



# Importation of Palm Kernel Expeller from Indonesia

INDONESIA VISIT

26-31 MAY 2013

MPI Audit Report

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## EXECUTIVE SUMMARY

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The purpose of this audit was to assess the systems in place to manage the biosecurity risk associated with the export of PKE from Indonesia to New Zealand and to identify any gaps or deficiencies. MPI officials accompanied by Ministry of Agriculture (Indonesia) officials audited 6 manufacturing plants and port loading facilities at Lampung (Port Panjang) and Dumai that have exported PKE to New Zealand since the beginning of 2012. The following critical findings were identified.

## CRITICAL FINDINGS

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1. The majority of manufacturing and storage facilities visited either met, or with minor improvements, would meet New Zealand's import requirements for supply chain security.
2. A small number of the manufacturing facilities do not fully meet New Zealand's import requirements for secure storage of PKE.
3. The systems and processes used by The Ministry of Agriculture (MOA) acting as the National Plant Protection Organisation of Indonesia for phytosanitary certification, inspection and supervision of fumigation are by and large appropriate and meet New Zealand's requirements. The certification and fumigation procedures fully meet New Zealand's requirements.
4. Amendments to the MOA procedures for approving facilities for export to New Zealand are required. The MPI is urgently amending the IHS to require that only approved facilities can export PKE to New Zealand.
5. Based on this audit, the knowledge that FMDV is not present in Indonesia, and the current requirements in the IHS with the proposed amendments, MPI considers that the biosecurity risk from the import of PKE remains very low. While concerns about contamination of PKE have been raised by stakeholders, there have been no detections of regulated pests or disease found in PKE imports from Indonesia following clearance in New Zealand.

## SUMMARY OF RECOMMENDATIONS

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- 1 That the Ministry of Agriculture (Indonesia) operating as the National Plant Protection Organisation (NPPO):
  - a. Update and amend procedures for approval of facilities (manufacturing and storage of PKE) involved in the supply chain for export of PKE to New Zealand to emphasise the biosecurity requirements for New Zealand.
  - b. Update and amends procedures for issuing phytosanitary certificates to ensure that -
    - i. All facilities (manufacturing plants, storage, warehouse and port loading facilities) involved in the supply chain are audited and approved by MOA to ensure they meet New Zealand's import requirements before exports can occur.
    - ii. Only PKE produced in MOA approved facilities are certified for export to New Zealand.
  - c. Provides a maintained and updated list of approved facilities on its website.
- 2 That MPI urgently amends the IHS for Processed Animal Feeds of Plant Origin regarding PKE to more clearly reflect the requirements for registration and phytosanitary certification and simplify requirements where possible.
- 3 That MPI provides additional information and specifications to MOA to assist with their updating of procedures, including guidelines for the requirements for storage and transport of PKE.

## DEFINITIONS AND ABBREVIATIONS

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NPPO	National Plant Protection Organisation
PKE	Palm Kernel expeller
PKM	Palm Kernel meal
MOA	Ministry of Agriculture (Indonesia)
ISPM	International Standard for Phytosanitary Measures
PKO	Palm Kernel oil
FMDV	Foot and Mouth Disease Virus

## BACKGROUND AND PURPOSE

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### BACKGROUND

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PKE is a by-product made from the extraction of oil from the palm kernel seeds and fruits of the oil palm, *Elaeis guineensis*. PKE is the mashed solid part of the seed kernels left remaining after oil extraction.

The Palm kernel is the edible seed of the oil palm tree. The fruit yields two distinct oils - palm oil derived from the outer parts of the fruit (crude palm oil, CPO), and palm kernel oil (PKO) derived from the kernel.

FIGURE 1: PALM FRUIT



FIGURE 2: PALM KERNELS



The pulp left after oil is rendered from the kernel is formed into palm kernel expeller, which is the mashed solid part of the seed kernels left remaining after oil extraction. Palm kernel expeller or extract (PKE) is the same product as palm kernel meal (PKM).

FIGURE 3: PALM KERNEL EXPELLER (PKE)



As a final product, PKE is a pure homogenous processed material produced under extremely high temperatures. The name PKE is based on the fact that the seeds have undergone extraction by an

expeller process for the oil and this is the residue, whereas the name PKM is more aligned with the physical state of the “meal” like product.

A summary of the oil palm production process, including PKE production is in appendix 1.

**IMPORTS OF PKE INTO NEW ZEALAND**

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Imports of PKE have become a significant production input to New Zealand’s dairy industry over the past decade as a high-protein supplementary feed for dairy cows. In the past few years, annual imported quantities of PKE have increased dramatically from approximately 100,000 tonnes in 2004 to 1.5 million tonnes in 2012. PKE is an important source of supplementary stockfeed, especially in drought affected areas.

Latest figures show New Zealand agents imported over 1.5 million tonnes from January 2012 to March 2013. The greatest volumes of imports are from Malaysia and Indonesia which make up approximately 93% of the total volume imported into New Zealand. PKE is generally shipped from Indonesia to New Zealand in bulk vessels. Usually about 2 to 3 vessels with 40-60,000 MT are exported to New Zealand every month.

TABLE 1: PKE IMPORTS BY COUNTRY

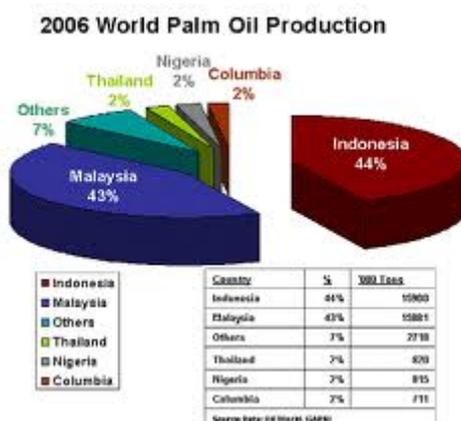
<b>Exporting Country</b>	<b>Imported Volume (Tonnes): January 2012 to March 2013</b>	<b>Percentage</b>
Indonesia	690,541	43.4%
Malaysia	781,034	49.1%
Solomon Islands	2,189	0.1%
Papua New Guinea	117,151	7.4%
<b>TOTAL</b>	<b>1,590,825</b>	<b>100%</b>

**PRODUCTION OF PKE IN INDONESIA**

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Indonesia is the world’s largest producer of palm oil producing over 45% of total production. An overview of palm oil production in Indonesia is reproduced in appendix 8.

FIGURE 4: PALM OIL PRODUCTION BY COUNTRY



The current total plantation area covers 8 million hectares, and expected to rise to 13 million hectares by 2020. Palm oil is the third biggest export earner for Indonesia.

FIGURE 5: PALM OIL PRODUCTION AND EXPORTS FROM INDONESIA



The biggest production area is Sumatra, but rapid expansion is occurring in the region of Kalimantan on the island of Borneo.

PKE is produced and used locally primarily as an animal feed. However, the largest volume of product is exported overseas. The PKE produced in Indonesia is exported around the world, primarily to Europe and New Zealand, as well as various Asian countries.

#### IMPORT HEALTH STANDARD REQUIREMENTS

The current phytosanitary requirements for the importation of plant-based animal feeds are specified in the IHS *Importation into New Zealand of Processed Animal Feeds of Plant Origin*: <http://www.biosecurity.govt.nz/imports/plants/standards/bnz-pafp-imprt>.

PKE is one of a number of single-ingredient processed animal feeds including seed meals and various pelletised products that are imported into New Zealand with entry requirements listed in section 7.3 of the above IHS.

