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News Letter

OIL TECHNOLOGISTS' ASSOCIATION OF INDIA
WESTERN ZONE

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The Goa Bowl

The RSDC Conference at Goa, this month October 2008 is unfolding into a glamourous track. It may beat the Chinese bowl.

This news letter is for free circulation only to the members of OTAI-WZ

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OIL TECHNOLOGISITS' ASSOCIATION OF INDIA WESTERN ZONE

From the Editors's Desk

Eureka! Eureka! The RSDC at Marriott, Goa, is unfolding its splendour. To bring joy, to start with, And Knowledgable, eloquent and seasoned international celebrities are going to share their experience in a sizzling manner. The elite includes our own Indian super-heros who will match others in every field. In fact, they may have to carry a lot of intricate info useful to them. Net- working? What is that? Getting closer by electronic media. All delegates will also receive Info-CD, Souvenirs suitably split to enhance their documentations. And, freevies ? Not really. But arrangements for ladies to freely spend their time sight-seeing and watch cultural events, are made. At a nominal price, of course. Men-delegates will have hard time going through the presentations. Hard time, did I say? Not really! Interesting & engrossing time. Welcome to all delegates warm and pleasant. Have you pressed the suits and packed yours bags. Happy time at Goa.

  

Trade & Commerce

HURRY ! HURRY!

20% biofuel blending in auto fuel from 2017

Policy links purchase price of biodiesel to diesel rates

By
Shaleen Agrawal & Shubhashish.
New Delhi/Mumbai

The Union Cabinet has approved a policy that aims to achieve 20% biofuel blending in all the auto fuel used in the country by 2017. It also plans to make 10% ethanol doping in petrol mandatory from October 1.

The national policy on biofuels seeks to ban import of certain biofuels, purposes no taxes and duties on bio-diesel, encourages free movement of biofuels within states, and ensures a minimum price for biofuel producers.

The minimum purchase price for bio-diesel would be linked to the prevailing subsidised diesel price. "In the event of diesel price falling below the minimum purchase price, oil marketing companies may be compensated by the government," an official statement said."Statutory minimum price mechanism for sugarcane could also be examined for extending such a mechanism for oilseeds to be utilised for production of bio-diesel by the processing industry," the statement said.

Biofuel makers welcomed the clarity. Pramod Chaudhari, chairman of the CII National Biofuel Committee and also of Praj Industries, the Pune-based biofuel equipment maker, said the policy is the need of the hour."Many countries have gone ahead with their plans for alternate energy and it is high time we did it too. The policy is good for the industry."

Vishal Rawat, president of the bio-diesel making unit of IKF Technologies, said, "The policy will help ease pressure on the economy by reducing dependence on imports of mineral oil."

India currently imports 70% of its oil requirement.

Amol Tilak, Analyst with Kotak Commodities Services Ltd, said the policy will be beneficial to farmers and sugar mills in the long run.

20% biofuel blending
"We have another 8 years to go to for the 02% blending to kick in. So we could see a situation where demand for ethanol would be on the higher side," he said.

Rajiv Kumar, director, Icrier, said the provision for bringing biofuels under the ambit of declared goods will integrate the domestic markets. The movement in agro products is a good start. With this, prices tend to equalise and also get lower with the growing economies of scale," he said.Rajiv Kumar, however, feels the policy is incomplete without removing subsidies on hydrocarbons. "A realistic policy doesn't work without the right market price for fossil fuels," he said.

In October 2007, the government made it optional for oil marketers to blend 5% ethanol. But oil companies couldn't reach the target, aggregating around 3% blending levels. The Centre now plants to double the current blending target to 10% from October, which is the start of the new crushing season for sugar.

But implementation is stuck over the floor price for ethanol – oil marketing companies are unwilling to pay Rs. 21.50 a litre demanded by producers.

[Source: Global Oils & Fats, Page 27&28, Jan.2007]

GRAPPLING!

Biofuel pricing in a month, level-peg with diesel likely

By
C Chitti Pantulu. Banglore

The Union Cabinet cleared the National Policy on Biofuels Thursday last setting a vision for 20% blending of biodiesel and ethanol with diesel and petrol by the year 2017.

Good news while it might be for environmentalist and those weighed down by the high cost of taking up their vehicles, it might be quite some time before they get some relief because of the new policy.

The reasons are not far to seek.

To achieve a blending of 20% there will be a need for 16.72 million tonne of biodiesel at the project demand of 83.58 million tonne fir diesel by 2017 (see table).

This in turn means a plantation area of 35 million hectare assuming a yield of 1.6 tonne per acre and oil recovery of 30%.

"This is a big challenge and may not be possible," said C S Jadhav, secretary, Biodiesel Society of India (BAI), who is also a member of the Task Force on Realistic Pricing for Biofuels set up by the ministry of new and renewable energy (MNRE).

Jadhav is director marketing at Nandan Biomatrix, a neutraceuticals and biotech company.
A 5-9% blending target would have been more realistic given that a gestation of 3-4 years is needed for any plantation to start yielding the feedstock, he said.

Clearly, then, massive feedstock shortages in the country for biodiesel could be commonplace.
But then given by the new policy rules out the possibility of making up this gap through imports of free fatty acid (FFA) such as oil, palm, etc, in a bid to encourage production of biodiesel feedstock, there are no shortcuts to making up in the near term.
Another reason why the common man may continue to pay high price linked international crude prices is that there seems to be a consensus among both policy makers and the industry for an 'on a par' pricing for biodiesel that refiners will sell to the oil marketing companies.

Currently, a blending rate of 5% is mandated for ethanol, which is procured by the oil marketing companies at Rs 21.50 per liter, while the reference price for biodiesel is set at Rs 26.50 per liter.

Sources in the know said the task force on Realistic Pricing will give its recommendations in about 30-45 days and the current thinking is to do away with the blinding system for the procuring ethanol and fixing the current Rs 21.50 per liter reference price as the minimum.

The task force is also likely to recommended pegging the price of biodiesel at the current Rs 36-39 per liter price of diesel across the country. This could make little difference to the consumer. "The pricing issue have to be resolved," responded Pramod Chaudhari, chairman of the CII National Committee on Biofuels.

However what one most recognise is the tremendous scope for replacing fossil fuel now that the policy is in place, Chaudhari said.

Pricing is crucial as it will be the basis for all investment upwards of Rs 20,000 crore is in the pipeline for biodiesel in the country. How much of this will actually materialise depends on the incentive and tax regime that the new policy puts in place.

"The policy is encouraging," said Suprotim Ganguly, secretary of the CII National Committee on Biofuels most of whose recommendations were met by the ministry while formulating the policy. Ganguly is also on the Task force on Realistic Pricing set up by the MNRE.

The policy states that biodiesel and bio-ethanol

will be brought under the ambit of "Declared Goods" to ensure unrestricted movement of biofuels within and outside the states, which means they can be transported at a duty of just 4% across states. in addition the policy also state that no state level taxes and duties shall be levied on biodiesel.

"The policy takes care of the downstream issue where biodiesel is concerned but it is the backward integration that needs to b paid a greater attention now," said Jadhav.

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[Source: DNA, Page N0. 23 & 24, Sep,14,2008]

MORE FOR LESS?

