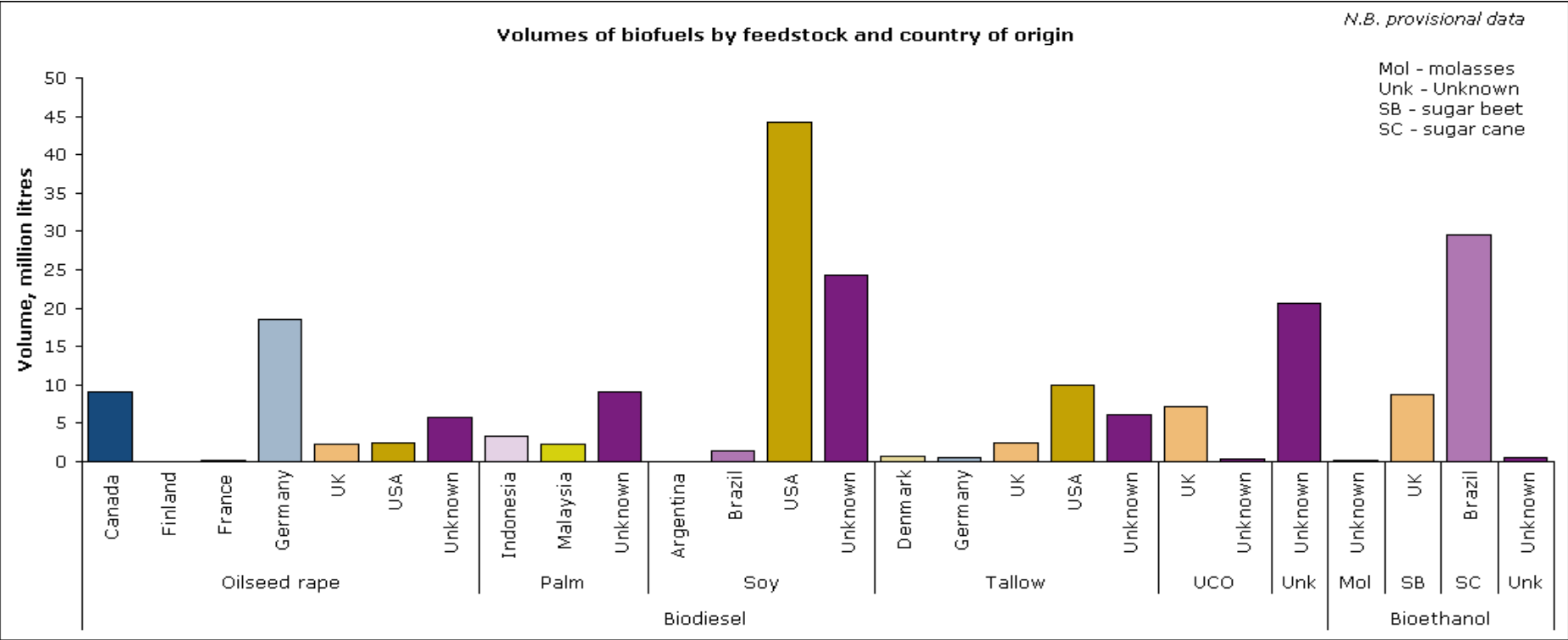


Table 3: Carbon and sustainability data of biodiesel from different feedstocks, countries, and according to the previous land-use.