The IHS for PKE requires that for each consignment, certification and assurances are provided to state that the PKE:

- has been heat processed to at least 85 degrees Celsius;
- has been stored in factories dedicated to the processing of the palm fruits and kernels, and kept clean and free of potential contamination following production;
- has been handled and stored in a manner to prevent contamination with any unprocessed plant material, vermin, birds, ruminant animals, faecal material and other animal products;
- has been inspected according to official procedures prior to export, and
- has been fumigated with phosphine or methyl bromide prior to or during shipment.

On arrival in New Zealand all consignments are inspected by MPI biosecurity inspectors. If insects or other contaminants are found, an approved method of treatment is undertaken to mitigate any biosecurity risk.

During the initial development of the IHS, the risk of regulated pests entering and establishing in New Zealand from processed animal feed imports was assessed. The risk that processed plant by-products for use as animal feed could introduce foot and mouth disease virus (FMDV), as well as other potentially significant diseases, was considered negligible because such material is not a natural “host” for foot and mouth disease, and the IHS requires that:

- the heat treatment used in the standard manufacturing process for animal feeds of plant origin exceeds 85°C (note: palm kernel is usually heated to over 95°C during processing) and is more than sufficient to inactivate diseases, such as FMDV, that might be present.
- imported product must have been processed in a facility that is dedicated to the production of plant based products only, and after processing, the product needs to be stored in indoor facilities that are used exclusively for this purpose to ensure that it cannot be contaminated.

## STAKEHOLDER CONCERNS

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In the past, the grains section of Federated Farmers have approached MPI and highlighted potential concerns in relation to imports of stock feed, particularly with regard to imported PKE. Concerns associated with PKE production have also been raised by environmental groups due to the growing land use for the production of palm oil, in countries like Malaysia and Indonesia, which has caused increased deforestation of native forests.

A key part of the biosecurity system in New Zealand is reporting by stakeholders (and public) of suspected new organisms or other biosecurity risks. Several concerns have been raised by farmers after finding live pests associated with PKE on farms in New Zealand and all reports have been investigated by MPI. In addition, some farmers have reported finding contaminating material in the PKE, including metal objects.

Previous concerns raised by stakeholders resulted in MPI (then the Ministry of Agriculture and Forestry) conducting a survey to inspect all containers of bulk stockfeed, including PKE, over an approximate 4 week period in February and March 2009. Because no product arrived in containers during this period, inspections of the storage facilities associated with the major ports in Auckland, Tauranga, Christchurch and Invercargill were initiated. The facility inspections resulted in 106 identifications, representing 52 pests, all of which are already present in New Zealand and they were all non-regulated organisms.

An MPI border survey was completed during 2010 and 2011 to inspect randomly selected consignments of processed animal feed imports, including PKE, tapioca, soybean meal and canola meal. A total of 98 consignments of PKE were surveyed, associated with both imports in bulk vessels and containers. No regulated organisms were found on palm kernel imports, and no slippage was identified by surveyors after the usual inspection by MPI inspectors.

There have been very few interceptions of regulated pests on PKE over the last 10 years. The most common interception is Diptera flies, of which some are regulated species, although the economic and environmental risk of these species is likely to be low to negligible. The most common species intercepted on PKE imports is the Diptera fly, *Megaselia scalaris*. New Zealand's regulatory status of this species was re-assessed in 2012, and was changed from regulated to non-regulated, as this species was unlikely to have a significant impact to New Zealand.

All information to date suggests that the interceptions of live insects found during mandatory inspection by MPI on arrival in New Zealand have been dealt with appropriately using methyl bromide fumigation. Pest contamination problems for imports of plant-based stockfeed are known to exist on occasion with bulk product in containers that have had a build-up of moisture within the vicinity of the container doors during transit. Importers are given the option of pest identification to see if the intercepted pests are regulated or not, or fumigation. The usual situation is for importers to request fumigation without pest identification, as this is usually made to speed up delivery and avoids the cost of identification.

In the past few months, MPI have received a number of notifications on possible contaminants in imports of PKE which have required investigation. For example, MPI received a report that the leg of an animal was found buried in a shipment of PKE on a farm. The report was investigated by MPI and the leg was found to be from a goat of New Zealand origin, based on the identification of fly larvae in the meat. It appears that the leg was buried in the PKE pile after delivery to the farm.

MPI has also been notified by a Carterton farmer of metal contamination within PKE, which was found to have led to the death of a cow. While metal contaminants are not a biosecurity risk, there may be concerns over feed safety. MPI are currently investigating the source of this metal contamination and if any further actions are required.

There has been no detection to date of regulated pests associated with PKE after biosecurity clearance at the New Zealand border. Further there have been no animal diseases detected in New Zealand as a result of the import and use of PKE.

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## RISK ASSESSMENT FOR FOOT AND MOUTH DISEASE VIRUS (FMDV)

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FMDV is a highly contagious viral disease that causes high fever, vesicular lesions and ulcerations, and is considered to be the most economically devastating animal disease. The outbreaks foot and mouth disease (FMD) in Britain in 2001 (Thompson et al 2002), and in Taiwan in 1997 (Yang et al 1999) cost those countries billions of dollars.

The disease is widespread, occurring endemically in areas of South America, Africa and Asia. Currently, there are many unresolved disease events, including outbreaks in Europe (Bulgaria), China, North and South Korea, and South Africa (WAHID 2011). The disease has been eradicated from or has not occurred in North America, Australia, and many European countries. The Host species include cattle, zebu, domestic buffaloes, yaks, sheep, goats, swine, all wild ruminants, wild *Suidae* and members of the *Camelidae* family.

FMDV is recognised as absent from Indonesia. The official World Organisation for Animal Health (OIE) FMD situation for Indonesia (<http://www.oie.int/?id=246>) is recognised as FMD free, and where vaccination is not practiced.

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## PATHWAY AUDITS

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MPI conducts ongoing reviews of pathways where necessary for providing quality assurance of products arriving at the New Zealand border, and the outcome of these audits can include an urgent amendment to an IHS where considered necessary.

As part of the normal audit process for IHSs, MPI has previously conducted audits of PKE processing and storage facilities in Malaysia in 2006 and 2009. During these visits the auditors inspected and reviewed PKE processing and storage facilities and met with government officials, exporters and facility managers. There was no evidence to suggest that there is a significant risk of palm kernel being contaminated through contact with animal material, or any other biological contamination or soil.

Following concerns expressed by Federated Farmers the next audit program was brought forward. MPI officials (including a senior official) travelled to Indonesia and Malaysia to ensure that import requirements (security of PKE post production) are being maintained and to provide assurance that appropriate oversight of the export supply chain is occurring. While previous audits focused on facilities known to be exporting product to New Zealand, this audit focussed also on the official supervision of the export process, and was more extensive than usual, auditing the majority of facilities as well as the official systems and processes.

This audit will also input into the wider review of the IHS for all processed plant-based animal feeds, including PKE, to ensure the requirements appropriately manage the biosecurity risk associated with these products. The IHS review has been underway since 2012 and is programmed to be completed later in 2013.

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## PURPOSE

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The purpose of this report is to the review the system in place for exports of PKE to New Zealand. This involves:

- reviewing the security of the supply chain from production to shipping to reduce the likelihood of:
  - infestation by regulated pests,
  - contamination by vectors capable of transmitting animal diseases, and
  - contamination by other regulated articles that may be a risk to animal health and welfare.

- reviewing the phytosanitary certification and inspection processes used by MOA, and
- verifying that the assurances provided by Indonesia on certification are accurate for PKE consignments exported to New Zealand.

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## AUDIT VISIT

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MPI officials visited Indonesia between 26 May and 31 May 2013. During this time, MPI officials met with officials from the Ministry of Agriculture (MOA), the National Plant Protection Organisation (NPPO) for Indonesia. The MOA is the government agency responsible for plant quarantine including phytosanitary inspection and issuing phytosanitary certificates for plant products exported from Indonesia. The structure of the MOA is reproduced in appendix 2.

