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Menjana Pembangunan K-Pekerja

OCCUPATIONAL STRUCTURE

Oil Palm-Based Industry





Menjana Pembangunan K-Pekerja

OCCUPATIONAL STRUCTURE MANUFACTURING SECTOR – OIL PALM BASED INDUSTRY

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1. EXECUTIVE BRIEF

The Malaysian oil palm industry is one of the most highly organised sectors of any national agriculture system of the world. Today, though, the focus has shifted to how well agriculture also meets universally accepted standards of sustainability. Malaysia is the world's 2nd. largest producer of palm oil. Palm oil is now a major source of sustainable and renewable raw material for the world's food, oleochemical and biofuel industries.

Mills regularly generate large quantities of fibre-type products in the form of empty fruit bunches and fruit mesocarp fibres, which have hitherto been mostly sent back to the plantations for mulching, for soil conservation purposes. Some amount of the fruit fibre and the kernel shell are burnt in boilers to generate steam and electricity for the mills. The availability of excess energy sources at the mills helps to minimise the cost of palm oil production in terms of energy needed to extract the oil and kernel.

In conducting the Occupational Analysis on Oil Palm Industry, information on Malaysian Oil Palm industry was gathered through literature search, interviews with the industry players from the public and private sectors. Visits to the oil palm companies and related public departments were made. A workshop was held in an attempt to get better understanding on the organizational structure, job titles, hierarchy objectives and primary activities of the said organization.

The occupational analysis conducted on oil palm industry showed that there are 4 prominent areas which can be categorized as i. refining sector, ii. Milling sector, iii. Plantation sector, and iv. Research and development sector. Oil palm industry is under the Manufacturing Sector. Further analysis of the oil palm industry, the panels manage to find out that there is a lack of skilled worker and is considered as one of the factor affecting the oil palm industry, especially skilled worker at level 4, 5, 6, 7 and 8 in the refining sector, whereas in the milling sector skilled workers at level 3, 4, and 5 are still lacking. In the plantation sector skilled workers at level 4, 5, 6, 7 and 8 are lacking and lastly the reseach and development sector skilled workers at level 4 till 8 are lacking. Thus, efforts and necessary action need be taken to rectify the situation. Efforts to conduct occupational analysis in oil palm industry followed by developing national occupational skills standard and training manuals by the Department of Skills Development is timely.

2.0 CONCEPT AND STRUCTURE OF MALAYSIAN SKILL CERTIFICATION SYSTEM

2.1. National Occupational Skill Standard (NOSS)

A NOSS is defined as a specification of the competencies expected of a skill worker who is gainfully employed in Malaysia

Type of Skill Certification

SKM Level 8 - Management Level
(Ph.D - Doctorate)

Level 8 qualifications recognise leading experts or practitioners in a particular field. Learning ai this level involves the development of new and creative approaches that extend or redefine existing knowledge or professional practice

SKM Level 7 - Management Level
(Post-Graduate Diploma, Masters MA, M sc)

Level 7 qualifications recognise highly developed and complex levels of knowledge which enable the development of in-depth and original responses to complicated and unpredictable problems and situations. Learning at this level involves the demonstration of high level specialist professional knowledge and is appropriate for senior professionals and managers Level 7 qualifications are at a level equivalent to Masters degrees, postgraduate certificates and postgraduate diplomas

SKM Level 6 – Management Level (Degree – Honours)Level 6
qualifications recognise a specialist high level knowledge of an area of work or study to enable the use of an individual's own ideas and research in response to complex problems and situations. Learning at this level involves the achievement of a high level of professional knowledge and is appropriate for people working as knowledge-based professionals or in professional management positions. Level 6 qualifications are at a level equivalent to Bachelors degrees with honours, graduate certificates and graduate diplomas

SKM Level 5 - Management Level
(Diploma/Advance Diploma Technology)

'Competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources feature strongly, as do personal accountabilities for analysis and diagnosis, design, planning, execution and evaluation.'

SKM Level 4 - Supervisory Level
(Diploma/Diploma Technology)

'Competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present.'

SKM Level 3 - Supervisory Level
(Malaysian Skill Certificate)

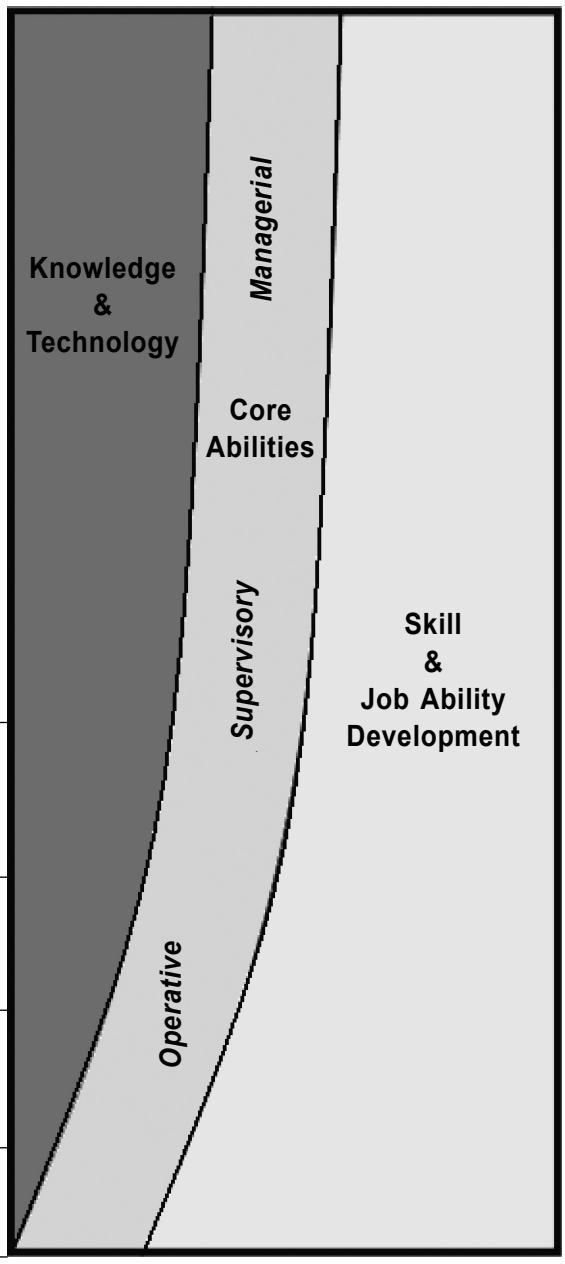
'Competent in performing a broad range of varied work activities, performed in a variety of context, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required.'

SKM Level 2 - Operation and Production Level
(Malaysian Skill Certificate)

'Competent in performing a significant range of varied work activities, performed in a variety of context . Some of the activities are non-routine and required individual responsibility and autonomy.'

SKM Level 1 - Operation and Production Level
(Malaysian Skill Certificate)

'Competent in performing a range of varied work activities, most of which are routine and predictable.'



3.0 OIL PALM INDUSRY IN MALAYSIA – BACKGROUND OF THE SECTOR

3.1 Introduction

The Malaysian oil palm industry is one of the most highly organised sectors of any national agriculture system of the world. Today, though, the focus has shifted to how well agriculture also meets universally accepted standards of sustainability. Malaysia is the world's largest producer of palm oil. Palm oil is now a major source of sustainable and renewable raw material for the world's food, oleochemical and biofuel industries. Involvement in cultivation or downstream activities has uplifted the quality of life of people, a key plank of the sustainability platform. In particular, this has helped alleviate poverty among landless farmers in Malaysia. Industry players have recently joined hands with other stakeholders to pursue certification of sustainably produced palm oil with full traceability. Also being explored are measures to conserve forests with high value and the wildlife population (Eur. J. Lipid Sci. Technol., 2007)

Global interest in sustainable agriculture requires a review of how the oil palm plantations have evolved in ensuring that palm oil is produced according to the set standards of responsible production practices. Many inherent advantages are already within the oil palm system of plant physiology of high productivity and efficient carbon assimilation. The oil palm is credited with its high oil yield per unit area. Palm oil is used mainly for food, while palm kernel oil goes mainly into the oleochemical industry for making soaps, detergents and toiletry products. Many other biomass products generated by the oil palm plantations are often under-utilised commercially. Mills regularly generate large quantities of fibre-type products in the form of empty fruit bunches and fruit mesocarp fibres, which have hitherto been mostly sent back to the plantations for mulching, for soil conservation purposes. Some amount of the fruit fibre and the kernel shell are burnt in boilers to generate steam and electricity for the mills.

The availability of excess energy sources at the mills helps to minimise the cost of palm oil production in terms of energy needed to extract the oil and kernel. As the oils form about 10% of the total dry biomass produced by the palm, the other 90% of the biomass represents a further huge source of fibre and cellulosic materials which await further commercial exploitation. It is projected that future second-generation biofuel will be based on the conversion of cellulosic fibre or biomass into liquid fuel. This makes the oil palm truly attractive as a future source of renewable energy from the biomass which, if exploited prudently, will enhance the sustainability of oil palm plantations.

3.2 Malaysian Economy

Malaysia is a growing and relatively open economy. In 2007, the economy of Malaysia was the 29th largest economy in the world by purchasing power parity with gross domestic product for 2007 was estimated to be $357.9 billion with a growth rate of 5% to 7% since 2007[1] The Southeast Asian nation experienced an economic boom and underwent rapid development during the late 20th century. With a GDP per capita standing at USD13,000, it has, from time to time, been considered a newly industrialized country.

As one of three countries that control the Strait of Malacca, international trade plays a large role in its economy. At one time, it was the largest producer of tin, rubber and palm oil in the world. Manufacturing has a large influence in the country's economy.

Gross Domestic Product (GDP) by sector is shown as agriculture 8.6%, industry 47.8%, services – 43.6% (2007 est). Whereas labour force by occupation sees the involvement the the agriculture is 13%, Industry is 36% and services is 51% (2005 est).

Main industries	Peninsular Malaysia - rubber and palm oil processing and manufacturing, light manufacturing industry, electronics, tin mining and smelting, logging and processing timber Sabah - Palm oil farming, tourism, petroleum production, logging Sarawak - agriculture processing, petroleum production and refining, logging

The government's development plans, called the Malaysian Plan, currently the Ninth Malaysia Plan, started in 1950 during the British colonial rule. The plans were largely centered around accelerating the growth of the economy by selectively investing in selective sectors of the economy and building infrastructure to support said sectors. For example, in the current national plan, three sectors- agriculture, manufacturing and services, will receive special attention to promote the transition to high value-added activities in the respective areas.

Other than the generalized plans like the Ninth Malaysia Plan, the government also has a development plan that is targeted to improve the manufacturing sector which is called the Industrial Master Plan. Currently, the plan is called

the Third Industrial Master Plan (IMP3) which covers a period from 2006 to 2020. The industrial plans aim to make Malaysia a major trading nation and build up the country's economy and human capital.

Malaysia is well-endowed with natural resources in areas such as agriculture, forestry and minerals. In terms of agriculture, Malaysia is one of the top exporters of natural rubber and palm oil, which together with sawn logs and sawn timber, cocoa, pepper, pineapple and tobacco dominate the growth of the sector. Palm oil is also a major generator of foreign exchange. Rubber, once the mainstay of the Malaysian economy, has been largely replaced by oil palm as Malaysia's leading agricultural export.

3.3 Developments of Oil Palm Plantations

Malaysia is currently the world's largest producer and exporter of palm oil. The plantation sector dates back to 1896, with the start of the rubber industry. Oil palm cultivation began in 1917, but growth was initially very slow. It was only during the last 50 years that plantation development was accelerated through large-scale investments in the cultivation of the oil palm as one of the approved crops for diversifying the country's agricultural development. Thus, production of oil palm is increasing.

Malaysia is also known as a major producer of rubber, cocoa and, to some extent, coconuts. Preference for oil palm has led to a rapid expansion of its planted areas at the expense of rubber and other crops over the last four decades. Areas under oil palm increased from 54,000 hectares in 1960 to 4.05 million hectares in 2005, reflecting a compound annual growth of 10.06%. Production increased from 94,000 tonnes in 1960 to 15 million tonnes in 2005, or by almost 160 times within 45 years – this represents a compound annual growth of 11.93% per year. These figures speak eloquently not only for the industry's success, but also for the tremendous contribution that Malaysian palm oil has made to the world food sources.

The oil palm thrives under Malaysia's tropical climate which is marked by all-year-round temperatures ranging from 25 to 33 ° C and evenly distributed rainfall of 2000 mm per year. Not many countries have similarly ideal temperatures and rainfall patterns. Malaysia and Indonesia have emerged as major producers of palm oil. other producers from about 20 countries command a production share of less than 3% each. The industry's breeding and selection work since the 1960s has contributed to improvements in yield.

The high petroleum prices in 2005 and 2006 led to many countries considering biodiesel production from renewable resources. This new application opened up a potentially large market outlet for palm oil as well as other major oils and fats. The first decade of the 21st century can therefore be regarded as the period of creating additional demand from biofuel, which in turn stimulated supply expansion in all producing countries.

The plantation sector is one of the biggest employers in Malaysia. A typical estate of 2000 hectares would employ a manager (usually a university graduate), three assistant managers, and nine field staff. Manual workers are employed to carry out field duties including weeding, applying fertilisers and harvesting. As a plantation company may have estates at several locations, it falls on the Managing Director to coordinate activities to ensure that palm oil is produced at the lowest cost and maximum yield to derive strong profits every year. When operated in a corporate environment, the plantations are deemed to be professionally managed by a Board of Directors, managers, and financial experts, advisors and inspectors.

They are backed by research expertise relating to agronomic, soil and water management. The profitable estate sector has attracted a growing number of smallholders to venture into oil palm cultivation. To overcome the lack of economies of scale, the Malaysian Government created agencies like the Federal Land Development Authority (FELDA) to consolidate or aggregate small areas into an estate of an economic size, and to provide management and infrastructural inputs. FELDA, established in 1956 from a concept supported by the World Bank and the United Nations, is tasked with reducing rural poverty through resettlement of landless farmers in land development schemes where they plant economically viable crops. FELDA's management of smallholders' areas has enabled the resettlement of some 100,000 families who were landless and living below the poverty level. FELDA is today the world's largest single plantation company with a combined oil palm area exceeding 600,000 hectares and an annual revenue exceeding US$2 billion.

3.4 Challenges in Future Sustainable Palm Oil Production

The need to produce palm oil sustainably has led to the establishment of the Round Table on Sustainable Palm Oil (RSPO). A number of Malaysian plantation companies are founding members of the body. The RSPO has progressed towards formulating a set of principles and criteria for sustainable production, but has yet to implement a scheme to enable sustainably produced palm oil to

be certified with full traceability. It is not easy to implement such an ambitious scheme, since maintaining the chain of custody for traceability purposes will be difficult and expensive.

The challenge of conserving land for forests with high conservation value remains a major objective. With a growing population and the need to open up more land for agriculture, there will be greater pressure on forested land because income from oil palm is higher than that from productive forests. Conscious of this potential conflict, the Malaysian government implemented a policy in the 1990s to stop the opening up of new forest land for agriculture. Only logged-over land zoned for agricultural development can be planted with oil palm or other crops.

Although Malaysia has a large percentage of its land area under forest and only a small percentage under agriculture and oil palm, the policy underscores the acceptance of the need for sustainability. In addition, an industry-based wildlife conservation fund has been created to assist in research and other kinds of funding to enhance sustainable practices and conservation efforts. The Malaysian Palm Oil Council (MPOC) recently launched a US$5.5 million revolving fund to support efforts to enhance biodiversity conservation related to palm oil production worldwide.

The Malaysian oil palm industry has become one of the most highly organised sectors of any national agriculture system of the world. It is able to compete with vegetable oil products produced from developed and developing countries. The competitiveness of palm oil implies that it will remain an important source of sustainable and renewable raw material for food, oleochemical and biofuel industries of the future.

The depletion of fossil fuels will require Malaysia to use more sources of renewable energy for the sustainability of its development. Malaysia will also have to address the associated environmental issues, particularly greenhouse gas emissions. For this, Malaysia will need a planned and dedicated approach with the appropriate measures, hence the formulation of the National Biofuel Policy.

3.5 The Supply Chain of the Palm Oil Industry in Malaysia

The major players in the palm oil industry in Malaysia are shown in Figure 7; the players are grouped under the following clusters:

- Upstream producers – essentially involved in the cultivation of oil palm, production of fresh fruit bunches (FFB) and processing them into crude palm oil and palm kernel.
- Downstream producers – palm oil refiners, palm kernel crushers, manufacture of palm-based edible products and specialty oils and fats,
- Exporters and Importers of palm oil
- Customers - institutional buyers and retail customers and investors
- Industry organisations representing the interests of the upstream and downstream producers
- Government agencies associated with the oil palm industry, particularly in respect of research and development and regulatory functions
- Other players who have an interest and/or stake in the oil palm industry (NGOs, unions etc)

3.6 Ninth Malaysian Plan 2006-2010

The agriculture sector registered favourable growth during the Eighth Plan period. Export earnings of the sector expanded significantly due to the increase in export volume and better prices of agricultural industrial commodities. The sector continued to provide the raw materials required by the domestic agro-based industries and part of the nation's food demand. During the Ninth Plan period, the agriculture sector will be revitalised to become the third engine of growth.

The emphasis will be on *New Agriculture* which, will involve large-scale commercial farming, the wider application of modern technology, production of high quality and value-added products, unlocking the potential in biotechnology, increased convergence with information and communications technology (ICT), and the participation of entrepreneurial farmers and skilled workforce. The functions of agricultural agencies will also be streamlined to enhance service delivery and efficiency.

Progress, 2001-2005

During the Eighth Plan period, the performance of the agriculture sector improved in terms of production, value added and exports, driven by the utilization of new technologies, shift to large-scale commercial production, wider adoption of

the group farming system, increased market accessibility and better commodity prices. Emphasis was given to the redevelopment of alienated agricultural land, particularly to expedite modernisation and improve productivity. The improved output of the agriculture sector contributed to better income and standard of living, particularly for farmers in rural areas.

The agricultural value added grew at an average rate of 3.0 per cent per annum during the Plan period, higher than the target of 2.0 per cent, as shown in *Table 1*. The higher growth was due to better performance of the agricultural industrial commodities subsector, particularly oil palm and rubber. The share of the sector to gross domestic product (GDP) decreased slightly from 8.9 per cent in 2000 to 8.2 per cent in 2005. Nevertheless, total agricultural value added increased from RM18.7 billion in 2000 to RM21.6 billion in 2005.

Commodity	*RM million (in 1987 prices)*			*% of Total*			*Average Annual Growth Rate (%)*		
	2000	*2005*	*2010*	*2000*	*2005*	*2010*	*8MP Target*	*Achieved*	*9MP Target*
Agriculture	**18,662**	**21,585**	**27,517**	***100.00***	***100.0***	***100.0***	***2.0***	***3.0***	***5.0***
Industrial Commodities	**11,033**	**13,278**	**15,521**	***59.0***	***60.6***	***56.4***	***0.7***	***3.8***	***3.2***
Oil Palm	5,860	7,915	10,068	*31.4*	*36.7*	*36.6*	*3.4*	*6.2*	*4.9*
Forestry and Logging	3,055	3,016	2,761	*16.4*	*13.0*	*10.0*	*-5.6*	*-0.3*	*-1.7*
Rubber	1,868	2,264	2,554	*10.0*	*10.5*	*9.3*	*1.1*	*3.9*	*2.4*
Cocoa	250	83	138	*1.3*	*0.4*	*0.5*	*0.1*	*-19.8*	*10.8*
Food Commodities	**7,629**	**8,308**	**11,996**	***40.9***	***39.4***	***43.6***	***4.0***	***1.7***	***7.6***
Fisheries	2,493	2,389	3,875	*13.4*	*12.6*	*14.1*	*4.1*	*-0.9*	*10.2*
Livestock	1,520	2,089	2,483	*8.1*	*8.1*	*9.0*	*6.0*	*6.6*	*3.5*
Padi	590	632	988	*3.2*	*3.4*	*3.6*	*2.7*	*1.4*	*9.4*
Other Agriculture[1]	3,026	3,198	4,650	16.2	15.2	16.9	3.2	1.1	7.8
Agro-Based Industry	**13,584**	**16,928**	**22,221**	***100.0***	***100.0***	***100.0***	***4.0***	***4.5***	***5.6***
Vegetable and Animal Oils & Fats	2,526	3,639	5,614	*18.6*	*21.5*	*25.3*	*6.3*	*7.6*	*9.1*
Other Food Processing, Beverages & Tobacco	4,010	4,790	6,333	*29.5*	*28.3*	*28.5*	*2.0*	*3.6*	*5.7*
Wood Products including Furniture	2,934	2,972	3,761	*21.6*	*17.6*	*16.9*	*0.6*	*0.3*	*4.8*
Paper and Paper Products, Printing & Publishing	2,293	2,640	3,275	*16.9*	*15.6*	*14.7*	*3.4*	*2.9*	*4.4*
Rubber Processing & Products	1,821	2,887	3,238	*13.4*	*17.1*	*14.6*	*4.7*	*9.7*	*2.3*
Total Agriculture and Agro-Based Industry	**32,246**	**38,513**	**49,738**				***2.7***	***3.6***	***5.2***
Gross Domestic Products at Purchasers' Prices	**210,558**	**262,029**	**351,297**					***4.5***	***6.0***

Source: Department of Statistics and Economic Planning Unit
Notes: [1] Includes coconut, vegetables, fruits, tobacco and pepper.

Table 1: Value added of agricultural and Agro-Based Industry, 2000-2010

Employment in the agriculture sector continued to contract at an average rate of 0.2 per cent per annum to 1.4 million in 2005. However, labour productivity improved, as reflected by the increase in value added per worker from RM13,120 in 2000 to RM15,750 in 2005, at an average rate of 3.7 per cent per annum. The Agricultural Census 2005[1] identified a total of 816,813 individuals or 7.2 per cent of the total labour force who was involved in the agriculture sector. Of this total, 52.8 per cent was agricultural operators, 37.2 per cent workers and 10.0 per cent unpaid family workers. In terms of age profile, 43.8 per cent was in the age group 55 and above while only 25.3 per cent was in the 15 to 40 year age group.

3.7 Land Utilisation

Agricultural land use increased from 5.9 million hectares in 2000 to 6.4 million hectares in 2005, largely due to the expansion in the hectarage of oil palm, coconuts, vegetables and fruits. Of the total land area, 4.0 million hectares were under oil palm followed by 1.3 million hectares under rubber. During the Plan period, a total of 163,000 hectares of agricultural land remained idle. Efforts to optimise the utilisation of idle land were hindered by several constraints, particularly absentee landlords, ageing landowners and farmers as well as difficulties in consolidating native and customary land.

3.8 Agricultural Production

During the Plan period, production of agricultural commodities except sawlogs, cocoa and pepper, continued to record positive growth. The increase in production was attributed to higher prices and market expansion as well as the effective implementation of programmes and projects to improve productivity and quality of outputs.

3.9 Agricultural Industrial Commodities

Crude *palm oil* (CPO) production increased at an average rate of 6.7 per cent per annum due to improvements in yield, higher oil extraction rate (OER), expansion in matured areas as well as higher palm oil prices. The palm oil industry benefited from the tight world supply of edible oils and fats, which resulted in palm oil prices rising to its highest level of RM1,610 per metric tonne during the Plan period.

3.10 Agro-Based Industry

The agro-based industry grew at 4.5 per cent per annum. Total export earnings of the agro-based industry increased significantly by 8.7 per cent per annum to reach RM37.4 billion in 2005. The processing of end-products from agricultural industrial commodities such as palm oil, rubber and cocoa increased during the Plan period.

The processing of food commodities continued to be encouraged and to support small producers; the products were marketed, particularly under the brand name *Agromas* and *Olemas*. Towards this end, the Ministry of Agriculture and Agro-Based Industry (MOA) provided extension services to 14,883 entrepreneurs. The Malaysian Agricultural Research and Development Institute (MARDI) developed 44 food products and 200 processing technologies, particularly to facilitate the activities of small and medium-scale enterprises (SMEs).

3.11 Agricultural Programmes

During the Plan period, agricultural programmes were focused on transforming traditional farming into modern and commercial farming to increase the income and productivity of farmers as well as improving their competitiveness. In this regard, efforts were intensified to encourage agricultural entrepreneurs, farmers and smallholders, particularly among the Bumiputera, to adopt new agronomic and modern farm management practices, increase mechanization and familiarise them with GAP.

