

United Plantations (Unitata) – A Company Profile

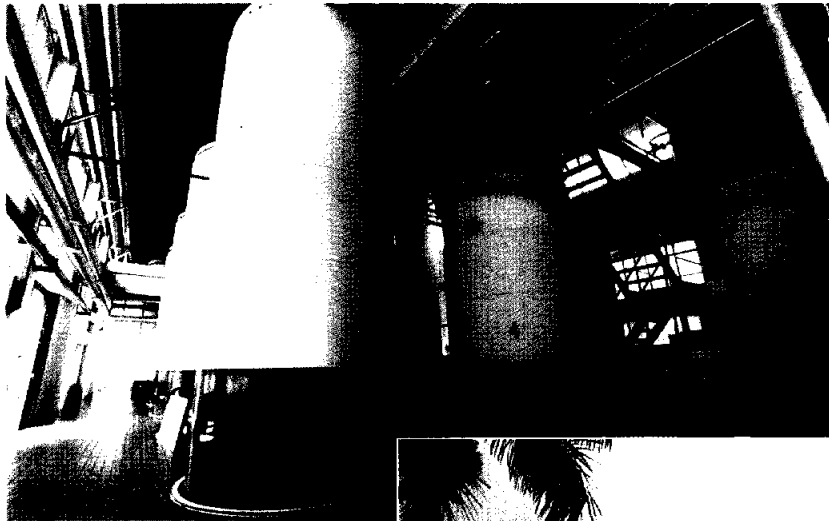
Ahmad Ibrahim

Palm oil is well known worldwide for its versatility in applications. It can be used in almost all the known oils and fats products, without much need for further modification. One attribute of palm oil which makes all this possible is its unique semi-solid nature. Through a simple fractionation process, the solid and liquid fractions can be separated quite easily. The liquid fraction, for example, which is commercially available as the RBD palm olein, makes excellent cooking oil and frying fat.

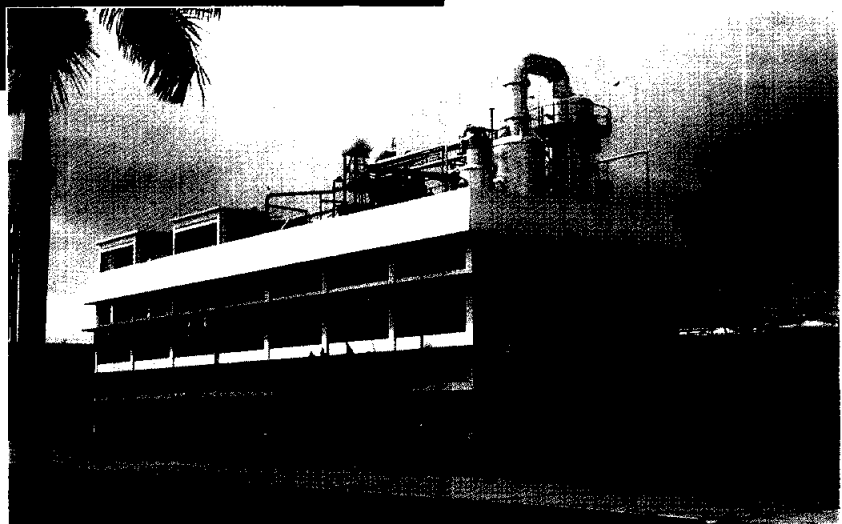
Many attribute this superior performance to its balanced fatty acid composition plus the rich presence of natural anti-oxidants. The solid fraction on the other hand which is widely marketed as RBD palm stearin or the softer palm mid-fraction is popularly

used as a natural hard stock in the manufacture of solid fats products such as margarine and shortening. It is also more economic because hydrogenation is often unnecessary when palm oil is used in such products. And ever since the news spread about the negative health implications of *trans* fatty acids, which are present in significant amounts in hydrogenated fats, many margarine and shortening manufacturers have been persuaded to switch to palm oil.

If palm oil is versatile as an oil, then many agree the United Plantations Group (UP) can be considered versatile in the palm oil business. UP, as it is widely known among palm oil enthusiasts locally and internationally, is not only actively involved in almost all the commercialisable aspects of palm oil,



Oil Purification Station



View of Unitata

but is also a pioneer in many palm oil products. In fact, many who are familiar with the company's integrated complex in Teluk Intan would testify to the fact that any familiarization programme on palm oil would not be complete without a visit to UP.

