



Natu'oil Services Inc.

Certified Sustainable Palm Oil
Introduction, definitions & drivers

Natu'oil
SERVICES INC

Ryan Welton – Marketing Manager, Natu'oil Services Inc.

Certified Sustainable Palm Oil

- ▶ Sustainability Defined
- ▶ Why Palm Oil has an intrinsic sustainable advantage
- ▶ Certified Sustainable Palm Oil Questions
- ▶ Roundtable on Sustainable Palm Oil (RSPO)





sustainable definition

▶ Sustainability Defined

- ▶ In ecology, sustainability is defined as how biological systems remain diverse and productive over time.
- ▶ For humans, sustainability is the potential for long-term maintenance of well being, which has ecological, economic, political and cultural dimensions.
- ▶ Sustainability requires the reconciliation of **environmental, social equity and economic demands** - also referred to as the "three pillars" of sustainability or the 3 Es.



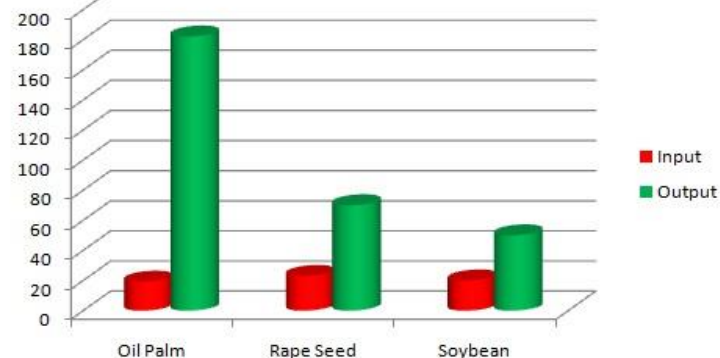
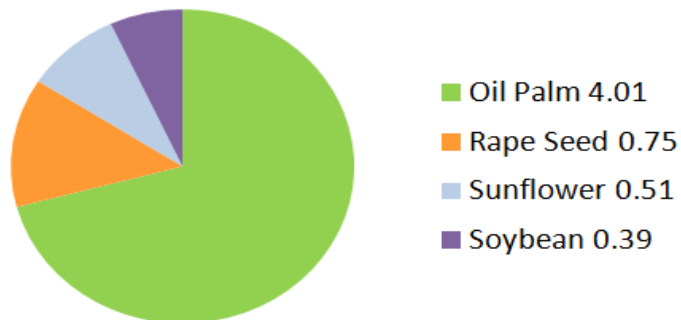
sustainable advantage

- ▶ Why Palm Oil has an intrinsic sustainable advantage
 - ▶ Perennial crop with year round production
 - ▶ Long productive life span – over 20 years
 - ▶ Highest yield of any vegetable oil crop - over 4000 kg (8800 lb) of oils per hectare/year
 - ▶ Best energy efficiency

Graph 1 & 2: Average Yield, Energy In/Out

Table 1: Energy Ratio

Average Oil Yield (t/ha/year)



Input and Output Energy for Oil Palm Compared to Other Crops

Input and Output Energy for Oil Palm Compared to Other Crops			
Farming System		Annual Energy Value (Gj/ha)	
	Input	Output	Ratio
Oil Palm	19.2	182.1	9.5
Oilseed Rape/Canola	23	70	3
Soybean	20	50	2.5

Oil Palm has the highest yield and best energy efficiency ratio of ANY vegetable oil crop.



Once mature the oil palm will reach 15 meters or 45 feet high and provides a lush canopy and environment for local and migratory birds, mammals, reptiles and insects.



sustainable

questions

- ▶ What is Sustainable Palm Oil – CSPO?
- ▶ Why is CSPO necessary?
- ▶ Where is the demand coming from?
- ▶ Who is working towards CSPO?
- ▶ When will CSPO become a factor in the marketplace?
- ▶ What is the availability of CSPO?
- ▶ What is the cost premium over conventional?
- ▶ How can you procure CSPO?



sustainable

questions

▶ What is Sustainable Palm Oil – CSPO?

