

OLEOCHEMICALS – DREAM OR NIGHTMARE?

Palm and Lauric Oils Conference, February 2008

Norman Ellard

Managing Director, FPG Oleochemicals Sdn. Bhd.

Ladies and gentlemen,

I am flattered to be standing here today continuing the heritage of my illustrious forbearers, Mr. Alan Brunskill and Mr. Martin Herrington. The question I proposed to discuss was “Oleochemicals Dream or Nightmare?” I didn’t realize when I accepted the offer to speak that this had been our perennial question. In 2005, Mr Herrington posed the question “A boom for whom?”, followed by “Boom, Gloom or Doom” in 2006 and finally last year asked the question last year – “A New World”.

I think it was fair to say that Martin was right when he declared a “new world”. 2007 was certainly a different year for the oleochemical producers as we grappled with not only high prices, but likely the most rapidly escalating and volatile markets ever seen. Palm Kernel Oil, the core of the fatty alcohol business went from 2180 RM / MT in January to 3575 RM / MT in December a 64% increase. Currently it stands at 4150 RM/ MT almost twice as high as it was this time last year. . Crude Palm Oil the core of the fatty acid business went from 1923 RM/ MT in January 2007 to 2930 in December 2007 about a 50% increase. Currently it is about 3140 RM/MT – about 63% higher than it was last year. Not only are these long term, if not all time highs, but the speed at which they went up and continue to go up is unprecedented, as these graphs illustrate The industry was never able to catch up.

Add to this, currency volatility as the US\$ lost ground to just about every major world currency and our new world was probably the most volatile world we had ever seen. The Malaysian Ringgit alone gained over 5% versus the US\$, obviously not only impacting the price of oils, but also the manufacturing expenses in the Malaysian industry. Again, this is continuing to happen as the \$US is predicted by the banks to continue to lose ground versus the RM in 2008.

Mr. Herrington liked to be held accountable for his predictions. Although we are not experts on palm oil, we are invited to try our luck at predicting the market. He predicted 2000 RM/MT for 2007 for Palm Oil, based on what he saw as a very bullish estimate since the oil markets had just finished moving. The MPOB estimates the 2007 Crude Palm oil price to be an average of 2530 RM/MT in 2007, so Martin was about 25% out. He estimated PKO at 2200 RM/MT. The estimate average price (same basis) for PKO was 2807 RM/MT – he missed by 28%. Rather than castigate Mr. Herrington for the misses, I think it is fair to say that we all were surprised by the strength of the markets and didn’t expect to see prices continue to increase as they did. This was in spite of warnings about the crude oil market and many presentations that crude palm oil was now thoroughly linked with Crude oil.

The biodiesel industry was widely touted to be the core of the new world by many. A boom for whom?- as Mr, Herrington asked last year. Turned out to be really no one in the oleochemical industry, unless you took advantage of the “splash and dash” loophole in the US subsidy system. CPO did follow world crude oil trends as predicted by many, as did many oils in the world as they reflected their energy value. Soybean, canola, corn and even tallow went to unprecedented highs based on their energy value. This laid waste to the biodiesel industry as the price of the raw materials allowed no margin for the producer to compete with other fuels, even with other subsidies. Two years ago, biodiesel was the most profitable piece of the oleo chemical business, spurring the rush to build plants. Unfortunately, many of those plants today are laying idle, major investments unable to run at a profit.

Interestingly, if you look at what probably spurred palm oil demand and the price to go up as high as it did, it wasn't the rush to fuel, it was more likely the rush to food. As the world economies grew, most especially in Asia, and as the world's population got more affluent in these developing regions, the real need was for food. China and India grew explosively. It was reported in November of 2007 that China's demand for oil grew 27% versus the previous year. Balance this against very modest growth in supply, it is easy to see why the price took off in spite of biodiesel.

Finally, one should not underestimate the impact of export taxes on oil, potentially destined to go higher as oil goes higher. These tend to push up prices even higher and advantage the plantations. Yet again, it is encouragement to increase oleochemical capacity in a world where seemingly there is no such concept as too much capacity.