3.12 Replanting

The replanting programme under various agencies, which comprised replanting of rubber to rubber as well as rubber to oil palm, achieved 77.6 per cent of its target. Of this total, 74 per cent was replanted with rubber and the balance with oil palm. The performance of this programme was affected by the high rubber prices, which led smallholders to delay replanting.

3.13 Land Consolidation and Rehabilitation

A total of 31,332 hectares of land was consolidated and rehabilitated whereby FELCRA Berhad managed to consolidate 10,200 hectares. *Lembaga Pertubuhan Peladang* (LPP) rehabilitated 4,433 hectares including idle land for commercial farming of food commodities, which benefited 3,159 farmers.

The regional offices of Malaysian Palm Oil Board (MPOB) Technical Advisory Services Units continued their efforts to increase market acceptance and consumption of palm oil.

3.14 Training and Extension Services

Focus was given to commercialization of agricultural activities, modern farming practices, post-harvest handling, processing and marketing. By the end of the Plan period, a total of 260,930 entrepreneurs and farmers was trained. In addition, four agricultural training institutions conducted the National Agricultural Skills Training Programme based on the National Occupational Skills Standard (NOSS) beginning 2004. Since its introduction, a total of 564 trainees was enrolled in courses related to fisheries, horticulture, livestock, food processing and marketing.

3.15 Prospects, 2006-2010

During the Ninth Plan period, the focus will be on developing *New Agriculture*. This will entail further expanding large-scale commercial farming and venturing into high quality and value added primary and processing activities as well as unlocking the potential in biotechnology. The productivity, efficiency, and the income and wealth generating potential of the sector will be enhanced through the wider application of modern farming methods and ICT, strengthening R&D and innovation, improving marketing capability, and promoting increased participation of the private sector including entrepreneurial farmers and skilled workers. Optimisation of land use as well as land consolidation and rehabilitation will be given priority. The agriculture sector is expected to grow at a higher average annual rate of 5.0 per cent. With the inclusion of the agro-based industry, the growth rate is expected to be 5.2 per cent. The issues related to the prevalence of pockets of poverty among small-scale farmers, the slow transformation of smallholdings into modern farming and agricultural land constraints will also be addressed.

3.16 Increasing Agricultural Production

During the Plan period, efforts will be undertaken to increase agricultural production through new land development, replanting, land consolidation and rehabilitation as well as greater utilisation of high yielding clones and breeds, farm mechanisation and good agronomic practices towards productivity improvements. The private sector and the government-linked companies (GLCs)

will be further encouraged to increase agricultural investments through better incentives and support measures. The production of *palm oil* is expected to increase at an average rate of 5.5 per cent per annum with the expansion in planted area and higher OER.

3.17 Replanting Programme

The replanting programme for rubber and oil palm involving 383,010 hectares will be implemented mainly by Rubber Industry Smallholders Development Authority (RISDA) and Federal Land Development Authority (FELDA).

3.18 Enhancing Productivity

Productivity will also be increased through wider application of the latest technology and knowledge-based production systems. To ensure quality control and high standards in oil palm plantations as well as improve productivity, efforts will be geared towards encouraging plantations to adopt international standards. In addition, to achieve Vision 35:25, a target of 35 metric tonnes of fresh fruit bunch (FFB) per hectare and 25 per cent OER, plantations will be encouraged to use quality oil palm seedlings. Adequate credit facilities will be provided to encourage smallholders to replant oil palm trees, which are over 25 years old with high yielding clones.

3.19 Human Capital Development

During the Plan period, labour productivity is expected to increase by an average rate of 6.2 per cent per annum. Emphasis will be given to the provision of training to change the mindset and attitude of farmers and fishermen as well as the younger generation including those with higher education to participate more effectively in modern and commercially oriented agricultural activities. These efforts will create job opportunity, particularly among the unemployed graduates. A total of 657,720 entrepreneurs and farmers is expected to be trained during the Plan period. In this respect, several agricultural training institutions will be upgraded to implement the National Agricultural Skills Training Programme in line with the NOSS. In line with the policy to turn agriculture into a viable business, more vigorous efforts will be undertaken to develop new agricultural entrepreneurs, strengthen existing small and medium-scale entrepreneurs as well as promote agricultural exporters. This will include agricultural entrepreneurship programmes to develop more competent Bumiputera agricultural entrepreneurs. In this regard, special training, credit facilities and technical assistance will be

provided. Efforts will also be undertaken to develop entrepreneurs among the new generation of FELDA settlers and participants of other land development projects.

3.20 Expanding Agro-Based Processing and Product Diversification

The Palm Oil Industry. During the Plan period, the palm oil industry is expected to benefit from greater downstream product diversification. To accelerate the development of the palm oil downstream industry, palm oil industrial clusters (POICs) will be established in the transborder areas of Eastern Johor-Southern Pahang and Southern Kelantan-Northern Terengganu as well as Sabah and Sarawak.

The POICs will act as a catalyst in creating the value chain of the palm oil industry as well as assist in the development of related supporting industries. Efforts will also be intensified to develop Malaysian brands of palm oil products, particularly in the oleochemicals derivatives industry, as well as build upon international networking to penetrate new markets.

The palm oil industry will be encouraged to expand its activities overseas, particularly in countries with high demand for palm oil and derivatives. Collaboration between the palm oil industry and research institutions will be further intensified to accelerate the commercialisation of R&D findings to widen the base for new product development and improve manufacturing processes.

Commercialisation of oil palm biomass products and biofuel will be expedited through greater private sector participation. Research on palm oil will focus on the utilization of advanced oleochemical technology and biotechnology including nutraceutical and pharmaceutical products.

3.21 Enhancing Income

Efforts will be undertaken to improve incomes and standard of living of FELDA settlers and the new generation. In this regard, selected areas in FELDA land schemes will be developed as new growth centres which consist of downstream industrial activities and equipped with improved infrastructure and social amenities.

In addition, the participation of the settlers and the new generation in non-farm activities including agro-based industrial activities and in the handicraft industry will be increased further. A total of 9,390 new entrepreneurs is expected to be created with an income of at least RM3,000 per month.

3.22 Policies and Development Plan

The National Biofuel Policy encourages the use of biofuels in line with the nation's Five-Fuel Diversification Policy. It spells out a comprehensive framework with concrete initiatives in line with the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) to which Malaysia is a party. Malaysia has the potential to lead the way in biofuels production capitalising on its vast production of agricultural products and by-products.

The National Biofuel Policy sets the platform for attainment of the following objectives:

- supplementing the depleting supply of fossil fuels with renewable resources;
- mobilising local resources for biofuels;
- exploiting local technology to generate energy for the transportation and industrial sectors;
- paving the way for exports of biofuels; and benefiting from the spin-off effect of more stable prices for palm oil.

Implementation of the National Biofuel Policy will be spearheaded by the Minister of Plantation Industries and Commodities. Towards this end, specific legislation on biofuels will be enacted.

As in all industries, research and development (R&D) is critical, particularly since palm oil competes with 16 other oils and fats on the world market. There is a need to generate information, increase production and processing efficiency and expand uses of palm oil through R&D.

The palm oil industry has been able to do this through the establishment of the Palm Oil Research Institute of Malaysia (PORIM). PORIM, established by law in 1979 . Since industry expectations are high, PORIM must be able to develop a strong and dedicated workforce to meet such expectations and an autonomous Board with full powers over remuneration, rewards and promotion is essential for attracting and retaining such a workforce.

The first commercial oil palm estate in Malaysia was set up in 1917 at Tennamaran Estate, Selangor. The growth of the industry has been phenomenal and Malaysia is now the largest producer and exporter of palm oil in the world, accounting for 52 percent of world production and 64 percent of world exports in 1997.

MALAYSIA exercise such other functions as the Minister of Primary Industries may The Act provides that the Board shall comprise representatives from arious government and industry bodies. Government bodies include the Ministry of Primary Industries, Treasury, Federal Land Development Authority, Palm Oil Registration and Licensing Authority and representatives of the Sabah and Sarawak state governments. Industry representatives normally include those from the Malaysian Oil Palm Growers' Council and the Palm Oil Refiners' Association of Malaysia. The Board decides the annual programmes and budget of the institute. Since it contains wide representation from both industry and government, the Board is able to formulate, implement and monitor the activities of the institute in line with the needs of the industry and the nation. The Board has virtual autonomy in the appointment and promotion of research scientists and other personnel.

Although the grades of staff and conditions of service generally follow those of the civil service, promotion for high achievers is generally faster because of this autonomy, a feature that has attracted and retained good scientists. Funding for the institute's operations is mainly derived from a research levy imposed on the palm oil industry. Millers and kernel crushers are required by law to pay the levy, currently 7.25 Ringitts per tonne of crude palm oil and crude palm kernel oil, to the Board. Through this mechanism, the Board collects about 70 million Ringitts a year for its operations.

In addition, the institute bids for government research grants, including development grants for the construction of buildings, facilities and oil palm research stations. The latter also generate revenue from the sale of oil palm fruits harvested at the stations.

Malaysian palm oil industry is a highly regulated industry. Currently, the industry is adhered to more than 15 laws and regulations including the Land Acquisition Act 1960, Environmental Quality Act 1974, Environmental Quality (Clean Air Regulations) 1978, Pesticides Act 1974 (Pesticides Registration Rules), Occupational Safety and Health Act (1977), and Protection of Wildlife Act 1972. The industry is also complying with Hazard & Critical Control Points (HACCP) and the Environmental Impact Assessment (EIA) requirements. Being sensitive and proactive on current environmental concerns, the industry is actively pursuing ISO 14000 standard series discussions and formulations notably on climate change, life cycle analysis (LCA), ecolabeling & Design for the Environment (DfE), environmental communications, and environmental management system (EMS).

The industry and its R&D arm are continuously working to improve the industry's environmental performance. Various approaches and technologies aimed to reduce the impact of the industry on the environment have been converted to successful practices in oil palm plantation, palm oil mill, and refineries. The industry envisions achieving the highest standards of sustainability of palm oil.

It is important to note that the industry is also participating in the Roundtable on Sustainable Palm Oil (RSPO) discussions. This roundtable is a platform to reach mutual understanding at the international level among various palm oil stakeholders namely; oil palm growers, palm oil processors/traders, consumer goods manufacturers, retailers, investment organizations, social or development NGOs and environmental or nature conservation NGOs. This understanding would be translated into common actions towards achieving sustainability of palm oil production and use in its entire supply chain.

4.0 CURRENT ANALYSIS OF THE SECTOR/SUBSECTOR

Oil palm based industry manufacturing consists of four sectors which is refining, milling, plantation and research and development sectors. See Figure 1.

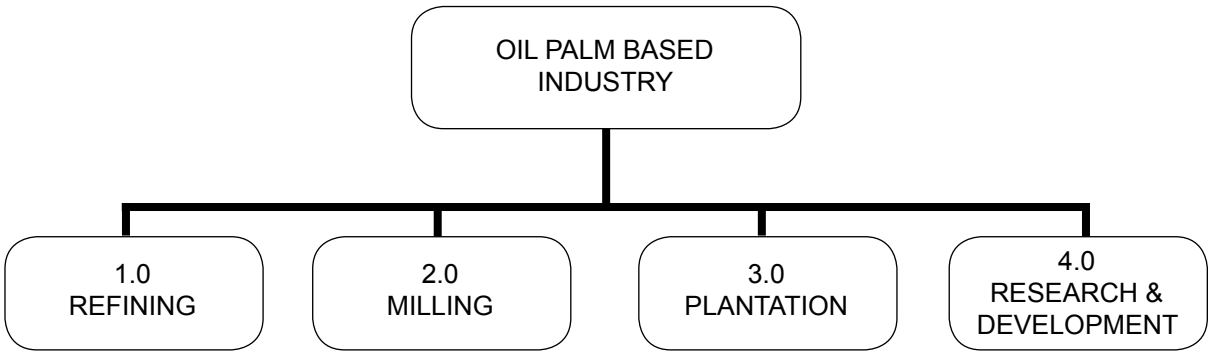


Figure 1: Occupational Areas in Oil Palm Based Industry

4.1 Refining Sectors

The refining sector consists of two main subsectors which is edible and non-edible products. For each of the subsectors there are three main divisions which is production, maintenance and technical services which is illustrated in Figure 2 (for edible products) and Figure 3 (for non-edible products). For each of the divisions there are also three subdivisions in the maintenance division and four subdivisions in the technical services.

The job hierachy for each of the divisions and subdivision will be elaborated further in the findings.

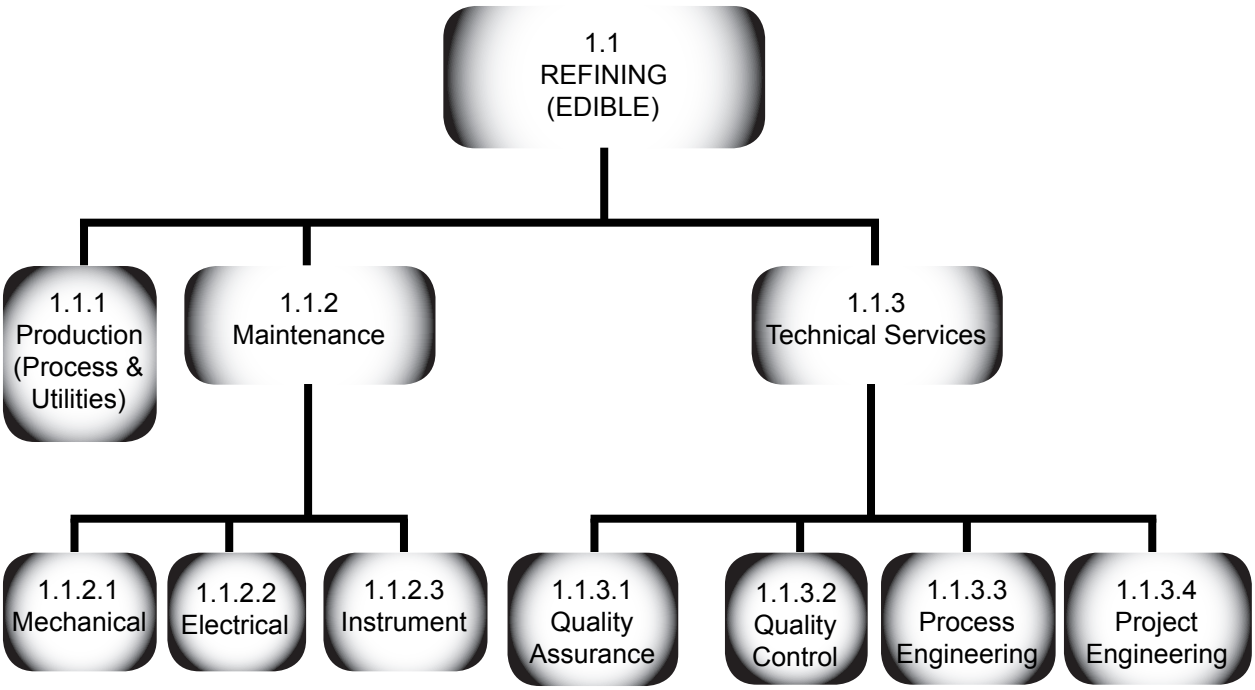


Figure 2: Refining Sector for Edible Products

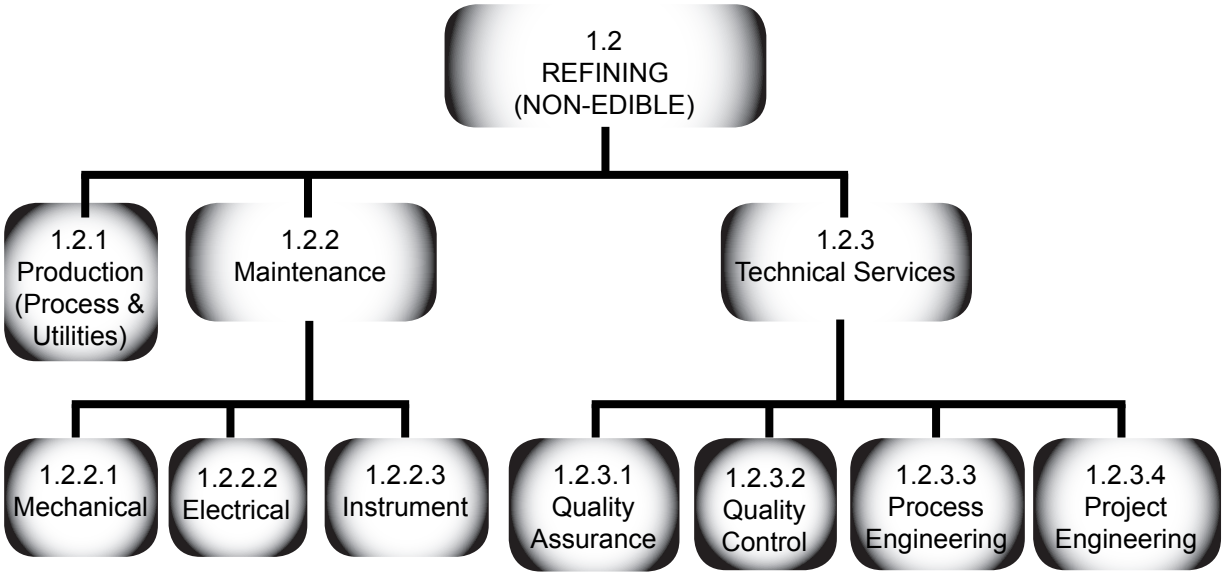


Figure 3: Refining Sector for Non-Edible Products

The refining process removes free fatty acids, phosphatides, odouriferous matter, water as well as impurities such as dirt and traces of metals from the CPO; the objective being to produce an edible oil of consistent quality that meets industry's standards and satisfies customer requirements particularly in respect of FFA, moisture and impurities, Iodine Value, Peroxide Value, melting point, colour and flavour. The refined oil must tasteless and have a bland flavour.

CPO is processed by either physical or chemical refining to produce either refined, bleached and deodourised palm oil (RBDPO) or neutralised, bleached and deodourised palm oil (NBDPO). These are subjected to fractionation to obtain the respective liquid olein fraction and the solid stearin fraction. (Figure 6). Of the two processes, physical refining is the predominant approach adopted by the refineries as it is simpler, less capital intensive, more efficient and produces a lower effluent load.

Physical or steam refining begins with degumming when the CPO is treated with food grade phosphoric acid or citric acid to remove natural gums in the form of phosphatides, followed by bleaching with activated earth (Fuller's Earth) under vacuum to remove colouring matters as well as to adsorb any metal ions. The treated oil is then heated to 240 C - 260 C under 2- 6 mm Hg (MEOMA, 2002) for simultaneous deacidification and deodorisation. The FFA is stripped off by live steam and is recovered together with the entrained oil is as palm fatty acid distillate. The steam distillation process also removes odours and off-flavors from the CPO ('Deodorisation'). The oil is then cooled to 55°C before polishing.

In the chemical refining process, the FFA present in CPO is removed by neutralisation with caustic soda (sodium hydroxide), the concentration of the latter being dependent on the quality of the CPO feedstock. This chemical reaction produces neutralised CPO and a soap stock; the latter is separated from the oil by a high-speed separator. The neutralised oil is subjected to earth bleaching to remove colour pigments and metal ions followed by deodorisation - steam distillation under vacuum to remove odoriferous matters such as aldehydes and ketones.

The refined oil contains triglycerides of various compositions and melting points, the main fractions being palm olein and palm stearin. These fractions can be separated by dry fractionation, detergent fractionation and solvent fractionation. Dry fractionation is commonly used whereby the refined oil is allowed to crystallise under controlled temperature and the resultant slurry is pumped through a membrane filter press to obtain the liquid olein fraction and the solid stearin portion. The olein could also be fractionated for a second time ('double fractionation') to produce a 'super olein' and a solid palm mid-fraction (PMF) which is the feedstock for production of specialty fats and other products.

4.2 Milling Sector

The milling sector consists of three main divisions which are production (process and utilities), maintenance and quality assurance and quality control, see Figure 4. For each of the divisions there are also two subdivisions in the maintenance division.

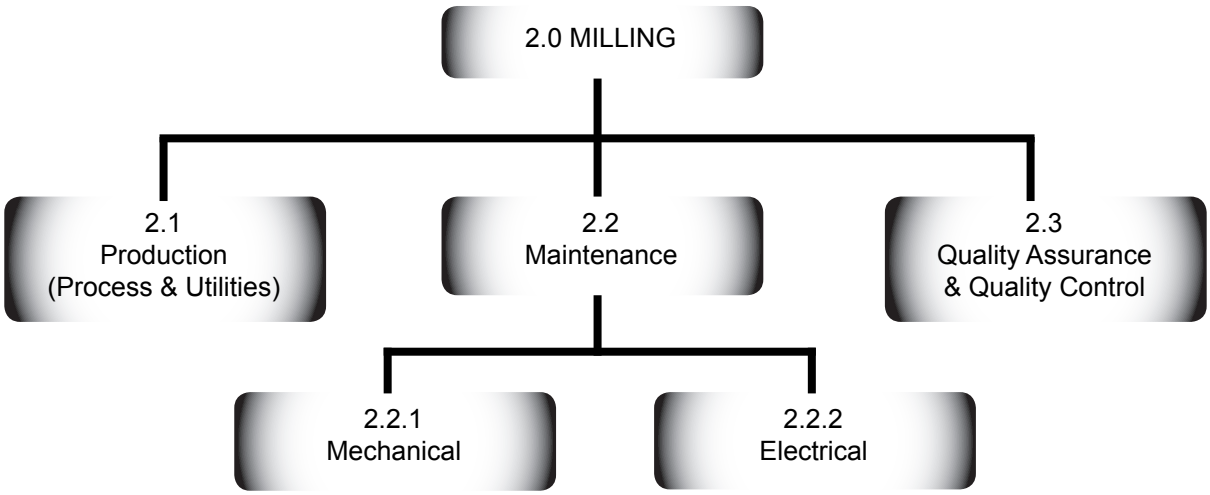


Figure 4: Milling Sector

The palm oil milling process involves the physical extraction of palm products namely, crude palm oil and palm kernel from the FFB. The process begins with sterilisation of the FFB. The fruit bunches are steamed in pressurised vessels up to 3 bars to arrest the formation of free fatty acids and prepare the fruits for subsequent sub-processes.

The sterilised bunches are then stripped of the fruitlets in a rotating drum thresher. The stripped bunches or empty fruit bunches (EFB) are transported to the plantation for mulching while the fruitlets are conveyed to the press digesters.

In the digesters, the fruits are heated using live steam and continuously stirred to loosen the oil-bearing mesocarp from the nuts as well as to break open the oil cells present in the mesocarp. The digested mash is then pressed, extracting the oil by means of screw presses. The press cake is then conveyed to the kernel plant where the kernels are recovered.

The oil from the press is diluted and pumped to vertical clarifier tanks. The clarified oil is then fed to purifiers to remove dirt and moisture before being dried further in the vacuum drier. The clean and dry oil is ready for storage and dispatch.

The sludge from the clarifier sediment is fed into bowl centrifuges for further oil recovery. The recovered oil is recycled to the clarifiers while the water/ sludge mixture which is referred to as Palm Oil Mill Effluent (POME) is treated in the effluent treatment plant (ETP).

The press cake is conveyed to the depericarper where the fibre and nuts are separated. Fibre is burned as fuel in the boiler to generate steam. The nuts are cracked and the shell and kernel are separated by means of a winnower and hydro-cyclone. The clean kernels are dried prior to storage.

About 80% of the national production of crude palm oil is used for food purposes, mainly as cooking oils. The CPO produced by the mills have to be refined to meet the industry's and international standards (FAO's Codex Alimentarius) for edible oils. The production of refined oil is undertaken in 57 refineries in Malaysia (Table 10) with a total refining capacity of 15.5 million tonnes CPO per year.

4.3 Plantation Sector

The plantation sector consists of two main divisions which are Field and workshop. For the field division there are four subdivision with their own job hierachy that is nursery, replanting, filed maintenance and harvesting. See Figure 5.