- ▶ For palm oil to be considered certified sustainable it must meet criteria set out by a certifying body, these criteria are determined, practiced, inspected, evaluated and updated.
- ▶ Palm oil cultivation, transportation and processing are evaluated by these 3rd party bodies. Growers and processors must follow strict guidelines to maintain their certifications and ability to trade in CSPO.
- ▶ Remember that the "three pillars" of sustainability are the reconciliation of environmental, social equity and economic demands.



sustainable

questions

▶ Why is CSPO necessary?

- ▶ With a rising global population, there is a need for a secure and sustainable food supply. Environmental groups and general consumers are growing concerned about the ecological, social and health promoting properties of our current supply system. Expansion in food production by means of increased planting, high tech innovations and Genetic Modification are raising concerns about the safety and sustainability of our food.
- ▶ Oil palm cultivation has increased dramatically over the past 10 years raising questions about long term environmental and social effects.



sustainable

questions

- ▶ Where is the demand coming from?
 - ▶ Europe is the primary user of certified sustainable palm oil
 - ▶ Consumer Groups and NGO's are raising awareness of the need for responsible sourcing
 - ▶ Shareholders are requesting companies to address potential risk associated with non-compliance
 - ▶ US market is preparing to incorporate CSPO with many major companies implementing sustainability plans. These plans include a gradual switch over from conventional palm oil to sustainably produced palm oil



sustainable

questions

- ▶ Who is working towards CSPO
 - ▶ Walmart, Starbucks, Sobeys, Safeway, Kroger, J&J, Hershey, McDonald's, PepsiCo, P&G, Kellogg's, MARS Inc.





sustainable

questions

- ▶ When will CSPO become a factor in the marketplace?
 - ▶ Many large retailers and manufacturers have sustainability plans that include the sourcing of CSPO for their Private Label product by end 2015. Retailers have planned to encourage their finished product suppliers to source from sustainable palm oil providers



sustainable

questions

▶ What is the availability of CSPO

- ▶ CSPO production has been increasing year over year – 9,792,185 MT
- ▶ Current production is greater than market uptake – 52% uptake
- ▶ Future production will increase as more market support is gathered

▶ What is the cost premium over conventional?

- ▶ Dependant upon supply chain model and level of traceability
- ▶ Market driven

Table 2 : Key Statistics for Certification, Area (hectarage), APC, Sales & Uptake

		2008	2009	2010	2011	2012	As of Dec 2013
Area (hectarage)	Production Area (ha)	106,384	264,952	644,816	1,130,969	1,526,273	1,978,110
	Certified Area (ha)	125,288	304,421	718,080	1,299,891	2,105,433	2,653,058
Annual Production Capacity	CSPO (mt)	619,012	1,473,912	3,522,207	5,573,202	8,184,200	9,792,185
	CSPK (mt)	154,335	338,740	803,999	1,296,488	1,896,702	2,244,312
							Jan-Dec 2013
Supply	CSPO (mt)	163,364	1,357,511	2,773,567	4,798,512	6,724,236	8,735,843
	CSPK (mt)	41,811	321,322	640,316	1,111,998	1,570,070	2,030,746
Sales	CSPO Sales through SG,MB	n/a	98,044	438,515	831,010	984,138	1,551,017
	CSPO Sales through B&C	4,452	245,813	842,619	1,659,516	2,495,277	2,962,256
	Total CSPO Sales	4,452	343,857	1,281,134	2,490,526	3,479,415	4,513,273
Uptake	CSPO Sales / Supply (mt)	2.7%	25.3%	46.2%	51.9%	51.7%	51.7%

*RSPO: CSPO Uptake & Production Dec 2013

<http://www.rspo.org/file/CSPO-Uptake-and-Production-Dec.pdf>



sustainable

questions

- ▶ How can you procure CSPO?
 - ▶ Certified supply chains

**Grower - Transporter - Miller - Refiner -
Manufacturer - Distributors - End User**

our sustainable future

- ▶ Roundtable on Sustainable Palm Oil (RSPO)
 - ▶ Objective
 - ▶ Stakeholders
 - ▶ Vision & Mission
 - ▶ Principles
 - ▶ Supply Chain Models



our sustainable future

▶ Roundtable on Sustainable Palm Oil (RSPO)