So has the oil increases impacted the oleochemical industry. Absolutely. It could be said that oil increases impact everybody evenly, hence everyone feels the pain. However, it is clear that there is a level of pain that can't be tolerated by anyone. A quote I saw last week really summed this up for me: "There is no demand for [downstream] fatty acids at such high prices," a source from a major oleochemical producer in this region said...." (Chemical News and Intelligence- February 5 2008).

There is a limit to the pricing level that can be tolerated. Users can decide not to buy. Reformulations can take place. We have already seen some major reformulations take place in the industry due to cost. The using industry is being driven to build flexibility in formulations. Such is the volatility of the world, we are likely to see violent swings in the usage patterns as pricing reflects the volatility of the raw material.

High pricing will also drive technology. Already attractive technologies are being brought forward that help surfactants get more efficiency at lower usage. In world where fresh water availability will be an issue, there will be a continuing drive to use less water and less surfactant to get the same level of clean. As always, necessity will be the mother of invention and customers will find a way to do more with less.

High prices will impact usage. It is a well known fact that Asia is the engine of the world's growth with China and India in particular hugely impacting the world's economies. The consumers are getting more affluent. It is also a well known fact that the usage pattern of consumer products such as shampoos, detergents and surfactants is well under the usage of developed economies such as the USA. In fact, based on estimates of alcohol usage in 2006, the average consumer in the US used 1 kg of alcohol versus an estimated usage in total Asia at 0.15 kg per consumer. While the North Americans will no doubt get more efficient in the face of a potential recession, clearly there continues to be a large opportunity in Asia.

The prize is big and consumer goods companies are working hard to attract those consumers. Being part of the world's largest consumer goods company, it is well known that to successfully attract those consumers, you need to drive the consumer value equation. This need, plus the growth of mega customers such as Walmart, drove an objective to keep consumer prices stable and, in fact, for many products value had been driven to the point that pricing had been stable for well over 10 years. In fact, in some economies, like Japan, prices for some consumer products had been driven down.

With the volatility we have seen in 2007, there is no question that this has impacted pricing of consumer products. The increases have been too big to absorb. Although everybody has been impacted by the high cost of oils on an equal basis, the consumer value equation for many basic products has been changed. We have seen this on basic foodstuffs and seen concerns about the impact of huge price increases, but it also has impacts on oleochemicals and their derivatives – most of which goes ultimately into consumer products.

So what kind of year has it been for the oleochemical producer? Likely closer to a nightmare than a dream.

Fatty acids: Twelve months ago, we saw increasing demand for fatty acids as the industry absorbed some dramatic fatty acid capacity increases and fatty acids replaced some high priced crude oil derivatives. I think it is fair to say that the demand did not grow as much as anticipated, as the high raw material cost dented some of the new demands. It appears that the industry is now contemplating further expansions and as the quote that I put up earlier shows, the industry is having a hard time recouping the increased costs. One of the major uses for fatty acids in Asia is for bar soaps and the raw material increases is having a dramatic effect on this basic cleaning product. No doubt it will also dent consumer demand.

Fatty alcohols: A year ago, it seemed that almost 1 million tones of capacity would be coming up over late 2006 through 2007. Most of the 2007 capacity started up late and some have been delayed to 2008. Starting up fatty alcohol plants is not as easy as it seems and almost all of the capacity expansions have been delayed. These delays might have had a real impact on the market, but unfortunately the dramatic rise in PKO prices overshadowed the market as it became almost impossible to keep pace with these increases.

All of the planned capacity is still getting ready to come up, so 2008 will be an interesting year. Last time there was a about 350,000 MT of high cost capacity that came out of the market. With so much new capacity, it is much less likely this will get corrected quickly. If PKO continues to be high priced, I think the market will be a very difficult market.

Glycerine: The one bright spot in the oleochemical business. Two years ago, there was talk of glycerine being traded at almost zero, because of a huge expected glut in the market due to the increase in biodiesel. There were major efforts to find new uses and new derivatives for glycerine. In the face of a negative return, synthetic glycerine capacity almost disappeared in the market.

Well the glycerine new uses happened. Glycerine derivatised into epichlorohidrin seemed to be the big idea, since there was a shortage for epichlorohidrin, glycerine was low cost and the stoicheometric balances seemed to make the most sense out of all the applications being considered. This created new demand in the glycerine business, especially in China. Estimates vary, but it was likely between 30,000MT to 60,000 MT and threatens to go much bigger. Some very big plans have been announced by some key industry players.