International Trends in Blended Oils and New FSSA as an Enabler of Change and Innoivation

By
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Chief of Technology,
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Abstract

Fats and oils are an important element of the diet and the amount and type of fat we eat plays a key role in the over all development during growth, keeping healthy and minimizing the risk of developing life style related diseases. Years of scientific research has given us insight and better understanding of the important role played by MUFA, PUFA and essential fatty acids, various minor ingredients presents in the oil like phytosterols, oryzanols, tocotrienols, squalenes in reducing the risk of developing CVD, diabetes, obesity, cancer etc. Science has also established the need for having a proper balance of these factors in the fat we consume. Apart from the heath benefits the fats also need to have the right stability characters during storage and applications like frying, baking. Fats must also have good organo leptic acceptability. Consumers are realizing that simply avoiding 'bad fats' is not the solution to health problems. Bad fats must be replaced by health and balanced fats with health benefits. Saturated and trans fats are undesirable and thus we need to have trans free fats that still have the desirable melting characteristics needed for bakery and confectionary applications. Even though nature has blessed us with a choice of oils and fats no single oil is tailor made to meet all these expectations. It is also practically not possible to keep changing the dietary fat constantly to ensure the proper balance of all the needed elements. Different geographical regions of the world have abundance of different oils and will have to make the best use of what is available in that region for providing maximum health benefit. Many of these challenges can de addressed by blending oils and fats in various ratios to provide maximum health benefit and organoleptic acceptability. These oil blends are safe and bring in synergy of benefits from each of the oils for optimal health benefits. Blending of oils is allowed in India as well as other countries and one finds increasing number of commercial brands that are oil blends.

The current restriction of allowing blending of only two oils has limitations in being able to design better oil blends and move towards the ideal ratio of fatty acids. The list of ingredients permissible in edible oils also needs continuous modification. India fast becoming a capital of cardiovascular diseases, diabetes and cancer, we need to adapt new science and technologies of edible oil blends at a faster rate. These may include even science and technologies of edible oil blends at a faster rate. These may include even looking at addition of MCT, diacyl glycosides etc where in countries like Japan have made a lot of progress. The new FSSA now being drafted is addressing the issue of ensuring safety and at the same time encouraging innovations and fast adaptations of global technologies. Industry is looking forward to this being a step in the right direction.

[Source: Technology Upgradation, Page No.1, Jun.2008]

Fundamental Approach to Price Forecasting – 2008

By
Dorab E Mistry
Director, Godrej International Limited , London

Recent events in the vegetable oil market have given the word Volatility a whole new meaning. We have seen moves of 200 ringgits on a single day on the BMD and moves of 400 points in Soya oil contracts on the Chicago Board of Trade. From a peak of 4486 Riggits, CPO futures have declined to a low of 3030. In Soya oil, futures have declined from a peak of 71 cents to a low of 49 cents. In both cases, it can be said that is the upside had been overdone, so was the downside.

It is estimated that the price level of 3800 to 3900 Riggits was comfortable keeping in mind the fundamentals and the liquidity n the market. It can be further forecasted that sometime between September 2008 and February 2009, in case any weather problem arises in the US growing season, CPO futures could go as high as 4500 Ringgits. The weather has become more precarious in recent years due to Global Warming (through it is not as bad as in 2007) and that the flow of money into commodities and the effect of money into commodities and the effect of Index Funds, Trend following funds and ETFs was very bullish in the medium term.

A brief account on what has been happening in the markets since 27th February 2008.
Events post February 2008 China

Events post February 2008 China
China is and continues to be single most important force in the oilseed and oil market today. It was noticed during the months of December, January and February a rising in all commodity markets. January saw a surge as new investment money flowed into the commodity investment space. Governments all over the world began to get concerned about food price inflation. Some tried to address supply issues, some tried price controls and some tried what I shall only call “co vert measures.”
In China, state controlled enterprises undertook massive imports of Soya oil and palm oil to try and cool the domestic market. They went one step further. Important oil was distributed into the domestic market at prices well below replacement cost in an effort to give relief to consumers. Under normal circumstances this would not have worked beyond a few days. However, this measure coincided with extreme turbulence in financial markets which led of the firm of Bear Stearns and the ugly rumors about Lehman Brothers. Liquidity dried up, massive margin calls were sent out and futures market took a bath. As commodity markets reeled under these blows, the domestic markets in China as indeed in all parts of the world, also witnessed severe price declines. Vegetable oil futures markets are relatively small and quickly hit Circuit Breakers and froze. Investors and traders who had enjoyed the ride Upwards and were sitting on fat paper profits found they could not get out.

The result was that the state-controlled enterprises in China have been very successful in cooling the domestic market and in taking the heat out of local speculative trades. Turbulence in financial; markets enabled them, providentially, to convert a hugely losing situation into a beneficial one. Their massive imports have led to indigestion and it will take perhaps as a buyer on the world vegetable oil scene.

The significant point here is that high prices have not led to any demand rationing in China and this will be a bullish factor when China is next in the market.

Indonesia
The month of March also saw massive shipments of palm products from Indonesia as shippers tried to export ahead of the expected hike in export duties.

The hallmark of a well advertised, well heralded and mature bull market is that no one is really short. Each day the market requires some new bullish news. As they often say, the mature bull needs. to be fed twice a day. The spectators got surprised to see the rapidity and scale of the sell-

off and the freezing up of markets. To those unfortunate enough to be caught, the pain was awful.

During this period, there emerged 4 further factors which will influence the course of our markets over the next six months at least.

India

Firstly, the Indian government found itself forced by its left-wing allies to take some strong steps to control domestic food price inflation. This led to India removing import duties on unrefined vegetable oils. Over the next few months, this measure will ensure imports of crude degummed Soya oil by India in good measure. India's overall imports of crude degummed Soya oil by India in good measure. India's overall imports of vegetable oil will also be higher than hitherto expected. Almost certainly, India's imports of vegetable oil will exceed 6 million tonnes in the year November 2007 to October 2008. It is estimated that the Indian government will 'undertake a large programme of imports by state owned enterprises for distribution to the public, Also, imports of oilseeds may at last be permitted, if only to take the heat out of an over-heated domestic market, sometime in 2009.

Argentina : Framer's Strike

The second important factor to emerge was the strike by farmers in Argentina. Agriculture is the most successful part of the economy of Argentina and its backbone. Farmers and agro industry should be the pride of Argentina. Unfortunately, Argentina is a divided nation whose politicians have done little to heal the rift and to create a climate where business, enterprise and success are rewarded. The government is trying to use old-fashioned price controls and taxes as instruments of state policy. As a result of the anger and frustration of farmers, Argentina is unlikely to come to the rescue of a world which is critically short of food grains and feed grains. The strike will divert demand towards USA and Brazil.

USDA bean acreage estimate

The third important factor to emerge is the USDA's estimate of soybean plantings this season. If that acreage materializes and good weather is maintained, the world will have solved at least temporarily its problem of soybeans and also of wheat. However, it is widely believed that the USDA estimate of 86 million acres will be the highest estimate of the season and that acreage for beans will from here onwards continue to shrink. It is also very uncertain as to what type of growing weather will be encountered in USA this year.

Rice – a frenzied bull market

The fourth major factor to emerge within the last 4 weeks has been the raging and frenzied bull market in Rice. The world picture in Rice has deteriorated beyond belief in a space of weeks. This is because exporting countries like India have put restrictions on exports. So 2008 may well be the year when the world and it is politically critical. Both India and China will have to give their undivided attention in salvaging and improving their Rice crops. As a result, oilseeds and pulses will have to take a back seat.

However, it is noticed that US Federal Reserve initiated the forceful policies to avoid or minimize a recession in the USA and thereby to keep the world economy growing. A weak Dollar is no bad thing for world growth. The developing world benefits far more from expansion in the USA and a continuation of the commodity boom than from deflation, tight money and an end to the commodity boom.

But, the Financial Times of London said this week, in 2008, the United Nations reckons the earth will finally become an urban planet, with more than half its population living in towns and cities. All kinds of reasons mare being put forward for food price inflation. The chief amongst them is the world's growing and increasingly affluent population, the factor of Climate Change and above all, bad short sighted policies of many governments. The simple truth is that China and India are today paying the price for 50 years of neglect of agriculture.