- ▶ The RSPO was formed in 2004 with the objective of promoting the growth and use of sustainable oil palm products through credible global standards and engagement of stakeholders.
- ▶ The seat of the association is in Zurich, Switzerland, while the secretariat is currently based in Kuala Lumpur, with a satellite office in Jakarta.
- ▶ RSPO is a member based organization with an international certification scheme and trademark system



our sustainable future

► Roundtable on Sustainable Palm Oil (RSPO)

- The RSPO is a not-for-profit association that unites stakeholders from seven sectors of the palm oil industry:
 - oil palm producers
 - palm oil processors or traders
 - consumer goods manufacturers
 - retailers
 - banks and investors
 - Environmental NGOs
 - Social NGOs



our sustainable future

▶ Roundtable on Sustainable Palm Oil (RSPO)

▶ Vision:

- ▶ RSPO will transform markets to make sustainable palm oil the norm

▶ Mission:

- ▶ To advance the production, procurement, finance and use of sustainable palm oil products
- ▶ To develop, implement, verify, assure and periodically review credible global standards for the entire supply chain of sustainable palm oil
- ▶ To monitor and evaluate the economic, environmental and social impacts of the uptake of sustainable palm oil in the market
- ▶ To engage and commit all stakeholders throughout the supply chain, including governments and consumers



our sustainable future

► Roundtable on Sustainable Palm Oil (RSPO) has defined 8 principals and 39 practical criteria

1. Commitment to transparency
2. Compliance with applicable laws and regulations
3. Commitment to long-term economic and financial viability
4. Use of appropriate best practices by growers and millers
5. Environmental responsibility and conservation of natural resources and biodiversity
6. Responsible consideration of employees, and of individuals and communities affected by growers and mills
7. Responsible development of new plantations
8. Commitment to continuous improvement



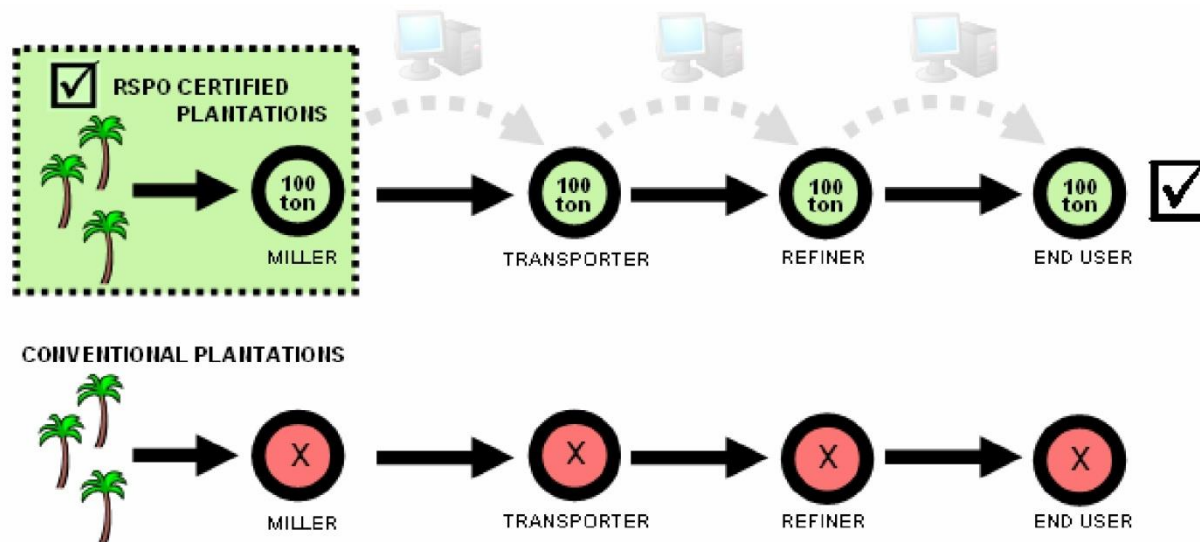
our sustainable future

- ▶ RSPO Supply Chain Models
 - ▶ Identity Preserved
 - ▶ Segregated
 - ▶ Mass Balance
 - ▶ Book & Claim



Identity Preserved

- ▶ Definition
- ▶ Explanation
- ▶ Supply Chain Requirements
- ▶ Market Claim
- ▶ Benefits and Limitations