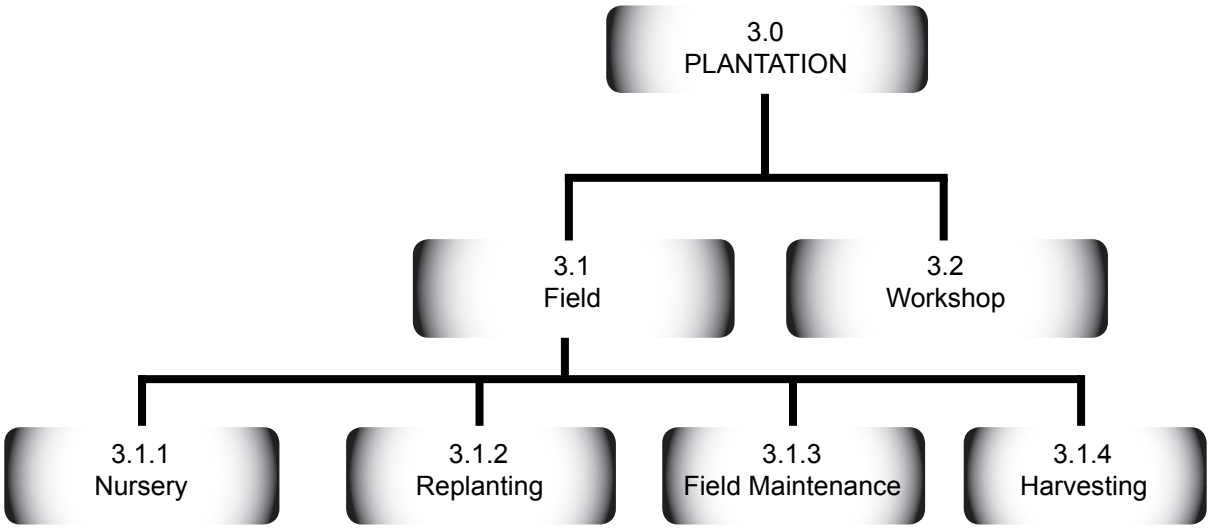


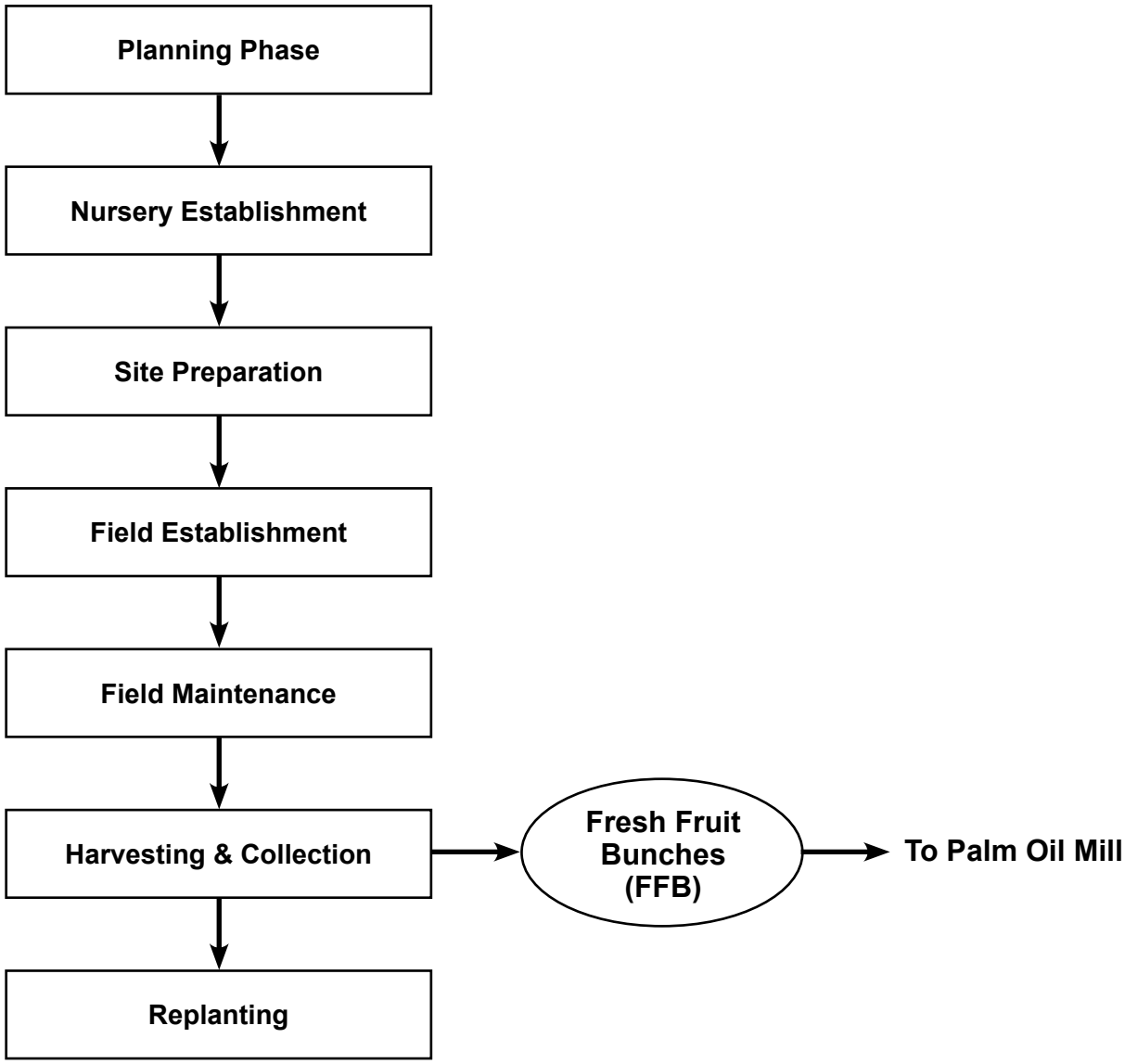
Figure 5: Plantation Sector

Key Processes in the Production of Palm Oil

Production of Fresh Fruit Bunches (FFB)

The key sub-processes involved in the development of plantations for the production of fresh fruit bunches (FFB) are shown in Figure 3 and the main activities for each step are summarised below:

Figure 3: Processes in the Production of Fresh Fruit Bunches



Planning Phase for the development of new plantations would involve the conduct for feasibility studies and an environment impact assessment (EIA) if the area to be developed is primary or secondary forest in excess of 500 hectares. An EIA is also required if the development involves changes in the types of agricultural use of land in excess of 500 hectares.

Field Maintenance operations include weeding, water management, pruning, pest and disease management and manuring. Integrated pest management involving a mix of cultural, physical, chemical and biological control approaches to minimise crop losses to pests is commonly adopted in plantations. Examples of biological control measures applied include the use of baculovirus and *Metarhizium anisopliae* to control the rhinoceros beetle (*Oryctes rhinoceros*), control of leaf-eating bagworms and nettle caterpillars by their natural predators and parasitoids and the use of barn owls (*Tyto alba)* as the biological agent to control rats. (Golden Hope Plantations Berhad, 1997). As the cost of fertilisers is the major component of field upkeep expenditure, plantation companies generally undertake soil and foliar analyses of individual fields regularly to assess their nutritional status and determine the appropriate types and quantities of fertilisers required for optimal palm development and production.

Nursery Establishment commences as soon as the land is found to be suitable and approved by the respective agencies for development to proceed. Good quality DxP seedlings are raised in a polybag nursery for about 12 months. Good nursery practices such as adequate watering, manuring and culling of seedlings with undesirable characteristics are essential for the production of vigorous planting materials. A culling rate of up to 25% is commonly practised in well managed nurseries.

Site Preparation include land survey, clearing of existing vegetation, establishment of a road and field drainage system, soil conservation measures such as terracing, conservation bunds and silt pits and sowing of leguminous cover crops. From the early 1990s, the zero burning technique for land clearing, from logged-over forest areas and replanting from various plantation crops.

Field Establishment activities are lining, holing and planting of polybag oil palm seedlings at density of 136 to 148 palms per ha, depending on the soil type. It is important that effort is made to obtain full ground coverage by leguminous cover crops such as *Pueraria javanica and Calopogonium caeruleum* to minimise soil loss through runoff as well as to improve the soil properties through nitrogen fixation.

Harvesting of FFB commences between 24 to 30 months after field planting, depending on the soil type and agronomic and management inputs. Harvesting is done manually, using a chisel in young palms and a sickle mounted on a bamboo or aluminum pole in taller palms.

Various systems for in-field collection of FFB and transportation to the palm oil mill. In view of increasing shortage of workers as well as the need to increase worker productivity, mechanised approaches have been adopted by plantations, an example being the tractor-mounted 'grabber'.

Replanting. The economic cycle of the oil palm is about 25 years, after which the old stand is replanted. The zero burning technique of replanting is now common commercial practice. However, in some situations, plantations consider underplanting, whereby new seedlings are planted under the old palms which are thinned out progressively to allow the development of the new stand.

Production of Crude Palm Oil (CPO) and Palm Kernel (PK)

After harvesting, it is important that the fresh fruit bunches (FFB) are processed as soon as possible to prevent a rapid rise in free fatty acids (FFA) which could adversely affect the quality of the crude palm oil (CPO). Palm oil mills are generally located in the plantations to facilitate timely transportation and effective processing of FFB. In 2001, there were 352 palm oil mills in Malaysia (Table 2), of which about 70% were located in Peninsular Malaysia.

Table 2: Number of Oil Mills, Refineries and Palm Kernel Crushing Factories in Operation in 2001 in Malaysia.

Region	Oil Mills		Refineries		Crushing	
	No	Capacity[1]	No	Capacity[2]	No	Capacity[3]
P. Malaysia	244	45,373,720	38	10,952,900	30	3,254,600
Sabah	89	18,750,600	9	4,596,500	8	1,057,500
Sarawak	19	3,620,400				
Malaysia	352	67,744,720	47	15,549,400	38	4,312,100

Source: MPOB

Capacity: 1. Tonnes FFB/year
2. Tonnes CPO/year
3. Tonnes Palm Kernel/year

4.4 Research & Development Sector (R&D)

The research and development sector is more specific and clear for the job title. There are 5 job title for this sector. See Figure 6.

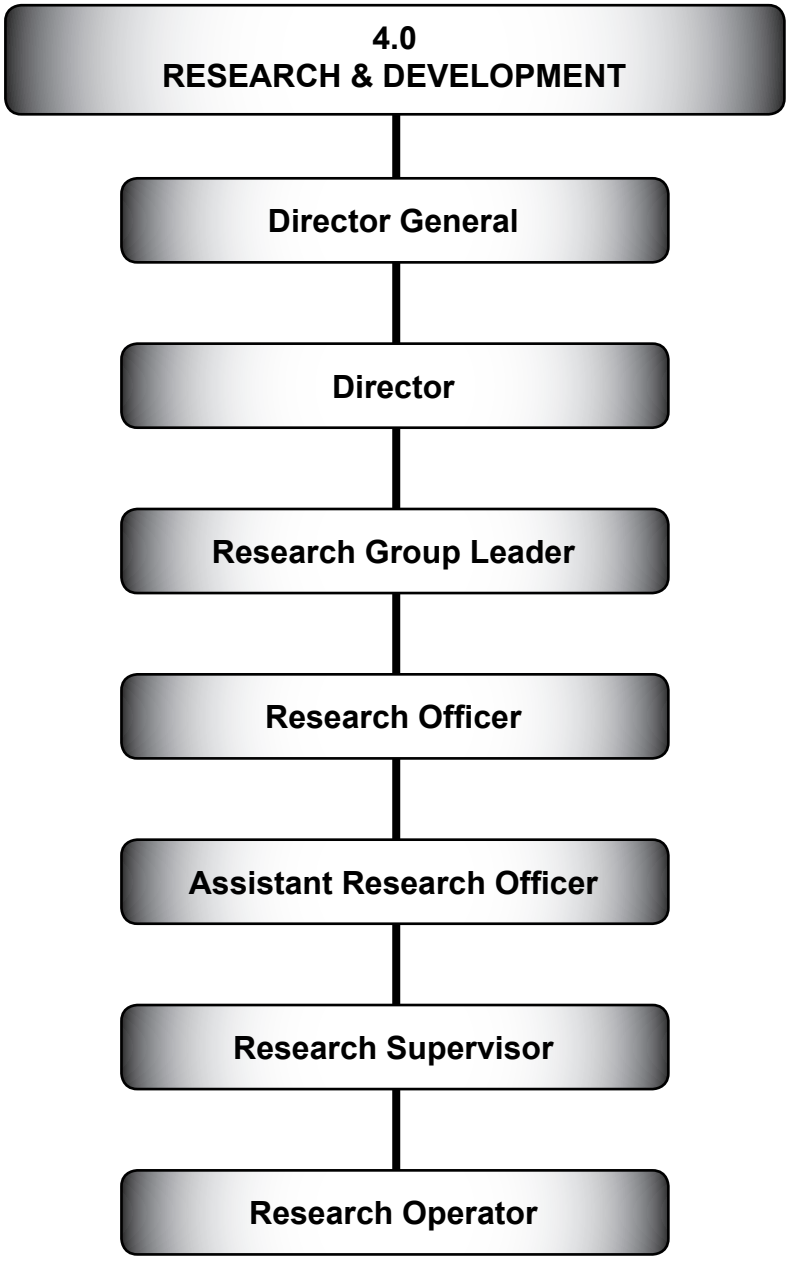


Figure 6: Research and Development Sector

4.5 Industry Organisations

The diverse interests of upstream and downstream producers of palm oil and palm-based products and their derivatives are formally represented by a number of industry organisations as shown in Table 2.

Table 2: Industry Organisations

Sector	Organisation
Plantations	Malaysian Palm Oil Association (MPOA)
	East Malaysia Planters Association (EMPA)
Planters	The Incorporated Society of Planters (ISP)
Independent palm oil millers	Palm Oil Millers Association (POMA)
Palm oil refiners	Palm Oil Refiners Association of Malaysia (PORAM)
Edible oil manufacturers	Malaysian Edible Oil Manufacturers' Assn (MEOMA)
Oleochemical	Malaysian Oleochemical Manufacturers Group
Palm oil promotion	Malaysian Palm Oil Promotion Council (MPOPC)

As the plantation industry developed, from the colonial era to present day, various organisations have been formed to represent the interests of relevant groups; the earliest industry organisations include the United Planting Association of Malaysia (UPAM), Rubber Growers' Association (RGA) and the Malaysian Estate Owners' Association (MEOA). With the rapid expansion of the oil palm industry from the 1960s, the Malaysian Oil Palm Growers' Council (MOPGC) was established to represent the plantation companies. With the passage of time and changes in the structure of the industry, there was much overlap in the roles and functions of the four organisations. A rationalisation exercise in 1999 saw the merger of the four major industry organisations into a single body, the **Malaysian Palm Oil Association (MPOA)**. *(Profile ORG.1, page 88)* The mandate of this integrated organisation is, to represent the industry as a single voice and meet the complex needs of the plantation industry more effectively.

Any individual or company which owns a minimum of 40 hectares of a plantation crop is eligible to be a member of MPOA. As on 1st June, 2002, MPOA has more than 100 members with a total area of more than 1.4 million hectares under

oil palms. This represents more than 70% of the area under private sector ownership. The total members' planted oil palm area includes more than 354,000 hectares under Felda Plantations Sdn. Bhd. which is registered as a plantation company.

MPOA represents the industry in several government and statutory bodies and related industry organisations, key representations include membership on the Board of the Malaysian Palm Oil Board (MPOB) and Chairman of the Board of Trustees of the Malaysian Palm Oil Promotion Council (MPOPC). MPOA also has a voice in international organisations on oils and fats such as the National Institute of Oilseed Products (NIOP), International Association of Seed Crushers (IASC), FOSFA International Oils and Fats Committee and the ASEAN Vegetable Oils Club (AVOC).

Results of this study show that the palm oil industry in Malaysia is complex and well organised. Various organisations are in place to look after the interests of major players in the supply chain, from production of fresh fruit bunches, milling, refining of crude palm oil, production of edible oil products and manufacture of basic oleochemicals such as fatty acids and fatty alcohols. Among the industry organisations, the Malaysian Palm Oil Association (MPOA), the Malaysian Palm Oil Board (MPOB) and the Malaysian Palm Oil Promotion Council (MPOPC) are considered the conerstones of the industry. Plantation companies and the other industry organisations are associated with these three organisations either by way of direct membership or through representation in the governing Boards of MPOB and MPOPC as well as membership in various working or technical committees of these organisations.

In view of the close linkages among the major players, engagement of the industry on issues pertaining to the environment, including the threat of further conversion of High Conservation Value Forests (HCVFs) should involve these key industry organisations, particulalrly MPOA as its members are the drivers for further development of the palm oil sector, in Malaysia and abroad.

To understand the oil palm based manufacturing industry, the processing of the palm oil is required to be elaborated in which job specification can be identified in each of the three main sectors as mentioned above that is refining, milling and plantation.

For each of the job specifications will be discussed further in the findings later in the paper.

5.0 METHODOLOGY OF OCCUPATIONAL ANALYSIS IN PALM OIL INDUSTRY

In conducting the occupational analysis, several brainstorming sessions were held primarily to strategize the Plan of Action in accordance with guidelines as presented by JPK in term of scope of study, time frame and representation by panel of biotechnology experts from both public and private sector as stipulated in the letter of offer.

After several discussion and brainstorming sessions, a Plan of Action was formulated taking into consideration the activities and time frame required. The details of the Plan of Action are as in the Annex 1.

5.1 Literature Search

As outlined by the guidelines, a literature search on the palm oil industry was carried out to get some insight on the scope, policy, program, activities in the context of Malaysian scenario. The scope covered under this search includes current analysis of the sector/subsector, current status of the palm oil industry sector, skilled workers requirement in the local industry and the industrial competition at international level.

5.2 Identifying Industry & Public Players

The literature search findings were used as a guide to identify the scope of occupational study and analysis.

5.3 Established Contact with the Oil Palm Industry Players

A pool of biotechnology experts form the industry and public sector has been contacted. Some kind of working relationship has been established with these experts. The list of experts is in Annex 3.

5.4 Analysing the Information

Based on the activities done as above, substantial data and information were collected. The data and information were discussed and analysed in several in-house workshop attended by selected key person or experts from public and industry player.

During this session, attempts to reframe oil palm based industry in Malaysia using the following framework:

i. Scope of the oil palm based industry sector and its subsector
ii. Main area
iii. Major occupational group of the industry
iv. Job title
v. Hierarchy structure (Level 1 – 5)
vi. Occupational definition

5.5 Organize Workshop with Panels

Several workshops on the oil palm based industry were held and activities covered as follows:

1. **6 – 7 June 2008** at the Tanjung Puteri Resort, Melaka. A total of 10 experts attended the workshop. The activities carried were:
    - Presentation of preliminary findings
    - Outline of Job Title
    - Career structure
    - Hierarchy structure (Level 1 – 5)
    - Occupational Definition
    - Gathering information from the internet

2. **21 – 22 June 2008** at Idaman Jauhari Office Seremban 2, Negeri Sembilan and 10 experts attended. The activities carried out were:
    - Review and refining of occupational definition, hierarchy structure
    - Literature review

3. **5 – 7 July 2008** at Idaman Jauhari Office Seremban 2, Negeri Sembilan and 10 experts attended. The activities carried out were:
    - Review and refining of occupational definition, hierarchy structure
    - Validation and verification

4. **27 July 2008** at Idaman Jauhari Office Seremban 2, Negeri Sembilan and 10 experts attended. The activities carried out were:

    - Validation and verification
    - Proof reading

5. **9 – 10 August 2008** at Idaman Jauhari Office Seremban 2, Negeri Sembilan and 10 experts attended. The activities carried out were:

    - Review and Editing
    - Validation and verification
    - Proof reading

6.0 FINDINGS

Based on the occupational analysis carried out as outlined in the methodology, the findings of this study is as follows:

i. The scope of oil palm based industry in Malaysia.

The oil palm based industry sector in Malaysia is categorically divided into 4 major sectors namely plantation, milling, refining and research and development.

For the **plantation sector,** two occupational areas were identified, namely the field and workshop. Under these two occupational areas, cluster of work identified were:

1. Nursery
2. Replanting
3. Field Maintenance
4. Harvesting

For the **milling sector**, three occupational areas were identified, namely the production, maintenance and quality assurance/quality control (QA/QC). Under this three occupational areas, cluster of work identified were:

1. Production (covers the process and utilities)

2. Electrical and mechanical under maintenance
3. Quality assurance/quality control

For the **refining sector**, two occupational areas identified were edible and non-edible production. Under this two occupational areas, cluster of work for each of the edible and non-edible identified were:

1. Production (covers the process and utilities)
2. Mechanical, electrical and instrument under maintenance
3. Quality assurance, quality Control, process engineering and project engineering under technical services

For each of the sectors and major areas there are a total of 30 job areas were identified to exist in Malaysia ranging from major to minor activity. These job areas under this subsector are best illustrated in the annex 3. These job areas comprises of 120 job titles (see annex 4).

ii. Job Title and Hierarchy

It has been observed that, for the plantation, milling and refining sector there are several job title which can be occupy by one person to control the overall sector. For the **refining sector** (edible and non-edible subsectors), there is only one plant manager that control the whole subsectors, that is the production, maintenance and technical services. This position is at Level 8 and can be filled by anyone in the sector as they come up. At level 7, there two position which control the whole subsectors.

For the **milling sector,** there is one mill manager at level 5 in charge of the whole milling sector, followed by two positions at level 4 which are process executive and the maintenance executive.

For the **plantation sector,** there is one estate manager at level 6 followed by and estate senior assistant at level 5 in the Field subsector. Both are the executive levels which require academic qualification and the person who can occupy these positions must have at a Diploma in Agriculture or any kind of Diploma. Staffs at Level 1 can work their way up to Level 4 depending on their skill and experience. For the workshop subsector, there are only two levels that are at level 2 and three.

For the **Research and Development Sector,** the job requires academic qualification which starts at level 4 up to level 8.

The details of the Job Title and Hierarchy of the above are in Annex 4.

iii. Occupational Definition

Under the oil palm based industry subsector, job titles are identified and defined. Each of the job title is given a job definition as specified. The definition for all job titles is as in Annex 5.

iv. Critical and non-critical job title

The Job title identified is categorized as critical and non-critical. The job is categorized as critical because of insufficient supply of workers in that field because the job needs specialized skilled workers. Meanwhile, jobs categorized as non-critical job because these jobs does not need a specialized skill worker to do the job. The company can employ anyone even those who doesn't know the job. For example in the plantation sector, the job as an operator in all the subdivisions under the field division which is at level 1 can be done by anyone even without knowledge of the product. Nowadays, these positions are being taken up by foreign workers. Table 3 shows the summarization of critical and non-critical job.

Table 3 : Total job titles for critical and non-critical identified.

Job Titles	Total
Critical	75
Non-Critical	45
Total	**120**

Annex 6 shows in detail the jobs that is categorized as critical and non-critical.

7.0 RECOMMENDATION

1. There are lacks of awareness among the industry players regarding the National Occupational Skill Standard; NOSS in their organization set up may hinder the government's vision to inculcate the human capital development

(K-Worker). This is reflected in the private company where the organization set up does not follow the job structure as stipulated by NOSS for the respective level (ie Level 1 to Level 8).

2. Lack of skilled worker is identified as one of the factors affecting the oil palm based industry, especially skilled worker at the Level 4 and 5. Thus, efforts and necessary action need be taken to rectify the situation. Efforts to conduct occupational analysis in oil palm based industry followed by developing national occupational skills standard and training manuals by the Department of Skills Development is timely.