The MPI officials visited a number of PKE manufacturing plants, storage facilities and ports of loading to review the security of the supply chain for PKE to avoid contamination with sources of potential biosecurity and animal health risk. The MPI officials visited all the facilities identified by MPI prior to the visit.

The audit was exceptionally thorough. The usual approach is to audit the activities of the NPPO in providing oversight of export systems and phytosanitary certification and then a small sample of facilities to verify or 'ground-truth' what has been seen. Based on past experience, and informed by the number of interceptions picked up through inspection and verification at the New Zealand border we would generally have high confidence in NPPO assurances and systems. We would only take the approach visiting the majority of the manufacturing plants as well as auditing the NPPO systems and processes for either the most severe risks, or where we have strong evidence of failure. MPI is not intending using this approach as a standard for future audits as it does not align with our focus for better and less regulation, given that it will increase the costs to businesses and would need to be supported by science-based risk assessment. This is consistent with the approach taken when New Zealand export systems are audited by our trading partners.

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## AUDIT CRITERIA

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This audit focused on two aspects: The oversight provided by the exporting NPPO, and the facilities used for export of PKE to New Zealand.

The following questions were used to assess the suitability of the systems and processes used by the NPPO for the export of PKE:

1. Are the procedures used by MOA sufficient to ensure PKE is sourced only from supply chains where all the facilities and transportation systems used are suitable for the secure storage of PKE?
2. Do the MOA procedures for the production of phytosanitary certificates and export phytosanitary inspection meet New Zealand's requirements and expectations?
3. Do the MOA procedures verify that all PKE shipments are fumigated correctly to meet New Zealand's import requirements?

The following criteria were used to assess the suitability of the manufacturing and storage facilities for PKE, and transport and loading of ships. The facilities must be:

1. dedicated to the production of plant based products only, and do not expose PKE to any source of contamination from animal products before processing;
2. have measures in place to keep PKE free from contamination by any unprocessed plant material, vermin, birds, faecal material and other animal products and visually detectable regulated pests;
3. fully fenced and stock-proof;
4. substantially bird-proof;
5. use transport and loading systems in a manner that prevents contamination with any unprocessed plant material, vermin, birds, ruminant animals, faecal material and other animal products, and
6. the buildings and surrounding area (within the boundary of the facility) are well maintained and clean and tidy to reduce the likelihood for contamination of the PKE.

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## ENTRY MEETING

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### PARTICIPANTS

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The MPI officials along with Mr Huw Thomas (Second Secretary, New Zealand High Commission, Jakarta) and Ms Desy Fatimah (Policy Adviser, New Zealand High Commission, Jakarta) met with Dr Antarjo Dikin, Director, Plant Quarantine and Bio-safety and other section representatives from the Ministry of Agriculture.

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### AGENDA

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- Introductions
- Purpose of the visit.  
The MPI officials explained that the purpose of the visit was to inspect and audit a number of PKE manufacturing plants, storage facilities and ports of loading to review the security of the supply chain for PKE to avoid contamination with sources of potential biosecurity and animal health risk.
- Agreement on schedule

The audit schedule is in appendix 3. A map of Indonesia showing the areas visited is reproduced in appendix 4.

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## SUMMARY OF KEY FINDINGS

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### NPPO PROCEDURES

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1. The procedures used by MOA for the production of phytosanitary certificates, export inspection, registration of fumigation providers, and supervision of fumigation are very good and meet or exceed New Zealand's requirements and expectations. The procedure for certification used by the MOA is reproduced in appendix 5.
2. MOA inspectors inspect and verify all applications of phosphine used for fumigating PKE exports to New Zealand. The fumigation certificate is signed by the MOA officer only when he/she is satisfied the fumigation process has been correctly applied.
3. While all facilities have been visited by MOA inspectors, there is insufficient evidence of verification to ensure that all the storage conditions in the supply chain meet New Zealand's import requirements.

**Comment:** The report by MacKinnon and Clark raised a concern that PKE from facilities that do meet the expected standard for storage may be exported to New Zealand specifically from Malaysia, but this concern may also apply to Indonesia if there is not sufficient oversight from the NPPO.

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## PKE FACILITIES

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### MANUFACTURING FACILITIES

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MPI officials visited six PKE manufacturing facilities on the island of Sumatra, which is the major area of PKE production in Indonesia, and the primary source of PKE for export to New Zealand. All six facilities have exported PKE to New Zealand since January 2012, and the majority of facilities have exported PKE to New Zealand in the past few months.

Two of these facilities were in the Dumai area in the Riau Province of eastern Sumatra (approximately six hours by road from the nearest airport at Pekanbaru), and the remaining four facilities were around the Lampung region in southern Sumatra. These six facilities make up approximately 25% of the PKE facilities in Indonesia manufacturing product for export to New Zealand.

MOA officials have visited and/or communicated with the majority of the PKE manufacturing facilities since correspondence was sent by MPI in April 2012, to ensure that these facilities met the New Zealand requirements for PKE storage.

All six facilities audited were dedicated to the production of plant based products only, and none were used for processing animal products. Most of the facilities maintained effective separation of raw material (palm kernels) from PKE, and have effective measures in place to keep PKE free from contamination by any unprocessed plant material, vermin, birds, faecal material and other animal products and visually detectable regulated pests. Most of the facilities were very well maintained with good quality buildings and clean and tidy surrounds. All the facilities were fully fenced and stock-proof, and most had effective bird-exclusion systems. All the facilities had procedures for ensuring trucks were free of contamination prior to loading, and used covers to prevent contamination during transport to the port of loading.

The PKE manufacturing facilities visited by MPI officials and recommended for initial approval for export to New Zealand by MOA are:

1. PT. Sari Dumai Sejati
2. PT. Sumber Indah Perkasa
3. PT. Tunas Baru Lampung
4. PT. Wilmar Nabati Indonesia

One facility, PT. Aman Jaya Perdana, visited by MPI officials needs minor improvements to ensure they effectively meet the IHS requirements, especially related to ensure the PKE storage warehouses are substantially bird-proof, such as suitable bird netting in place for all doors and gaps in the storage warehouses, and to ensure that appropriate pest control activities are in place, such as regular monitoring and trapping programmes. In addition, improved systems were needed close to the storage shed doors to reduce the likelihood of contamination from soil associated with trucks entering the storage facility.

One facility, PT. Sinarjaya Intl Mulya, requires substantial improvements to bring it up to standard including additional bird proofing, implementation of an appropriate pest control programme, and additional building maintenance and improved cleanliness in the grounds surrounding the production and storage buildings to ensure there is not the potential for contamination to occur. The MPI officials identified this facility as not meeting New Zealand's requirements.

Audit reports for each of the PKE manufacturing facilities visited by the MPI officials are outlined in appendix 6.

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## PKE PORT TERMINAL WAREHOUSES

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MPI visited port facilities associated with Wilmar and SDS manufacturing plants in Dumai. Each port is privately owned by the respective companies, and directly loads product via automatic conveyer (SDS) or using trucks to tip product into automatic conveyors (Wilmar). In both cases the facilities and systems in place for loading product on to vessels are considered to meet New Zealand's requirements. The conveyors have in-line magnetic separators to remove any metallic objects prior to loading,

MPI also visited the port facility associated with the Bandar Lampung port. The MPI officials observed the area where PKE is loaded on to the vessels, and observed through photos the way that PKE is loaded on to vessels intended for export to New Zealand. Loading at this port is conducted using mechanical grabs to load into ship holds. In this case the facility and system for loading product on to vessels is considered to meet New Zealand's requirements.