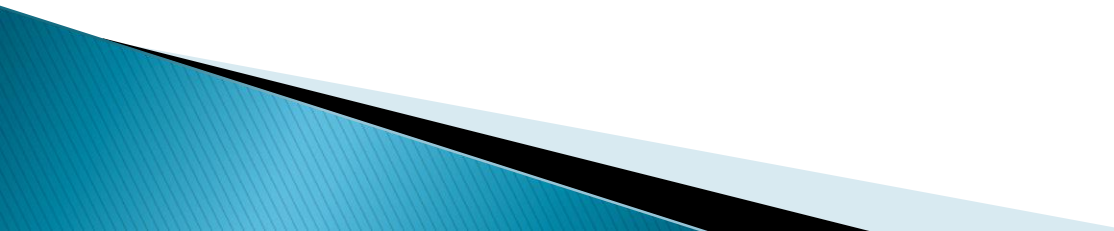
Identity Preserved

Definition

The Identity Preserved (IP) supply chain model assures that the RSPO certified palm oil and its derivatives delivered to the end user is uniquely identifiable to the mill and its supply base and is kept physically isolated from all other oil palm sources throughout the supply chain (including other segregated RSPO-CSPO sources).

Explanation

The IP supply chain model requires that the grower, refiner, and supply chain maintains full separation and full traceability through to the delivery point at the end user. The end user will be assured that 100% of the physical palm oil received has come from a uniquely identifiable RSPO certified estate/plantation and meets all of the required elements of the certification program.



Identity Preserved

Supply Chain Requirements:

The basis of the supply chain requirements for IP requires proof of separation and full traceability of the RSPO CSPO and its derivatives throughout the supply chain originating at the estate/plantation and ending with the final user of the oil. The facility must ensure that the RSPO CSPO is kept physically isolated from all other palm oil sources and is unique identifiable to the mill and its supply base.

Market Claim:

“Contains RSPO Certified Sustainable Palm Oil”

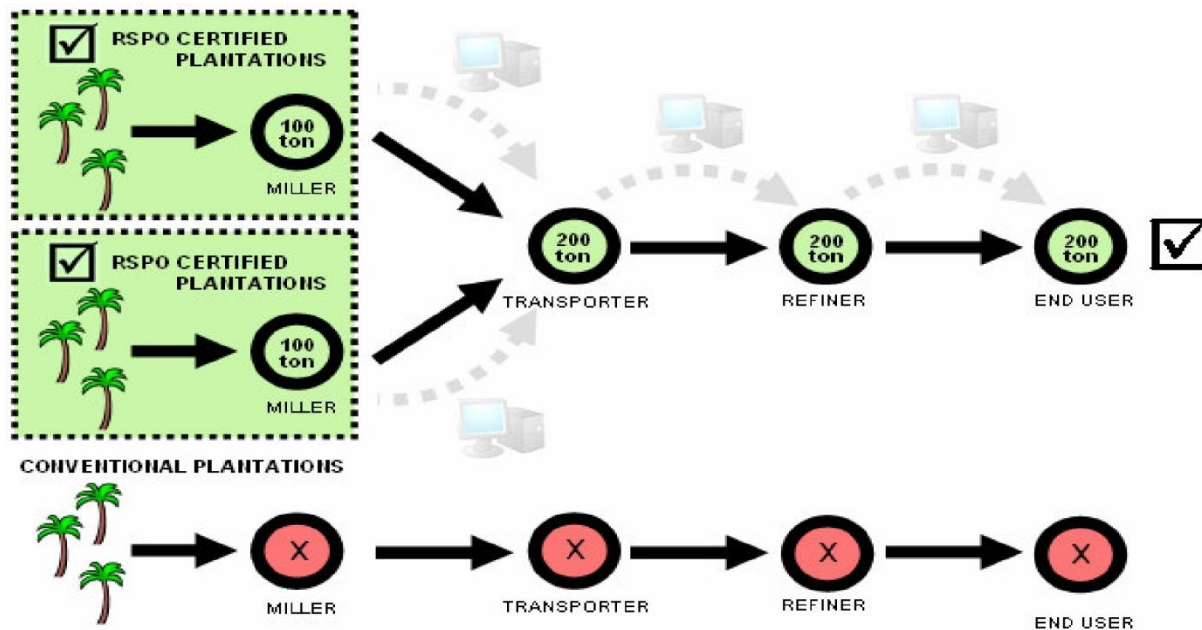
Benefits and Limitations:

Level of traceability:	*****
Level of claim:	*****
Implementation costs:	\$\$\$\$\$

- ▶ Delivered physical palm oil is 100% RSPO certified palm oil.
- ▶ Fully traceable to a uniquely identifiable RSPO certified point of origin.