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11. Existing NOSS referred:

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  C-030-3

- WIREMAN
  C-020-1

- *ESTATE MANAGER
  (Y-030-5)

- *ESTATE SENIOR ASSISTANT MANAGER
  (Y-030-4)

- ASSISTANT MANAGER
  (Y-030-2)

- FIELD MANDORE
  (Y-030-2)

- FIELD SUPERVISOR
  (Y030-2)

ANNEX 1

PLAN OF ACTION-OCCUPATIONAL ANALYSIS OF OIL PALM BASED INDUSTRY-MANUFACTURING

IDAMAN JAUHARI (M) SDN. BHD.																		
GANTT CHART FOR DEVELOPING OCCUPATIONAL ANALYSIS (OIL PALM BASED INDUSTRY)																		
NO.	Activities	Facilitator In-Charge	Month															Remarks/Status
			MEI '08				JUN '08				JULY '08				AUG '08			
			M1	M2	M3	M4	M1	M2	M3	M4	M1	M2	M3	M4				
1	TAKLIMAT OA OLEH JPK 5/5/2008																	
2	Search for Resources/ Literature Review	SATTAR/ NABLAN																IMP3, DOC,Govnmt Policy, MASCO, Dic Of Occupational Titles, Ind. Association, WWW.jobtitles
3	Literature Review/ Conduct Survey	SATTAR/ NABLAN																IMP3, DOC,Govnmt Policy, MASCO, Dic Of Occupational Titles, Ind. Association, WWW.jobtitles
4	Compile OA Findings																	Industry Sector/Sub Sectors/ Job Areas
5	OA Job Titles Brainstorming Sessions(Occupational Area)	SATTAR/ NABLAN																Conduct Workshop 1-sector, sub-sector, ocupational area organizational chart, job hierachy
6	Job Structure Compilation																	Facilitator & Typist
7	Occupational Area Analysis (Job Title & Hierachy)	SATTAR/ NABLAN																Conduct Workshop 3-ocupational area organizational chart, job hierachy, occupational definition
8	Occupational Definitions Analysis																	Individual/Company Analysis
9	Proof Reading & Validation	SATTAR/ NABLAN																Conduct Workshop 3-ocupational area organizational chart, job hierachy, occupational definition, critical& non-critical
10	Photostat & Binding (30 Sets documents)																	Secretariat
11	Presentation of Complete OA to JPK 25/7/2008	SATTAR/ NABLAN																Facilitator, Panels, Company Representatives
12	Review and Validation Session	SATTAR/ NABLAN																Conduct Workshop 4
13	Compilation	SATTAR/ NABLAN																Facilitator & Typist

ANNEX 2

LIST OF PANELS EXPERT IN THE DEVELOPMENT OF OCCUPATIONAL ANALYSIS OF OIL PALM BASED INDUSTRY

SAIFUL BAHRI BIN SAIDINA AMIN
IKHTISAS INGENEUR

SHARIPUDDIN BIN HASHIM
FOUR-LEAF CLOVER SDN. BHD.

CHONG YIN CHAO
SYNTEK ENGINEERING (M) SDN. BHD.

B. KAMALESWARI A/P R. BALAKRISHNAN
CARGILL PALM PRODUCTS SDN. BHD.

MOHD IRSAN BIN AZMI
SIME DARBY BHD.

MOHD SAFIYAN BIN ABDUL KUDUS
SIME DARBY BHD.

ROSLAND SIDEK
FELDA KERNEL PRODUCTS SDN. BHD.

ZAINI BIN IDRIS
FELDA PALM INDUSTRIES SDN. BHD.

NORIN ZAMIAH KASSIM SHAARI
LECTURER
FAKULTI KEJURUTERAAN KIMIA
UNIVERSITI TEKNOLOGI MARA (UITM)
40450 SHAH ALAM, SELANGOR.
* EX-MPOB RESEARCHER

HALIZA ABD AZIZ
RESEARCH ENGINEER
ADVANCED OLEOCHEMICAL TECHNOLOGY DIVISION (AOTD)
MALAYSIA PALM OIL BOARD (MPOB)

MOHD POAD BIN BACHIK
PERNIAGAAN MOHD POAD BIN BACHIK
(Pengeluar Dan Pembungkus Minyak Masak Berasaskan Olein Sawit)

MOHD KHAIRULLAH BIN AB. MANAF
INTERNATIONAL ISLAMIC RESEARCH ACADEMY
(I-IRA) SDN. BHD.

FACILITATOR:
MOHAMAD SATTAR BIN RASUL
INTERNATIONAL ISLAMIC RESEARCH ACADEMY
(I-IRA) SDN. BHD.

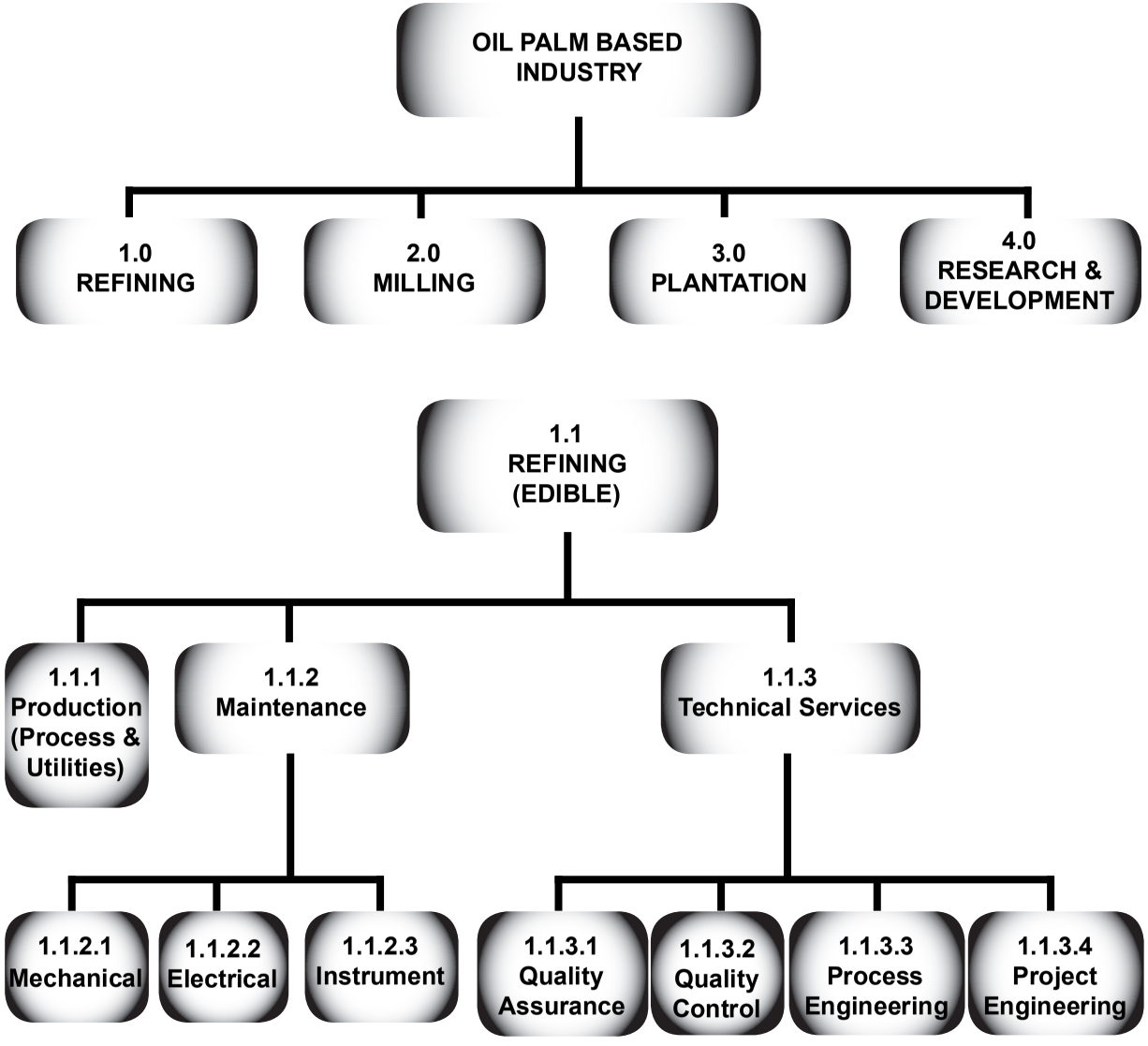
NABLAN BIN YUSOFF
IDAMAN JAUHARI SDN. BHD.

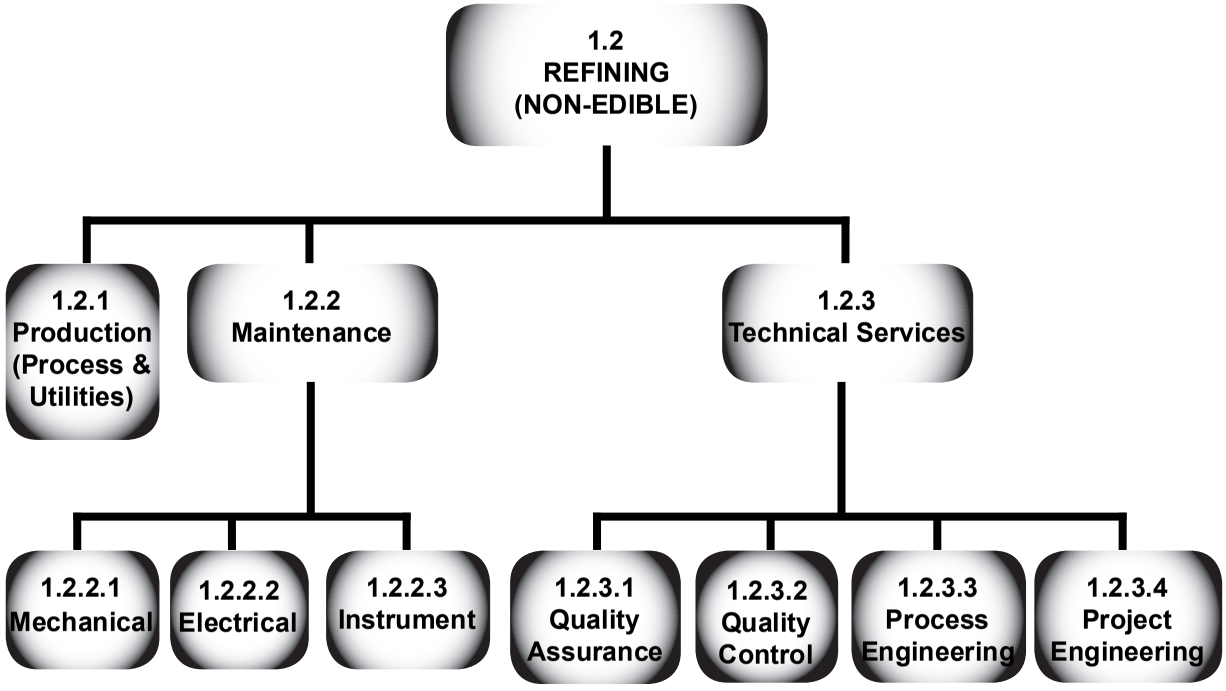
PROOF READER:
ZULKARNAIN BIN MOHAMED
UNIVERSITI KEBANGSAAN MALAYSIA

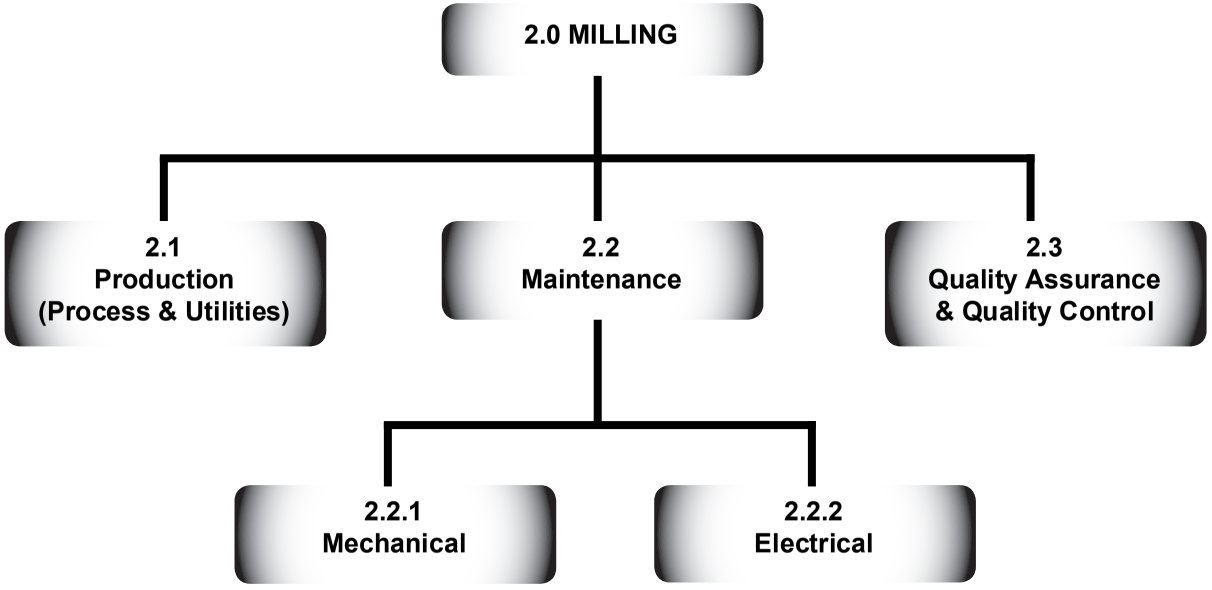
ANNEX 3

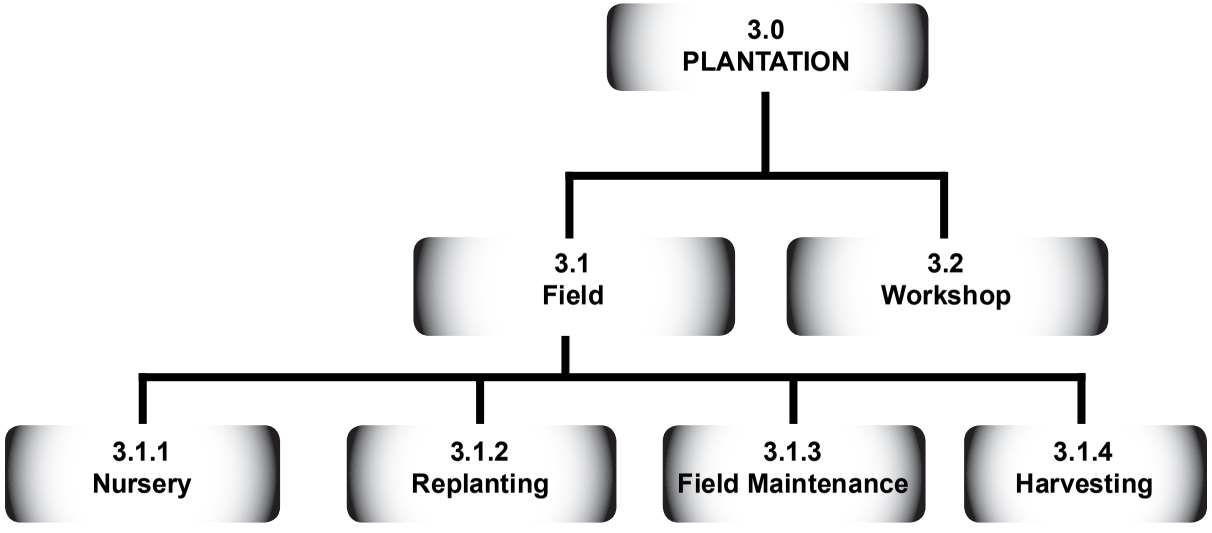
OCCUPATIONAL AREAS – IN OIL PALM BASED INDUSTRY

OCCUPATIONAL AREAS–IN OIL PALM BASED INDUSTRY




1.2
REFINING
(NON-EDIBLE)
1.2.1
Production
(Process &
Utilities)
1.2.2
Maintenance
1.2.3
Technical Services
1.2.2.1
Mechanical
1.2.2.2
Electrical
1.2.2.3
Instrument
1.2.3.1
Quality
Assurance
1.2.3.2
Quality
Control
1.2.3.3
Process
Engineering
1.2.3.4
Project
Engineering


2.0 MILLING
2.1
Production
(Process & Utilities)
2.2
Maintenance
2.3
Quality Assurance
& Quality Control
2.2.1
Mechanical
2.2.2
Electrical


3.0
PLANTATION
3.1
Field
3.2
Workshop
3.1.1
Nursery
3.1.2
Replanting
3.1.3
Field Maintenance
3.1.4
Harvesting


4.0
RESEARCH & DEVELOPMENT
Director General
Director
Research Group Leader
Research Officer
Assistant Research Officer
Research Supervisor
Research Operator

ANNEX 4

JOB TITLES & HIERACHY OF OIL PALM BASED INDUSTRY

1.0 REFINING

1.1 JOB HIERACHY FOR REFINING (EDIBLE) OF OIL PALM BASED INDUSTRY

LEVEL	PRODUCTION (PROCESS & UNTILITIES)	MAINTENANCE			TECHNICAL SERVICES			
		MECHANICAL	ELECTRICAL	INSTRUMENT	QUALITY ASSURANCE	QUALITY CONTROL	PROCESS ENGINEERING	PROJECT ENGINEERING
L8	*PLANT MANAGER							
L7	*PRODUCTION MANAGER	*MAINTENANCE MANAGER			*TECHNICAL SERVICES MANAGER			
L6	*OPERATION SECTION MANAGER	*MECHANICAL MAINTENANCE MANAGER	*ELECTRICAL MAINTENANCE MANAGER	*INSTRUMENT MAINTENANCE MANAGER	*LAB MANAGER	*LAB MANAGER	*PROCESS ENGINEERING MANAGER	*PROJECT ENGINEERING MANAGER
L5	*SUPERVISOR	*SUPERVISOR	*SUPERVISOR	*SUPERVISOR	*LAB SUPERVISOR	*LAB SUPERVISOR	*PROCESS OPTIMIZATION ENGINEER	*PROJECT ENGINEER
L4	*CONTROL ROOM TECHNICIAN	*CHIEF TECHNICIAN			*CHIEF LAB TECHNICIAN		*PROCESS TECHNOLOGIST	*DESIGN DRAUGHTMAN
L3	SENIOR FIELD TECHNICIAN	SENIOR TECHNICIAN	SENIOR TECHNICIAN	SENIOR TECHNICIAN	SENIOR LAB TECHNICIAN	SENIOR LAB TECHNICIAN	N/A	N/A
L2	FIELD TECHNICIAN	TECHNICIAN	TECHNICIAN	TECHNICIAN	LAB TECHNICIAN	LAB TECHNICIAN	N/A	N/A
L1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*** - Critical Job Title**

1.2 JOB HIERACHY FOR REFINING (NON-EDIBLE /OLEOCHEMICAL) OF OIL PALM BASED INDUSTRY

LEVEL	PRODUCTION (PROCESS & UNTILITIES)	MAINTENANCE			TECHNICAL SERVICES			
		MECHANICAL	ELECTRICAL	INSTRUMENT	QUALITY ASSURANCE	QUALITY CONTROL	PROCESS ENGINEERING	PROJECT ENGINEERING
L8	*PLANT MANAGER							
L7	*PRODUCTION MANAGER	*MAINTENANCE MANAGER			*TECHNICAL SERVICES MANAGER			
L6	*OPERATION SECTION MANAGER	*MECHANICAL MAINTENANCE MANAGER	*ELECTRICAL MAINTENANCE MANAGER	*INSTRUMENT MAINTENANCE MANAGER	*LAB MANAGER	*LAB MANAGER	*PROCESS ENGINEERING MANAGER	*PROJECT ENGINEERING MANAGER
L5	*SUPERVISOR	*SUPERVISOR	*SUPERVISOR	*SUPERVISOR	*LAB SUPERVISOR	*LAB SUPERVISOR	*PROCESS OPTIMIZATION ENGINEER	*PROJECT ENGINEER
L4	*CONTROL ROOM TECHNICIAN	*CHIEF TECHNICIAN			*CHIEF LAB TECHNICIAN		* PROCESS TECHNOLOGIST	*DESIGN DRAUGHTMAN
L3	SENIOR FIELD TECHNICIAN	SENIOR TECHNICIAN			SENIOR LAB TECHNICIAN		N/A	N/A
L2	FIELD TECHNICIAN	TECHNICIAN			LAB TECHNICIAN		N/A	N/A
L1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*** - Critical Job Title**

2.0 JOB HIERACHY FOR MILLING OF OIL PALM BASED INDUSTRY

LEVEL	PRODUCTION	QA/QC	MAINTENANCE	
			MECHANICAL	ELECTRICAL
L8	N/A			
L7	N/A			
L6	*MILL MANAGER			
L5	*SENIOR ASSISTANT MILL MANAGER			
L4	*PROCESS ENGINEER/EXECUTIVE		*MAINTENANCE ENGINEER/EXECUTIVE	
L3	*MILL SUPERVISOR	*LAB SUPERVISOR	*TECHNICAL SUPERVISOR/ CONDUCTOR	*CHARGEMAN C-030-3
L2	OPERATOR	LAB OPERATOR	FITTER	WIREMAN C-020-1
L1	ATTENDENT	SAMPLER/SORTER	APPRENTICE	APPRENTICE

*** - Critical Job Title**

3.0 PLANTATION

3.1 JOB HIERACHY FOR OIL PALM PLANTATION - FIELD

LEVEL	FIELD			
	NURSERY	REPLANTING	FIELD MAINTENANCE	HARVESTING
L8	N/A			
L7	N/A			
L6	*ESTATE MANAGER (Y-030-5)			
L5	*ESTATE SENIOR ASSISTANT MANAGER (Y-030-4)			
L4	ASSISTANT MANAGER (Y-030-2)			
L3	FIELD SUPERVISOR (Y030-2)			
L2	FIELD MANDORE (Y-030-2)			
L1	FIELD OPERATOR			

*** - Critical Job Title**

3.2 JOB HIERACHY FOR OIL PALM PLANTATION – WORKSHOP

LEVEL	WORKSHOP
L8	N/A
L7	N/A
L6	N/A
L5	N/A
L4	N/A
L3	*FOREMAN
L2	HELPER
L1	N/A

*** - Critical Job Title**

4.0 JOB HIERACHY FOR RESEARCH & DEVELOPMENT (R&D) OF OIL PALM BASED INDUSTRY

LEVEL	RESEARCH & DEVELOPMENT (R&D)
L8	*DIRECTOR GENERAL (R&D)
L7	*DIRECTOR (R&D)
L6	*RESEARCH GROUPS LEADER/ AGRONOMIST
L5	*RESEARCH OFFICER
L4	*ASSISTANT RESEARCH OFFICER
L3	RESEARCH SUPERVISOR
L2	RESEARCH OPERATOR
L1	N/A

*** - Critical Job Title**

ANNEX 5

OCCUPATIONAL DEFINITION OF OIL PALM BASED INDUSTRY

OCCUPATIONAL DEFINITION

REFINING

(EDIBLE & NON-EDIBLE)

- PRODUCTION -

LEVEL 2

FIELD TECHNICIAN (PRODUCTION)

A PRODUCTION FIELD TECHNICIAN IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS CHECKING AND RECORDING PROCESS PARAMETERS AND STATUS IN A PROCESSING PLANT. HE/SHE MAY CARRY OUT CERTAIN FUNCTIONS IN THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISOR, TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE PROCESSING AND UTILITIES PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A PRODUCTION FIELD TECHNICAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular, the person will:

1. Be knowledgeable in measuring principles of the basic instrument and process control system.
2. Routinely check and record process parameters and status of the processing and utilities plant.
3. Record and upkeep specific processing and utilities plant log book.
4. Report deviation from optimum or normal operating conditions to his/her immediate supervisor.
5. Monitor the operation of production equipment.
6. Adhere to all safety procedures.
7. Carry out housekeeping the immediate plant area under his/her care.
8. Assist in the daily plant operations in achieving high productivity and quality products.

LEVEL 3

SENIOR FIELD TECHNICIAN (PRODUCTION)

A PRODUCTION SENIOR FIELD TECHNICIAN IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS SUPERVISING THE RECORDING OF PROCESS PARAMETERS AND STATUS IN A PROCESSING PLANT. HE/SHE IS REQUIRED TO SUPERVISE THE PRODUCTION FIELD TECHNICIAN WHILE PERFORMING HIS OWN DUTIES. HE/SHE MAY CARRY OUT CERTAIN FUNCTIONS UNDER THE SUPERVISION OF THE PRODUCTION CONTROL ROOM LEAD TECHNICIAN, TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE PROCESSING AND UTILITIES PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A PRODUCTION SENIOR FIELD TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular, the person will:

1. Be knowledgeable of the process instrumentation and control system (eg: single loop feedback applied in the process and utilities plant).
2. Supervise the recording of process parameters and status of the processing and utilities plant.
3. Maintain and upkeep specific processing and utilities plant log book.
4. Alert his/her immediate supervisor of deviation from optimum or normal operating conditions.
5. Supervise the operation of production equipment.
6. Carry out first line of routine laboratory analysis.
7. Assist in meeting production target set forth for specific products as per production plan.
8. Ensure all safety procedures are adhered to.

9. Carry out pre-maintenance handover activities, i.e. positive isolation, draining, purging, flushing and blinding.
10. Supervise general workers carrying out duties assigned to them.