Its integrated and well maintained facilities may be important elements in UP's popularity among palm oil visitors. They are by no means the only reason though. The other reason why UP is a preferred destination among many who came to find out more about Malaysian palm oil is its vibrant and enthusiastic Executive Director, Dato' Seri B. Bek-Nielsen. Through his many years of undiminished enthusiasm, travelling the globe speaking for the cause of Malaysian palm oil, Dato' Seri Bek has now earned the nickname as Malaysian's "Palm Oil King". Through his able managerial leadership, UP can take pride in many "firsts" as far as palm oil is concerned.

In fact, UP has pioneered many innovative concepts in palm oil production, processing and related developments. For example, because of UP's strong commitment not only to produce but also to deliver quality products, it constructed its first own bulking station in Malaysia. This was way back in 1951, on the island of Penang. A second and much bigger bulking installation was also built as the first unit at the Butterworth wharf. With their own facility, UP was thus able to exercise better control of quality rather than continue to depend on the common installation in Singapore. Among its other innovative cost cutting measures is its well publicised use of the light railway system in conjunction with the harvesting gantry system for the infield collection and transportation of the fruit bunches. This has generated dividends for the company not only in terms of reduced transportation cost but also quality FFB reaching the mill. And the quality FFB is an important prerequisite for a quality CPO.

During the late fifties and early sixties, UP also initiated the construction of locally manufactured palm oil mills, which in turn resulted in the disappearance of the foreign monopoly in the construction of palm oil mills. In fact, not less than 23 palm oil mills have been designed and constructed under the supervision of the engineering staff of UP in Peninsular Malaysia as well as East Malaysia.

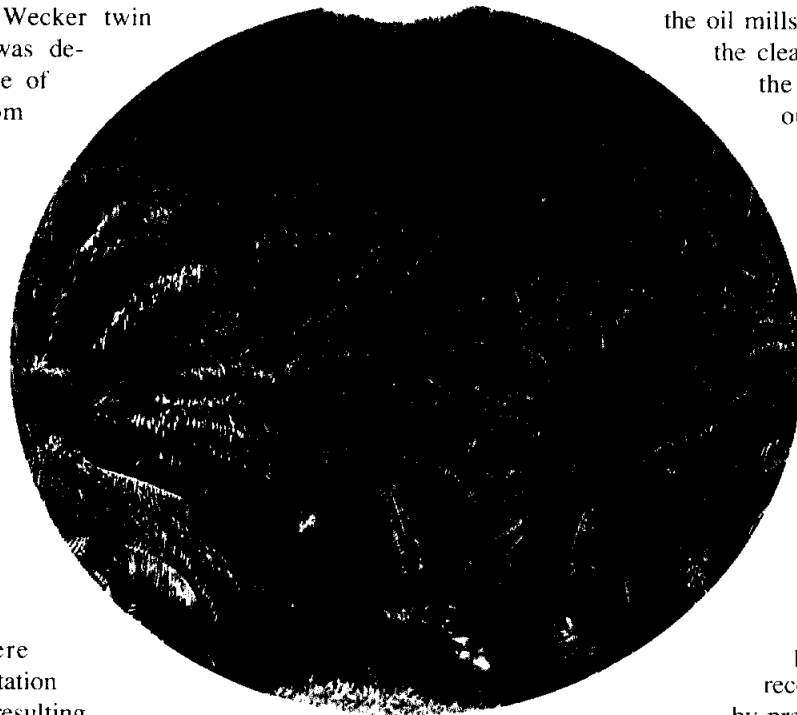
During 1963/64, the first in Malaysia, Usine de Wecker twin screw press, which was designed for the purpose of extracting wine from grapes in Luxembourg, was installed at UP's Ulu Bernam Oil Mill under the direct supervision of then Chief Engineer, Mr B. Bek-Nielsen. During a period of 18 months, the Usine de Wecker screw press was subjected to several modifications and continuous test operation. The result of the tests were announced to the plantation industry in general, resulting in the introduction of the Usine de Wecker Screw Press being installed first in the UP Palm Oil Mills, and subsequently in most of the oil mills in Malaysia and Indonesia, where approximately 1 500 such presses or copies are in operation.