Segregated

- ▶ Definition
- ▶ Explanation
- ▶ Supply Chain Requirements
- ▶ Market Claim
- ▶ Benefits and Limitations



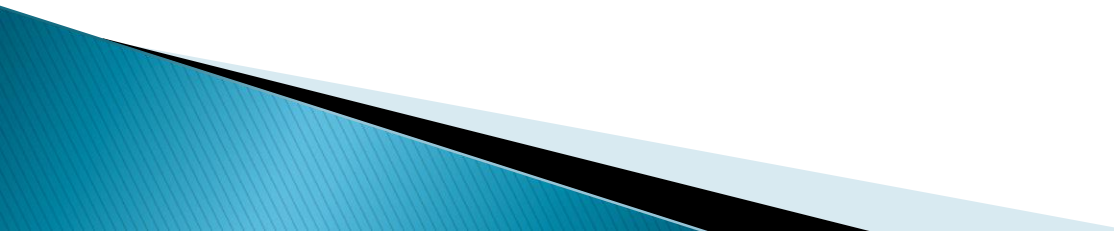
Segregated

Definition:

The Segregation supply chain model assures that RSPO certified palm oil and its derivatives delivered to the end user comes only from RSPO certified sources. It permits the mixing of RSPO certified palm oil from a variety of sources.

Explanation:

The Segregation supply chain model assures that 100% of the physical product has originated from RSPO certified estates/plantations. However, the physical oil will not be uniquely identified to a specific estate/plantation as in the case of Identity Preserved.



Segregated

Supply Chain Requirements:

The Segregation approach requires that the RSPO certified palm oil from estates/plantations is kept separate from material from non-RSPO certified estates/plantations at every stage of production, processing, refining and manufacturing throughout the supply chain. This model does allow for the mixing of RSPO certified palm oil and its derivatives from various sources. Therefore the physical oil delivered to the end user will not be fully traceable to the specific mill and its supply base.

Market Claim:

“Contains RSPO Certified Sustainable Palm Oil”

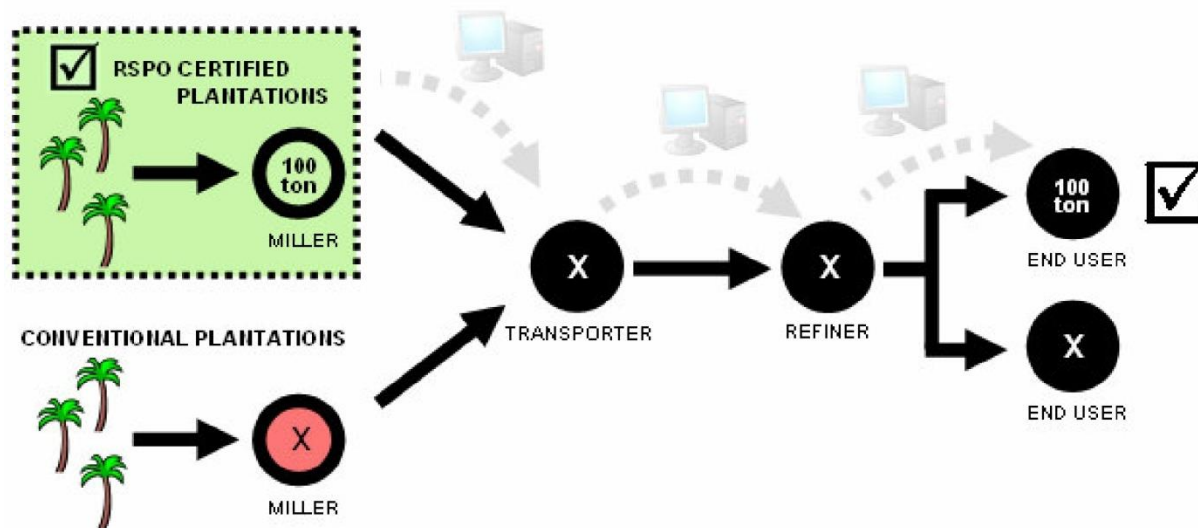
Benefits and Limitations:

Level of traceability:	****
Level of claim:	****
Implementation costs:	\$\$\$\$

- ▶ Delivered physical palm oil is 100% RSPO certified palm oil
- ▶ Mix of RSPO certified palm oil from a variety of RSPO certified points of origin.