Pre-Requisite:

In addition to the above, the person requires the following prerequisite

- Steam Driver Certificate Grade 2

LEVEL 4

CONTROL ROOM TECHNICIAN (PRODUCTION)

A PRODUCTION CONTROL ROOM TECHNICIAN IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS LEADING THE MONITORING OF PROCESS PARAMETERS AND STATUS IN A PROCESSING PLANT THROUGH THE DISTRIBUTED CONTROL SYSTEM (DCS). HE/SHE IS REQUIRED TO SUPERVISE PRODUCTION FIELD TECHNICIAN WHILE PERFORMING HIS OWN DUTIES. HE/SHE MAY CARRY OUT CERTAIN FUNCTIONS UNDER THE SUPERVISION OF THE PRODUCTION SUPERVISOR, TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE PROCESSING AND UTILITIES PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A PRODUCTION CONTROL ROOM TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular, the person will:

1. Be knowledgeable of the process instrument and advanced process control system (eg: cascade, feedfoward, ratio, override, non linear) applied in the process and utilities plant.
2. Lead the monitoring of process and utilities parameters and status through the distributed control system (DCS).
3. Operate and monitor process using emergency plant shut-down (ESD) and load shedding systems.
4. Alert his/her immediate supervisor of deviation from optimum or normal operating conditions based on the alarms and enunciators from the DCS.
5. Ensure all safety procedures are adhered to.
6. Supervise pre-maintenance handover activities, i.e. positive isolation, draining, purging, flushing and blinding from the DCS.

7. Assist in managing human resource including training, performance appraisal and staff development to ensure optimal operation.

Pre-Requisite:

In addition to the above, the person requires the following prerequisite

- Steam Driver Certificate Grade 1

LEVEL 5

SUPERVISOR (PRODUCTION)

A PRODUCTION SUPERVISOR IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS MANAGING, PLANNING AND COORDINATING ALL MATTERS REGARDING THE DAILY OPERATIONS OF THE PROCESSING PLANT IN ORDER TO MEET PRODUCTION AND QUALITY TARGET. HE/SHE MUST BE ABLE TO LEAD PRE-MAINTENANCE HANDOVER ACTIVITIES. HE/SHE IS ALSO RESPONSIBLE FOR ISSUING PERMIT-TO-WORK FOR EQUIPMENT/ PLANT MAINTENANCE.

A PRODUCTION SUPERVISOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Manage, plan, organize and monitor all matters regarding the daily operations of the processing and utilities plant in safe and timely manner.
2. Carry out first line of process intervention in getting an upset plant back on track.
3. Provide guidance to subordinates to ensure smooth and safe plant operations.
4. Provide general supervision over a work group by assigning task and checking work at regular time.
5. Generate section detailed shift report (production activities and incidences) for submission to the management.
6. Lead pre-maintenance handover activities in the field, i.e. positive isolation, draining, purging, flushing and blinding.
7. Prepare Permit-to-Work for equipment/plant maintenance.
8. Issue Permit-to-Work for equipment/plant maintenance.

9. Implement and ensure all safety procedures are adhered to.
10. Be knowledgeable for all the process instrumentation and process control system (basic and advanced) applied in the process and utilities plant.
11. Manage human resource including training, performance appraisal and staff development to ensure optimal operation.
12. Respond immediately and rectify process deviations detected.

LEVEL 6

OPERATIONS SECTION MANAGER (PRODUCTION)

A PRODUCTION OPERATIONS SECTION MANAGER IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS MANAGING VARIOUS PLANT OPERATION ACTIVITIES. HE/SHE MAY ASSIST IN HUMAN RESOURCE MANAGEMENT. HE/SHE ALSO ASSISTS THE PRODUCTION MANAGER TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE PROCESSING PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A PRODUCTION OPERATIONS SECTION MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular, the person will:

1. Manage various plant operation activities such as checking and recording of process parameters and status of the whole plant.
2. Generate whole plant process reports.
3. Respond immediately and rectify process deviations detected.
4. Ensure all Standard Operating Procedures are followed.
5. Implement and ensure all safety procedures in the plant are adhered to.
6. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Assist in compiling and review progress (plant operation, modification and process optimization) and reports to the Production Manager.
8. Report and update the progress of production activities and incidences occurred at his/her plant section at the daily production meeting.

LEVEL 7

PRODUCTION MANAGER

A PRODUCTION MANAGER IS DESIGNATED TO PERFORM SUPERVISORY AND MANAGEMENT ACTIVITIES THAT INCLUDE MANAGING THE PRODUCTION PLANT OVERALL PERFORMANCE AND THE MANPOWER RESOURCES IN A PROCESSING PLANT. HE/SHE ALSO ASSISTS THE PLANT MANAGER TO ENSURE THE PRODUCTION AND QUALITY TARGET AND THE PLANT OVERALL 'HEALTH' IS MET.

A PRODUCTION MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular, the person will:

1. Supervise and manage various activities of plant operations, staff planning and overall plant 'health' monitoring.
2. Generate plant specific process performance reports.
3. Manage process deviation rectification and trouble-shooting activities.
4. Prepare and manage equipment Standard Operating Procedures (SOP), including updating and modifications.
5. Initiate process/utilities plant modifications and process optimizations.
6. Manage human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Compile and review progress (plant operation, modification and process optimization) and reports to the plant management.
8. Review the progress of production activities and incidences occurred at the whole plant at the daily production meeting.

LEVEL 8

PLANT MANAGER

A PLANT MANAGER IS DESIGNATED TO PRIMARILY BE RESPONSIBLE FOR THE OVERALL SMOOTH AND SAFE OPERATION OF THE PROCESSING PLANT. HE/SHE IS ABLE TO TROUBLESHOOT ALL PROCESS MALFUNCTIONS AND CARRY OUT IMMEDIATE CORRECTIVE ACTIONS. HE/SHE ALSO MANAGES ALL PRODUCTION MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND TECHNICAL SERVICE MANAGERS TO ENSURE OPTIMAL OPERATION OF THE WHOLE PLANT.

A PLANT MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular, the person will:

1. Manage, plan, organize and monitor all matters regarding the daily operations of the plant in safe and timely manner.
2. Ensure all production and quality targets are met.
3. Responsible for overall plant performance according to accounting and costing.
4. Provide guidance to subordinates to ensure smooth and safe plant operations.
5. Ensure all Standard Operating Procedures (SOP) and safety standards are fully complied with.
6. Coordinate with Production, Maintenance, Technical Service and other management departments on the Plant modification, optimization, maintenance and product quality needs.
7. Improve plant design and operations.
8. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

9. Review the progress of plant operation, modification, process optimization, maintenance.
10. Responsible for plant engineering, production operation and maintenance activities.

OCCUPATIONAL DEFINITION

REFINING

(EDIBLE & NON-EDIBLE)

- MAINTENANCE -

LEVEL 2

TECHNICIAN (MECHANICAL)

A MECHANICAL TECHNICIAN IS DESIGNATED TO TROUBLESHOOT AND PERFORM MAINTENANCE FUNCTIONS UNDER THE GUIDANCE OF HIS/ HER IMMEDIATE SUPERVISOR, IN ORDER TO ENSURE CONTINOUS AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

A MECHANICAL TECHNICIAN MAY BE FOUND MOST COMMONLY IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in mechanical principles (pump theories).
2. Be able to troubleshoot general mechanical problems in the plant and buildings.
3. Be able to undertake basic repair.
4. Maintain and upkeep plant equipment log book.
5. Generate simple reporting.
6. Report to immediate supervisor of work progress.
7. Ensure safety procedures are followed.

LEVEL 3

SENIOR TECHNICIAN (MECHANICAL)

A MECHANICAL SENIOR TECHNICIAN IS DESIGNATED TO SUPERVISE MAINTENANCE AND TROUBLESHOOT OF MECHANICAL SYSTEMS, IN ORDER TO ENSURES CONTINOUS AND SAFE OPERATIONS OF THE FACILITIES OR PLANT. HE/SHE MUST BE ABLE TO TROUBLESHOOT MORE SPECIFIC MECHANICAL PROBLEMS.

A MECHANICAL SENIOR TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in mechanical principles (pumps theories, heat transfer, fluid mechanics etc).
2. Be able to troubleshoot more specifics mechanical problems in the plant and buildings.
3. Be able to undertake more complex repair.
4. Maintain and upkeep plant equipment log book.
5. Generate reporting.
6. Ensure safety procedures are followed.
7. Supervise mechanical technician on troubleshooting and repair work.
8. Report to immediate supervisor of work progress.

LEVEL 4

CHIEF TECHNICIAN (MECHANICAL)

A MECHANICAL CHIEF TECHNICIAN IS DESIGNATED TO LEAD MAINTENANCE AND TROUBLESHOOT OF MECHANICAL SYSTEMS. HE/SHE ALSO ASSISTS THE MECHANICAL SUPERVISOR IN MANAGING THE MECHANICAL DEPARTMENT.

A MECHANICAL CHIEF TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in factory and machineries act and regulations.
2. Lead troubleshooting and maintenance for mechanical problems in the plant and utilities.
3. Supervise and validate basic mechanical maintenance and repair work.
4. Maintain record of work for mechanical department.
5. Train mechanical technician in handling and maintaining mechanical equipment.
6. Assist mechanical supervisor in:
    - Managing human resources which include recruitment, training, performance appraisal and staff development.
    - Liaising with equipment vendors/suppliers.
    - Planning and executing projects.
7. Ensure mechanical safety procedures are implemented.
8. Prepare work schedule for mechanical senior technician and mechanical technician.

LEVEL 5

SUPERVISOR (MECHANICAL)

A MECHANICAL SUPERVISOR IS DESIGNATED TO MANAGE, PLAN AND COORDINATES PROJECTS AND RESOURCES FOR MECHANICAL DEPARTMENT, IN ORDER TO OPTIMIZE THE RELIABILITY AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

A MECHANICAL SUPERVISOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in factory and machineries act and regulations.
2. Manage mechanical department to ensure KPI's are achieved.
3. Manage human resources which include recruitment, training, performance appraisal and staff development.
4. Liase with equipment vendors/suppliers so that KPI targets are met.
5. Liase with authorities for approval where appropriate.
6. Liase with consultants where appropriate.
7. Plan and execute projects.
8. Formulate safety procedure relating to mechanical works.

LEVEL 6

MECHANICAL MAINTENANCE MANAGER

A MECHANICAL MAINTENANCE MANAGER IS DESIGNATED TO MANAGE, PLAN AND COORDINATES PROJECTS AND RESOURCES FOR MECHANICAL DEPARTMENT, IN ORDER TO OPTIMIZE THE RELIABILITY AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

A MECHANICAL MAINTENANCE MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Possess the knowledge, prerequisite and execute the function of a mechanical supervisor.
2. Execute the policies, goals and plans set by his/her immediate superior.
3. Review policies and initiate corrective actions where appropriate.
4. Organize and recruit manpower.
5. Support division goals by setting his/her department's targets and action plans that are in line with division objective.

Pre-Requisite:

In addition to the above, the person requires the following prerequisite

- MBA
- 4-5 years experience in the same (or similar) industry

LEVEL 7

MAINTENANCE MANAGER

A MAINTENANCE MANAGER IS DESIGNATED TO MANAGE, PLAN AND COORDINATES PROJECTS AND RESOURCES FOR MAINTENANCE DIVISION, IN ORDER TO OPTIMIZE THE RELIABILITY AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

A MAINTENANCE MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. (Together with top management) create policies for the company that is in line with company's vision and mission.
2. (Together with top management) create strategic objectives for the company that is in line with company's vision and mission.
3. Manage maintenance division to ensure KPI's are achieved.
4. Set division's goals and action plans to support the company's goals and objectives.
5. Manage human resources in the division to meet the company's human resources goals.
6. Be knowledgeable in the relevant acts and regulations.

Pre-Requisite:

In addition to the above, the person requires the following prerequisite

- MBA
- More than 8 years experience in the same (or similar) industry

LEVEL 2

TECHNICIAN (ELECTRICAL)

AN ELECTRICAL TECHNICIAN IS DESIGNATED TO TROUBLESHOOT AND PERFORM MAINTENANCE FUNCTIONS UNDER THE GUIDANCE OF HIS/ HER IMMEDIATE SUPERVISOR, IN ORDER TO ENSURE CONTINOUS AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

AN ELECTRICAL TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE)

In particular the person will:

1. Be knowledgeable in electrical principles (circuits and machine theories).
2. Be able to troubleshoot general electrical problems in the plant and buildings.
3. Be able to undertake basic repair.
4. Maintain and upkeep plant equipment log book.
5. Generate simple reporting.
6. Report to immediate supervisor of work progress.
7. Ensure safety procedures are followed.

LEVEL 3

SENIOR TECHNICIAN (ELECTRICAL)

AN ELECTRICAL SENIOR TECHNICIAN IS DESIGNATED TO SUPERVISE MAINTENANCE AND TROUBLESHOOT OF ELECTRICAL SYSTEM IN ORDER TO ENSURE CONTINOUS AND SAFE OPERATIONS OF THE FACILITIES OR PLANT. HE/SHE MUST BE ABLE TO TROUBLESHOOT MORE SPECIFIC ELECTRICAL PROBLEMS.

AN ELECTRICAL SENIOR TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in electrical principles (circuits and machine theories).
2. Be able to troubleshoot more specifics electrical problems in the plant and buildings.
3. Be able to undertake more complex repair.
4. Maintain and upkeep plant equipment log book.
5. Generate reporting.
6. Ensure safety procedures are followed.
7. Supervise electrical technician on troubleshooting and repair work.
8. Report to immediate supervisor of work progress.

LEVEL 4

CHIEF TECHNICIAN (ELECTRICAL)

AN ELECTRICAL CHIEF TECHNICIAN IS DESIGNATED TO LEAD MAINTENANCE AND TROUBLESHOOT OF ELECTRICAL SYSTEMS. HE/SHE ALSO ASSISTS THE ELECTRICAL SUPERVISOR IN MANAGING THE ELECTRICAL DEPARTMENT.

AN ELECTRICAL CHIEF TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in electricity act and regulations.
2. Lead troubleshooting and maintenance for electrical problems in the plant and utilities.
3. Supervise and validate basic electrical maintenance and repair work.
4. Maintain record of work for electrical department.
5. Train electrical technician in handling and maintaining electrical equipment.
6. Assist electrical supervisor in:
    - Managing human resources which include recruitment, training, performance appraisal and staff development.
    - Liaising with equipment vendors/suppliers.
    - Planning and executing projects.
7. Ensure electrical safety procedures are implemented.
8. Prepare work schedule for electrical senior technician and electrical technician.

LEVEL 5

SUPERVISOR (ELECTRICAL)

AN ELECTRICAL SUPERVISOR IS DESIGNATED TO MANAGE, PLAN COORDINATE PROJECTS AND RESOURCES FOR ELECTRICAL DEPARTMENT, IN ORDER TO OPTIMIZE THE RELIABILITY AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

AN ELECTRICAL SUPERVISOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in electricity act and regulations.
2. Manage electrical department to ensure KPI's are achieved.
3. Manage human resources which include recruitment, training, performance appraisal and staff development.
4. Liase with equipment vendors/suppliers so that KPI targets are met.
5. Liase with authorities for approval where appropriate.
6. Liase with electrical consultants where appropriate.
7. Plan and execute projects.
8. Formulate electrical safety procedure.

LEVEL 6

ELECTRICAL MAINTENANCE MANAGER

AN ELECTRICAL MAINTENANCE MANAGER IS DESIGNATED TO MANAGE, PLAN AND COORDINATES PROJECTS AND RESOURCES FOR ELECTRICAL DEPARTMENT, IN ORDER TO OPTIMIZE THE RELIABILITY AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

AN ELECTRICAL MAINTENANCE MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Possess the knowledge, prerequisite and execute the function of an electrical supervisor.
2. Execute the policies, goals and plans set by his/her immediate superior.
3. Review policies and initiate corrective actions where appropriate.
4. Organize and recruit manpower.
5. Support division goals by setting his/her department's targets and action plans that are in line with division objective.

Pre-Requisite:

In addition to the above, the person requires the following prerequisite

- MBA
- 4-5 years experience in the same (or similar) industry

LEVEL 2

TECHNICIAN (INSTRUMENT)

AN INSTRUMENTATION TECHNICIAN IS DESIGNATED TO TROUBLESHOOT, MAINTAIN AND PERFORM FIRST LEVEL SUPPORT UNDER THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISOR, IN ORDER TO ENSURE CONTINUOUS AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

AN INSTRUMENTATION TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in measuring principles of the basic instrumentation and control system.
2. Be able to troubleshoot general instrumentation and control system malfunction.
3. Perform basic calibration of instrumentation and control system.
4. Maintain Instrument air supply system.
5. Maintain safe guarding system.
6. Record and update instrumentation and control systems data/log book.
7. Generate simple reporting.
8. Report to immediate supervisor of work schedule.
9. Adhere to all safety procedures.

LEVEL 3

SENIOR TECHNICIAN (INSTRUMENT)

AN INSTRUMENTATION SENIOR TECHNICIAN IS DESIGNATED TO SUPERVISE MAINTENANCE AND TROUBLESHOOT OF INSTRUMENTATION AND CONTROL SYSTEMS. HE/SHE MUST BE ABLE TO TROUBLESHOOT MORE COMPLEX PROCESS CONTROL SYSTEMS. HE/SHE ALSO PLAN OVERALL INSTRUMENT MAINTENANCE ACTIVITIES, IN ORDER TO ENSURE CONTINUOUS AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

AN INSTRUMENTATION SENIOR TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Supervise troubleshooting and maintenance for general instrumentation and control systems malfunctions.
2. Supervise and validate calibration of instrumentation and control systems.
3. Maintain record of work for the facilities or plant.
4. Validate test equipment.
5. Troubleshoot more complex instrumentation and control systems problems.
6. Liaise and engage when necessary with instrumentation and control system vendors/suppliers to ensure speedy rectification work of complex problems.
7. Train technician in handling, maintaining and calibrating instrumentation and control system.

8. Ensure all safety procedures are adhered to.
9. Perform supervisory functions such as plan preventive maintenance, plan scheduled maintenance, coordinate implementation of scheduled maintenance, preventive maintenance and corrective maintenance.

LEVEL 4

CHIEF TECHNICIAN (INSTRUMENT)

AN INSTRUMENTATION CHIEF TECHNICIAN IS DESIGNATED TO LEAD MAINTENANCE AND TROUBLESHOOT OF INSTRUMENTATION AND CONTROL SYSTEMS. HE/SHE MUST BE ABLE TO SUPERVISE TROUBLESHOOT OF MORE COMPLEX ADVANCED PROCESS CONTROL SYSTEMS. HE/SHE ALSO ASSIST IN PROCUREMENT OF BASIC INSTRUMENTATION AND CONTROL SYSTEMS AND HUMAN RESOURCE MANAGEMENT.

AN INSTRUMENTATION CHIEF TECHNICIAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Lead troubleshooting and maintenance for general instrument and control system malfunction.
2. Inspect instrument compliance to safety requirements.
3. Prepare and manage maintenance procedures including updating and modifications.
4. Inspect various works performed by instrumentation and control systems vendors/suppliers.
5. Troubleshoot more complex instrument and advanced process control systems problems.
6. Assist in procurement of basic instrumentation and control system equipment (i.e.: auxiliary instrument devices, measuring instruments, final control element, safe guarding system, consumables and other assets).
7. Prepare progress reports.
8. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
9. Ensure all safety procedures are adhered to.

LEVEL 5

SUPERVISOR (INSTRUMENT)

AN INSTRUMENTATION SUPERVISOR IS DESIGNATED TO MANAGE, PLAN, COORDINATE PROJECTS AND RESOURCES FOR INSTRUMENTATION DEPARTMENT, IN ORDER TO OPTIMIZE THE REALIABILITY AND SAFE OPERATIONS OF THE FACILITIES OR PLANT. HE/SHE MUST BE ABLE TO TROUBLESHOOT HIGH-END INSTRUMENTATION AND MODEL-BASED CONTROL SYSTEMS. HE/SHE ALSO RESPONSIBLE FOR PROCUREMENT OF ALL NECESSARY INSTRUMENTATION AND CONTROL SYSTEMS AND HUMAN RESOURCE MANAGEMENT.

AN INSTRUMENTATION SUPERVISOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Be knowledgeable in ISA instrument standard.
2. Manage, plan, organize and monitor all matters regarding the daily operations and maintenance of the instrumentation and control system.
3. Responsible for procurement of all necessary instrumentation and control system (i.e.auxiliary instrument devices, measuring instruments, final control element, safe guarding system, consumables and other assets).
4. Supervise all maintenance (instrument) staff.
5. Troubleshoot high-end instrument and model based control systems.
6. Responsible for various works performed by instrumentation and control systems vendors/suppliers.
7. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

8. Compile and review progress and reports to the management.
9. Implement and ensure all safety procedures are adhered to.

LEVEL 6

INSTRUMENT MAINTENANCE MANAGER

AN INSTRUMENT MAINTENANCE MANAGER IS DESIGNATED TO MANAGE, PLAN AND COORDINATES PROJECTS AND RESOURCES FOR INSTRUMENT DEPARTMENT, IN ORDER TO OPTIMIZE THE RELIABILITY AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

AN INSTRUMENT MAINTENANCE MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Possess the knowledge, prerequisite and execute the function of an instrument supervisor.
2. Execute the policies, goals and plans set by his/her immediate superior.
3. Review policies and initiate corrective actions where appropriate.
4. Organize and recruit manpower.
5. Support division goals by setting his/her department's targets and action plans that are in line with division objective.

Pre-Requisite:

In addition to the above, the person requires the following prerequisite

- MBA
- 4-5 years experience in the same (or similar) industry

OCCUPATIONAL DEFINITION

REFINING

(EDIBLE & NON-EDIBLE)

- TECHNICAL SERVICES -

LEVEL 2

LAB TECHNICIAN (QUALITY ASSURANCE) (EDIBLE)

A QUALITY ASSURANCE LAB TECHNICIAN (EDIBLE) IS DESIGNATED TO PERFORM SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY ASSURANCE PROCEDURES FOR INCOMING RAW MATERIALS, IN-PROGRESS FINISHED PRODUCTS UNDER THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISOR.

A QUALITY ASSURANCE LAB TECHNICIAN (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular, the person will:

1. Undertake the tasks of ensuring that materials/services/processes conform to the specified standards.
2. Record systematically all results of each of the assigned tasks.
3. Apply the best practices in Quality Assurance such as ISO, GMP, HALAL and KOSHER.
4. Assist in preparation of report on specific Quality Assurance task to immediate supervisor.
5. Comply with the company and industries Safety Standards and Standard Operating Procedures (SOP).

LEVEL 3

SENIOR LAB TECHNICIAN (QUALITY ASSURANCE) (EDIBLE)

A QUALITY ASSURANCE SENIOR LAB TECHNICIAN (EDIBLE) IS DESIGNATED TO SUPERVISE SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY ASSURANCE PROCEDURES FOR INCOMING RAW MATERIALS, IN-PROCESS AND FINISHED. HE/SHE MUST BE ABLE TO PERFORM MORE COMPLEX QUALITY ASSURANCE PROCEDURES. HE/SHE ALSO SUPERVISE THE DEVELOPMENT, IMPLEMENTATION AND MAINTENANCE OF QUALITY ASSURANCE SYSTEM.

A QUALITY ASSURANCE SENIOR LAB TECHNICIAN (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular, the person will:

1. Supervise the tasks of ensuring that materials and processes conform to the specified standards.
2. Manage quality control documentation.
3. Supervise the best practices in Quality Assurance such as ISO, GMP, HALAL, and KOSHER.
4. Prepare report on specific Quality Assurance task to immediate supervisor.
5. Assist in compiling and review progress.
6. Ensure the company and industrial Safety Standards and SOP procedures are followed strictly.

LEVEL 4

CHIEF LAB TECHNICIAN (QUALITY ASSURANCE) (EDIBLE)

A QUALITY ASSURANCE CHIEF LAB TECHNICIAN (EDIBLE) IS DESIGNATED TO LEAD AND SUPERVISE QUALITY ASSURANCE PROCEDURES FOR PRODUCTS AND PROCESSES. HE/SHE UNDERTAKES TRAINING OF QUALITY ASSURANCE LAB TECHNICIANS AND SENIOR LAB TECHNICIANS.

A QUALITY ASSURANCE CHIEF LAB TECHNICIAN (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Lead the task of ensuring that materials/services/processes conform to specification/specified standards.
2. Maintain and update records of all results of assigned tasks.
3. Ensure that best practices in Quality Assurance are implemented.
4. Collate and reconcile all reports on Quality Assurance tasks for immediate supervisor.
5. Provide training to Quality Assurance Lab Technicians and Senior Lab Technicians.
6. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Assist in compiling and review progress and reports to the management.
8. Prepare and compile audit documents.