World Vegetable Oil Scenario

The Palm market presents a very interesting picture. Currently there is an excellent CPO produc-

tion in both Malaysia and Indonesia. But the question is For How Long? Current price levels are encouraging the most liberal use' of fertilizer and therefore the monthly production is excellent. It should be considered is excellent. It should be considered if the trees are now burning the candle at both ends. The high stocks at origin for the next several months would be seen but what will happen once the High Cycle concludes?

The availability of sunflower oil is seen and it is estimated that this would take the edge off sun oil prices in the next few months. Further, the rape oil availability would be almost unchanged from last year until November when greater quantities would be available from Australia.
The availability of Soya oil can remain an enigma for the next few months if the farmers strike in Argentina does not get sorted out in an amicable manner. Even if that fortuitous result were to materialize, any expansion in Soya acreage in Argentina can not be expected. Brazil has made a large commitment to bio diesel for the local market and those mandates are likely to be enhanced as time goes by, This relationship can change if the High Production Cycle in palm rapidly subsides and palm production begins to falter.
What is going to be the role of the Funds? It is expected that a degree of normalcy will be resumed and for Funds to be active once again on the same scale as before.

The world's incremental S&Ds can be seen as follows :

000 tonnes	Apr 07 to Mar 08	Apr 08 to Mar 09
Soya oil	+ 1800	+ 1700
Rape oil	- 500	- 300
Sun oil	- 1200	+ 1100
Gn oil	+ 200	—
Cotton oil	—	- 100
Palm Oil	+ 3700	+ 2700
Lauric oil	+ 400	+ 300
Total Increase	**+ 4400**	**+ 5400**

In 2007-08, Demand for food oil grew by 4 million tonnes whilst biofuel demand grew by 2 million tonnes.

In 2008-09, it is expected that the food demand will grow by 3.5 million tonnes and biofuel demand will grow by only 1 million tonnes. Therefore, growth in Supply should exceed the growth in Demand by almost 1 million tonnes.

Global Incremental S&Ds can be seen as follows:

000 tonnes	Apr 07 to Mar 08	Apr 08 to Mar 09
Supply	+ 3,800	+ 5, 400
Demand	+ 6,000	+ 4, 500

Whilst Supply will exceed Demand, it is considered that increased supply will depend on weather and particularly on the Palm Growth Cycle. It should be reckoned with the annual increase in found activity in our markets. But an increase in supply of 1 million tonnes may not be sufficient to prevent prices from rising from current levels.

Price Outlook

It is estimated to have a sideways market for the next 3 weeks whilst U S planting season is underway and the over-supply in the China Domestic market gets sorted out.

After the first week of May, the strong buying interest from China and India and all the traditional

palm markets can be seen. Then a prolonged weather market for the U S growing season can be commenced. Prices would be recovered during this period. Much will depend on the U S weather and the development of the Palm High Cycle. Palm production should peak in September / October and around that time the trees may be seen the trees showing the first time signs of exhaustion.

For the next 12 weeks, it is expected that Soya oil would be the price leader due to the situation in Argentina. In case normalcy returns, there will be enough incentive to concentrate on bio diesel and this will curtail the availability for export of crude degummed Soya oil. Eventually, in case of problems with U S growing weather, it is expected the Soya oil prices may rise to USD 1800. Further, it is expected that soybeans may rise to USD 16 per bushel and in case of a weather problem to go to USD 18 per bushel.

These volatile markets may give something for everyone. Bears may find temporary solace as prices swing from Down 200 to Up 400 Ringgits in a single day. As has been seen so far, money management and margin maintenance are of paramount importable. Trading may need professional skill at all times.

What developments will negate my forecasts? Firstly a deep and painful recession and contagion in world markets can destroy the bulls. No commodity market can withstand a severe recession without giving up its price gains. Secondly an improvement in global weather and bumper crops in USA. Thirdly, sensible policies from the government of Argentina which encourage expansion of Soya acreage. Fourthly, a rise i US interest rates which can lead in US interest rates which can lead to a strengthening of the US Dollar. Fifthly, a collapse in crude oil prices. At present none of these appear to be probable but the possibility of at least one of them happening should not be discounted.

[Source: Oils & Fats Today, Page No.17to19, Jun. 2008]

VISUALS? YES

SUPREME COURT JUDGMENT PICTURES OF VEGETABLE ON LABELS OF VEGETABLE OILS IS NOT MISBRANDING UNDER RULE 37D OF PFA RULES

(We reproduced here below the Supreme Court Judgment on the above subject in the case of Parakh Foods Ltd vs State of A.P. & another)

2008(1) FAC 150
SUPREME COURT OF INDIA
Hon'ble Mr. Justice P.P. Naolekar and
Hon'ble Mr. Justice Lokeshwar Singh Panta

M/s. Parakh Foods Ltd. Appellant

Versus

State of A.P. & another Respondents

Criminal Appeal No. 559 of 2008
Decided on 27th March,2008
M/s Parakh Foods Ltd versus State of A.P.

Prevention of Food Adulteration Act, 1954 – Rules 37-D – Violation of – misbranding – High Court observed the article of food in question was misbranded since non of the pictures contained on the label has any thing to do with the article of food in question – appeal – the appellant has used pictures of the vegetables on the label of the product on which is refined soybean oil, which according to the appellant is to depict the purpose for which the oil can be used, viz., preparation of the vegetable depicted thereon. Unless the picture depicted on the label of edible oils and fats exaggerates the quality the product, it would be not fall with in the mischief of Rule 37-D. In the present case the vegetable shown on the label of soybean oils does not in any way indicate that the quality of soybean oils is 'super refined', 'extra-refined', 'micro-refined', 'double-refined', 'ultra-refined', 'anti-cholesterol', 'soothing to heart', 'cho-

lesterol-friendly', 'saturated fat free' etc., nor it indicates the exaggeration towards the quality of the product to come with in mischief of Rule 37-D of the PFA Rules – the High Court has committed a serious error in arriving at a finding that the article of food (soybean oil) was misbranded since the picture contained on the label has nothing to do with the article of food in question, completely ignoring the fact that the article of food can be used for cooking the vegetable shown in the picture which can not be said to be exaggeration the quality of the food question – the impugned finding of the high court as regards misbranding the valuation of Rule 37D of the PFA Rules is set aside.

JUDGMENT

P.P. Naolekar, J .:- Leave granted

2. This appeal arise from the judgment and order of the Andhra Pradesh High Court
whereby the high court has held that from the evidence on record the article of the food in question is soybean oil. The label contains picture of vegetables like cabbage, carrot, brinjal, capsicum, cauliflower, tomato and onions which are in no way connected with soybean oil. Although the prosecution of the appellant is quashed, a clear case of misbranding is made out.

3. The relevant fats of the case ore that the appellant M/s. Parakh Foods Ltd. (now Cargill Foods India Limited) is a company registered under the companies Act, 1954
(herein after referred to as "the Act") and it sells markets the said product throughout the country. On 23.12.2003, respondent No.2, the food Inspector, District Mahboob Nagar, Andhra Pradesh visited the shop of M/s. Md. Dilawar General & oil shop No. 2-10-4, Old Gunj, Mahboob Nagar, being accused No.1 vendor in the complaint. Respondent No.2 found a carton containing 20 packets of "Shaktimaam Refined Soybean Oil" kept for sale for Human consumption. Respondent No.2 suspected the quality of oil to adulterated and purchased three packets each containing 1 liter oil and obtained cash receipt from the vendor. Thereafter the packets were send to the public Analyst, State Food laboratory, Nacharam, Hyderabad. The public Analyst furnished his report on 31-01-2004 and opined that the label contains picture of vegetable like cabbage, carrot, brinjal, capsicum, cauliflower, tomato and onions which are in no way connected with soybean oil and said that the picture of the vegetables on the label is an exaggeration of the quality of the product and hence violates Rule 37D of the prevention of the food Adulteration Rules, 1995 (hereinafter referred to as PFA Rule) and, therefore is misbranded.