Mass Balance

- ▶ Definition
- ▶ Explanation
- ▶ Supply Chain Requirements
- ▶ Market Claim
- ▶ Benefits and Limitations



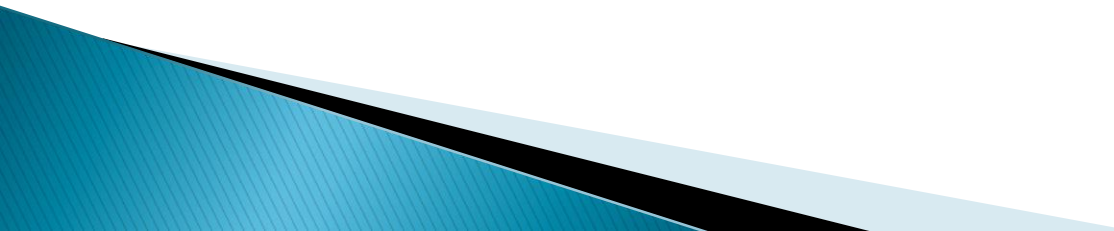
Mass Balance

Definition:

The mass balance supply chain model administratively monitors the trade of RSPO certified palm oil and its derivatives throughout the entire supply chain, as a driver for mainstream trade in sustainable palm oil.

Explanation:

The mass balance supply chain model allows everyone within the supply chain to demonstrate their commitment to sustainable palm oil production and to actively promote the trading of RSPO certified palm oil. This stimulates trading of certified product and will encourage industry to set up segregated supply chains and reach a mainstream level of sustainable palm oil trade. The mass balance system allows for mixing of RSPO and non-RSPO certified palm oil at any stage in the supply chain provided that overall company quantities are controlled. The mass balance model is constructed in such a way that volumes of RSPO certified product shipped, will never exceed volumes received by the end user.



Mass Balance

Supply Chain Requirements:

The basis of the supply chain requirements for mass balance will consist of reconciliation between quantity of RSPO material bought and the quantity of RSPO material sold. This includes control of purchases and sales of RSPO certified palm oil and its derivatives which will be independently verified. There will be no requirements for separate storing or controls in the production process.

Market Claim:

“Supports the production of RSPO Certified Sustainable Palm Oil”

Benefits and Limitations:

Level of traceability: **

Level of claim: **

Implementation costs: \$\$

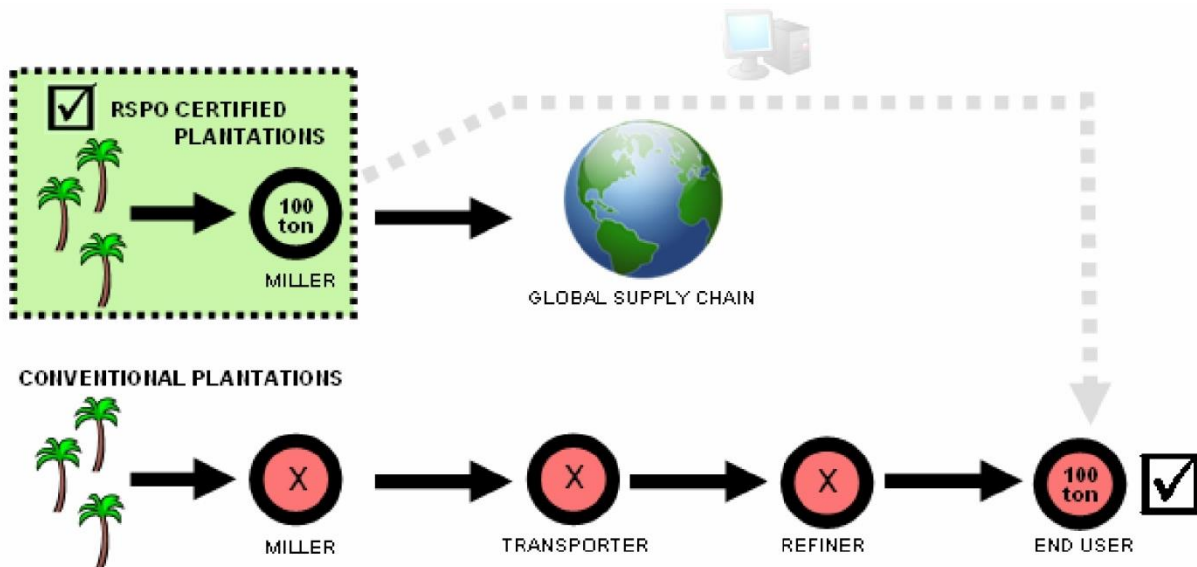
- ▶ Delivered physical palm oil is likely to not be directly linked with the RSPO certified palm oil at the RSPO certified point of origin.
- ▶ Actively engages all supply chain actors to be part of the sustainable palm oil trade as a planned route towards fully segregated supply chains.