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## TRANSPORT

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Secure transport (from manufacturing facility to storage warehouse, to port of loading) is an important component in the supply chain and a potential source of contamination. No evidence was found indicating significant risk in this area. The production of palm oil, and the most valuable commodity palm kernel oil, is a major industry in Indonesia. In most cases the MPI officials found dedicated transport for either PKE exclusively, or in some cases use of trucks for PKE, kernels and palm fruit. There was a good level of awareness of the need for clean trucks to prevent contamination of PKE associated with previous cargoes. All facilities used weighbridge staff to

visually inspect trucks before loading to ensure freedom from contamination. All facilities weighed trucks at origin and destination.

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## GMP+ B2

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The GMP+ standards have been developed to harmonize requirements for feed in order to ensure quality and safety throughout the entire feed chain. It is based on widely recognized principles of quality assurance, Hazard Analysis Critical Control Point (HACCP). Choosing which standard (B1, B2, etc.) and certification scope (production of feed materials, trade, etc.) depends on the organization's role in the feed chain. GMP+B1 is mandatory for the production of compound feed, but can also be used for the production of feed materials and transport. B2 can be used for the production of feed materials and feed additives, while B3 is intended for trade and trans-shipment.

Each of these standards is intended for different means of feed transport (e.g. B4.1 is intended for truck transport). All steps in the supply chain are thus covered by the given requirements. New Zealand does not require certification to GMP B2+. However many of the PKE facilities are GMP+ B2 certified as required by the EU. This standard, when enforced appropriately, would also meet New Zealand's supply chain security requirements.

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## EXIT MEETING

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### SUPPLY CHAIN SECURITY

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The MPI officials discussed and re-emphasised the need for supply chain security from the point of manufacture of PKE (where the product has been heated to over 95 degrees) to local storage, transport, warehousing and loading onto the vessel for shipping to New Zealand.

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### CRITICAL FINDINGS

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The MPI officials presented the following critical findings requiring immediate action:

- a. With one exception the facilities visited either met, or with minor improvements, would meet New Zealand's import requirements for supply chain security.
- b. The systems and processes used by the export NPPO (MOA) for phytosanitary inspection and certification, and the supervision of pre-export fumigation are very good.
- c. The export system relies on inspection of the product just prior to export, rather than verification of requirements for the whole supply chain.
- d. Facilities manufacturing and storing PKE may not necessarily be audited or inspected by MOA prior to export.

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### SUMMARY OF FINDINGS

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The MPI officials presented the following summary of findings:

- a. Palm oil is a major industry in Indonesia, and many systems and processes are in place to manage production, storage, transport, certification and export.

- b. MOA is the government agency responsible for providing oversight for all phytosanitary products, including PKE, and for ensuring the products meets import country requirements, including issuing phytosanitary certificates.
- c. MOA has good processes in place for facility registration, auditing and enforcement, phytosanitary inspection, issuing phytosanitary certificates, and supervising fumigation. However registration of facilities for the export of PKE is not conducted at present as this has not been a requirement for New Zealand.
- d. MOA phytosanitary certification process includes supervision of the application of phosphine fumigation of PKE in holds of the transport ships.
- e. Most of the facilities visited meet New Zealand’s requirements for maintenance of biosecurity (exclusion of animals, be substantially bird-proof, have effective rodent control, and be maintained in a manner that significantly reduces the likelihood of contamination of the PKE from non-biological material) and are of a very high quality.
- f. One facility could be upgraded to meet New Zealand’s requirements with minor improvements (improved bird-proofing, extended rodent controls).
- g. One facility requires significant improvement to bring it up to the required standard.
- h. With a few exceptions, facilities and transporting trucks are used exclusively for PKE. Some trucks are also used for transporting palm fruit.

## RECOMMENDATIONS AND ACTIONS

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The MPI officials discussed the following recommendations and actions required.

- 1 That the Ministry of Agriculture (Indonesia) operating as the National Plant Protection Organisation (NPPO):
  - a. Approve all manufacturing plants and storage facilities involved in exporting PKE to New Zealand. The factors to be considered are listed in Table 2.

TABLE 2: AUDIT FACTORS TO BE CONSIDERED IN APPROVING FACILITIES

Manufacturing facilities	Dedicated to plant based products, and no animal products present.
	Maintains effective separation between raw material (palm kernels) and PKE.
	Plant does not process palm fruit or has effective separation of palm fruit from palm kernels and PKE.
	The plant is fully fenced and stock-proof, substantially bird-proof and has effective pest and rodent management systems.
	The buildings and surrounding area (within the boundary of the facility) are well maintained and clean and tidy to reduce the likelihood for contamination of the PKE.
Storage facilities	Maintains effective separation between raw material (palm kernels) and PKE.
	The facility uses transport and loading systems in a manner that prevents contamination with any unprocessed plant material, vermin, birds, ruminant animals, faecal material and other animal

	products
	The plant is fully fenced and stock-proof, substantially bird-proof and has effective pest and rodent management systems.
	The buildings and surrounding area (within the boundary of the facility) are well maintained and clean and tidy to reduce the likelihood for contamination of the PKE.

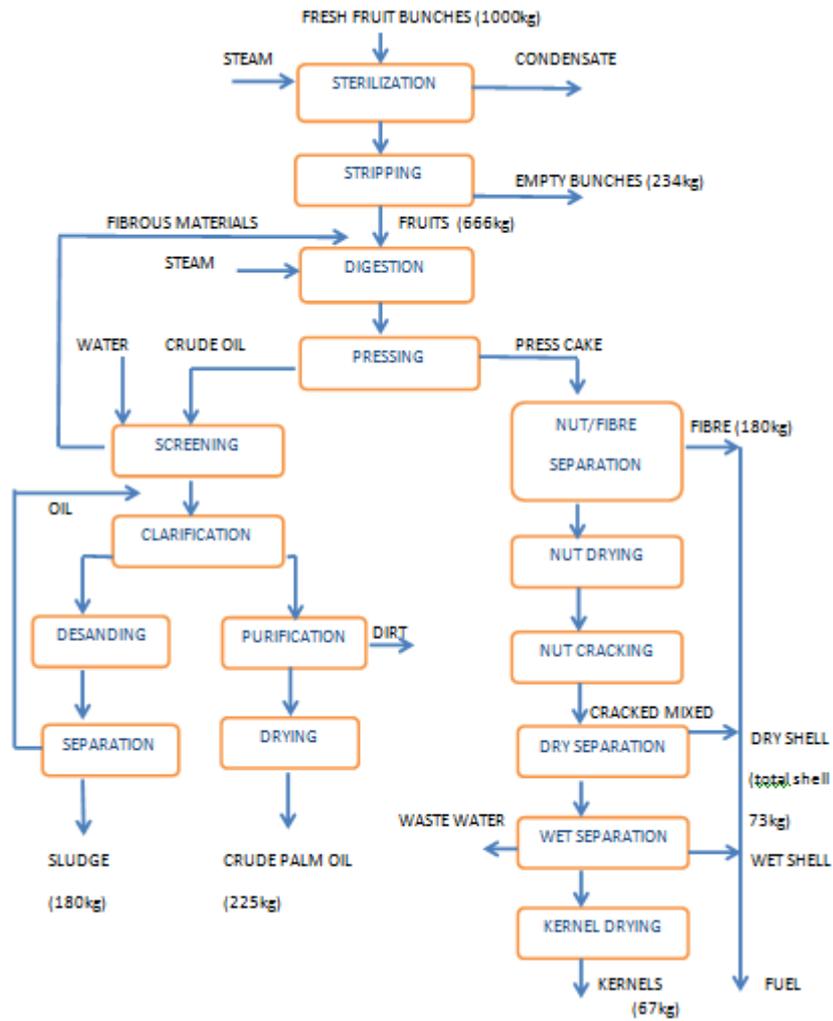
- b. Update procedures for registration of facilities (manufacturing and storage) to emphasise the requirements for New Zealand.
- c. Update procedures for issuing phytosanitary certificates to ensure;
  - i. all facilities (manufacturing plants, storage, warehouse and port loading facilities) involved in the supply chain are approved to ensure they meet New Zealand's import requirements and must be approved by MOA before exports can occur.
  - ii. only PKE produced in MOA approved facilities meeting New Zealand's import requirements are certified for export to New Zealand
- d. Increase the level of supervision of the supply chain from manufacture to loading at the port.
- e. Provides a maintained and updated list of approved facilities on its website.