4. Accordingly the food Inspector filed a complaint under the provision of the Act before the Magistrate. A case was registered under Section 16(1)(a)(i) of the act for alleged contravention of section 2(ix)(k) and under section 7(ii) of the Act read with rule 37 D of the PFA Rules.

5. The prosecution initiated against the appellant was challenged by filing a petition
under Section 482 of the Code of criminal Procedure, 1973. The High Court decided the criminal proceeding on 20.17.2007 The High Court came to the conclusion that the vector did not produced any warranty, thus the manufacturer or the dealer can not be prosecuted. When there is no allegation complaint alleging that the vendor produced any warranty or bill with regard to the purchase of the food item in question from accused No.2 that is the appellant herein, merely basing on label declaration the appellant cannot be prosecuted. However, the order of quashing will not preclude the concerned Magistrate in arraying the appellant as an accused during the trial, if there is any offence.

6. The High court has also observed that it is clear that the article of food in question was misbranded since none of the pictures contain on the label has nothing to do with the article of food in question. Therefore it is held to be clear case of violation of Rule 37 D of the PFA Rules. Aggrieved by these finding, the present appeal filed.

7. It is connected by Shri Ashok H. Desai, learned senior counsel for the appellant that the article of food can be considered to be misbranded only when false claims are made with respect to such article of food upon the label or otherwise there is no statutory prohibition under the act in printing

pictures of vegetables on the label of article of the food on which the said article of food may be used in the preparation / cooking of such vegetables. Whereas it is submitted by the learned counsel for the State that the picture on the brand dose not relate to the article which the appellant manufacture and sells and, therefore it would fall within the violation of Rule 37 D of the PFA Rules as misbranded. The relevant provision reads as under :-

RULE 37D- " Labeling of edible oils and fats The package, label or the advertisement of edible oils and fats shall not used the expression "Super – Refined", "Extra-Refined", "Micro-Refined", "Double –Refined", " Ultra –Refined", "Anti-Cholesterol", "Cholesterol fighter", "shooting of heart", "Cholesterol Friendly", "Saturated Fat Free" or such other expressions which are the exaggeration of the quality of the product".

8. The provision for labeling of edible oil and fats is under rule 37D of the PFA Rules which specifies labeling of edible oils and fats. The Rule clearly states that package / labeling or advertisement of edible oils and fats shall not use the expressions such as (i) super-refined; (ii) extra-refined; (iii) micro-refined; (iv) double-refined; (v) ultra-refined; (vi) anticholesterol; (vii) cholesterol fighter; (viii) soothing to heart; (ix) cholesterol friendly; (x) saturated fat free, etc. It would be pertinent to say that all these expressions from (i) to (x) are prohibited because if they are mentioned on the labeling of the product they will tend to exaggerate the quality of the product. The Rule further states that will tend to exaggerate the quality of the product. The Rule further states that all such other expression are also prohibited which tend to exaggerate the quality of the product. For the purpose of interpretation of this Rule the principle of ejusdem generis can be applied; ejusdem generis is a latin expression which means "of the same kind", for example where a law lists specific classes of persons or things and then refers to them in general, the general statements only apply to the same kind" of persons or things specifically listed. In other words, it means words of similar class. According to Black's Law Dictionary (8th Edn0. 2004), the principal of ejusdem generis is where general words follow an enumeration of persons or things, by words of a particular and specific meaning, such general words are not to be constructed in their widest extent, but ate to be held as applying only to persons or things by words of a particular and specific meaning, such general words are not to be construed in their widest extent, but are to be held as applying only to persons or things of the same kind or class as those specifically mentioned. It is a canon of statutory construction that where general words follow the enumeration of particular classes of things, the general words will be construed as applying only to things of the same general class as those enumerated.

9. Keeping the above principle in mind, the words "such other" as used in Rule 37 D is to be read along with the subject matter in which they have been used. The residuary clause of the rule to be read in light of the ten prohibited expressions, and it becomes clear that what is prohibited are only the expressions which are an exaggeration of the quality of the product.

10. In the present case, it is true that the appellant has used pictures of vegetables on the label of the product which is refined soyabean oil, which according to the appellant is to depict the purpose for which the oil can be used, viz. preparation of the vegetables depicted thereon. Unless the picture depicted on a label of edible oils and fats exaggerates the quality of the product, it would not fall within the mischief of Rule 37 D. In the present case, the vegetables shown on the label of soyabean oil is 'super refined', 'extra-refined', micro-refined', 'double-refined', 'ultra-refined', 'anti-cholesterol', 'cholesterol fighter', 'soothing to heart', 'cholesterol friendly', 'saturated fat free' etc., nor it indicates the exaggeration towards the quality of the product to come within the mischief of Rule 37D of the PFA Rules. In our opinion the High Court has committed a serious error in arriving at a finding that the article of food (soyabean oil) was misbranded since the picture contained on the label has nothing to do with the article of food in question, completely ignoring the fact that the article of food can be used for cooking the vegetables shown in the picture which cannot be said to be exaggerating the quality of the food in question.

11. For the aforesaid reason, the appeal is allowed and the impugned finding of the High Court as regards misbranding and violation of Rule 37D of the PFA Rules is set aside.

[Source: Sea News Circular, Page No. 21 to 24, June.2008]

WHY INDEBTEDNESS?

Pilot Studies To Find Out Actual Cost Of Farm Output

The commission for Agriculture Costs and Prices (CACP) has decided to roll out pilot studies in various States to find out the costs of production in realistic terms. The idea is to cross check them with the inputs it gets from State Agriculture Universities. The decision obviously follows the widespread criticism from farmers'organization and agriculture experts that the CACP has not been capturing the costs of production and that there is a huge gap between the CACP estimates and ground realities.

" If there are huge discrepancies, we can tell the Ministry of Agriculture and the agencies concerned to change the procedure of collecting the information," Prof Mahendra Dev, the newly-appointed Chairman of CACP, Said. In an interview, he said the pilot projects would help evolve a more realistic method to find out the costs.

The CACP advice the Union Government on pricing policy for 25 agriculture commodities. Accepting that there could not be a single estimate of costs and prices for the entire country, he said the commission could come out with a common observation, taking into account the inputs it got from 16 States.

"There can be differences in costs of cultivation for different regions. Cost of lab our and other inputs could very from State to State. But it is up to the state Government concerned to step in and add," he pointed out.

[Source The Hindu Business Line dated 13th may 08]

HOP-STEP-JUMP!

FRIENDS, JUST THINK IT OVER

– **One Timely Rain Shower** can save the crop !
– **One Tree** can start the Forest !
– **One Star** can guide a ship at Deep Sea !
– **One Step** Forward can start each journey !
– **One Candle** can wipe out darkness !
– **One Vote** can change the vote of nation !
– **One Smile** give rise to friendship !
– **One song** can spark a movement !
– **One word** can spark a love or Heat !
– **One touch** can show you Care !
– **One hope** can rice your Spirits !
– **One Helping hand** can change the Life of some one !
– **One tear** can tell you what is on Inside !
– **One Drop** can be the beginning of Ocean !
– **One mistake** can cost you Dearly !
– **One pat** on the back of some one can be Rejuvenating !
– **One Deep Breath** can make your stress less !
– **One Small Gesture** can change someone's Career !
– **One Pinch of Salt** can spoil milk !
– **One pinch of Turmeric** can keep you Healthy!
– **One Fight** can separate Best Friends !
– **One Sorrow** can ruin Life !

Finally

– **One Stitch** in time saves Nine Stitches !

[Source Vol.:XI, Issue:2, May,2008]

INTRIGUING?