Subsequently, UP Engineering Department accepted test operation on behalf of the Krupp and Colin single screw presses, which in turn proved less suitable for the palm oil mills than the Usine de Wecker screw press. However, such pioneering effort combined with the request for prime bleachable palm oil by Aarhus Oliefabrik A/S and Karlshamn Oliefabrikker A/B, promoted the construction of the stainless steel single 10 tonnes/hour FFB screw press (UP10) at the Ulu Bernam workshop. All wet surfaces of this press was made from stainless steel. The latest UP14 single pressure screw press is capable of the throughput of 14 tonnes/hour of FFB. Indeed! the introduction of the screw press had a salutary effect

on the design of palm oil mills in Malaysia.

It is also a recognized fact that UP made the first pneumatic palm kernel separation plant during the early 70's in order to cope with the mixture of *dura* and *tenera* nuts. This was followed by the UP/Hombolt effluent plant by 1978, which was designed by the Chief Engineer, Mr H K Jorgensen. The unique feature of this plant of which more than 50 units are in operation in Malaysia and

Indonesia, is its ability to enable the oil mills to comply with the clean air as well as the effluent water outlet restriction and thereby producing fertilizers or cattle feed.



United Plantation

The empty bunch press developed 15 years ago by the U P engineering staff, has made it possible to recover 0.25% oil by pressing the empty bunches, as well as to reduce the moisture to such an extent that the empty bunches can be burned in the boilers, which in turn promotes the following advantages. The steam production can be increased by 40%, while the filthy smoke from the incinerators can be avoided.

The latest development is the design of a special unit which can produce fibre from the palm trunks, palm fronds and empty bunches. Samples of the products have been tested by Novopan, the biggest Danish company engaged with the production of various types of Chipboard materials. Patent application has been made for this particular unit. Other projects are on the drawing board and the close relationship with Aarhus Oliefabrik no doubt will further enhance the development of new high quality products.

The ever increasing demand for high quality palm oil promoted the installation of the following

units all made from stainless steel – namely: the UP patented continuous palm oil separating unit (19–39), Elevator Buckets, stainless steel wear plates in the digester, the discharge chutes from the digester, crude oil reception tanks, palm oil transfer pumps, stainless steel pipe lines throughout the production to the epoxy coated tanks, vacuum drier and epoxy coated coastal tankers bringing the oil to the Butterworth Bulking installation. The result of such quality measures combined with strict temperature control throughout the extraction process has made it possible to produce palm oil with iron contents of 1 ppm and no measurable peroxide value when leaving the oil mills for the Unitata Refinery. In fact, the Unitata Refinery was the first plantation refinery in Malaysia during the 1972–74 period. The reason being that none of the British controlled Oil Palm Plantation Companies, at that time, were willing to exploit the opportunities offered by the Malaysian Government in order to gain the more added value in Malaysia. The rest is history.

Unitata is now recognized internationally as a leading producer of many high quality palm oil products. One which deserves special mention is their international quality specialty fats packed under the

names CEBES and POLAWAR destined for markets which insist on uncompromised quality. And lately, UP has announced another first in palm oil products. Thanks to their committed R&D investment, and the ingenuity of its scientists, UP recently, after 3½ years of continuous research and development has unveiled a new palm oil product, rich in all the positive health ingredients including vitamin E and beta-carotenes. This refers, of course, to UP's red palm oil now marketed under the commercial name of "NUTROLEIN" **Golden Palm Oil**. With increasing health consciousness among consumers in many countries, many predict "NUTROLEIN" **Golden Palm Oil** will make a big impact in the market. For example, its recent introduction in Japan created intense interest in the product.

Today, oil palm accounts for about 88% of UP's total acreage of about 74 000 acres. Coconuts, cocoa and bananas make up the balance. With many industry pundits unanimous in their prediction about palm oil's promising future, UP is expected to sustain its long term interest in palm oil.

Soap Industry in Algeria – A Market Niche for Palm Oil

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INTRODUCTION

The soap industry is an integral part of the vegetable oil refining industry in Algeria. It is managed by Enterprise Nationale Des Corps Gras (ENCG) and the soap making plants are also located in the same premises as the oil refineries. In all, there are six oil refineries having facilities for making soaps with a total production capacity of about 625 tonnes per day (TPD) *i.e.* about 187 500 tonnes per annum based on 300 working days. The annual capacity for making

laundry soap is about 150 000 tonnes and 37 500 tonnes of toilet soap. The capacities of the six soap production units are shown in *Table 1*.

In Algeria, about 20% of the total oils and fats consumption is in soap making. There are about 21 different brands of soap (*Table 2*) produced by ENCG units and they are of high quality. The laundry soap contains up to 10% coconut oil. The production of soaps has shown an average growth rate of about 9.0% per year since 1985.