That MPI:

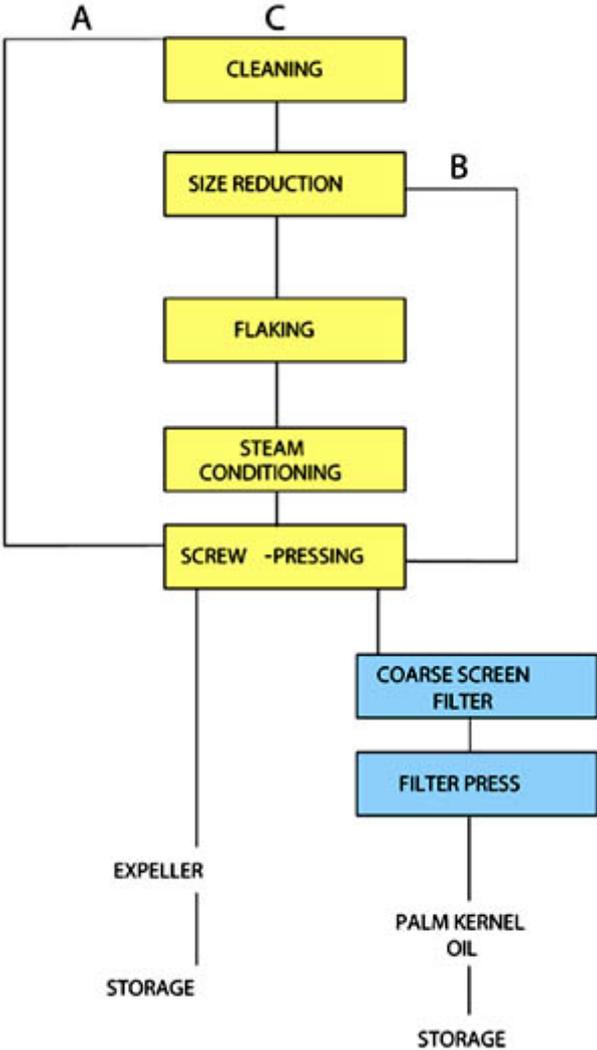
- a. Urgently amends the IHS for Processed Animal Feeds of Plant Origin to more clearly reflect the requirements for registration and phytosanitary certification and simplify requirements where possible.
- b. Provide additional guidelines specifying requirements for storage and transport of PKE.

## APPENDICES

### APPENDIX 1: PALM OIL AND PALM KERNEL PRODUCTION



Extraction of PKO and production of PKE



The mechanical pressing process produces high temperatures (above 85 C).



## APPENDIX 2: MINISTRY OF AGRICULTURE (INDONESIA) STRUCTURE

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APPENDIX 3: AUDIT SCHEDULE

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<b>Day</b>	<b>Time</b>	<b>Activities</b>
<b>Day-1</b> <b>Monday,</b> <b>27 May 2013</b>	<b>08.30 – 10.00</b>	<b>Opening meeting at MOA office in Jakarta</b>
	<b>14.05 – 15.55</b>	<b>Flight Jakarta – Pekanbaru (GA 176)</b>
	<b>16.30 – 22.30</b>	<b>Trip to Pekanbaru – Dumai (stay in Dumai)</b>
<b>Day-2</b> <b>Tuesday,</b> <b>28 May 2013</b>	<b>09.00 – 17.00</b>	<b>Visit to PKE Export Facilities in Dumai</b>
	<b>17.00 – 23.00</b>	<b>Trip to Dumai – Pekanbaru (stay in Pekanbaru)</b>
<b>Day-3</b> <b>Wednesday,</b> <b>29 May 2013</b>	<b>11.10 – 12.55</b>	<b>Flight Pekanbaru – Jakarta (GA 175)</b>
	<b>15.25 – 16.20</b>	<b>Flight Jakarta – Lampung (GA 076) (stay in Lampung)</b>
<b>Day-4</b> <b>Thursday,</b> <b>30 May 2013</b>	<b>09.00 – 17.00</b>	<b>Visit to PKE Export Facilities in Lampung</b>
<b>Day-5</b> <b>Friday,</b> <b>31 May 2013</b>	<b>08.00 – 09.30</b>	<b>Closing meeting at Agricultural Quarantine Service in Lampung</b>
	<b>10.35 – 11.30</b>	<b>Flight Lampung – Jakarta (GA 073)</b>

#### APPENDIX 4: MAP OF INDONESIA WITH KEY LOCATIONS

The areas visited were the port of Dumai (North of Pekanbaru) and Bandar Lampung



## **SISTEM SERTIFIKASI EKSPOR PALM KERNEL EXPELLER (PKE)**

### ***EXPORT CERTIFICATION SYSTEM FOR PALM KERNEL EXPELLER***

#### **Persyaratan Fasilitas Produksi dan Gudang**

##### ***Requirements for facility of production and warehouse***

1. Fasilitas produksi bukan merupakan tempat untuk produksi bahan-bahan yang berasal dari hewan.  
*The facility of production was not used for production of stuff from animal source.*
2. Fasilitas produksi tidak tercemar oleh kontaminan yang berasal dari hewan.  
*The facility of production was not contaminated by contamination from animal source.*
3. Fasilitas produksi memiliki sistem yang baik untuk menjamin produk yang dihasilkan bebas dari gangguan dan kontaminasi yang berasal dari hewan.  
*The facility of production had a good system to ensure the product free from disruption and contamination from animal source.*
4. Fasilitas produksi dilengkapi gudang yang bebas dari burung.  
*The facility of production equipped with a bird-free warehouse.*
5. Kelayakan fasilitas produksi telah diregistrasi oleh instansi pemerintah yang berwenang.  
*The feasibility of production facility shall be registered by the government authority.*
6. Fasilitas produksi dan gudang harus diaudit oleh Badan Karantina Pertanian melalui UPT setempat, secara berkala atau sebelum dilakukannya ekspor, untuk memastikan bahwa fasilitas tersebut telah memenuhi persyaratan negara tujuan ekspor.  
*The facility of production as well as warehouse shall be audited by IAQA through its plant quarantine service in local area, periodically or prior to export, to ensure that those facilities had met the requirements of importing country.*

#### **Persyaratan Produk Kualitas Ekspor**

##### ***Product Requirements for export***

1. Produk harus melalui proses pemanasan dengan suhu inti komoditas mencapai minimum 85 °C selama tidak kurang dari 5 menit.  
*The product shall through a heat treatment process to achieve a core commodity's temperature minimum 85 °C for at least 5 minutes.*

2. Produk harus bebas dari benih/biji-bijian yang memiliki daya tumbuh.  
*The product shall be free from viable seeds/grains.*
3. Produk harus bebas dari kontaminasi bagian tanaman yang belum diproses, bagian tubuh maupun kotoran hewan, produk hewan lainnya, dan OPTK yang secara visual dapat dideteksi.  
*The product shall be free from contamination of unprocessed plant parts, animal's waste as well its body parts, other animal products, and pests with visual detectable.*