FOOD INFLATION OFFERS AN OPPORTUNITY

Given our large arable land and favorable climate, and rising global prices, a proper policy framework could ensure that India becomes the world food bowl, says Prashant Goyal

Food inflation is an area of concern today. The rising prices of agricultural commodi ties have forced the government to come up with a slew of restrictions. However, the food price rise in India is not an aberration. The prices have risen globally owing to rising demand from emerging economies, increasing integration of food and fuel markets, growing feed demand (increasing meat consumption) and production shortfalls. It is projected that he agro prices are here to stay, at least over the next few years. The golbal warming could only make the matters worse, Would these restrictions work?

Further, a steep lowering of import duty may reduce the prices in the immediate run but with a large buyer like India entering the market, exporters would be tempted to raise prices and corner the gains, thereby neutralizing the purported benefit for consumers. This is truer in a scenario of shortages. It would also lower the terms of trade for the country and the government too may end up losing customs revenue. Lower duty would hurt the small farmers and farm laborers because of competition from agro MNCs. Moreover, imports at high prices would benefit the foreign farmers, while the Indian farmer would have to be content with MSP. Customs duties are best maintained at stable rates unless there are exigent situations.

Export curbs may be economically self-defeating. They may push farmers into growing crops that are unlikely to face export ban and thus divert attention from crops needed for food security. The crops needed for food security. The credibility of the country as a reliable supplier may suffer and mar future access to export markets. Stock limits, licensing for dealers/retailers, compulsory stock declaration, etc., would discourage the much-needed private investment in agriculture. The Economist suggest that rather than erect trade barriers, the countries should coordinate their efforts to increase supply. The government need intervene only when there is a failure of market and prices rise out of sync with global fundamentals. The export restrictions and import duty cuts favour the consumer at the expense of farmer!

'Ban futures' chorus is again picking up momentum although it is quite clear that the earlier ban on cereals and pulses futures trading failed to lower their prices. Well regulated futures markets help in far and efficient price determination and provide right signal to farmers in taking, critical sowing decisions based on projected demand rather than being guided by MSP, which being administered may encourage production out of sync with market demand. Even a relatively high MSP may fail' to assure the desired procurement as witnessed in the past two years when government failed to meet its food grain procurement target. MSP should best be used to prevent distress sales, while the procurement could be based on more remunerative market prices, with futures trade serving to hedge price risks. With futures banned, price discovery becomes difficult and traders make a ill at the expense of farmers. No wonder the farmers in Punjab protested in favour of futures trading that had offered them vital price clues in 2006 and 2007.

Farmers of the developing countries have long suffered from depressed global prices owing to generous agro-subsidies extended by countries like the US and EG. Now is the time for them to earn decent returns. Deflationary steps would only frustrate them. The price even if paid to traders would get passed on to farmers, in the same proportion, although with a small lag.

The crux of National Policy for Farmers, 2007 is to ensure growth in the real income of farmers. Already the NSSO survey has brought out that 40% of Indian farmers want to quit farming because they find it unremunerative. If that were to happen, the food security of the country may be

in peril and consumers would be forced to go for higher priced imports.

The input subsidies such as on fertilizer, pesticide, power, water, etc. only encourage inefficient use of resources and fail to address the basic problems confronting he agro sector. They may confronting the agro sector. They may even add to our agro-woes-fertilizer subsidies have hurt soil fertility. Input Subsidies have become unsustainable but remained untouchable in a scenario of rising input costs and relatively stagnant output costs and relatively stagnant output prices. Allowing farmers to now earn market prices would increase their ability to pay more for the inputs used by them. Thus, there exists a window of opportunity to gradually wean farmers away from input subsidies. Right prices would also help curb avoidable consumption.

It is true that significant subsidies are given to agriculture in the developed countries and this supports a case for giving subsides to, Indian farmers. However, given our limited resources the subsidies need to be directed towards their most productive use. The savings from reduced input subsidies could be used to give a big push to much-needed investments in agri-infrastructure such as irrigation, roads and power; reducing post harvest wastages; and research and extension services.

It could also be used to extend direct subsidies to small and marginal farmers, de-coupled from production (permissible Green Box subsidy in WTO), to avoid subsidies would also ensure that they are not cornered by the rich and influential farmers. Also, direct food subsidies to the needy (through food coupons) would ensure that food security is not compromised in this process.

The small farmers would also benefit from this. Earlier, it was an administrative nightmare to give direct subsidies to a large number of small farmers but the same is now possible using biometric cards and other IT tools. Countries like Mexico and Brazil are successfully running direct transfer programme to combat poverty. These measures could help make Indian agriculture more completive and empower farmers to withstand global competition.

The sustainable way out of the current mess is to increase food production and productivity and this cannot come without right prices. If the farmer: does not get remunerative prices for his, produce, even the loan waiver packages may jot deliver. Given our large arable land and favorable climate, and rising global food prices, a proper policy framework could ensure that India become world's food bowl.

[Source: Oils & Fats, Page No. 27&28, Jan.2008]

SQUEEZE!

OILSEEDS UNDER THE CRUSHERS

By
G. Chandrashekhar

At the recently concluded GIboil International 2008 seminar in Dubai, the recurring theme was what would happen to the global vegetable oil market in the face of continued spikes in crude oil prices, support for biofuels, planting area constraints and, of course, weather uncertainties. The world market dynamics is critical for India, which is a large importer of edible oils – about 50 lakh tonnes representing over 40 per cent of the total consumption requirement. The country spends over$2.5 billion on such imports.

India, a substantial market

Until a couple of years ago, India was a market closely watched by most global players in the vegoil sector, not only for the size of its vegoil economy, growth potential and import volumes, but also for the unpredictability of its policies towards this sector. China, of course, is another major economy closely watched because of the massive size of its import volumes. Yet, India was a dark horse.

Two years ago, when the bio-diesel movement

began to gather momentum, the world's attention was diverted away from India. While India continued to stay in the market as a large producer, importer and consumers of vegoils, it was no longer the "mover and shaker" of the world market.

Specifically, the palm market got somewhat delinked or insulated from Indian influence. In recent times, the tariff policy changes have had limited impact on the palm of oils, unlike the situation, say, five years ago, although the country continues to be a substantial market even today.

Bio-fuels frenzy

Meanwhile, as the bio-fuels frenzy seized some major economics, new issues have come to the fore. Specifically, competition for acreage; mandated use of bio-fuels; government support; and not in the least, flow of speculative capital.

The situation has not altered dramatically in recent months except for three-four significant developments.

Food verus fuel debate is gathering steam;

Global food inflation is putting pressure on government in many countries.

'Splash and dash' (practice or business of avoidably moving bio-fuels/feedstock to obtain government subsidy) in under challenge; and

India truly opening up its market with zero-duty on crude oils (unthinkable, even recently).

Both palm and soya oils are currently ruling well above $1,000 a tonne. Prices have doubled in the last year-nad-a-half. There has, of course, been a smart correction in recent weeks. Will current high prices of vegetable oil hold up for long?

Volatile markets

By their very nature, commodity markets are volatile. High and low prices are a part of market dynamics. History tells us that bull markets in commodities do not generally last long. Supplies usually respond to prices. In the case of energy and metals, there will be a lag before high prices result in higher supplies; but in the case of agricultural commodities whose production cycle is small at four-six months, supply response can potentially show up in a matter of months.

However, this time, the extraordinary price spike in vegoils has sent ripples through the entire supply chain/value chain. There is concern primarily because 'food inflation' has combined with 'fuel inflation.' In more sense than one, high energy prices have contributed to food inflation.

Consumption of high-priced energy products for agriculture-fertilisers, mechanised farming, transportation – has meant rising production costs for food crops. Adverse weather has played a role in disturbing production in some of the key exporting countries.