9. Liaise with external lab for products and process accreditation purpose.
10. Assist in procurement of Lab tools and consumables required for Quality Assurance activities.

LEVEL 5

LAB SUPERVISOR (QUALITY ASSURANCE) (EDIBLE)

A QUALITY ASSURANCE LAB SUPERVISIOR (EDIBLE) IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY ASSURANCE PROCEDURES IN THE LABORATORY FOR INCOMING MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY CONTROL SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A QUALITY ASSURANCE LAB SUPERVISOR (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Manage and administer all matters pertaining to Quality Assurance procedures of the products and processes.
2. Coordinate/oversee all Quality Assurance Standard Operating Procedures.
3. Plan and implement training activities for the Quality Assurance Technician.
4. Responsible for procurement of consumables required for Quality Assurance activities.
5. Validate all Quality Assurance reports emitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

7. Compile and review progress and reports to the management.
8. Validate documents for audit.
9. Responsible for product and process accreditation from external labs.

LEVEL 6

LAB MANAGER (QUALITY ASSURANCE)

A QUALITY ASSURANCE LAB MANAGER IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY ASSURANCE PROCEDURES IN THE LABORATORY FOR INCOMING MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY CONTROL SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE QUALITY ASSURANCE LAB.

A QUALITY ASSURANCE LAB MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Manage and administer all matters pertaining to Quality Assurance procedures of the products and processes.
2. Coordinate/oversee all Quality Assurance Standard Operating Procedures.
3. Plan and implement training activities for the Quality Assurance Technicians and Supervisors.
4. Responsible for the approval procurement of consumables required for Quality Assurance activities.
5. Validate all Quality Assurance reports transmittal for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

7. Compile and review progress and reports to the management.
8. Validate documents for audit.
9. Responsible for product and process accreditation from external labs.

LEVEL 7

TECHNICAL SERVICES MANAGER

A TECHNICAL SERVICES MANAGER IS DESIGNATED TO MANAGE, COORDINATE ALL MATTERS PERTAINING TO TECHNICAL SERVICES DEPARTMENT. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE OPERATIONS AND MAINTENANCE DEPARTMENTS TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A TECHNICAL SERVICES MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/ SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Manage and administer all matters pertaining to Technical Services Department.
2. Coordinate/oversee all activities and performance related to Technical Services Department.
3. Manage training activities for the personnel under Technical Services Department.
4. Validate all Technical Services Department reports transmitted for the plant.
5. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
6. Compile and review progress and reports to the management.

7. Validate documents for quality audit.
8. Responsible for product and process accreditation from external bodies.

LEVEL 2

LAB TECHNICIAN (QUALITY ASSURANCE) (NON-EDIBLE)

A QUALITY ASSURANCE LAB TECHNICIAN (NON-EDIBLE) IS DESIGNATED TO PERFORM SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY ASSURANCE PROCEDURES FOR INCOMING RAW MATERIALS, IN-PROGRESS FINISHED PRODUCTS UNDER THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISOR.

A QUALITY ASSURANCE LAB TECHNICIAN (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular, the person will:

1. Undertake the tasks of ensuring that materials/services/processes conform to the specified standards.
2. Record systematically all results of each of the assigned tasks.
3. Apply the best practices in Quality Assurance ISO and GIIP.
4. Assist in preparation of report on specific Quality Assurance task to immediate supervisor.
5. Comply with the company and industries Safety Standards and SOP procedures.

LEVEL 3

SENIOR LAB TECHNICIAN (QUALITY ASSURANCE) (NON-EDIBLE)

A QUALITY ASSURANCE SENIOR LAB TECHNICIAN (NON-EDIBLE) IS DESIGNATED TO SUPERVISE SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY ASSURANCE PROCEDURES FOR INCOMING RAW MATERIALS, IN-PROCESS AND FINISHED. HE/SHE MUST BE ABLE TO PERFORM MORE COMPLEX QUALITY ASSURANCE PROCEDURES. HE/SHE ALSO SUPERVISE THE DEVELOPMENT, IMPLEMENTATION AND MAINTENANCE OF QUALITY ASSURANCE SYSTEM.

A QUALITY ASSURANCE SENIOR LAB TECHNICIAN (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular, the person will:

1. Supervise the tasks of ensuring that materials and processes conform to the specified standards.
2. Manage quality control documentation.
3. Supervise the best practices in Quality Assurance such as ISO and GIIP.
4. Prepare report on specific Quality Assurance task to immediate supervisor.
5. Assist in compiling and review progress.
6. Ensure the company and industrial Safety Standards and SOP procedures are followed strictly.

LEVEL 4

CHIEF LAB TECHNICIAN (QUALITY ASSURANCE) (NON-EDIBLE)

A QUALITY ASSURANCE CHIEF LAB TECHNICIAN (NON-EDIBLE) IS DESIGNATED TO LEAD AND SUPERVISE QUALITY ASSURANCE PROCEDURES FOR PRODUCTS AND PROCESSES. HE/SHE UNDERTAKES TRAINING OF QUALITY ASSURANCE LAB TECHNICIANS AND SENIOR LAB TECHNICIANS.

A QUALITY ASSURANCE CHIEF LAB TECHNICIAN (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular the person will:

1. Lead the task of ensuring that materials/services/processes conform to specification/specified standards.
2. Maintain and update records of all results of assigned tasks.
3. Ensure that best practices in Quality Assurance are implemented.
4. Collate and reconcile all reports on Quality Assurance tasks for immediate supervisor.
5. Provide training to Quality Assurance Lab Technicians and Senior Lab Technicians.
6. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Assist in compiling and review progress and reports to the management.
8. Prepare and compile audit documents.

9. Liaise with external lab for products and process accreditation purpose.
10. Assist in procurement of Lab tools and consumables required for Quality Assurance activities.

LEVEL 5

LAB SUPERVISOR (QUALITY ASSURANCE) (NON-EDIBLE)

A QUALITY ASSURANCE LAB SUPERVISIOR (NON-EDIBLE) IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY ASSURANCE PROCEDURES IN THE LABORATORY FOR INCOMING MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY CONTROL SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A QUALITY ASSURANCE LAB SUPERVISOR (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular the person will:

1. Manage and administer all matters pertaining to Quality Assurance procedures of the products and processes.
2. Coordinate/oversee all Quality Assurance Standard Operating Procedures.
3. Plan and implement training activities for the Quality Assurance Technician.
4. Responsible for procurement of consumables required for Quality Assurance activities.
5. Validate all Quality Assurance reports emitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

7. Compile and review progress and reports to the management.
8. Validate documents for audit.
9. Responsible for product and process accreditation from external labs.

LEVEL 2

LAB TECHNICIAN (QUALITY CONTROL) (EDIBLE)

A QUALITY CONTROL LAB TECHNICIAN (EDIBLE) IS DESIGNATED TO PERFORM SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY CONTROL PRODUCERS FOR INCOMING RAW MATERIALS, IN PROGRESS AND FINISHED PRODUCTS UNDER THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISIOR.

A QUALITY CONTROL LAB TECHNICIAN (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STERIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Prepare basic reagents for sample testing.
2. Log sample collections.
3. Undertake housekeeping (cleaning,sample disposal,sterilization,keeps track of consumables and spare parts.)
4. Undertake the tasks of ensuring that materials/services/processes conform to specification/specified standard.
5. Record systematically all result of each of the assigned task.
6. Be aware of the best practices in Quality Control System.
7. Assist in preparation of report on specific Quality Control task.
8. Ensure product specifications are in a accordance to PORAM specifications.
9. Ability to perform product testing based on AOC method (routine).

SENIOR LAB TECHNICIAN (QUALITY CONTROL) (EDIBLE)

LEVEL 3

A QUALITY CONTROL SENIOR LAB TECHNICIAN (EDIBLE) IS DESIGNATED TO SUPERVISE SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY CONTROL PRODUCERS FOR INCOMING RAW MATERIALS, IN PROCESS AND FINISHED. HE/SHE MUST BE ABLE TO PERFORM MORE COMPLEX QUALITY CONTROL PROCEDURES. HE/SHE ALSO SUPERVISE THE DEVELOPMENT, IMPLEMENTATION AND MAINTENANCE OF QUALITY CONTROL SYSTEM.

A QUALITY CONTROL SENIOR LAB TECHNICIAN (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STERIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Supervise the tasks of ensuring that materials and processes conform to specification/specified standards.
2. Manage quality control documentation.
3. Be aware of best practices in Quality Control.
4. Prepare report on specific Quality Control task to immediate supervision.
5. Supervises the development, implementation and maintenance of quality control system and activities
6. Coordinate inter-departmental activities, pertaining to product/production quality.
7. Provides guidance to employees and supervises the work group.

8. Validate product specifications are in accordance to PORAM specification.
9. Supervise product testing base on AOC methods .
10. Validate the results for certificate of Analysis (CoA).

LEVEL 4

CHIEF LAB TECHNICIAN (QUALITY CONTROL) (EDIBLE)

A QUALITY CONTROL CHIEF LAB TECHNICIAN (EDIBLE) IS DESIGNATED TO LEAD QUALITY CONTROL PROCEDURES FOR INCOMING RAW MATERIALS, IN PROCESS AND FINISHED PRODUCTS. HE/SHE UNDERTAKES TRAINING OF QUALITY CONTROL LAB TECHNICIANS AND SENIOR LAB TECHNICIANS, AND SENIOR LAB TECHNICIANS.

A QUALITY CONTROL CHIEF LAB TECHNICIAN (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STERIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Lead the task of ensuring that materials/services/processes conform to specification/specified standards.
2. Maintain and update records of all results of assigned tasks.
3. Ensure that best practices in Quality Control are implemented.
4. Collate and reconcile all reports on Quality Control tasks for immediate supervisor.
5. Provide training to Quality Control Lab Technician and Senior Lab Technicians.
6. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Assist in compiling and reviewing progress and reports to the management.
8. Assist in procurement of Lab tools and consumables required for Quality Control activities.

LEVEL 5

LAB SUPERVISOR (QUALITY CONTROL) (EDIBLE)

A QUALITY CONTROL LAB SUPERVISOR (EDIBLE) IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY CONTROL PROCEDURES IN THE LABORATORY FOR INCOMING RAW MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY ASSURANCE SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A QUALITY CONTROL LAB SUPERVISOR (EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE) WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STERIN/COCOA BUTTER EQUIVALENT/SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Manage and administer all matters pertaining to Quality Control procedures of the products and processes.
2. Coordinate/oversee all Quality Control Standard Operating Procedures.
3. Plan and implement training activities for the Quality Control Technician.
4. Responsible for procurement of Lab tools and consumables required for Quality Control activities.
5. Validate all Quality Control reports emitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Compile and review progress and reports to the management.

8. Responsible for short and long term goals of Quality Control efforts.
9. Establish and direct QC Control programs and related training programs.
10. Ensure quality control (product and process) comply to external inspection bodies such as BV, SGS, ITS.
11. Perform Shelf life Analysis (Edible).

LEVEL 6

LAB MANAGER (QUALITY CONTROL)

A QUALITY CONTROL LAB MANAGER IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY ASSURANCE PROCEDURES IN THE LABORATORY FOR INCOMING MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY CONTROL SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A QUALITY CONTROL LAB MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/ SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Manage and administer all matters pertaining to Quality Control procedures of the products and processes.
2. Coordinate/oversee all Quality Control Standard Operating Procedures.
3. Plan and implement training activities for the Quality Control personnel.
4. Responsible for procurement of tool of the trade required for Quality Control activities.
5. Validate all Quality Control reports transmitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

7. Compile and review progress and reports to the management.
8. Validate documents for audit.
9. Responsible for product and process accreditation from external labs.

LEVEL 2

LAB TECHNICIAN (QUALITY CONTROL) (NON-EDIBLE)

A QUALITY CONTROL LAB TECHNICIAN (NON-EDIBLE) IS DESIGNATED TO PERFORM SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY CONTROL PRODUCERS FOR INCOMING RAW MATERIALS, IN PROGRESS AND FINISHED PRODUCTS UNDER THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISIOR.

A QUALITY CONTROL LAB TECHNICIAN (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular the person will:

1. Prepare basic reagents for sample testing.
2. Log sample collections.
3. Undertake housekeeping (cleaning,sample disposal,sterilization,keeps track of consumables and spare parts.)
4. Undertake the tasks of ensuring that materials/services/processes conform to specification/specified standard.
5. Record systematically all result of each of the assigned task.
6. Be aware of the best practices in Quality Control System.
7. Assist in preparation of report on specific Quality Control task.
8. Ensure product specifications are in a accordance to PORAM specifications.
9. Ability to perform product testing based on AOC method (routine).

SENIOR LAB TECHNICIAN (QUALITY CONTROL) (NON-EDIBLE)

LEVEL 3

A QUALITY CONTROL SENIOR LAB TECHNICIAN (NON-EDIBLE) IS DESIGNATED TO SUPERVISE SPECIFIC ROUTINE AND NON-ROUTINE TASK IN QUALITY CONTROL PRODUCERS FOR INCOMING RAW MATERIALS, IN PROCESS AND FINISHED. HE/SHE MUST BE ABLE TO PERFORM MORE COMPLEX QUALITY CONTROL PROCEDURES. HE/SHE ALSO SUPERVISE THE DEVELOPMENT, IMPLEMENTATION AND MAINTENANCE OF QUALITY CONTROL SYSTEM.

A QUALITY CONTROL SENIOR LAB TECHNICIAN (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular the person will:

1. Supervise the tasks of ensuring that materials and processes conform to specification/specified standards.
2. Manage quality control documentation.
3. Be aware of best practices in Quality Control.
4. Prepare report on specific Quality Control task to immediate supervision.
5. Supervises the development, implementation and maintenance of quality control system and activities
6. Coordinate inter-departmental activities, pertaining to product/production quality.

7. Provides guidance to employees and supervises the work group.
8. Validate product specifications are in accordance to PORAM specification
9. Supervise product testing base on AOC methods.
10. Validate the results for certificate of Analysis (CoA).

LEVEL 4

CHIEF LAB TECHNICIAN (QUALITY CONTROL) (NON-EDIBLE)

A QUALITY CONTROL CHIEF LAB TECHNICIAN (NON-EDIBLE) IS DESIGNATED TO LEAD QUALITY CONTROL PROCEDURES FOR INCOMING RAW MATERIALS, IN PROCESS AND FINISHED PRODUCTS. HE/SHE UNDERTAKES TRAINING OF QUALITY CONTROL LAB TECHNICIANS AND SENIOR LAB TECHNICIANS, AND SENIOR LAB TECHNICIANS.

A QUALITY CONTROL CHIEF LAB TECHNICIAN (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular the person will:

1. Lead the task of ensuring that materials/services/processes conform to specification/specified standards.
2. Maintain and update records of all results of assigned tasks.
3. Ensure that best practices in Quality Control are implemented.
4. Collate and reconcile all reports on Quality Control tasks for immediate supervisor.
5. Provide training to Quality Control Lab Technician and Senior Lab Technicians.
6. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Assist in compiling and reviewing progress and reports to the management.
8. Assist in procurement of Lab tools and consumables required for Quality Control activities.

LEVEL 5

LAB SUPERVISOR (QUALITY CONTROL) (NON-EDIBLE)

A QUALITY CONTROL LAB SUPERVISOR (NON-EDIBLE) IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY CONTROL PROCEDURES IN THE LABORATORY FOR INCOMING RAW MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY ASSURANCE SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A QUALITY CONTROL LAB SUPERVISOR (NON-EDIBLE) MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS SOLVENT FRACTIONATION, HYDROGENATION, SPLITTING, DISTILLATION, ESTERRIFICATION, HYDROLYSIS WHICH PRODUCES PALM BASED OLEOCHEMICAL PRODUCTS SUCH AS GLYCERINE, METHYL ESTERS, FATTY ALCOHOLS AND FATTY ACIDS.

In particular the person will:

1. Manage and administer all matters pertaining to Quality Control procedures of the products and processes.
2. Coordinate/oversee all Quality Control Standard Operating Procedures.
3. Plan and implement training activities for the Quality Control Technician.
4. Responsible for procurement of lab tools and consumables required for Quality Control activities.
5. Validate all Quality Control reports emitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

7. Compile and review progress and reports to the management.
8. Responsible for short and long term goals of Quality Control efforts.
9. Establish and direct QC Control programs and related training programs.
10. Ensure quality control (product and process) comply with external inspection bodies such as BV, SGS, ITS.
11. Perform Shelf life Analysis (NON-EDIBLE).

LEVEL 4

PROCESS TECHNOLOGIST

A PROCESS TECHNOLOGIST IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY ASSURANCE PROCEDURES IN THE LABORATORY FOR INCOMING MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY CONTROL SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A PROCESS TECHNOLOGIST MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING WHICH PRODUCES PALM OIL PRODUCTS SUCH AS REFINED, BLEACHED AND DEODORIZED PALM OIL/PALM OLEIN/PALM STEARIN/COCOA BUTTER EQUIVALENT/ SUBSTITUTE (LAURIC/NON-LAURIC), COOKING OILS (PURE PALM OLEIN, BLENDED OR POLYUNSATURATED).

In particular the person will:

1. Manage and administer all matters pertaining to Quality Assurance procedures of the products and processes.
2. Coordinate/oversee all Quality Assurance Standard Operating Procedures.
3. Plan and implement training activities for the Quality Assurance Technician.
4. Responsible for procurement of consumables required for Quality Assurance activities.
5. Validate all Quality Assurance reports emitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.

7. Compile and review progress and reports to the management.
8. Validate documents for audit.
9. Responsible for product and process accreditation from external labs.

LEVEL 5

PROCESS OPTIMIZATION ENGINEER

A PROCESS OPTIMIZATION ENGINEER IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY ASSURANCE PROCEDURES IN THE LABORATORY FOR INCOMING MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY CONTROL SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A PROCESS OPTIMIZATION ENGINEER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Manage and administer all matters pertaining to Quality Assurance procedures of the products and processes.
2. Coordinate/oversee all Quality Assurance Standard Operating Procedures.
3. Plan and implement training activities for the Quality Assurance Technician.
4. Responsible for procurement of consumables required for Quality Assurance activities.
5. Validate all Quality Assurance reports emitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Compile and review progress and reports to the management.
8. Validate documents for audit.
9. Responsible for product and process accreditation from external labs.

LEVEL 6

PROCESS ENGINEERING MANAGER

A PROCESS ENGINEERING MANAGER IS DESIGNATED TO MANAGE, COORDINATE ALL PROCESS ENGINEERING MATTERS IN THE TECHNICAL SERVICES SECTION. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH OPERATIONS, MAINTENANCE, AND QUALITY ASSURANCE DEPARTMENT TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A PROCESS ENGINEERING MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Manage and administer all matters pertaining to Process Engineering matters of the products and processes.
2. Coordinate/oversee all Process Engineering Standard Operating Procedures.
3. Plan and implement training activities for the Process Engineering Technologists and Process Optimization Engineers.
4. Validate all Process Optimization process reports transmitted for the plant.
5. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation of the Process Engineering Department.
6. Compile and review Process Optimization Activities progress and reports to the management.
7. Validate documents for Quality audit.

LEVEL 4

DESIGN DRAUGHTMAN

A DESIGN DRAUGHTMAN IS DESIGNATED TO DESIGN PROJECTS, SUPERVISE AND MONITOR ALL DRAUGHTING WORK RELATING TO PLANT MODIFICATION AND DEBOTTLE-NECKING PROJECTS. HE/SHE ALSO COORDINATES WITH THE PLANT OPERATION MANAGEMENT TO ENABLE ALL MODIFICATION PROJECTS CAN BE CARRIED OUT WITH INTERFEERING THE 'LIVE' PLANT.

A DESIGN DRAUGHTMAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Design and produce draughting work for plant modification and optimization work undertaken by the Technical Services Department.
2. Coordinate/oversee all physical modification work comply to the approved design as per Plant Modification Standard Operating Procedures.
3. Responsible for procurement of consumables required for Quality Assurance activities.
4. Validate all modification work carried out by the contractor comply to the as built drawing approved by the Project Engineering Manager, in compliance to the Standard Operating Procedure for Plant Modification and Debottlenecking.
5. Prepare project progress reports for submission to the Project Engineer.

LEVEL 5

PROJECT ENGINEER

A PROJECT ENGINEER IS DESIGNATED TO LEAD, MANAGE, COORDINATE ALL QUALITY ASSURANCE PROCEDURES IN THE LABORATORY FOR INCOMING MATERIALS, IN-PROCESS AND FINISHED PRODUCTS. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE MAINTENANCE AND QUALITY CONTROL SUPERVISOR TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A PROJECT ENGINEER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Manage and administer all matters pertaining to Quality Assurance procedures of the products and processes.
2. Coordinate/oversee all Quality Assurance Standard Operating Procedures.
3. Plan and implement training activities for the Quality Assurance Technician.
4. Responsible for procurement of consumables required for Quality Assurance activities.
5. Validate all Quality Assurance reports emitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Compile and review progress and reports to the management.
8. Validate documents for audit.
9. Responsible for product and process accreditation from external labs.

LEVEL 6

PROJECT ENGINEERING MANAGER

A PROJECT ENGINEERING MANAGER IS DESIGNATED TO MANAGE, COORDINATE ALL PROJECT ENGINEERING PROCEDURES IN THE PROJECT ENGINEERING SECTION, WHEN EMBARKING FOR ANY PLANT MODIFICATIONS AND DEBOTTLENECKING. HE/SHE ALSO MANAGES ALL MATTERS INCLUDING TRAINING, BUDGET, RECRUITMENT AND COORDINATE WITH THE OPERATIONS DEPARTMENT TO ENSURE OPTIMAL OPERATION OF THE PLANT.

A PROJECT ENGINEERING MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM BASED INDUSTRIES SUCH AS REFINING (EDIBLE AND NON-EDIBLE).

In particular the person will:

1. Manage and administer all matters pertaining to Project Engineering matters.
2. Coordinate/oversee all Project Engineering Standard Operating Procedures.
3. Plan and implement training activities for the Project Engineering personnel.
4. Responsible for procurement of tools required for Project Engineering activities.
5. Validate all Project Engineering reports transmitted for the plant.
6. Responsible in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation of the Project Engineering Section.
7. Compile and review project progress and reports to the management.

OCCUPATIONAL DEFINITION

- MILLING -

LEVEL 1

ATTENDANT (PRODUCTION)

A PRODUCTION ATTENDANT IS DESIGNATED TO PERFORM GENERAL WORK IN PROCESSES SUCH AS FFB HOPPER, STERILIZATION, THRESHING, DIGESTION & PRESSING, OIL ROOM, NUTS SEPARATION AND KERNEL SEPARATION, TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE MILLING PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A PRODUCTION ATTENDANT MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular, the person will:

1. Ensure cleanliness of work station (eg. area surrounding empty bunch hopper).
2. Adhere to all safety procedures.
3. Operate production machineries (eg sterilizer station, FFB hopper, pressing, oil room, threshing station, nut station, kernel station) as per milling processes and adheres to Standard Operating Procedures and Work Instructions.
4. Perform daily routine work (eg. send un-stripped bunches for recycling).
5. Ensures environmental concerns are addressed to.

LEVEL 2

OPERATOR (PRODUCTION)

A PRODUCTION OPERATOR IS DESIGNATED TO PERFORM ROUTINE AND NON-ROUTINE ACTIVITES RELATING TO FFB CHECKING, FFB HOPPER, STERILIZATION, THRESHING, DIGESTION & PRESSING, OIL ROOM, NUTS SEPARATION, KERNEL SEPARATION AND EFFLUENT STATION, TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE MILLING PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A PRODUCTION OPERATOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular, the person will:

1. Ensure FFB received is within company specifications/MPOB requirements.
2. Maintain and upkeep log book (eg. FFB checking, Weigh Bridge data).
3. Alert his/her immediate supervisor of deviation from normal operating condition and raw material quality.
4. Monitor the operation of production machineries (eg. sterilizer station, FFB hopper, pressing, oil room, threshing station, nut station, kernel station, effluent station) as per milling processes.
5. Assist in meeting production target set forth for specific products as per production plan on FIFO basis (eg. continuous filling of thresher with sterilized FFB as per set target).
6. Generate simple and accurate reporting to immediate supervisor.
7. Ensure all safety procedures are adhered to.
8. Supervise general workers carrying out duties assigned to them.