What didn't happen was the expected growth of glycerine supply due to the growth of biodiesel. The consequence was a very tight market in 2007 and one that is continuing to be very tight. This drove glycerine prices up dramatically and we saw almost a tripling of glycerine prices in 2007. Interestingly, without the dynamic of a large synthetic glycerine supplier that could make glycerine "on purpose" from propylene one might say the market became a true coproduct market. In other words, although it may be very attractive, it is only 10% of the molecule and no oleochemical plant will run solely to produce glycerine.

As glycerine prices increased, one might expect that these new uses would become uneconomic and drop their demand. It seems that with the shortness and high cost of propylene, glycerine continues to be derivatised into epi – since it is needed in the market. Interestingly, I heard very recently some of some synthetic glycerine producers getting in the business of glycerine to epichlorohidrin, presumably looking at running their old plants backwards.

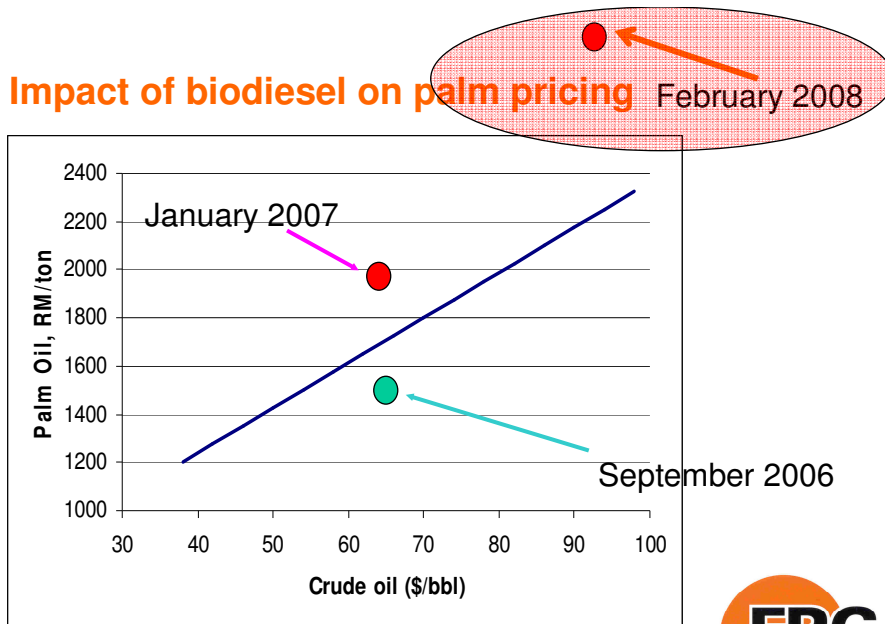
For 2008, glycerine will be a tough one to call. Will the economy change the demand for epi? Will the growth of oleochemicals increase the supply? Expecting the glycerine market to maintain the

current tightness might be just as flawed as the expectation two years ago that it would stay at very low levels forever. The only thing for sure in this business seems to be change.

MES - A lot has been said about methyl ester sulphonate recently and about 200,000 MT of more capacity has been announced over the current modest production. MES is not a new surfactant, it has been around for about 30 years. A harsh but interesting quote I heard some years back was that MES was “the surfactant of the future – and it always will be”. MES has always been promoted as the potential natural replacement for linear alkyl benzene sulphonate – LAS, however, chemically it is more likely to replace alcohol sulphates in formulas. MES is an interesting, but not a breakthrough surfactant. I think the recent momentum behind the growth was based on cost potentials based on what was thought to be low cost palm oil stearine. With stearine averaging 2500 RM/ MT in 2007 – a 54% increase versus 2006 – this has blunted the ardour for MES considerably. MES will only make sense if it offers breakthrough sustainable cost advantages to enable companies to deliver on the promise of consumer value. To date, in my opinion, that has not been proven.

Biodiesel:

Showing the famous graphs from the previous two years that shows break even economics for palm methyl ester based on palm prices, we can see the progression of the biodiesel business. From being a pretty good business in 2006, to a not very good business in 2007 to a bust for most now, unless you happen to own plantations. Literally the economics are now “off of the chart”. It’s pretty clear why we see idle capacity from brand new installations.