No great relief form high food prices is expected anytime soon. Both demand and supply-side factors are likely to keep the market buoyant. A significant relief from high energy prices – mainly crude –s is also becoming increasingly unlikely. the prices of crude and other energy products suggest that the market expects the rates to stay high. This expectation will continue to rub-off on food prices in general and vegoil prices in particular.

It is within this overall expectation that one needs to assess how the Indian vegoil sector will pan out in the next few years. It must be realised that, globally, the policy environment is turning increasingly complex. Across the world, governments are in a dilemma as to how to reconcile the conflict between domestic political and other compulsions on the one hand, and international obligations and steadfast adherence to economic liberatisation, on the other.

Implications for India

However, India's problems are more internal than externally driven. Lop-sided nature of growth so far and compulsions to ensure "inclusive growth" and "growth with equity" are beginning to create "political risk" for the government and "policy risk" for the market.

One may reasonably expect that, during next

three to five year, the economic policy would be oriented towards greater investments in rural areas, and generation of income and employment opportunities in the hitherto neglected regions. Rural incomes are set to go up. Successful implementation of welfare programme and schemes such as Bharat Nirman would improve the livelihood conditions in the villages.

Demand and supply

If rural incomes go up, demand too would. With rising incomes, the demand for a wide variety of goods and services would expand. This is simply because the existing consumption levels are low and every increase in income would first translate to higher demand for food and other necessities of life. Will supplies go up too? Will incremental supplies match incremental demand?

In the case of edible oils, there is little confidence that additional demand will be matched by additional demand will be matched by additional supplies. Projections of Government of India, Planning Commission for the Eleventh Plan hardly inspire confidence. The Government has targeted an annual growth of 4 per cent in oilseed output. Two points need focussed attention. First, there is absolutely no guarantee that output will grow at 4 per cent a year. There is no specific action plan to make it happen. Second, even if 4 per cent growth is achieved, it would fall short of incremental demand by a large margin. As a result, import volumes would expand.

Serious concerns are developing over the future of Indian agriculture, in general, and oilseeds production, in particular. The area under oilseeds has stagnated at 26-27 million hectares. Meanwhile, food grains shortage is looming large; and, therefore, grains will enjoy priority in terms of government's policy attention.

For oilseeds, the scope for area expansion is limited. Relative prices of various crops and procurement policy may influence farmers' planting decision in many areas. Importantly, inflation control will be the top priority for the Government. New Delhi will do everything within its control to ensure prices are reined-in. As the government faces political risk over inflation and poor farm performance, its negative response will result in policy risk for the trade and industry. Lastly, with the burgeoning demand for food, who will feed India in future?

[Source: Oils & FatsToday, Page No. 36&37]

GREAT PERFORMANCE

Soyameal export doubles

Due to bumper production and higher demand abroad, India's soyabean exports have increased significantly. According to the data released recently by the Indore based Soyabean Processor Association of India ISOPA), the soyameal exports in April 2008 increased to 5.5 lakh tonne against 2.31 lakh tones record ed a year ago, a hefty increase of 138%. "We have been targeting countries of southern and eastern Asian regions for the lower freight charges. Thee has been substantial increase in exports during last month due to large production during 2007-08 and good demand from abroad," Rajesh Agarwal, coordinator, SOPA, said.

Agarwal said that the exports may decline from May till September as the availability of soyabean would be lower. Soyabean is grown during the Kharif season and harvest begins during September-October. During October 2007 and April 2008, the soyameal exports have risen by 26% at 3.7 million tonne as compared to 2.9 million tonne in the corresponding period last year, SOPA in a statement said.

During April 2008, the soyameal exports to Vietnam was maximum at of 1,56,339 tonne against 1,04,661 tonne achieved during April 207. The exports t Malaysia, Japan, China and Vietnam also recorded an increase. Soyameal exports to Malaysia rose to 75,174 tonne from 36,226 tonne while to Japan grew to 6.39 lakh tonne compared

to 3.97 lakh tonne.

Edible Oil imports on the upswing

Total import of edible oil into the country has increased by 31% to 26.11 lakh tonne during the first six months (November 2007 to April 2008) of oil season 2007-08 compared to 19-99 lakh tonne in the same period last season. It includes 22.44 lakh tonne of edible oil and 3.67 tonne of non-edible oil.

According to import data compiled by the Solvent Extractor's Association of India (SEA), the import of edible oil in April 2008 was reported at 3.10 lakh tonne compared to 3.06 lakh tonne in April 2007 and non edible oil was reported at 37,703 tonne compared to 49,918 tonne, down by 24%.

Import of edible oil during the review period, despite being peak crushing season has risen by 33%. However, the import slowed down in April month-the beginning of lean period as traders and refiners reduced there inventory due to stock imposed by the various state government and fears of harassment by over-zealous civil supplies officers even though imported oil is exempted from stock limit, This may lead to deplete the stock in pipeline and may put upward pressure on prices of edible oil if the situation does not change in the coming months, according to SEA sources.

In last two and half months, crude palm oil & RBD palmolein prices have gone down by $175-200 while crude soyabean oil reduced over $230 while crude soyabean oil reduced over $230. This, coupled with reduction of import duty has had softening import on domestic prices. Import of refined oil (RBD) palmolein) was reported at 92,967 tonne (4%) during November 2007 to April 2008 compared to 40,050 tonne (2%), and crude oil was reported at 21.51 lakh tonne (96%) compared to 16.67 lakh tonne (98%) for the same period of last year.

CAPTURE THE MARKET!

SEA CASTORSEED & OIL PROMOTION COUNCIL'S ESTIMATE OF CASTOR SEED BALANCE ON 26TH MAY. 08

Particulars	2007 (June '07)	2008 (Projection)
Opening Stock - Seeds as on 1st Jan.	150,000	125,000 (Rev)
Estimated Crop - Seeds (Nielsen Est)	750, 000	909,000
Total Available for Crushing	800,000	1034,000
Total Oil Available for the year (& 44% Recovery)	345,000	460,000
Less: Oil Exports - Jan/ May Bulk	(100,000)	100,000
Containers	{ }	32,000
Derivatives Exports - Jan/ May	25,000	25,000
Domestic Consumption - Jan/ May	20,000	20,000
Est. Balance on 1st June	**200,000**	**283.000**
Less: Oil Exports - Jun/Dec	100,000	105,000 (Proj)
Derivatives Exports- Jun/Dec	50,000	35,000 (Proj)
Derivatives Exports- Jun/Dec	30,000	30,000 (Proj)
Closing Stocks - as Castor Oil	20,000	68,000 (Est)
Closing Stocks - as Seeds as on Dec.end	100,000	150,000 (Est)

[Source: Sea News Circular, Vol.:XI, Issue:3, Jun.2008]

Technology

Diluted biofuel policy by Sept

Declared goods status for ethanol, biofuel technology fund on the anvil

The National Biofuel Policy may finally see the light of day, albeit in a watered down version, in September this year.

A draft policy cleared on July 09 by the group of ministers headed by union agriculture minister Sharad Power has been sent to the union Cabinet for formal clearance.

The draft recommended the creation of the biofuel development board led by the minister of new and renewable energy (MNRE) to monitor the implementation of the policy.

With funding of Rs. 1,200-1,400 corer, the board aim would be to promote the use of biofuel and ensure feedstock sustainability through a programme sponsored and monitored by the Center.

This programme will include the development of germplasm banks and supply mechanisms for non-edible grad biofuel plants.

The panel on the pricing of biodiesel is also likely to complete the process by September. With MNRE's A K Gupta as the chairman, the committee has representatives of stakeholder industries as also of the member Tariff Commission, the Confederation of Indian Industry (CII), Teri (Formerly The Energy Research Institute), New Deli and others.

Pramod Chaudhari, chairman of Praj Industries, who heads CII's national committee on biofuels, said the pricing exercise is crucial as it would from the basis for all investments into the sector.Currently, global production of biofuel stands at 50-55 billon liter per year and is expected to triple on 12 years, he added.