## **Persyaratan Pemeriksaan oleh Petugas Karantina Tumbuhan**

### ***Phytosanitary Inspection***

4. Pemeriksaan dalam rangka sertifikasi ekspor oleh Petugas Karantina Tumbuhan harus dilakukan dalam fasilitas produksi dan gudang yang telah diregistrasi.  
*Phytosanitary inspection by plant quarantine inspectors shall be conducted within registered facility of production and warehouse.*
5. Pemeriksaan harus dilakukan secara acak (sampel) dari setiap lot kiriman dengan target pemeriksaan sesuai persyaratan produk tujuan ekspor atau perhatian negara pengimpor.  
*Inspection shall be conducted randomly to each lot of consignment, with inspection target as listed in product requirements for export or as concern of importing country.*
6. Sampel pemeriksaan harus mewakili produk yang akan dikirim.  
*The sample for inspection shall be as the representative from all export consignment.*
7. Produk harus bebas dari benih/biji-bijian yang memiliki daya tumbuh, serta bebas dari kontaminasi bagian tanaman yang belum diproses, bagian tubuh maupun kotoran hewan, produk hewan lainnya, dan OPTK yang secara visual dapat dideteksi.  
*The consignment shall be free from viable seeds/grains, as well as free from contamination of unprocessed plant parts, animal's waste as well its body parts, other animal products, and pests with visual detectable.*
8. Produk yang tidak memenuhi persyaratan harus ditolak untuk diekspor.  
*Consignments failed from export requirements of importing country shall be withdrawn to export.*
9. Sertifikat Phytosanitary asli yang dikeluarkan oleh UPT Karantina Pertanian harus menyertai setiap barang kiriman yang akan diekspor.  
*An original document of Phytosanitary Certificate (PC) issued by IAQA shall accompany each export consignment.*
10. Pada kolom *Additional Declaration* pada PC harus mencantumkan keterangan "*The product has been processed with a heat application at least 85 °C for a minimum of 5 minutes, and*

*free from contamination from animal or plant products or animal waste or viable seed or regulated pests, and has been inspected accordance to New Zealand requirements”.*

*In the Additional Declaration column of PC shall be stated that ”The product has been processed with a heat application at least 85 °C for a minimum of 5 minutes, and free from contamination from animal or plant products or animal waste or viable seed or regulated pests, and has been inspected accordance to New Zealand requirements”.*

11. Pada kolom perlakuan pada PC harus diisi informasi tentang rincian perlakuan antara lain:

*In the Treatment column of PC shall be stated detail information of treatment, as follows:*

- a. tanggal perlakuan  
*date of treatment*
- b. dosis perlakuan panas yang digunakan (°C / menit)  
*dose of heat treatment used (°C/minutes)*
- c. suhu inti minimum komoditas selama perlakuan  
*a minimum core temperature of commodity treated during treatment*

12. Informasi tambahan lainnya harus disebutkan pada PC, antara lain:

*The additional information shall be informed well in the Phytosanitary Certificate, as follows:*

- a. nama dan nomor registrasi fasilitas produksi  
*name and registered number of production facility*
- b. jumlah paket dan volume (berat) kiriman  
*number of packages and volume (weight) of consignment*
- c. identitas kemasan atau nomor kontener (untuk angkutan laut)  
*identity of packing or container or seal numbers (for sea freight only).*

## **Keamanan Produk**

### ***Product security***

1. Produk yang telah diperiksa dan disertifikasi oleh Petugas Karantina harus dijaga dalam kondisi aman dan dicegah dari kontaminasi benih/biji-bijian yang memiliki daya tumbuh serta kontaminasi bagian tanaman yang belum diproses, bagian tubuh maupun kotoran hewan, produk hewan lainnya, dan OPTK yang secara visual dapat dideteksi, selama penyimpanan dan pengiriman.

*The product that has been inspected and certified by IAQA shall be maintained under a secure condition and to be prevented free from contamination of viable seeds/grains, as well as free from contamination of unprocessed plant parts, animal’s waste as well its body parts, other animal products, and pests with visual detectable, during storage and movement.*

2. Produk yang akan diekspor ke suatu negara harus disimpan secara terpisah dengan negara lainnya.

*The product exported for an importing country shall be separated from another country.*

3. Pengiriman produk harus menggunakan alat angkut yang tertutup dan aman dari kontaminasi.

*The movement of consignment shall be use a secure transportation (in sealed trucks, containers or air cans) to ensure the products still free from contamination.*



APPENDIX 6: DETAILED FACILITY AUDIT SUMMARIES

**PKE Manufacturing Facilities**

Facility: PT. Sari Dumai Sejati (SDS), Dumai			Date Audited: 28/5/2013
	Yes	No	Notes
<b>1. Sourcing of product</b>			
a. Confirm that only Palm fruit/Palm kernels are received at the processing facility and confirm that no other products are processed or kept on-site (excluding products derived from Palm kernels, i.e. PKE cake, PKE meal, Palm kernel oil, etc).	☑		Dedicated facility only for palm fruit, kernels, and oil palm based products. No other products are processed or kept on-site.
b. Confirm that the facility is dedicated to the production of plant based products only.	☑		Dedicated facility for production of plant based products only. GMP certified.
<b>2. Production</b>			
a. Confirm that the facility processes palm kernels using the high temperature screw press process.	☑		High temperature screw press process used.
<b>3. Maintenance and Sanitation</b>			
a. Verify the general cleanliness of all facilities and surrounding grounds are well maintained. No build-up of residues, etc.	☑		Good general cleanliness of facility, including surrounding grounds which are well fenced. No livestock in nearby areas.
<b>4. Post Production Storage</b>			
a. Storage of final product is fully enclosed with no potential for contamination - restricted access from cattle/animals, insect controls, rodent controls, bird proofing etc.	☑		Bird-proofing nets used at all door and gaps in facility. Plastic sheet protection used at main door to prevent birds etc.

b. Confirm no other products are stored in the same storage facility as the final product.	<input checked="" type="checkbox"/>		No other products are stored in the same storage area. Also store PKE in one tonne (approx) bags in warehouse.
<b>5. Pest Control</b>			
a. All storage facilities operate an adequate and effective pest control program.	<input checked="" type="checkbox"/>		Pest control programme in place, including vermin traps.
<b>6. Post Production Transportation</b>			
a. Are the trucks weighed at the processing facility and at the point of loading?		<input checked="" type="checkbox"/>	Material is directly transported and loaded on to SDS's own port (Lubuk Gaung) by automatic conveyer from PKE storage warehouse. The product is covered on conveyor during movement to vessel loading area.
b. Are the trucks dedicated for transporting Palm Kernel Meal (PKE)? Verify the trucks are not used to transport animals, animal material and/or unprocessed plant material.		<input checked="" type="checkbox"/>	
c. Are the trucks cleaned prior to loading and are they inspected for cleanliness prior to loading?		<input checked="" type="checkbox"/>	
d. Verify raw material is covered/protected during transport (clean tarps, etc).	<input checked="" type="checkbox"/>		
e. Verify the final product cannot be contaminated during loading of the trucks, transport and receipt at the port of export.	<input checked="" type="checkbox"/>		