Book and Claim

- ▶ Definition
- ▶ Explanation
- ▶ Supply Chain Requirements
- ▶ Market Claim
- ▶ Benefits and Limitations



www.greenpalm.org



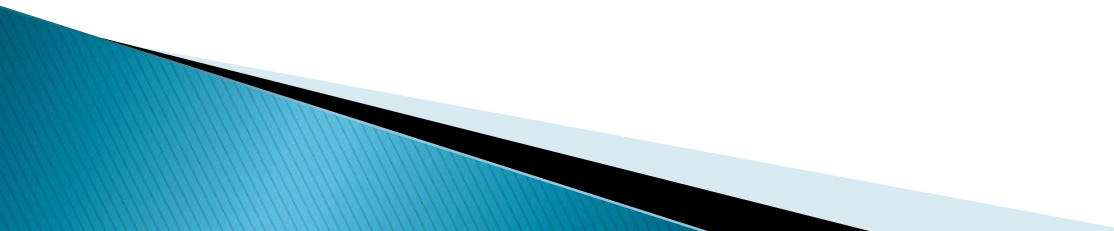
Book and Claim

Definition

The Book and Claim supply chain model provides tradable certificates for RSPO certified palm oil to the palm oil supply base. The supply base may then offer these certificates on a web based transaction system to end users who choose to support specific volumes of RSPO certified palm oil and or their derivatives.

Explanation:

The book and claim system allows for the transfer of RSPO certified palm oil volume credits from the mill and its supply base to the end user independently of the physical supply chain. The end user buys an equivalent amount of volume credits to the oil they buy in from their existing physical supply chain. The RSPO certified mill sells an equivalent volume of Crude Palm Oil, to the volume credits received, into their existing supply chain as conventional CPO.



Book and Claim

Supply Chain Requirements:

Volume credits can only be introduced into the system by RSPO certified mills and their supply base up to the annual output of the certification unit. Volume credits are traded electronically directly to end users so there are only traceability requirements for the end product-manufacturer. These requirements are designed to ensure that all palm oil and/or its derivatives that are claimed to be sustainable under this supply chain model are indeed covered by sustainable certificates.

Market Claim:

“Supports the production of RSPO Certified Sustainable Palm Oil”

Benefits and Limitations:

Level of traceability: *

Level of claim: *

Implementation costs: \$

- ▶ Delivered physical palm oil is not linked to the RSPO certified sustainable certificate.
- ▶ Costs for this model may be the lowest as it uses the existing industry supply chain model.
- ▶ Directly connects RSPO certified sustainable producers to end users of palm oil, without the involvement of the entire supply chain.

More information

- ▶ Ryan Welton
 - Natu'oil Services Inc. ryan@natuoil.com
- ▶ Global Agri-trade Corp. www.globalagritrade.com
- ▶ Natu'oil Services Inc. www.natuoil.com
- ▶ RSPO www.rspo.org
- ▶ GreenPalm www.greenpalm.org
- ▶ Malaysian Palm Oil Board www.mpob.gov.my
- ▶ American Palm Oil Council www.americanpalmoil.com

Thank you



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