9. Boiler operators (Boilerman) will operate the Boiler Station as per Factory & Machinery Act 1974 and ensure smoke emissions are as per Environmental Quality Act 1967.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- Minimum steam driver certificate grade 2 for Boiler man.

LEVEL 3

MILL SUPERVISOR

A MILL SUPERVISOR IS DESIGNATED TO PERFORM SUPERVISORY ACTIVITIES RELATED TO PROCESSES SUCH AS FFB HOPPER, STERILIZATION, THRESHING, DIGESTION & PRESSING, OIL ROOM, NUTS SEPARATION, KERNEL SEPARATION AND EFFLUENT STATION, TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE MILLING PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A MILL SUPERVISOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular, the person will:

1. Be knowledgeable of all milling processes.
2. Upkeep specific milling log book.
3. Ensure mill processes, product quality and losses are within set target.
4. Supervise the operation of production machineries (eg. sterilizer station, FFB hopper, pressing, oil room, threshing station, nut station, kernel station, effluent station) as per milling processes and ensure continuous process flow.
5. Ensure all safety procedures are adhered to.
6. Report to Process Executive/Engineer on any and all issues.
7. Alert/inform maintenance department of any defects and machinery breakdowns.

LEVEL 4

PROCESS ENGINEER/EXECUTIVE

A PROCESS ENGINEER/EXECUTIVE IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS SUPERVISING AND MANAGING DAILY PROCESSING AND UPKEEP OF THE MILL AND EFFLUENT TREATMENT PLANT, TO ENSURE THE SMOOTH AND SAFE OPERATION OF THE MILLING PLANT IN ACHIEVING HIGH PRODUCTIVITY AND QUALITY PRODUCTS.

A PROCESS ENGINEER/ EXECUTIVE MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Be knowledgeable of all advanced milling processes.
2. Manage daily processing and upkeep of the mill and effluent treatment plant.
3. Responsible for the palm product production quality.
4. Ensure the overall mill operations and process control.
5. Ensures all safety procedures are adhered to at all times.
6. Monitor process using emergency plant shut-down (ESD).
7. Ensure the safe environment of the mill as per relevant laws and regulations.
8. Ensure steam boiler and unfired pressure vessels are operated as per Factories and Machineries Act 1974.
9. Manage human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
10. Assist in compiling and review progress (plant operation, modification and process optimization) and reports to the mill manager.

11. Act for the mill manager in his absence.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

1. Minimum Diploma in Mechanical Engineering.

2. Steam Engineer Certificate Grade 2.

LEVEL 5

SENIOR ASSISTANT MILL MANAGER

AN SENIOR ASSISTANT MILL MANAGER/ENGINEER (OIL PALM) ASSISTS MILL MANAGER TO LEAD TEAM INCLUDING MANAGER, SUPERVISOR, LOCAL AND FOREIGN WORKERS AND WORKS CLOSELY WITH R&D IN DEVELOPMENT OF NEW PRODUCTS.

In particular the person will:

1. Ensure compliance with Company Policy and Standard Operation Manual.
2. Ensure productions to continually improve its effectiveness and meet established requirements and objectives.
3. Ensure product realization processes and control for their effectiveness and efficiency to meet the quality, quantity and deadline of product.
4. Maintain discipline, welfare and safety of subordinates.
5. Execute in scheduling of production activities and records.
6. Monitor daily operation and maintenance.
7. Organize personnel and technical development programs to enhance occupational competencies.
8. Perform the role of the manager in his/her absence.
9. Perform any other tasks as and when assigned by the management.

LEVEL 6

MILL MANAGER

A MILL MANAGER IS DESIGNATED TO LEAD THE MILL. HE/SHE IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS MANAGING, PLANNING AND COORDINATING ALL MATTERS REGARDING THE DAILY OPERATIONS OF THE MILLING PLANT IN ORDER TO MEET PRODUCTION AND QUALITY TARGET. HE/SHE MUST BE ABLE TO SUPERVISE TROUBLESHOOTING AND MAINTENANCE OF MORE COMPLEX ISSUES. HE/SHE IS ALSO RESPONSIBLE FOR MILL ACCOUNTING, COSTING AND HUMAN RESOURCE MANAGEMENT.

A MILL MANAGER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular, the person will:

1. Manage, plan, organize and monitor all matters regarding the daily operations of the milling plant in safe and timely manner.
2. Carry out first line of process intervention in getting an upset plant back on track.
3. Provide guidance to subordinates to ensure smooth and safe plant operations.
4. Provide general supervision over a work group by assigning task and checking work at regular time.
5. Compile and review progress (plant operation, modification and process optimization) and reports to the higher management.
6. Manage human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Responsible for overall mill plant performance according to accounting and costing.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- Minimum Diploma in Mechanical Engineering.
- Minimum Steam Engineer Certificate Grade 2. Preferably Steam Engineer Certificate Grade 1.

LEVEL 1

APPRENTICE (MECHANICAL)

A MECHANICAL APPRENTICE IS DESIGNATED TO DO GENERAL WORK AND ASSIST FITTERS IN DAILY WORK.

A MECHANICAL APPRENTICE MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Ensure cleanliness of work station cleaning.
2. Operates machineries as per required by mill management.
3. Maintain the general upkeep of machineries.
4. Adhere to all safety procedures.
5. Assists fitters in carrying out daily maintenance duties.
6. To lubricate necessary bearings and carry out preventive maintenance.
7. Ensure any mill stoppage due to mechanical breakdowns to be attended to immediately.

LEVEL 2

FITTER
(MECHANICAL)

A MECHANICAL FITTER IS DESIGNATED TO ATTEND TO MACHINERY BREAKDOWNS AND CARRY OUT MAINTENANCE AS PER REQUIRED BY MILL MANAGEMENT

A MECHANICAL FITTER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Attend to machinery breakdowns without delay.
2. Carry out daily maintenance.
3. Maintain the general upkeep of machineries.
4. Ensures all safety procedures are adhered to.
5. Ensure upkeep of workshop.
6. Ensures all mechanical defects are rectified as advised and informed by technical conductor.
7. Ensures the apprentice assigned to respective fitters are shown and taught the necessary skills to assist fitters on day to day basis.
8. Informs on job progress of all work carried out by individual fitters to the technical conductor.
9. Ensures any defects to be rectified are reported to the supervisor in charge and the technical conductor before and after any work are carried out.

LEVEL 3

TECHNICAL SUPERVISOR/CONDUCTOR (MECHANICAL)

A MECHANICAL TECHNICAL SUPERVISOR/CONDUCTOR IS DESIGNATED TO LEAD MECHANICAL MAINTENANCE AND TROUBLESHOOT MACHINERY REPAIRS. HE/SHE MUST BE ABLE TO SUPERVISE TROUBLESHOOT OF MORE COMPLEX ADVANCED PROCESS CONTROL SYSTEMS. HE/SHE ALSO ASSIST IN HUMAN RESOURCE MANAGEMENT.

A MECHANICAL TECHNICAL SUPERVISOR/CONDUCTOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Lead troubleshooting and maintenance for machinery and equipment malfunction and continuous operational condition.
2. Inspect equipment compliance to safety requirements.
3. Inspect various maintenance works carried out by vendors/suppliers.
4. Assist in procurement of materials.
5. Ensure minimal downtime due to mechanical machinery failures.
6. Assign daily work to be carried out to respective personnel without fail on a daily basis.
7. Informs the maintenance executive daily on all work carried out.
8. Ensures all apprentice and fitters follow safety regulations and standard operating procedures.

LEVEL 4

MAINTENANCE ENGINEER/EXECUTIVE

A MAINTENANCE ENGINEER/EXECUTIVE IS DESIGNATED TO LEAD MAINTENANCE AND TROUBLESHOOT OF MECHANICAL AND ELECTRICAL SYSTEMS. HE/SHE MUST BE ABLE TO SUPERVISE TROUBLESHOOT OF MORE COMPLEX ADVANCED PROCESS CONTROL SYSTEMS. HE/SHE ALSO ASSIST IN PROCUREMENT OF MATERIALS AND HUMAN RESOURCE MANAGEMENT.

A MAINTENANCE ENGINEER/EXECUTIVE MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Lead troubleshooting and maintenance for general and specific equipments and materials of electrical and mechanical departments.
2. Inspect machinery compliance to safety requirements.
3. Inspect various works performed by mechanical and electrical vendors/ suppliers.
4. Assist in procurement of materials.
5. Prepare progress and maintenance reports.
6. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
7. Ensures all safety procedures are adhered to at all times.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- Minimum Diploma in Mechanical Engineering
- Steam Engineer Certificate Grade 2

LEVEL 1

APPRENTICE (ELECTRICAL)

AN ELECTRICAL APPRENTICE IS DESIGNATED TO DO GENERAL WORK AND ASSIST THE WIREMAN AND CHARGEMAN IN DAILY WORK.

A MECHANICAL APPRENTICE MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Ensure cleanliness of workstation and general upkeep.
2. Operates machineries as per required by mill management to ensure minimal electrical breakdown.
3. Maintain the electrical and electronical capability of all machinery in terms of motor performance and general electrical connections.
4. Adhere to all safety procedures and environmental concerns.
5. Immediate attention to mill stoppage caused by any and all electrical breakdowns.

LEVEL 2

WIREMAN
(ELECTRICAL)

AN ELECTRICAL WIREMAN IS DESIGNATED TO ASSIST THE ELECTRICAL CHARGEMAN PER REQUIRED BY MILL MANAGEMENT AND TROUBLESHOOT BASIC ELECTRICAL SYSTEM.

AN ELECTRICAL WIREMAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Ensure the cleanliness of the work place.
2. Maintain the electrical and electronical capability of all machinery in terms of motor performance and electrical wiring connections.
3. Ensure the electrical control switchboards are kept in good operating conditions.
4. Ensure all safety procedures are adhered to before, after and during any work carried out and follow the set Regulations of Electrical Supply Act.
5. Carry out daily work station cleaning.
6. Attend to any and all electrical defects in the absence of the Chargeman.
7. Ensure any electrical breakdowns are attended to immediately and reported to Chargeman.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- Minimum PW4 by JBE

LEVEL 3

CHARGEMAN (ELECTRICAL)

AN ELECTRICAL CHARGEMAN IS DESIGNATED TO LEAD ELECTRICAL MAINTENANCE AND TROUBLESHOOTING OF ELECTRICAL SYSTEMS. HE/SHE MUST BE ABLE TO SUPERVISE TROUBLESHOOT OF MORE COMPLEX ADVANCED SYSTEMS.

AN ELECTRICAL CHARGEMAN MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Lead troubleshooting and maintenance for all electrical and electronical equipments.
2. Inspect electrical compliance to safety requirements.
3. Inspect various works performed by electrical vendors/suppliers.
4. Prepare progress reports.
5. Assist in managing human resource including recruitment, training, performance appraisal and staff development to ensure optimal operation.
6. Ensures electrical switchboards are kept in general good condition.
7. Ensures all overhead wirings and cables are in good condition.
8. Ensures all generating engines are operated and synchronized as required by Electrical Supply Act.
9. Ensure all recommendations by the Visiting Electrical Engineer are adhered to strictly.
10. Ensure preventive maintenance is carried out to reduce downtime due to electrical breakdowns.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- Minimum A0 by JBE

LEVEL 1

SAMPLER/SORTER

A SAMPLER/SORTER IS DESIGNATED TO PERFORM GENERAL WORK AND ASSIST LABORATORY ASSISTANT IN DAILY WORK.

A SAMPLER/SORTER MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Take all necessary product samples as per QA/QC procedures.
2. Sort all product samples for data acquisition.
3. Ensure cleanliness of work station.
4. Adhere to all safety procedures.
5. Informs Laboratory Assistant or Supervisor on any adverse product quality reports.
6. Ensures compliance to Mill Standard Operating Procedures and work instructions.
7. Ensures accurate reporting on product quality and product losses.

LEVEL 2

LAB OPERATOR

A LAB OPERATOR IS DESIGNATED TO ASSIST THE LAB SUPERVISOR AS PER REQUIRED BY MILL MANAGEMENT.

A LAB OPERATOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Carry out routine raw and product quality testing.
2. Ensure the housekeeping of the laboratory.
3. Maintain the general upkeep of laboratory equipment.
4. Ensures all safety procedures are adhered to.
5. Ensure compliance to Mill Standard Operating Procedures (SOP) and guidelines.
6. Ensure accurate reports on product quality and product losses are carried out.
7. Report to Lab Supervisor or Process Engineer/Executive on any adverse quality reports as per taken by lab samplers and sorters.

LEVEL 3

LAB SUPERVISOR

A LAB SUPERVISOR IS DESIGNATED TO LEAD LABORATORY IN ASSESSING AND TESTING OF PRODUCT QUALITY AND ADVISES ON PROCESS CONTROLS AND CHECKING.

A LAB SUPERVISOR MAY BE FOUND IN VARIOUS SECTORS OF OIL PALM INDUSTRIES SUCH AS MILLING (CRUDE PALM OIL (CPO) AND PALM KERNEL CRUSHING).

In particular the person will:

1. Leads the laboratory in ensuring compliance to product quality assurance standard.
2. Inspect instrument in compliance to QA/QC requirements.
3. Prepare QA/QC reports.
4. Assist in managing human resource including training and staff development to ensure optimal operation.
5. Ensures Mill Standard Operating Procedures (SOP) are adhered to at all times by all laboratory personnel.
6. Ensures accurate reporting on product quality and product losses to Process Engineer/Executive and Mill Manager.
7. Ensures Safety procedures are strictly followed by all laboratory personnel.
8. Report to process executive on any and all issues.

OCCUPATIONAL DEFINITION

- PLANTATION -

LEVEL 1

FIELD OPERATOR (NURSERY/REPLANTING/FIELD MAINTENANCE/ HARVESTING)

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING OPERATOR IS DESIGNATED TO RESPONSIBLE TO PREPARE AND PERFORM NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING FUNCTIONS IN ORDER TO ENSURE CONTINUOUS AND SAFE OPERATIONS OF THE FACILITIES OR PLANT.

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING OPERATOR MAY BE FOUND IN PLANTATION ESTATES OF OIL PALM.

In particular the person will:

1. Harvest or cut ripe bunches (FFB-Fresh Fruit Bunches) and collect all the loose fruit.
2. Load all harvested bunches into trailer or lorry.
3. Count and record all harvested bunches.
4. Drive the tractor C/W trailer safely for any related work.
5. Prepare land for planting.
6. Repair road and bridges.
7. Check and demarcation the estate boundaries.
8. Repair harvesting path.
9. Desalting the drain.
10. Manage water irrigation.
11. Spray and monitor for pest infection to palm.

12. Soil management to retain water and erosion.
13. Supply new seedling at any vacant area.
14. Plant and maintain the Legume Cover Crop (LCC) for soil structure and erosion.
15. Spray herbicide for weed.
16. Count palm and bunches.
17. Clean up palm base and trunk from any debris.

LEVEL 2

FIELD MANDORE (NURSERY/REPLANTING/FIELD MAINTENANCE/ HARVESTING)

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING MANDORE IS DESIGNATED TO DIRECT AND SUPERVISE SUCH AREA FUNCTIONS AND WORKERS(OPERATORS) AND UPKEEP UNDER HIS CONTROL AS TO ENSURE THAT OPERATION ARE MANAGED EFFECTIVELY AND EFFICIENTLY WITHIN THE GUIDELINES LAID DOWN BY THE SUPERVISOR, ASSISTANT, SENIOR ASSISTANT AND ESTATE MANAGER.

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING MANDORE MAY BE FOUND MOST COMMONLY IN PLANTATION ESTATES OF PALM OIL.

In particular the person will:

1. Supervise operator (within 15 to 20 workers-Team leader) based on the job title and description and report to field supervisor.
2. Monitor the work carried out as per work planning.
3. Monitor and enforcement of safety for the operator during working hours.
4. Record the attendant and productivity of the operator for the day.
5. Count and record all harvested bunches for payment purposes.

LEVEL 3

FIELD SUPERVISOR (NURSERY/REPLANTING/FIELD MAINTENANCE/ HARVESTING)

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING SUPERVISOR IS DESIGNATED TO RESPONSIBLE TO THEIR ASSISTANT FOR EFFECTIVE SUPERVISION, CONTROL AND FUNCTION WHICH PLACED UNDER HIS CONTROL. TO ASSIST AND SUPERVISE SUCH AREA FUNCTIONS AND WORKERS SUCH AS HARVESTERS UNDER HIS CONTROL AS TO ENSURE THAT OPERATION ARE MANAGED EFFECTIVELY AND EFFICIENTLY WITHIN THE GUIDELINES LAID DOWN BY THE ASSISTANT, SENIOR ASSISTANT, ESTATE MANAGER AND COMPANY.

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING SUPERVISOR MAY BE FOUND MOST COMMONLY IN PLANTATION ESTATES OF PALM OIL.

In particular the person will:

1. Conducts morning muster, records workers attendance, distributes workers and machine/tractor/bin, etc. based on the various work activities.
2. Supervises field activities/work such as draining, weeding, water-management, pest & disease control sanitation, manuring, harvesting, collection and transport.
3. Supervises activities in the nurseries and replanting.
4. Responsible for making requisitions, issue, receive or records materials necessary for the operations under his supervision.
5. Maintains cost-books, input forms, muster-chit, contract work record, etc.
6. Prepare CPCF for the approval of superior/executives for payment.
7. Plan and estimates cost of operations and submits periodic progress report to superior as required.

8. Assists in the management of estate workshop and tractor fleet.
9. Maintains running logs and work records of all tractor/vehicle/machine.
10. Assists executives in payment of wages to workers.
11. Resolve workers' grievances.

LEVEL 4

ASSISTANT MANAGER (NURSERY/REPLANTING/FIELD MAINTENANCE/ HARVESTING)

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING ASSISTANT IS DESIGNATED TO RESPONSIBLE TO THE SENIOR ASSISTANT AND MANAGER FOR EFFECTIVE SUPERVISION, CONTROL AND FUNCTION WHICH PLACED UNDER HIS CONTROL. TO DIRECT AND SUPERVISE SUCH AREA FUNCTIONS AND WORKERS AND UPKEEP UNDER HIS CONTROL AS TO ENSURE THAT OPERATION ARE MANAGED EFFECTIVELY AND EFFICIENTLY WITHIN THE GUIDELINES LAID DOWN BY THE SENIOR ASSISTANT, ESTATE MANAGER AND COMPANY.

A NURSERY, REPLANTING, FIELD MAINTENANCE AND HARVESTING ASSISTANT MANAGER MAY BE FOUND MOST COMMONLY IN PLANTATION ESTATES OF OIL PALM.

In particular the person will:

1. Production of FFB

   - Ensure all crop delivered to the mill daily and to maintain the high quality FFB as per company guideline.
   - Maximize crop harvested with the minimum cost.

2. Field Upkeep

   Ensure that all field upkeep condition is maintained as per company guideline.

3. Documentation

   - Check checkroll and contract input form and overtime authorization.
   - Preparation of CPCF when work completed.

- Checking on delivery note of FFB dispatch to the mill.
- Checking on crop book.
- Preparation of reports return submitted to HQ on time required.

4. Workers Discipline

   Counsel and maintain workers discipline and conduct disciplinary domestic enquiry and actions as and when required.

5. Budget preparation and revenue estimate.

6. Meeting.

   Organize meetings work required such as JCC meeting, ESH meeting,Malam Mesra and labour sport game.

7. Maintain costs within the budget ensuring that value for money is obtained.

8. Ensure that company property under his control is correctly operated and maintained accordingly to current regulations and policies.

9. Develop and recommend improved work methods, techniques and standards.

10. Supervise supervisor incharge Upkeep and Harvesting of Division as are assigned.

11. Consult with Senior Assistant and Manager before makes decisions concerning the detailed running and control his area of responsibilities within the constraints imposed by management.

12. Makes payments as assigned by the management. Prepares and checks payrolls,contract work progress, contract voucher or other payment document as assigned.

13. Maintains contact with outside executive and government bodies etc. in order to enhance good report and knowledge.

14. Maintain good relationship with all subordinate, staff and workers in getting maximize crops with minimum cost, good upkeep work. To improve the harvesting system through discussion, meeting, planning and etc. in achieving good costs reduction for the company.

15. Receive supervision from the Senior Assistant, Manager and the Company through line management as required.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- At least a Diploma in Agriculture or similar degree.

LEVEL 5

ESTATE SENIOR ASSISTANT MANAGER

AN ESTATE SENIOR ASSISTANT MANAGER IS DESIGNATED TO RESPONSIBLE TO THE MANAGER FOR EFFECTIVE SUPERVISION, CONTROL AND FUNCTION WHICH PLACED UNDER HIS CONTROL. TO ASSIST MANAGER AND SUPERVISE ALL FUNCTIONS SUCH AS ADMIN, FIELD OPERATION AND SECURITY UNDER HIS CONTROL AS TO ENSURE THAT OPERATION ARE MANAGED EFFECTIVELY AND EFFICIENTLY WITHIN THE GUIDELINES LAID DOWN BY THE ESTATE MANAGER AND COMPANY.

AN ESTATE SENIOR ASSISTANT MANAGER MAY BE FOUND MOST COMMONLY IN PLANTATION ESTATES OF OIL PALM.

In particular the person will:

1. Production of FFB
   - Ensure all crop delivered to the mill daily and to maintain the high quality FFB as per company guideline.
   - Maximize crop harvested with the minimum cost.
2. Field Upkeep

   Ensure that all field upkeep condition are maintained as per company guideline.
3. Documentation
   - Check checkroll and contract input form and overtime authorization.
   - Preparation of CPCF when work completed.
   - Checking on delivery note of FFB dispatch to the mill.
   - Checking on crop book.
   - Preparation of reports return submitted to HQ on time required.

4. Workers Discipline

   Counsel and maintain workers discipline and conduct disciplinary domestic enquiry and actions as and when required.

5. Budget preparation and revenue estimate.

6. Meeting

   Organize meetings work required such as JCC meeting, ESH meeting,Malam Mesra and labour sport game.

7. Maintain costs within the budget ensuring that value for money is obtained.

8. Ensure that company property under his control is correctly operated and maintained accordingly to current regulations and policies.

9. Develop and recommend improved work methods, techniques and standard.

10. Supervise supervisor incharge all operation as are assigned.

11. Consult with Manager before makes decisions concerning the detailed running and control his area of responsibilities within the constraints imposed by management.

12. Makes payments as assigned by the management. Prepares and checks payrolls, CPCFs, contract voucher or other payment document as assigned.

13. Maintains contact with outside executive and government bodies etc. in order to enhance good report and knowledge.

14. Maintain good relationship with all subordinate, staff and workers in getting maximize crops with minimum cost, good upkeep work. To improve the harvesting system through discussion, meeting, planning and etc. in achieving good costs reduction for the company.

15. Receive supervision from the Manager and the Company line management as required.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

1. At least a Diploma in Agriculture or similar degree.

LEVEL 6

ESTATE MANAGER

AN ESTATE MANAGER IS DESIGNATED TO RESPONSIBLE TO THE COMPANY PROPERTIES FOR EFFECTIVE SUPERVISION, CONTROL AND FUNCTION WHICH PLACED UNDER HIS CONTROL. TO DIRECT AND SUPERVISE ALL FUNCTIONS SUCH AS ADMIN, FIELD OPERATION AND SECURITY UNDER HIS CONTROL AS TO ENSURE THAT OPERATION ARE MANAGED EFFECTIVELY AND EFFICIENTLY WITHIN THE GUIDELINES LAID DOWN BY THE COMPANY.

AN ESTATE MANAGER MAY BE FOUND MOST COMMONLY IN PLANTATION ESTATES OF OIL PALM.

In particular the person will:

1. Production of FFB
   - Ensure all crop delivered to the mill daily and to maintain the high quality FFB as per company guideline.
   - Maximize crop harvested with the minimum cost.
2. Field Upkeep

   Ensure that all field upkeep condition are maintained as per company guideline.
3. Documentation
   - Approve checkroll and contract input form and overtime authorization.
   - Approve of payment requested when work completed.
   - Approve on delivery note of FFB dispatch to the mill.
   - Checking on crop book.
   - Monitoring of reports return submitted to HQ on time required.

4. Workers Discipline

   Counsel and maintain workers discipline and conduct disciplinary domestic enquiry and actions as and when required.