However, capacity addition at the current procurement price of Rs. 26.50 per liter of biodiesel is unlikely as it is considered unrealistic. The panel is understood to be considering a three part costing formula linked to the actual product cost, international prices, and incentives and tax benefits given by various sates.

As for ethanol, the committee has recommended a mandatory blending of 5-10% in addition to a declared goods states to ensure a uniform taxation regime across states. It has also suggested a pass-through of all duties and levies as also a minimum price of Rs 21.50 opposed to a maximum price to avoid unhealthy competition and inconsistencies in supply.

The panel also suggested a renewable and biotech unit status for the industry to open it up to a host of fiscal benefits and incentives for improved viability.

Also recommended is a Rs 500 core second generation biofuels technology promotion fund to boost R&D activities and pilot scale projects based on the private public partnership (PPP) model.

In addition, the panel has proposed bio-energy centers, again based on the PPP model, at the village level to integrate available resources, utilise agri waste and lignocellulosic technologies, and development alternative feedstock.

The draft policy asserts that the biofuel programme will not affect food security as it dose nit provide for utilization biofuel crop plantations.
C Chitti Pantulu, Hyderabad

[Source: DNA, Page No.23&24, Jully,14,.2008]

FIRE RAGING!

Crude inferno ignites biodiesel interest

Rs.15,000-20,000 cr investment slated over next 5-8 years, apart from RIL's Kakinada mega plans

The move to encourage production and use of biodiesel started off an environment friendly initiative some five years back in India.

But suddenly it has become an economic urgency with the international crude prices shooting through the roof and domestic fuel prices keeping pace accordingly.

Over the past few days companies, both foreign and Indian, particularly, the public sector oil firms have begun biodiesel more seriously after international crude prices started going up.

So much so the industry estimates here between Rs. 15,000 crore and Rs. 20,000 crore would be pumped into growing non-edible oil seeds and refining them into biodiesel across the country over the next five to eight years.

BPCL Leads

BPCL has committed an investment of Rs 2,000 crore of jatropha plantations in UP

It has identified Rajasthan, Gujarat, Madhya Pradesh and Orissa to take up similar initiatives

The Company has formed a consortium with Nandan Bimatrix Ltd and Shapoorji Pallonji to take up the project in UP

The figure does not include the money that Reliance Industries will be spending on the 5000 hectares that is has bought in the Kakinada belt in Andhra sources said.

"Talk about biofuels began because of environmental concerns some years back. While the talk has continued for some time it cannot any longer be ignored," said A K Bansal. executive director (corporate affairs), Bharat Petroleum Corporation Ltd, talking to DNA Money.

BPCL has committed an investment of Rs. 2,000 crore to cultivate one million acres of jatropha plantations in UP

Likewise, it has identified Rajasthan, Gujarat, Madhya Pradesh and Orissa to take up similar initiatives.

The company has formed a consortium with integrated neutraceuticals and biotech company Nandan Biomatrix Ltd., and infrastructure company Shapoorji Pallonji to take up the project in UP.

Similarly, Nandan Bio through its Triple-One initiative is talking of investing up to $1 billion across several status in the country to take up jatropha cultivation over 1 million hectares to benefit 1 million families over the next five years.
Likewise it is in talks with various consortium partners including Petronas, Cheveron, the Global Environment Fund and the IFC to take up similar projects in at least nine other countries.

In India, apart from typing up with BPCL and Shapoorji for UP, it is slated to announce this week another such project to be taken up in Orissa with Platinum Energy of Malaysia to take up cultivation of 3200 hectares engaging 2900 farmers in Orissa.

Likewise, IOC has kicked off a pilot project for cultivating and producing biodiesel from non-edible oilseeds with Pantnagar Agricultural University while HPCL too is said to be seriously considering it.

According to industry sources Reliance Industries is slated to be the biggest player in the production of non-edible oilseeds and refining of biodiesel.

The Tatas on their part are said to be investing over Rs 1,500 crore on biodiesel R & D and production over the next five years while the Mahindras, and Ashok Leyland too are in the fray. The reasons for this sudden interest are not far to seek,

As Bansal explains, while the demand for non-edible oils obtained from plant species like jatropha curcas and pongamia pinnata, which can be blended with petroleum diesel is huge in the country, none is available at the Rs. 26.50 pre litre price mandated by the Planning Commission.

Not surprisingly therefore the recommendations of the National Committee on Biodiesel Pricing and Carbon Footprint is awaited by the industry in the hope that it would suggest a higher price tag for non-edible oils as feedstock for biodiesel. "Given the urgency the issue has taken we expect to present our report by September but what is also required in tandem is the finalisation of the National Biodiesel Policy that has been hanging fire for quite some time," said Suprotim Gangulym member secretary of the committee, pricing to be determined by the committee, the industry has been expecting a price of at least Rs. 34-35 per litre which it says is fair given that international crude has already cross the $130 per barrel mark and the farmer and the entrepreneur should get their due price.

But more importantly, the issue is not price but the availability of biodiesel itself. The basis merit of biodiesel is that it can give a partial energy security and save some forex for the oil companies which can be used to mitigate to spike in crude prices, he added.

The country consumes roughly 55 million metric tonnes of diesel every year, And given the initial 5% blend by 2010 mandated by the draft biodiesel policy which is slated to go up to 15-20% in another five years, one can well imaging the saving that will accrue to the country, said B Jaya Kumar, director-technical at Nandan Biomatrix.

Nevertheless, while the sudden interest in biodiesel bodes well for India where energy security and economics for the oil companies are concerned, the country will still have to wait for at least another 3-4 years before it can see the oil actually is pumped out.

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[Source: DNA, Page No. 27&28, Jun,5,2008]

THE BITTER- SWEET

Neem seed oil

The neem species (Azadirachta indica A. Juss., synonymous Melia azadirachta L.) belongs to the genus Meliaceae.

The other species with similar botanical characteristics are known as a Persianlilac or Bakayan (Melia azedarch L.) The neem or margosa tree is native to South East Asia and is grown in many countries throughout the world including India. Srilanka. Myanmar, Pakistan, Malaysia, Indonesia. Japan and tropical regions of Autralia and Africa. It is also grown in the United States. mostly in Florida. While neem is grown extensively for many useful purposes, particularly as a barrier along margins of fields and in homesteads. it furnishes several valuable economic, health and ecological benefits.

An ancient, fascinating tree

The neem tree is treated in India as sacred and is popularly known as the "village pharmachy" because of its healing versatility. Twigs of neem are used in India and Africa as toothbrushes. Different parts of the neem plant including leaves, flowers, fruits, seeds, roots, and bark have been reported for their valuable medicinal and pesticides properties and have been used in Ayurvedic medicine for more than 4,000 years. These benefits are listed in the ancient documents. Charak-Sumhita and Susruta-Smahita, the books at the foundation of the Indian system of natural treatment, Ayurved. Neem trees are fast growing and drought-resistant, remove toxicity from unhealthy polluted air, and provide shade to prevent the occurrence of many diseases.

The neem tree is a large, glabrous evergreen, normally growing up 15 25 meters high, with a relatively short straight trunk reaching a girth of 2.5 to 3.5 meters. The tree (Figure 1) flowers from March to May, fruits from May to August, and bears an ovoid fruit, 2 cm by 1 cm that has a pericarp containing a resinous substance with a garlic odor.

The seed kernels, which weight about 0.2 g each. constitute 50 60% of the seed weight and 25% of the fruit. The oil content of the kernels ranges from 40 to 50%. The fruit yield per tree is 35 55 kg.