MPOB estimate of economic price of palm oil into biodiesel (without subsidies).



Some biodiesel will likely happen, but it won't be the bonanza that it was expected to be. CPO seems to be inseparable from the price of crude oil, even though likely the demand is being driven by food uses rather than biodiesel.

I have long experience in this business, as you may have recognized, and I do remember some "dream" years for oleochemicals. The last one in memory was 2000. PKO and CPO were well behaved, alcohol prices were reasonable and glycerine prices were strong due to high demand. I compared the prices then to the prices today and found that PKO today is about 325% of where it was in the year 2000, alcohol prices are about 140% and glycerine is about 130% of where it was then. I think the conclusions are pretty easy when you say that this is not a dream year. I also think you can see where most of the value chain today has swung to the plantations. While 2000 might have been an exceptional year, 2007 certainly was a difficult year for oleochemical producers.

I won't be so bold as to predict the future, but I will tell you what I think will be important for the future.

Finding the customer will be key. I continue to be amazed at the attitude in the industry that seems to be "we will build it and they will come". Finding the customer and driving the right value equations right through to the end product will be key. This business will grow, but not nearly as fast as we all hope unless some of the value chain is driven back to generate consumer demand.

Innovation will be key to doing this. Most of the technology we deal with today is quite old, including biodiesel and MES. We need to innovate on not only products, but financial models that share help build value for all. Glycerine is a prime example of this. Glycerine is the positive part of the industry this year because some very intreprenurial people in China went ahead and innovated quickly. The business is volatile. Moving quickly will be key.

Biodiesel will continue to exist, but will not be as big as we all thought it would. New technologies are coming. Unless CPO finds a way to create value versus the alternative energy feeds, it will not be a viable commodity energy source. I think the needs for food will, however, dominate the demand for CPO. The world does need to be fed. Bio fuels will play an important role in the future, but will likely be "next generation" type fuels rather than simple biodiesel.

Logistics will be king. Energy, whether it be bio or petro, is continuing to escalate. The dominance of the mega plant is being balanced against the economics of shipping and storing products around the world. It's hard for me to believe that capacity is being built with no due consideration of how to ship it to the customer.

Rebirth of the US Industry? The Oleochemical industry was built in SE Asia to supply the global economy. In particular, it was thought to replace the industries in developed economies. Make no mistake, the US is getting it's house in order and with the decline in the US\$ and the increasing costs of logistics, for US demand the US could be the low cost source, in spite of the fact we have most of the raw material here. It should also be recognized that although raw materials like tallow have also increased in price, they now represent good value versus palm oil, especially when logistics is taken into account.

Sustainability will become very important: it already is. It is impacting the consumer and the companies that service the consumer and becoming an important decision factor on raw material choices. . I know that Palm oil can be promoted as a good sustainable crop, but I think that a lot more needs to be done to promote that. It is very hard to change perceptions.

Responsible Care® was created 30 years ago, actually in my home country, Canada, to help change the public perception of the chemical industry. I think anyone who has been involved in

this knows it has been a long tough road to put teeth in to this concept. I think the palm industry faces the same challenges and needs to get very serious about changing perceptions. It will certainly be important to the oleochemical industry.

Finally, this is a Price Outlook Conference, and I guess as my predecessors did, I guess I am required to stick my neck out and make a forecast. For Palm Oil, I continue to see a strong demand, especially for food, and if supply does not pick up dramatically, I see continued high prices. I guess it is a hope more than a forecast, but I hope we see some modification and therefore predict 2500 RM/MT. With new demands and new capacity additions, I don't see much help for PKO, but again, out of hope more than anything, I predict 3000 RM/MT. Unfortunately, I don't think my predictions will influence the market, but I hope we can build some value in the oleochemical business and ultimately in the consumer businesses of all the consumer companies to drive growth in Asia and help improve the lives of the consumers

If nothing else, oleochemicals is a dynamic market. While it is old chemistry, I think it holds the thrill of expecting the unexpected. With the changes in 2007 it certainly lived up to its billing. I don't think 2008 will be so different.

N.R. Ellard , Feb 2008