



Update on the Certification of Waste and Residues from Palm Oil Mills

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Background



- Palm oil mill effluent (POME) and Empty Palm Fruit Bunches (EFBs) are listed in Annex IX A of the RED II („advanced“) but not defined
- RED II sets mandatory targets for advanced biofuels (3.5% until 2030)
- At the same time, high ILUC-risk biofuels (i.e. biofuels produced from palm oil) shall be phased out under RED II
- High GHG savings potential
- Eligible for „double-counting“ in several European countries
- Increasing demand and increasing price premiums also lead to an increased risk of fraudulent behaviour
- ISCC decided to engage with its stakeholders in a „POME working group“ to strenghten the ISCC certification for these materials

POME working group

- Working group includes experts from the palm sector (upstream) as well as industry representatives from Europe (downstream)
- Objectives of the working group:
 - Determine what can and cannot be classified as POME and to find an appropriate **definition** under ISCC
 - **Define other waste/residues** generated at the palm oil mill
 - Develop a **guidance for auditors**
- A comprehensive guidance document was published for public consultation on 20 April 2021
- A **revised version** of the guidance document was published for public consultation on 22 September 2021
 - <https://www.iscc-system.org/stakeholders/public-consultation/>



Guidance Document for the Audit of Wastes and Residues from Palm Oil Mills

DRAFT Version 1 (may be subject to adjustments following a public consultation phase)
as of April 2021





Palm Oil Mill Effluent (POME) Definition and Wording

- POME is the unavoidable **wastewater** arising from palm oil production at a palm oil mill (i.e. the point of origin)
- POME consists mostly of water, and a small percentage of oil and solid matter
- POME volume and composition varies by FFB composition, processing setup and conditions, and efficiency of the mill
- The following terminology shall be applied under ISCC:
 - POME (referring to the wastewater from the palm oil mill)
 - POME oil (referring to the oil recovered from the wastewater from the palm oil mill)
- Any oil which is not recovered from the wastewater of a palm oil mill cannot be labelled as POME oil
- Labelling or selling other types of oil (e.g. PFAD, high FFA CPO, “acid oil”, etc.) as POME oil is a critical and fraudulent violation of ISCC requirements!