		Volume, l	Volume, million l	Volume, %	Proportion meeting an environmental standard				Proportion meeting a social standard				Carbon intensity, g(CO _{2e})/MJ	Greenhouse gas saving, %	Accuracy level (0-5)
					RTFO	QS	Benchmarked	None/unknown	RTFO	QS	Benchmarked	None/unknown			
Feedstock	Oilseed rape	25553974	25.6	21%	0%	4%	27%	69%	0%	0%	27%	73%	61	29%	1.8
	Palm	8208909	8.2	7%	0%	49%	0%	51%	0%	49%	0%	51%	47	46%	1.6
	Soy	37027256	37.0	30%	0%	17%	0%	83%	0%	17%	0%	83%	63	27%	2.1
	Tallow	11652274	11.7	9%	0%	100%	0%	0%	0%	100%	0%	0%	15	83%	2.4
	UCO	4620016	4.6	4%	0%	100%	0%	0%	0%	100%	0%	0%	13	85%	3.0
	Unknown	9007496	9.0	7%	0%	0%	0%	100%	0%	0%	0%	100%	55	36%	0.0
	Total Mean	96069925	96.1	78%	0%	29%	7%	64%	0%	28%	7%	65%	52	40%	1.8
Country of origin	Argentina	42693	0.0	0%	0%	0%	0%	100%	0%	0%	0%	100%	48	44%	2.0
	Brazil	197062	0.2	0%	0%	0%	0%	100%	0%	0%	0%	100%	78	10%	2.0
	Canada	8551873	8.6	7%	0%	0%	0%	100%	0%	0%	0%	100%	56	35%	2.0
	Finland	47088	0.0	0%	0%	0%	0%	100%	0%	0%	0%	100%	54	38%	2.0
	France	47089	0.0	0%	0%	0%	0%	100%	0%	0%	0%	100%	139	-61%	2.0
	Germany	10395112	10.4	8%	0%	4%	66%	30%	0%	4%	66%	30%	67	22%	2.0
	Indonesia	2706689	2.7	2%	0%	87%	0%	13%	0%	87%	0%	13%	47	46%	2.0
	Malaysia	2041669	2.0	2%	0%	80%	0%	20%	0%	80%	0%	20%	47	46%	2.0
	United Kingdom	8015147	8.0	7%	0%	94%	0%	6%	0%	81%	0%	19%	21	75%	2.6
	United States	34574847	34.6	28%	0%	36%	0%	64%	0%	36%	0%	64%	51	41%	2.6
	Unknown	29450656	29.5	24%	0%	12%	0%	88%	0%	12%	0%	88%	56	35%	0.7
	Total Mean	96069925	96.1	78%	0%	29%	7%	64%	0%	28%	7%	65%	52	40%	1.8
Previous land-use	By-product	16272290	16.3	13%	0%	100%	0%	0%	0%	100%	0%	0%	15	83%	2.6
	Cropland	40141091	40.1	33%	0%	26%	16%	59%	0%	26%	16%	59%	55	37%	2.1
	Grassland - ag. use	1902947	1.9	2%	0%	0%	33%	67%	0%	0%	33%	67%	164	-90%	2.0
	Unknown	37753597	37.8	31%	0%	3%	0%	97%	0%	0%	0%	100%	60	31%	1.3
	Total Mean	96069925	96.1	78%	0%	29%	7%	64%	0%	28%	7%	65%	52	40%	1.8

Table 4: Carbon and sustainability data of bioethanol from different feedstocks, countries, and according to the previous land-use.

		Volume, l	Volume, million l	Volume, %	Proportion meeting an environmental standard				Proportion meeting a social standard				Carbon intensity, g(CO _{2e})/MJ	Greenhouse gas saving, %	Accuracy level (0-5)
					RTFO	QS	Benchmarked	None/unknown	RTFO	QS	Benchmarked	None/unknown			
Feedstock	Molasses	162688	0.2	0%	0%	100%	0%	0%	0%	100%	0%	0%	40	53%	1.0
	Sugar beet	5405522	5.4	4%	0%	100%	0%	0%	0%	0%	0%	100%	25	71%	4.0
	Sugar cane	20652550	20.7	17%	0%	0%	0%	100%	0%	0%	0%	100%	27	68%	2.7
	Unknown	417599	0.4	0%	0%	0%	0%	100%	0%	0%	0%	100%	61	28%	0.0
	Total	26638359	26.6	22%											
	Mean				0%	21%	0%	79%	0%	1%	0%	99%	27	68%	2.9
Country of origin	Brazil	20652550	20.7	17%	0%	0%	0%	100%	0%	0%	0%	100%	27	68%	2.7
	United Kingdom	5405522	5.4	4%	0%	100%	0%	0%	0%	0%	0%	100%	25	71%	4.0
	Unknown	580287	0.6	0%	0%	28%	0%	72%	0%	28%	0%	72%	55	35%	0.3
	Total	26638359	26.6	22%											
	Mean				0%	21%	0%	79%	0%	1%	0%	99%	27	68%	2.9
Previous land-use	By-product	162688	0.2	0%	0%	100%	0%	0%	0%	100%	0%	0%	40	53%	1.0
	Cropland	5405522	5.4	4%	0%	100%	0%	0%	0%	0%	0%	100%	25	71%	4.0
	Unknown	21070149	21.1	17%	0%	0%	0%	100%	0%	0%	0%	100%	27	68%	2.6
	Total	26638359	26.6	22%											
	Mean				0%	21%	0%	79%	0%	1%	0%	99%	27	68%	2.9

Read the notes and glossary for additional information on data in the darker shaded boxes

Table 5: Carbon and sustainability data for biofuels by fuel type, feedstock, country of origin and previous land-use.