FIGURE 6: PKE STORAGE AT PT. SARI DUMAI SEJATI



FIGURE 7: COVERED CONVEYER FROM STORAGE FACILITY TO PORT AT PT. SARI DUMAI SEJATI



FIGURE 8: BIRD CONTROL MEASURES AT DOORS OF PKE STORAGE FACILITY



FIGURE 9: BIRD NETTING AT PKE STORAGE FACILITY



Facility: PT. Wilmar Nabati Indonesia, Dumai			Date Audited: 28/5/2013
	Yes	No	Notes
<b>1. Sourcing of product</b>			
a. Confirm that only Palm fruit/Palm kernels are received at the processing facility and confirm that no other products are processed or kept on-site (excluding products derived from Palm kernels, i.e. PKE cake, PKE meal, Palm kernel oil, etc).	☑		Dedicated facility only for palm fruit, kernels, and oil palm based products. No other products are processed or kept on-site. Produce on average 600-700 tonnes per day of PKE.
b. Confirm that the facility is dedicated to the production of plant based products only.	☑		Dedicated facility for production of plant based products only. GMP certified. Registered by ISPO.
<b>2. Production</b>			
a. Confirm that the facility processes palm kernels using the high temperature screw press process.	☑		High temperature screw press process used.
<b>3. Maintenance and Sanitation</b>			
a. Verify the general cleanliness of all facilities and surrounding grounds are well maintained. No build-up of residues, etc.	☑		Good general cleanliness of facility, including surrounding grounds which are well fenced. No livestock in nearby areas.
<b>4. Post Production Storage</b>			
a. Storage of final product is fully enclosed with no potential for contamination - restricted access from cattle/animals, insect controls, rodent controls, bird proofing etc.	☑		Bird-proofing nets used at all gaps in facility. Roller doors used. One small gap noticed at one door.

b. Confirm no other products are stored in the same storage facility as the final product.	<input checked="" type="checkbox"/>		No other products are stored in the same storage area.
<b>5. Pest Control</b>			
a. All storage facilities operate an adequate and effective pest control program.	<input checked="" type="checkbox"/>		Pest control programme in place, including vermin, gecko and insect traps. Conducted by external provider.
<b>6. Post Production Transportation</b>			
a. Are the trucks weighed at the processing facility and at the point of loading?	<input checked="" type="checkbox"/>		Yes, trucks are weighed at processing facility and port of loading. Port of loading is their own port only 500 to 600 metres away from the PKE storage warehouse.
b. Are the trucks dedicated for transporting Palm Kernel Meal (PKE)? Verify the trucks are not used to transport animals, animal material and/or unprocessed plant material.	<input checked="" type="checkbox"/>		Trucks are dedicated for transporting PKE or kernels only.
c. Are the trucks cleaned prior to loading and are they inspected for cleanliness prior to loading?	<input checked="" type="checkbox"/>		Trucks are checked and cleaned prior to loading.
d. Verify raw material is covered/protected during transport (clean tarps, etc).	<input checked="" type="checkbox"/>		Material is covered with clean canvas tarps.
e. Verify the final product cannot be contaminated during loading of the trucks, transport and receipt at the port of export.	<input checked="" type="checkbox"/>		Product cannot be contaminated during loading, transport and receipt at port of export. Trucks tip product on to automatic conveyors which transport PKE into the vessel hold.

FIGURE 10: PALM OIL AND PKE PROCESSING AT PT. WILMAR NABATI INDONESIA



FIGURE 11: BIRD NETTING AT PKE STORAGE WAREHOUSE



FIGURE 12: PKE STORAGE AT PT. WILMAR NABATI INDONESIA



FIGURE 13: RODENT BAIT STATION OUTSIDE PKE STORAGE FACILITY



Facility: PT. Aman Jaya Perdana, Lampung			Date Audited: 30/5/2013
	Yes	No	Notes
<b>1. Sourcing of product</b>			
a. Confirm that only Palm fruit/Palm kernels are received at the processing facility and confirm that no other products are processed or kept on-site (excluding products derived from Palm kernels, i.e.. PKE cake, PKE meal, Palm kernel oil, etc).		<input checked="" type="checkbox"/>	Dedicated facility only for palm fruit, kernels, and oil palm based products. However other products such as fertiliser and black pepper are kept on site. Produce on average 750 tonnes per day of PKE.
b. Confirm that the facility is dedicated to the production of plant based products only.	<input checked="" type="checkbox"/>		Dedicated facility for production of plant based products only. GMP certified.
<b>2. Production</b>			
a. Confirm that the facility processes palm kernels using the high temperature screw press process.	<input checked="" type="checkbox"/>		High temperature screw press process used.
<b>3. Maintenance and Sanitation</b>			
a. Verify the general cleanliness of all facilities and surrounding grounds are well maintained. No build-up of residues, etc.		<input checked="" type="checkbox"/>	Some poor hygiene practices with product outside main door of PKE facility. Surrounding grounds are well fenced. No livestock in nearby areas.
<b>4. Post Production Storage</b>			
a. Storage of final product is fully enclosed with no potential for contamination - restricted access from cattle/animals, insect controls, rodent controls, bird proofing etc.		<input checked="" type="checkbox"/>	Bird-proofing nets used at all gaps in facility; one area needing repair where there is a gap in netting. Roller doors used, and were open during visit with no bird netting. Very small amount of food wrappers noticed in PKE product near door.

b. Confirm no other products are stored in the same storage facility as the final product.		<input checked="" type="checkbox"/>	No other products are stored in the same storage area. Bagged PKE also stored in area intended for local market as feed. Bagged fertiliser was temporarily in storage room with PKE.
<b>5. Pest Control</b>			
a. All storage facilities operate an adequate and effective pest control program.		<input checked="" type="checkbox"/>	Pest control programme in place, including vermin traps.
<b>6. Post Production Transportation</b>			
a. Are the trucks weighed at the processing facility and at the point of loading?		<input checked="" type="checkbox"/>	Yes, trucks are weighed at processing facility and port of loading.
b. Are the trucks dedicated for transporting Palm Kernel Meal (PKE)? Verify the trucks are not used to transport animals, animal material and/or unprocessed plant material.		<input checked="" type="checkbox"/>	Trucks are dedicated for transporting PKE.
c. Are the trucks cleaned prior to loading and are they inspected for cleanliness prior to loading?		<input checked="" type="checkbox"/>	Trucks are checked and cleaned prior to loading.
d. Verify raw material is covered/protected during transport (clean tarps, etc).		<input checked="" type="checkbox"/>	Material is covered with clean canvas tarps.
e. Verify the final product cannot be contaminated during loading of the trucks, transport and receipt at the port of export.		<input checked="" type="checkbox"/>	Product cannot be contaminated during loading, transport and receipt at port of export.

FIGURE 14: LOADING OF PKE INTO TRUCKS AT PT. AMAN JAYA PERDANA



FIGURE 15: PKE STORAGE FACILITY PT. AMAN JAYA PERDANA



FIGURE 16: BAGGED FERTILISER BEING TEMPORARILY STORED IN PKE STORAGE FACILITY



Facility: PT. Sumber Indah Perkasa, Lampung			Date Audited: 30/5/2013
	Yes	No	Notes
<b>1. Sourcing of product</b>			
a. Confirm that only Palm fruit/Palm kernels are received at the processing facility and confirm that no other products are processed or kept on-site (excluding products derived from Palm kernels, i.e.. PKE cake, PKE meal, Palm kernel oil, etc).	<input checked="" type="checkbox"/>		Dedicated facility only for palm fruit, kernels, and oil palm based products. No other products are processed or kept on-site. Produce on average 300-350 tonnes per day of PKE.
b. Confirm that the facility is dedicated to the production of plant based products only.	<input checked="" type="checkbox"/>		Dedicated facility for production of plant based products only. GMP certified.
<b>2. Production</b>			
a. Confirm that the facility processes palm kernels using the high temperature screw press process.	<input checked="" type="checkbox"/>		High temperature screw press process used.
<b>3. Maintenance and Sanitation</b>			
a. Verify the general cleanliness of all facilities and surrounding grounds are well maintained. No build-up of residues, etc.	<input checked="" type="checkbox"/>		Excellent general cleanliness of facility, including surrounding grounds which are well fenced. No livestock in nearby areas.
<b>4. Post Production Storage</b>			
a. Storage of final product is fully enclosed with no potential for contamination - restricted access from cattle/animals, insect controls, rodent controls, bird proofing etc.	<input checked="" type="checkbox"/>		Bird-proofing nets used at all gaps in facility. Plastic strips used at door.