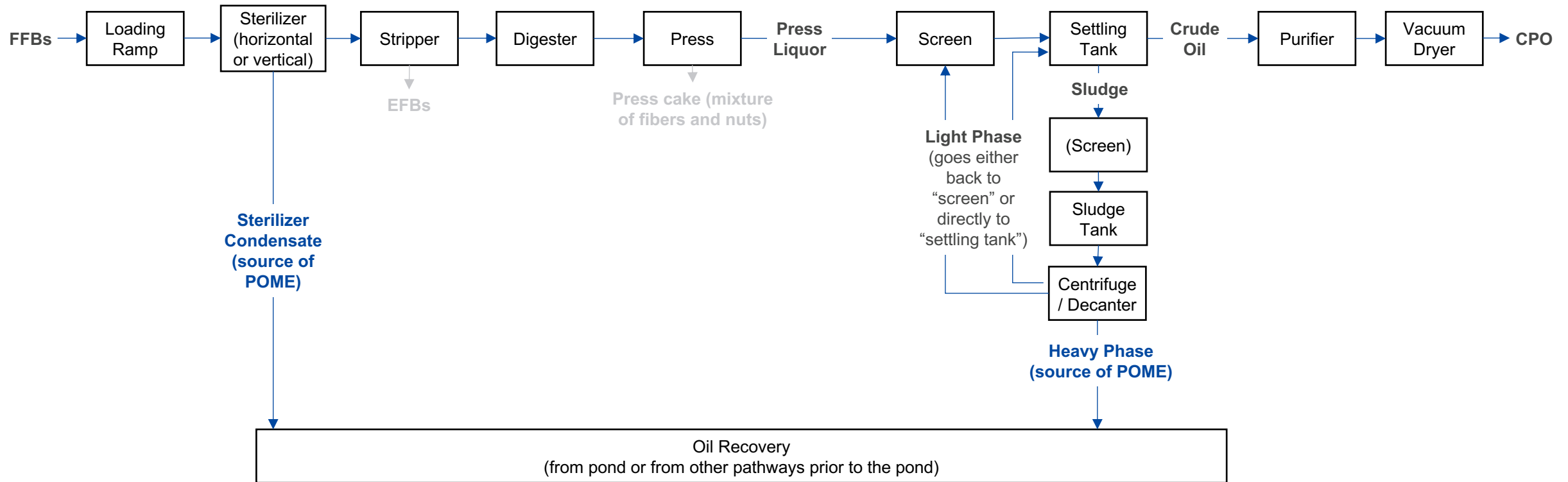


Palm Oil Mill Effluent (POME)

POME Treatment and GHG emissions

- Release to POME ponds:
 - POME is usually released to a system of ponds to **remove solids, oil and grease** before land application or discharging the water into waterways
 - **Oil settles on top of the pond** and is can be recovered (skimmed off)
 - After skimming off the oil from the pond, the oil is decanted to further reduce the water content. Decanting may take place at the palm oil mill or at a separate location.
- Other pathways to recover oil prior to the pond:
 - Further oil recovery from POME is possible through the implementation of different technologies, e.g. centrifuges prior to the release to the ponding system
- POME oil is considered to have zero GHG emissions at the palm oil mill (the point of origin from where it is collected)
- RED II does not contain GHG default values for biofuels derived from POME oil

Palm Oil Mill Process Diagram: Oil from Palm Oil Mill Effluent (POME) (process and figures may vary in the individual case)



Palm Oil Mill with Horizontal Sterilizer (approximate figures)	
Oil content of sterilizer condensate	0.5 kg/ton FFB ¹ – 2.1 kg/ton FFB ²
Oil content of heavy phase	1.6 kg/ton FFB ² – 5.5 kg/ton FFB ³
Total POME oil content	2.1 kg/ton FFB – 7.6 kg/ton FFB

Palm Oil Mill with Vertical Sterilizer (approximate figures)	
Oil content of sterilizer condensate	0.5 kg/ton FFB ¹ – 17.4 kg/ton FFB ²
Oil content of heavy phase	5.5 kg/ton FFB ³ – 11.4 kg/ton FFB ²
Total POME oil content	6 kg/ton FFB – 28.8 kg/ton FFB

Sources:

¹ Environmental Management Guideline for the Palm Oil Industry. Sep 1997. Note: No differentiation between horizontal and vertical sterilizer.

² Averages calculated based on actual company data for a sample of 17 palm oil mills (10 with horizontal sterilizer, 7 with vertical sterilizer)

³ Alflaval Presentation POMEVap technology. Oct 2020

Similarly to POME, definitions and process descriptions were developed for Empty Palm Fruit Bunches and Pressed Palm (Mesocarp) Fibers

- EFBs are the remains of the fresh fruit bunches after the fruit has been removed (“stripped”) for oil pressing




- Pressed palm (mesocarp) fibers are the residues that remain from pressing palm fruits

Adjusted audit process for palm oil mills supplying waste and residues to collecting points

- All palm oil mills (POMs) generating and supplying wastes and residues as sustainable under ISCC must be audited on-site annually*
 - This means, the group auditing approach for points of origin (i.e. auditing a sample of the points of origin) cannot be applied for POMs
- 2 Options for POMs:
 1. Individual certification of the POM as Point of Origin (PoO) following an annual audit. In this case the certificate will be issued to the individual mill. POMs which are already ISCC certified (i.e. for the CPO) can add the PoO scope to the already existing ISCC certificate. The ISCC requirements for the CPO and for the waste and residues can thus be covered during one single audit.
 2. 100% of those POMs which are not individually certified and which are supplying waste and residues to a Collecting Point have to be audited on-site during the annual certification of the Collecting Point (no sampling). In this case, the certificate will be issued to the Collecting Point. The POMs supplying sustainable waste and residues to the Collecting Point do not require an individual ISCC certificate.
- A transitional period of one year will apply to ensure that collecting points can adapt to this new requirement



Thank you for your attention!

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