		Feedstock	Country of origin	Previous land-use	Volume, l	Volume, million l	Volume, %	Proportion meeting an environmental standard				Proportion meeting a social standard				Carbon intensity, g(CO _{2e})/MJ	Greenhouse gas saving, %	Accuracy level (0-5)	
								RTFO	QS	Benchmarked	None/unknown	RTFO	QS	Benchmarked	None/unknown				
Fuel type	Biodiesel	Oilseed rape	Canada	Cropland	4472503	4.5	3.6%	0%	0%	0%	100%	0%	0%	0%	100%	56	35%	2.0	
			Unknown	Unknown	4079370	4.1	3.3%	0%	0%	0%	100%	0%	0%	0%	100%	56	35%	2.0	
			Finland	Grassland - ag use	47088	0.0	0.0%	0%	0%	0%	100%	0%	0%	0%	100%	54	38%	2.0	
			France	Grassland - ag use	47089	0.0	0.0%	0%	0%	0%	100%	0%	0%	0%	100%	139	-61%	2.0	
			Germany	Cropland	8139553	8.1	6.6%	0%	0%	77%	23%	0%	0%	77%	23%	48	44%	2.0	
			Grassland - ag use	1808770	1.8	1.5%	0%	0%	34%	66%	0%	0%	34%	66%	168	-94%	2.0		
			United Kingdom	Unknown	1561909	1.6	1.3%	0%	70%	0%	30%	0%	0%	0%	100%	55	36%	2.0	
			United States	Unknown	450768	0.5	0.4%	0%	0%	0%	100%	0%	0%	0%	100%	55	36%	2.0	
			Unknown	Cropland	1407878	1.4	1.1%	0%	0%	0%	100%	0%	0%	0%	100%	55	36%	1.0	
			Unknown	Unknown	3539046	3.5	2.9%	0%	0%	0%	100%	0%	0%	0%	100%	55	36%	1.0	
		Palm	Indonesia	Cropland	2294098	2.3	1.9%	0%	100%	0%	0%	0%	100%	0%	0%	47	46%	2.0	
			Unknown	Unknown	412591	0.4	0.3%	0%	16%	0%	84%	0%	16%	0%	84%	47	46%	2.0	
			Malaysia	Cropland	1640800	1.6	1.3%	0%	100%	0%	0%	0%	100%	0%	0%	47	46%	2.0	
			Unknown	Unknown	400869	0.4	0.3%	0%	0%	0%	100%	0%	0%	0%	100%	47	46%	2.0	
			Unknown	Unknown	3460551	3.5	2.8%	0%	0%	0%	100%	0%	0%	0%	100%	47	46%	1.0	
			Argentina	Cropland	42693	0.0	0.0%	0%	0%	0%	100%	0%	0%	0%	100%	48	44%	2.0	
			Brazil	Unknown	197062	0.2	0.2%	0%	0%	0%	100%	0%	0%	0%	100%	78	10%	2.0	
			United States	Cropland	22143566	22.1	18.0%	0%	29%	0%	71%	0%	29%	0%	71%	58	33%	2.2	
			Unknown	Unknown	6058137	6.1	4.9%	0%	0%	0%	100%	0%	0%	0%	100%	58	33%	3.1	
			Unknown	Unknown	8585798	8.6	7.0%	0%	0%	0%	100%	0%	0%	0%	100%	78	10%	1.0	
		Tallow	Germany	By-product	446789	0.4	0.4%	0%	100%	0%	0%	0%	100%	0%	0%	13	85%	2.0	
			United Kingdom	By-product	2005796	2.0	1.6%	0%	100%	0%	0%	0%	100%	0%	0%	13	85%	2.0	
			United States	By-product	5922376	5.9	4.8%	0%	100%	0%	0%	0%	100%	0%	0%	17	80%	3.4	
			Unknown	By-product	3277313	3.3	2.7%	0%	100%	0%	0%	0%	100%	0%	0%	13	85%	1.0	
			United Kingdom	By-product	4447442	4.4	3.6%	0%	100%	0%	0%	0%	100%	0%	0%	13	85%	3.1	
			Unknown	By-product	172574	0.2	0.1%	0%	100%	0%	0%	0%	100%	0%	0%	13	85%	1.0	
		Bioethanol	Unknown	Unknown	9007496	9.0	7.3%	0%	0%	0%	100%	0%	0%	0%	100%	55	36%	0.0	
			Molasses	Unknown	By-product	162688	0.2	0.1%	0%	100%	0%	0%	0%	100%	0%	0%	40	53%	1.0
			Sugar beet	United Kingdom	Cropland	5405522	5.4	4.4%	0%	100%	0%	0%	0%	0%	0%	100%	25	71%	4.0
			Sugar cane	Brazil	Unknown	20652550	20.7	16.8%	0%	0%	0%	100%	0%	0%	0%	100%	27	68%	2.7
			Unknown	Unknown	Unknown	417599	0.4	0.3%	0%	0%	0%	100%	0%	0%	0%	100%	61	28%	0.0
			Total Mean				122708284	123	100%	0%	27%	6%	67%	0%	22%	6%	73%	47	46%