5. Monitor budget preparation and revenue estimate.
6. Monitor meetings work required such as JCC meeting, ESH meeting, Malam Mesra and labour sport game.
7. Maintain costs within the budget ensuring that value for money is obtained.
8. Ensure that company property under his control is correctly operated and maintained accordingly to current regulations and policies.
9. Develop and recommend improved work methods, techniques and standards.
10. To supervise all operation supervisors (Executive and staff) as are assigned.
11. Consult with Support service before makes decisions concerning the detailed running and control his area of responsibilities within the constraints imposed by management.
12. Monitor all operations payments as assigned by the management. Approve and checks payrolls, CPCFs, contract voucher or other payment document as assigned.
13. Maintains contact with outside executive and government bodies etc. in order to enhance good report and knowledge.
14. Maintain good relationship with all subordinate, staff and workers in getting maximize crops with minimum cost, good upkeep work. To improve the harvesting system through discussion, meeting, planning and etc. in achieving well costs reduction for the company.
15. Receive supervision from the company through line management as required.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- At least a Diploma in Agriculture or similar degree.

LEVEL 2

WORKSHOP HELPER

A WORKSHOP HELPER IS DESIGNATED TO ASSIST ACTIVITIES SUCH AS REPAIRING AND MAINTAINING MACHINERIES UNDER THE SUPERVISION OF WORKSHOP FOREMAN. HE/SHE IS RESPONSIBLE TO THE ESTATE WORKSHOP FOREMAN AND SENIOR ASSISTANT.

A WORKSHOP HELPER MAY BE FOUND MOST COMMONLY IN PLANTATION ESTATES OF PALM OIL.

In particular the person will:

1. Assist foreman repair machinery at the estate operation.
2. Assist foreman repair diesel engine.
3. Assist foreman repair hydraulic system.
4. Assist foremen related with the any machinery issue.
5. Record all maintenance activities.
6. Carried out as per work planning.

LEVEL 3

FOREMAN

A WORKSHOP FOREMAN IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS REPAIRING AND MAINTAINING MACHINERIES. HE/SHE IS RESPONSIBLE TO THE ESTATE SENIOR ASSISTANT AND TO ASSIST AND SUPERVISE WORKSHOP HELPER.

A WORKSHOP FOREMAN MAY BE FOUND MOST COMMONLY IN PLANTATION ESTATES OF PALM OIL.

In particular the person will:

1. Repair machinery at the estate operation especially diesel engine and hydraulic system.
2. Monitor and supervise workshop helper related with the machinery issue.
3. Records workers attendance, distributes workers and machine/tractor/bin, etc. based on the various work activities.
4. Supervises maintenance activities.
5. Receive and records materials necessary for the operations under his supervision.
6. Maintains cost-books, input forms, muster-chit, contract work record, etc.
7. Prepare CPCF for the approval of superior/executives for payment.
8. Plan and estimates cost of operations and submits periodic progress report to superior as required.
9. Assists in the management of estate workshop and tractor fleet.
10. Maintains running logs and work records of all tractor/vehicle/machine.

OCCUPATIONAL DEFINITION

- RESEARCH & DEVELOPMENT (R&D) -

LEVEL 2

RESEARCH OPERATOR

A RESEARCH OPERATOR IS DESIGNATED TO PERFORM ROUNTINE AND NON-ROUTINE ACTIVITIES RELATING TO RESEARCH PROJECT. HE/SHE MAY CARRY OUT CERTAIN FUNCTIONS IN THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISOR TO ENSURE THAT TASKS ARE COMPLETED ON TIME AND OF A HIGH QUALITY.

A RESEARCH OPERATOR MAY BE FOUND IN RESEARCH & DEVELOPMENT (EDIBLE AND NON-EDIBLE) SECTORS OF OIL PALM INDUSTRIES.

In particular, the person will:

1. Ensure cleanliness of workplace.
2. Adhere to all safety procedures.
3. Operate data collection instruments mainly for research purposes.
4. Adhere to Standard Operating Procedures (SOP) and work instructions.
5. Maintain an upkeep log book (eg.: data collection).

LEVEL 3

RESEARCH SUPERVISOR

A RESEARCH SUPERVISOR IS DESIGNATED TO PERFORM SUPERVISORY ACTIVITIES RELATING TO RESEARCH PROJECTS. HE/SHE MAY CARRY OUT CERTAIN FUNCTIONS IN THE GUIDANCE OF ASSISTANT RESEARCH OFFICER TO ENSURE THAT TASKS ARE COMPLETED ON TIME AND OF A HIGH QUALITY.

A RESEARCH SUPERVISOR MAY BE FOUND IN RESEARCH & DEVELOPMENT (EDIBLE AND NON-EDIBLE) SECTORS OF OIL PALM INDUSTRIES.

In particular, the person will:

1. Supervise the operation of data collection instruments mainly for research purpose.
2. Test data collection instruments in accordance to procedures.
3. Gather and analyze information about the research project undertaken.
4. Assist in preparation of project reports.
5. Assist in monitoring the timeline for the research project.
6. Inform immediate officer of any defects and test instruments breakdown.
7. Arrange supplies of material and equipment.

LEVEL 4

ASSISTANT RESEARCH OFFICER

AN ASSISTANT RESEARCH OFFICER IS DESIGNATED TO CARRY OUT RESEARCH PROJECTS ACCORDING TO WORK PLANS. HE/SHE MAY CARRY OUT CERTAIN FUNCTIONS IN THE GUIDANCE OF HIS/HER IMMEDIATE SUPERVISOR, TO ENSURE THAT TASKS ARE COMPLETED ON TIME AND OF A HIGH QUALITY.

AN ASSISTANT RESEARCH OFFICER MAY BE FOUND IN RESEARCH & DEVELOPMENT (EDIBLE AND NON-EDIBLE) SECTORS OF OIL PALM INDUSTRIES.

In particular, the person will:

1. Assist in the overall design of a research.
2. Test data collection instruments in accordance to procedures.
3. Assist in the implementation of the research projects according to work plans as outlined by the immediate supervisor.
4. Be able to handle or run instruments mainly for research purposes in accordance with the standard procedures.
5. Be able to work well under pressure and to manage deadlines.
6. Assist in creating new and imaginative approaches to work-related issues.

LEVEL 5

RESEARCH OFFICER

A RESEARCH OFFICER IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS PLANNING, ORGANISING WORK AND BALANCING RESEARCH TASK PRIORITIES. HE/SHE MAY CARRY OUT CERTAIN FUNCTIONS UNDER THE SUPERVISION OF THE RESEARCH GROUP LEADER, TO ENSURE THAT TASKS ARE COMPLETED ON TIME AND OF A HIGH QUALITY.

A RESEARCH OFFICER MAY BE FOUND IN RESEARCH & DEVELOPMENT (EDIBLE AND NON-EDIBLE) SECTORS OF OIL PALM INDUSTRIES.

In particular, the person will:

1. Be the main contact for a project and liaise effectively with fellow research officers and other department staff, as well as clients and collaborators.
2. Contribute to the overall design of a research.
3. Develop and test data collection instruments.
4. Design and deliver interviewer briefings.
5. Carry out basic statistical analysis.
6. Prepare the literature reviews, reports and proposals.
7. Present the research findings during progress meeting or during monitoring by external advisor.
8. Dissemination of research results, both written and orally, through reports, publications, and presentations including those at professional conferences.
9. Be able to work well under pressure and to manage deadlines.
10. Creates new and imaginative approaches to work-related issues.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- First or higher technical/engineering degree.

LEVEL 6

RESEARCH GROUP LEADER/AGRONOMIST

A RESEARCH GROUP LEADER/ AGRONOMIST IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS PLANNING, ORGANISING WORK AND BALANCING RESEARCH TASK PRIORITIES. HE/SHE IS REQUIRED TO SUPERVISE RESEARCH OFFICERS WHILE PERFORMING HIS/HER OWN DUTIES. HE/ SHE MAY CARRY OUT CERTAIN FUNCTIONS UNDER THE SUPERVISION OF THE DIRECTOR TO ENSURE THAT TASKS ARE COMPLETED ON TIME AND OF A HIGH QUALITY.

A RESEARCH GROUP LEADER/ AGRONOMIST MAY BE FOUND IN RESEARCH & DEVELOPMENT (EDIBLE AND NON-EDIBLE) SECTORS OF OIL PALM INDUSTRIES.

In particular, the person will:

1. Provide assistance to the officers in the group in the design and execution of research projects.
2. Conduct appropriate data analyses (quantitative and/or qualitative).
3. Conduct the conceptualization, development, and refinement of research projects.
4. Present the research findings during progress meeting or during monitoring by external advisor.
5. Prepare written reports and/or short study-briefs for non-research audiences.
6. Dissemination of research results, both written and orally, through reports, publications, and presentations including those at professional conferences.
7. Balance the workflow of research projects to ensure timely completion of projects.

8. Coach internal staff on research activities as needed.
9. Review of relevant research literature.
10. Work with and/or supervise external consultants on *ad hoc* evaluation efforts/projects.

Pre-Requisite:

In addition to the above, the person requires the following pre-requisite:

- Master or PhD degree.

LEVEL 7

DIRECTOR (R&D)

A DIRECTOR (R&D) IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS MANAGING, PLANNING AND COORDINATING ALL MATTERS REGARDING THE DAILY OPERATIONS OF THE RESEARCH GROUPS TO ENSURE THAT TASKS ARE COMPLETED ON TIME AND OF A HIGH QUALITY.

A DIRECTOR (R&D) MAY BE FOUND IN RESEARCH & DEVELOPMENT (EDIBLE AND NON-EDIBLE) SECTORS OF OIL PALM INDUSTRIES.

In particular the person will:

1. Lead in the development and establishment of the research department.
2. Oversee the work of research staff and interns.
3. Conceptualize and oversee the development of a variety of models, tools, and techniques to analyze the impact of policies and proposals on oil palm industries.
4. Oversee data collection and management, and contribute to the creation and maintenance of online tools and databases.
5. Help develop and promote new or revised policies and strategies designed to promote oil palm industries.
6. Produce research reports, fact sheets, and other written materials, including analyses based on timely, systematically derived data.

LEVEL 8

DIRECTOR GENERAL (R&D)

A DIRECTOR GENERAL (R&D) IS DESIGNATED TO PERFORM ACTIVITIES SUCH AS MANAGING VARIOUS RESEARCH GROUP ACTIVITIES TO ENSURE THE RESEARCH TARGETS ARE MET. HE/SHE MAY ASSIST IN HUMAN RESOURCE MANAGEMENT.

A DIRECTOR GENERAL (R&D) MAY BE FOUND IN RESEARCH & DEVELOPMENT (EDIBLE AND NON-EDIBLE) SECTORS OF OIL PALM INDUSTRIES.

In particular, the person will:

1. Enhance the research group capacity to disseminate research findings (sometimes via the Internet) and respond to requests for information about oil palm research and data.
2. Build and maintain ongoing relationships with allied research and policy organizations.
3. Work collaboratively with directors on new and ongoing research projects.
4. Develop and promote new or revised policies and strategies designed to promote oil palm industries.
5. Represent the R&D group outside of the organization at meetings, at conferences and other hearings, and at a wide variety of speaking engagements.

ANNEX 6

CRITICAL AND NON-CRITICAL JOB TITLE IN OIL PALM BASED INDUSTRY

CRITICAL AND NON-CRITICAL JOB TITLE IN OIL PALM BASED INDUSTRY

NO.	SUBSECTOR		LEVEL								TOTAL
			L1	L2	L3	L4	L5	L6	L7	L8	
1.0	**REFINING**										
1.1	**REFINING - EDIBLE**										
1.1.1	Production (Process & Utilities)	*Critical*	N/A			1	1	1	1	1	5
		Non-Critical		1	1						2
1.1.2	**MAINTENANCE**										
1.1.2.1	Mechanical	*Critical*	N/A			1	1	1	1	-	4
		Non-Critical		1	1						2
1.1.2.2	Electrical	*Critical*	N/A			1	1	1	-	-	3
		Non-Critical		1	1						2
1.1.2.3	Instrument	*Critical*	N/A			1	1	1	-	-	3
		Non-Critical		1	1						2
1.1.3	**TECHNICAL SERVICES**										
1.1.3.1	Quality Assurance	*Critical*	N/A			1	1	1	1	-	4
		Non-Critical		1	1						2
1.1.3.2	Quality Control	*Critical*	N/A			1	1	1	-	-	3
		Non-Critical		1	1						2
1.1.3.3	Process Engineering	*Critical*	N/A	N/A	N/A	1	1	1	-	-	3
		Non-Critical									
1.1.3.4	Project Engineering	*Critical*	N/A	N/A	N/A	1	1	1	-	-	3
		Non-Critical									
	TOTAL			**6**	**6**	**8**	**8**	**8**	**3**	**1**	**40**

NO.	SUBSECTOR		LEVEL								TOTAL
			L1	L2	L3	L4	L5	L6	L7	L8	
1.2	**REFINING – NON-EDIBLE**										
1.2.1	Production (Process & Utilities)	*Critical*	N/A			1	1	1	1	1	5
		Non-Critical		1	1						2
1.2.2	**MAINTENANCE**										
1.2.2.1	Mechanical	*Critical*	N/A			1	1	1	1	-	4
		Non-Critical		1	1						2
1.2.2.2	Electrical	*Critical*	N/A			1	1	1	-	-	3
		Non-Critical		1	1						2
1.2.2.3	Instrument	*Critical*	N/A			1	1	1	-	-	3
		Non-Critical		1	1						2
1.2.3	**TECHNICAL SERVICES**										
1.2.3.1	Quality Assurance	*Critical*	N/A			1	1	1	1	-	4
		Non-Critical		1	1						2
1.2.3.2	Quality Control	*Critical*	N/A			1	1	1	-	-	3
		Non-Critical		1	1						2
1.2.3.3	Process Engineering	*Critical*	N/A	N/A	N/A	1	1	1	-	-	3
		Non-Critical									
1.2.3.4	Project Engineering	*Critical*	N/A	N/A	N/A	1	1	1	-	-	3
		Non-Critical									
	TOTAL			**6**	**6**	**8**	**8**	**8**	**3**	**1**	**40**

NO.	SUBSECTOR		LEVEL								TOTAL
			L1	L2	L3	L4	L5	L6	L7	L8	
2.0	**MILLING**										
2.1	Production (Process & Utilities)	*Critical*			1	1	1	N/A	N/A	N/A	3
		Non-Critical	1	1							2
2.2	**MAINTENANCE**										
2.2.1	Maintenance – Mechanical	*Critical*			1	1	-	N/A	N/A	N/A	2
		Non-Critical	1	1							2
2.2.2	Maintenance – Electrical	*Critical*			1	-	-	N/A	N/A	N/A	1
		Non-Critical	1	1							2
2.3	Quality Assurance/ Quality Control	*Critical*			1	-	-	N/A	N/A	N/A	1
		Non-Critical	1	1							2
	TOTAL		**4**	**4**	**4**	**2**	**1**				**15**

NO.	SUBSECTOR		LEVEL								TOTAL
			L1	L2	L3	L4	L5	L6	L7	L8	
3.0	**PLANTATION**										
3.1	**FIELD**										
3.1.1	Nursery	*Critical*				1	1	1	N/A	N/A	3
		Non-Critical	1	1	1						3
3.1.2	Replanting	*Critical*				1	-	-	N/A	N/A	1
		Non-Critical	1	1	1						3
3.1.3	Field maintenance	*Critical*				1	-	-	N/A	N/A	1
		Non-Critical	1	1	1						3
3.1.4	Harvesting	*Critical*				1	-	-	N/A	N/A	1
		Non-Critical	1	1	1						3
3.2	Workshop	*Critical*			1	N/A	N/A	N/A	N/A	N/A	1
		Non-Critical	N/A	1							1
	TOTAL		**4**	**5**	**5**	**4**	**1**	**1**			**20**

NO.	SUBSECTOR		LEVEL								TOTAL
			L1	L2	L3	L4	L5	L6	L7	L8	
4.0	**RESEARCH & DEVELOPMENT (R&D)**	*Critical*	N/A	N/A	N/A	1	1	1	1	1	5
		Non-Critical									
	TOTAL					**1**	**1**	**1**	**1**	**1**	**5**
	OVERALL TOTAL		**8**	**21**	**21**	**23**	**19**	**18**	**7**	**3**	**120**

TOTAL CRITICAL AND NON-CRITICAL JOB TITLE IN OIL PALM BASED INDUSTRY-MANUFACTURING

Job Titles	Total
Critical	71
Non-Critical	42
Total	**123**

CRITICAL JOB TITLE

SUBSECTOR: REFINING - EDIBLE

Production (Process & Utilities)

No.	Job Title	Level
1	Control Room Technician	L4
2	Supervisor	L5
3	Operation Section Manager	L6
4	Production Manager	L7
5	Plant Manager	L8

Maintenance (Mechanical)

No.	Job Title	Level
1	Chief Technician	L4
2	Supervisor	L5
3	Mechanical Maintenance Manager	L6
4	Maintenance Manager	L7
5	Plant Manager	L8

Maintenance (Electrical)

No.	Job Title	Level
1	Chief Technician	L4
2	Supervisor	L5
3	Electrical Maintenance Manager	L6
4	Maintenance Manager	L7
5	Plant Manager	L8

Maintenance (Instrument)

No.	Job Title	Level
1	Chief Technician	L4
2	Supervisor	L5
3	Instrument Maintenance Manager	L6
4	Maintenance Manager	L7
5	Plant Manager	L8

Quality Assurance

No.	Job Title	Level
1	Chief Lab Technician	L4
2	Lab Supervisor	L5
3	Lab Manager	L6
4	Technical Services Manager	L7
5	Plant Manager	L8

Quality Control

No.	Job Title	Level
1	Chief Lab Technician	L4
2	Lab Supervisor	L5
3	Lab Manager	L6
4	Technical Services Manager	L7
5	Plant Manager	L8

Process Engineering

No.	Job Title	Level
1	Process Technologist	L4
2	Process Optimization Engineer	L5
3	Process Engineering Manager	L6
4	Technical Service Manager	L7
5	Plant Manager	L8

Project Engineering

No.	Job Title	Level
1	Design Draftman	L4
2	Project Engineer	L5
3	Project Engineering Manager	L6
4	Technical Service Manager	L7
5	Plant Manager	L8

SUBSECTOR: REFINING – NON-EDIBLE/OLEOCHEMICAL

Production (Process & Utilities)

No.	Job Title	Level
1	Control Room Technician	L4
2	Supervisor	L5
3	Operation Section Manager	L6
4	Production Manager	L7
5	Plant Manager	L8

Maintenance (Mechanical)

No.	Job Title	Level
1	Chief Technician	L4
2	Supervisor	L5
3	Mechanical Maintenance Manager	L6
4	Maintenance Manager	L7
5	Plant Manager	L8

Maintenance (Electrical)

No.	Job Title	Level
1	Chief Technician	L4
2	Supervisor	L5
3	Electrical Maintenance Manager	L6
4	Maintenance Manager	L7
5	Plant Manager	L8

Maintenance (Instrument)

No.	Job Title	Level
1	Chief Technician	L4
2	Supervisor	L5
3	Instrument Maintenance Manager	L6
4	Maintenance Manager	L7
5	Plant Manager	L8

Quality Assurance

No.	Job Title	Level
1	Chief Lab Technician	L4
2	Lab Supervisor	L5
3	Lab Manager	L6
4	Technical Services Manager	L7
5	Plant Manager	L8

Quality Control

No.	Job Title	Level
1	Chief Lab Technician	L4
2	Lab Supervisor	L5
3	Lab Manager	L6
4	Technical Services Manager	L7
5	Plant Manager	L8

Process Engineering

No.	Job Title	Level
1	Process Technologist	L4
2	Process Optimization Engineer	L5
3	Process Engineering Manager	L6
4	Technical Service Manager	L7
5	Plant Manager	L8

Project Engineering

No.	Job Title	Level
1	Design Draftman	L4
2	Project Engineer	L5
3	Project Engineering Manager	L6
4	Technical Service Manager	L7
5	Plant Manager	L8

SUBSECTOR: MILLING

Production (Process & Utilities)

No.	Job Title	Level
1	Mill Supervisor	L3
2	Process Engineer/Executive	L4
3	Senior Assistant Mill Manager	L5
4	Mill Manager	L6

Maintenance (Mechanical)

No.	Job Title	Level
1	Technical Supervisor/Conductor	L3
2	Maintenance Engineer/Executive	L4
3	Senior Assistant Mill Manager	L5
4	Mill Manager	L6

Maintenance (Electrical)

No.	Job Title	Level
1	Chargeman	L3
2	Maintenance Engineer/Executive	L4
3	Senior Assistant Mill Manager	L5
4	Mill Manager	L6

Quality Assurance & Quality Control (QA/QC)

No.	Job Title	Level
1	Lab Supervisor	L3
2	Process Engineer/Executive	L4
3	Senior Assistant Mill Manager	L5
4	Mill Manager	L6

SUBSECTOR: PLANTATION

Field - Nursery

No.	Job Title	Level
1	Assistant Manager	L4
2	Estate Senior Assistant Manager	L5
3	Estate Manager	L6

Field - Replanting

No.	Job Title	Level
1	Assistant Manager	L4
2	Estate Senior Assistant Manager	L5
3	Estate Manager	L6

Field - Field Maintenance

No.	Job Title	Level
1	Assistant Manager	L4
2	Estate Senior Assistant Manager	L5
3	Estate Manager	L6

Field - Harvesting

No.	Job Title	Level
1	Assistant Manager	L4
2	Estate Senior Assistant Manager	L5
3	Estate Manager	L6

Workshop

No.	Job Title	Level
1	Foreman	L3

SUBSECTOR: RESEARCH & DEVELOPMENT (R&D)

No.	Job Title	Level
1	Assistant Research Officer	L4
2	Research Officer	L5
3	Research Group Leader/Agronomist	L6
4	Director	L7
5	Director General	L8

NON-CRITICAL JOB TITLE

SUBSECTOR: REFINING - EDIBLE

Production (Process & Utilities)

No.	Job Title	Level
1	Field Technician	L2
2	Senior Field Technician	L3

Maintenance (Mechanical)

No.	Job Title	Level
1	Technician	L2
2	Senior Technician	L3

Maintenance (Electrical)

No.	Job Title	Level
1	Technician	L2
2	Senior Technician	L3

Maintenance (Instrument)

No.	Job Title	Level
1	Technician	L2
2	Senior Technician	L3

Quality Assurance

No.	Job Title	Level
1	Lab Technician	L2
2	Senior Lab Technician	L3

Quality Control

No.	Job Title	Level
1	Lab Technician	L2
2	Senior Lab Technician	L3

SUBSECTOR: REFINING–NON-EDIBLE/OLEOCHEMICAL

Production (Process & Utilities)

No.	Job Title	Level
1	Field Technician	L2
2	Senior Field Technician	L3

Maintenance (Mechanical)

No.	Job Title	Level
1	Technician	L2
2	Senior Technician	L3

Maintenance (Electrical)

No.	Job Title	Level
1	Technician	L2
2	Senior Technician	L3

Maintenance (Instrument)

No.	Job Title	Level
1	Technician	L2
2	Senior Technician	L3

Quality Assurance

No.	Job Title	Level
1	Lab Technician	L2
2	Senior Lab Technician	L3

Quality Control

No.	Job Title	Level
1	Lab Technician	L2
2	Senior Lab Technician	L3

SUBSECTOR: MILLING

Production (Process & Utilities)

No.	Job Title	Level
1	Attendant	L1
2	Operator	L2

Maintenance (Mechanical)

No.	Job Title	Level
1	Apprentice	L1
2	Fitter	L2

Maintenance (Electrical)

No.	Job Title	Level
1	Apprentice	L1
2	Wireman	L2

Quality Assurance & Quality Control

No.	Job Title	Level
1	Sampler/Sorter	L1
2	Lab Operator	L2

SUBSECTOR: PLANTATION

Field-Nursery

No.	Job Title	Level
1	Field Operator	L1
2	Field Mandore	L2
3	Field Supervisor	L3

Field - Replanting

No.	Job Title	Level
1	Field Operator	L1
2	Field Mandore	L2
3	Field Supervisor	L3

Field - Field Maintenance

No.	Job Title	Level
1	Field Operator	L1
2	Field Mandore	L2
3	Field Supervisor	L3

Field - Harvesting

No.	Job Title	Level
1	Field Operator	L1
2	Field Mandore	L2
3	Field Supervisor	L3

Workshop

No.	Job Title	Level
1	Helper	L2

SUBSECTOR: RESEARCH & DEVELOPMENT (R&D)

No.	Job Title	Level
1	Research Supervisor	L2
2	Research Operator	L3