b. Confirm no other products are stored in the same storage facility as the final product.	☑		No other products are stored in the same storage area.
<b>5. Pest Control</b>			
a. All storage facilities operate an adequate and effective pest control program.	☑		Pest control programme in place, including vermin. Conducted by external provider.
<b>6. Post Production Transportation</b>			
a. Are the trucks weighed at the processing facility and at the point of loading?	☑		Yes, trucks are weighed at processing facility and port of loading.
b. Are the trucks dedicated for transporting Palm Kernel Meal (PKE)? Verify the trucks are not used to transport animals, animal material and/or unprocessed plant material.	☑		Trucks are dedicated for transporting PKE or kernels by contracting company.
c. Are the trucks cleaned prior to loading and are they inspected for cleanliness prior to loading?	☑		Trucks are checked and cleaned prior to loading.
d. Verify raw material is covered/protected during transport (clean tarps, etc).	☑		Material is covered with clean canvas tarps.
e. Verify the final product cannot be contaminated during loading of the trucks, transport and receipt at the port of export.	☑		Product cannot be contaminated during loading, transport and receipt at port of export. Facility currently building their own conveyor to own port, which should be completed within a year.

FIGURE 17: SIGN AT PT. SUMBER INDAH PERKASA



FIGURE 18: PALM KERNEL OIL AND PKE PRODUCTION FACILITIES AT PT. SUMBER INDAH PERKASA



FIGURE 19: WITHIN PKE STORAGE FACILITY AT PT. SUMBER INDAH PERKASA



Facility: PT. Tunas Baru Lampung, Lampung			Date Audited: 30/5/2013
	Yes	No	Notes
<b>1. Sourcing of product</b>			
a. Confirm that only Palm fruit/Palm kernels are received at the processing facility and confirm that no other products are processed or kept on-site (excluding products derived from Palm kernels, i.e.. PKE cake, PKE meal, Palm kernel oil, etc).	☑		Dedicated facility only for palm fruit, kernels, and oil palm based products. No other products are processed or kept on-site. Produce on average 300 tonnes per day of PKE.
b. Confirm that the facility is dedicated to the production of plant based products only.	☑		Dedicated facility for production of plant based products only. GMP certified. Approved by AQIS.
<b>2. Production</b>			
a. Confirm that the facility processes palm kernels using the high temperature screw press process.	☑		High temperature screw press process used.
<b>3. Maintenance and Sanitation</b>			
a. Verify the general cleanliness of all facilities and surrounding grounds are well maintained. No build-up of residues, etc.	☑		Good general cleanliness of facility, including surrounding grounds which are well fenced. No livestock in nearby areas.
<b>4. Post Production Storage</b>			
a. Storage of final product is fully enclosed with no potential for contamination - restricted access from cattle/animals, insect controls, rodent controls, bird proofing etc.	☑		Have just moved to a new storage facility; cleanliness was excellent. Bird-proofing nets used at all gaps in facility. Door nets used, but not put up in new facility yet.

b. Confirm no other products are stored in the same storage facility as the final product.	<input checked="" type="checkbox"/>		No other products are stored in the same storage area.
<b>5. Pest Control</b>			
a. All storage facilities operate an adequate and effective pest control program.	<input checked="" type="checkbox"/>		Pest control programme in place, including vermin traps.
<b>6. Post Production Transportation</b>			
a. Are the trucks weighed at the processing facility and at the point of loading?	<input checked="" type="checkbox"/>		Yes, trucks are weighed at processing facility and port of loading.
b. Are the trucks dedicated for transporting Palm Kernel Meal (PKE)? Verify the trucks are not used to transport animals, animal material and/or unprocessed plant material.	<input checked="" type="checkbox"/>		Trucks are dedicated for transporting PKE or kernels only.
c. Are the trucks cleaned prior to loading and are they inspected for cleanliness prior to loading?	<input checked="" type="checkbox"/>		Trucks are checked and cleaned prior to loading.
d. Verify raw material is covered/protected during transport (clean tarps, etc).	<input checked="" type="checkbox"/>		Material is covered with clean canvas tarps.
e. Verify the final product cannot be contaminated during loading of the trucks, transport and receipt at the port of export.	<input checked="" type="checkbox"/>		Product cannot be contaminated during loading, transport and receipt at port of export.

FIGURE 20: WITHIN THE PKE STORAGE WAREHOUSE AT PT. TUNAS BARU LAMPUNG



FIGURE 21: NETTING ON VENTS WITHIN PKE STORAGE FACILITY



FIGURE 22: NETTING AT DOORS AND GAPS IN PKE STORAGE WAREHOUSE



Facility: PT. Sinar Jaya Intl Mulya, Lampung			Date Audited: 30/5/2013
	Yes	No	Notes
<b>1. Sourcing of product</b>			
a. Confirm that only Palm fruit/Palm kernels are received at the processing facility and confirm that no other products are processed or kept on-site (excluding products derived from Palm kernels, i.e.. PKE cake, PKE meal, Palm kernel oil, etc).	☒		Dedicated facility only for palm kernels, and oil. Oldest facility for PKE and oil in Lampung region. Produce on average 400 tonnes per day of PKE.
b. Confirm that the facility is dedicated to the production of plant based products only.	☒		Dedicated facility for production of plant based products only. GMP certified.
<b>2. Production</b>			
a. Confirm that the facility processes palm kernels using the high temperature screw press process.	☒		High temperature screw press process used.
<b>3. Maintenance and Sanitation</b>			
a. Verify the general cleanliness of all facilities and surrounding grounds are well maintained. No build-up of residues, etc.		☒	Some poor hygiene practices and areas of vegetation in grounds. Surrounding grounds are fenced, but potential for livestock, vermin or other animals to enter grounds as within a village area..
<b>4. Post Production Storage</b>			
a. Storage of final product is fully enclosed with no potential for contamination - restricted access from cattle/animals, insect controls, rodent controls, bird proofing etc.		☒	Two storage sheds are used for PKE. Bird-proofing nets used at most gaps in facility. However some large doors were unprotected when visited and no sign of netting at doors. PKE also processed in production facility and expelled into area with kernels.

b. Confirm no other products are stored in the same storage facility as the final product.	☑		No other products are stored in the same storage area.
<b>5. Pest Control</b>			
a. All storage facilities operate an adequate and effective pest control program.		☑	No record of pest control programme in place or traps in storage facility.
<b>6. Post Production Transportation</b>			
a. Are the trucks weighed at the processing facility and at the point of loading?	☑		Yes, trucks are weighed at processing facility and port of loading.
b. Are the trucks dedicated for transporting Palm Kernel Meal (PKE)? Verify the trucks are not used to transport animals, animal material and/or unprocessed plant material.		☑	Trucks are not dedicated.
c. Are the trucks cleaned prior to loading and are they inspected for cleanliness prior to loading?	☑		Trucks are checked and cleaned prior to loading.
d. Verify raw material is covered/protected during transport (clean tarps, etc).	☑		Material is covered with canvas tarps.
e. Verify the final product cannot be contaminated during loading of the trucks, transport and receipt at the port of export.	☑		Product cannot be contaminated during loading, transport and receipt at port of export.

FIGURE 23: BIRD NETTING AT SOME DOORS FOR PKE STORAGE WAREHOUSE 1



FIGURE 24: WITHIN ONE OF THE PKE STORAGE WAREHOUSES



FIGURE 25: EMPTY BAG WASTE NEAR PKE STORAGE WAREHOUSE AT PT. SINAR JAYA INTL MULYA



FIGURE 26: NO NETTING AT ONE DOOR OF PKE STORAGE WAREHOUSE 2



FIGURE 27: OUTSIDE OF PKE STORAGE WAREHOUSE