India has an excellent resource with about 20 million neem trees estimated in 1976 that could provide a theoretical oil yield of about 0.70 million metric tons (M.M.T) from about 3.5 M. M. T. of seeds are being collected from these trees for the extraction of nonedible oils and biopesticides in India. Global production of neem fruit was estimated in the year 1996 at somewhere between 64 and 91 million trees. The commercial development of neem-based insecticides has raised some interesting legal issues, including the granting of international patents. Due to this and several other factors, the neem tree has caught the attention of large and multinational chemical and pharmaceutical companies in the last 30 years.

In recent years, neem has gained importance because of the compound azadirachtin, a liminoid and a highly oxidized tetranortriterpenoid molecule possessing many oxygen functional groups. it has insect antifeedant, inseet growth regulator chemostcrialtn repleent, and juvenlic and antijuvenilc hormone, molting and antimolting hormone, ovicide, nematicide and rodenticide and contraceptive properties. Azadirachtin in found in many parts of the tree, but is concentrated in the seed, which has become the main focus of interest at commoditizing this tree.

Processing of neem fruits

Neem is not a plantation tree, and the seeds are generally gathered from wild trees growing on the fringes of farms, along hill sides, and from roadsides and shade trees around homes in rural villages. The fruit is a fleshy drupe, yellow when ripe. As the ripe fruit falls to the ground, it is gathered from around the trees. After collection, the fruits are depulped, usually manually, although small mechanical pulpers are available. In some areas, the fruits are buried for a few days to facilitate pulping. After washing, the seeds are dried in the sun. The yields of oil from dried seeds can fall drastically, and also the extracted oil can be very dark with a foul odor and may contain dangerous contaminants. if the neem seeds are not dried and stored properly.

Neem oil can be extracted from the seeds by employing ghanis (village-level crushers), expellers, or solvent extraction. Today, seed oil is usually obtained using large mechanical expellers or solvent extraction. Small-scale product still use traditional pressing methods like ghanis. Neem seeds are usually crushed prior to extraction in ghanis, and good-quality kernels yield 40% oil. In expellers, whole dried fruits, depulped seeds. and kernels

TABLE 1. Physicochemical Characteristic of Neem Oil

Characteristic	Value
Specific gravity at 20^{O}C	0.920-0.940
Refractive index at 40^{0}C	1.4615-1.4705
Saponification value	180-205
Free fatty acid %	<10
lodine value	65-80
Unsaponfiable matter	1.3-3.8
Tocopherols	1.17 mg/g

TABLE 2. Fatty Acid Composition (wt%) of Neem Oil

Fatty acid	Composition (wt%)
Plamitic	13.8-34.0
Stearic	6.6-27.5
Arachidic	Traces-2.1
Behenic	Traces-0.5
Lignoceric	Traces-0.3
Oleic	33.0-69.0
Linoleic	7.5-16.7

yield 4 6, 12, 16 and 30 40% oil, respectively. The oil often has suspended particles that have to be removed by filtration or centrifugation. The cake, with a residual oil content of 7 12%, is sold for solvent extraction or used as fertilizer for different crops.

The solvent extraction of neem seed is usually carried out in two different ways. In the first approach, crushed neem seeds are extracted with polar solvents, e.g., methanol, ethanol, aqueous ethanol, and isopropanol, to separate the bitter constituents into the solvent extract and an oil cake free from bitter and offensive odoriferous constituents. The resultant dried oil cake is then subjected to a further solvent extraction using hexane as a solvent to obtain refined debitterizes and deodorizes neem oil. In another approach, oil is extracted using hexane as a solvent, and the bitter constituents can be extracted from deoiled cake using ethanol or methanol.

Use of different conventional solvents at higher temperature can cause damage to sensitive bioactive molecules. Supercritical extraction of neem kernels using carbon dioxide or methane or other dense gases can be carried out to extract neem oil and azadirachtin-rich powder without damaging these sensitive molecules. This process allows delivery of a broad spectrum of photochemical, including both lipophobic (water soluble) and lipophobic (oil soluble) isolates.

The presence of terpenes, sulfur compounds, and other impurities is the major hurdles in processing neem oil into edible oil. There have been a few reports wherein neem oil was treated with alkali for the removal of free acids and with hydrogen peroxide to remove sulfur-containing unsaponifiable components. Even though the early attempts for refining the oils by selective extraction of nonlipids by alcohol followed by bleaching and deodorization were encouraging, these methods are not economically viable.

Properties of neem oil

The physicochemical characteristics and fatty acid composition of neem oil are given in Tables 1 and 2. Neem oil is rich in oleic acid, which can exceed 45% of the total acid content. The other major fatty acids are palmitic, stearic, and linoleic. The percentages vary from sample to sample depending on place and time of collection of the seeds. Neem oil has been reported to contain phospatidylcholine (13.9%), phosphatidyelthanolamine (39.4%), phosphatidylionsitol (36.4%), and cardiolpin (10.3%) as major phospholipids.

Neem oil is generally dark, bitter, and has a disagreeable odor, and earlier it was mainly used by small-scale laundry soap manufactures. The oil contains nonlipid associates, popularly called "bitters." and organic sulfur compounds that impart a pungent, disagreeable odor. The bitters contain terpenes, namely nimbidin, nimbin, nimbinin, and nimbiodol. When commercial neem oil is treated with alcohol, all the azadirachtin and other biologically active bitter substances can be removed from the oil. The yields of bitters depend on the quality and age of the oil, and also on the maturity of seeds and their processing, drying, and storage conditions.

Azadirachtin concentration in the seed varies from 0.4 to 1% and is reduced on exposure to ultraviolet light. Hence the extraction and stabilization process can be quite critical in ensuring high yield of product. Its isolation, analysis, structure elucidation, and, more recently, synthesis have been the subject of active research. Among the analytical methods employed for the determination of

INFORMATION

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azadirachtin, high-performance liquid chromatography has been reported to be the most reliable. There are more than 100 other active compounds found in neem. including meliantriol, vepol, and salannin. Its extremely bitter flavor can cause many insects to stop feeding on the host plant

Neem seed cake

The composition of the neem seed cake left after oil expression varies depending on the raw material used for expelling. The ranges of the composition (wt%) of neem seed cake are; protein, 13 35: carbohydrates, 26 50: fiber, 8 26: fat 8 13: ash , 5 18: and acid insoluble, 1 7. It has been established that neem seed cake has a high nutritional potential for livestock, but its bitter taste and foul odor due to the presence of nimbin. nimbidin, and nimbosterol have prevented its use as food fro humans.

The cake after extraction of the oil is suitable as a soil additive, positively affecting soil structure, boosting crop root and shoot development, and inducing resistance/tolerance to plant parasitic nematodes. It is being used to supply nutrients to cash crops and vegetables. Neem cake also has the capability to convey residual effect to succeeding crops, including nitrification inhibition capacity due to the pressure of terpenoids-lie azadirachtin, salannin, nimbin, and nimbidin.

Applications of neem oil and its constituents

Neem extracts have been approved by the U. S. Environmental Protection Agency (EPA) for use on food crops. It has been proven in various research studies that neem is nontoxic to birds, beneficial to insects or humans, and protects crops from over 200 of the most costly pests. Neem tree products are widely relied on fro herbal medicine in those countries of production and are used in many cosmetic and pharmaceutical products, as well as for pest control, in homes and crops, Because of its medicinal properties, neem oil is widely deployed in different toiletries such as soap, toothpaste, hair care products, and skin care products.

Azadirachtin, the biologically active, bitter consituent of neem seed oil, influences the hormnal system. feeding activity, reproduction, and flying abiliity of insects and so protects the tree from damaging insects. Azadirachtin has low mammalian toxicity: it degrades rapidly in the environment, and has low side effects on nontarget species and beneficial insects.

Neem oil has moisturizing and regenerative properties. Scientific research today validates many of the traditional uses of neem oil, including the treatment of bacterial, fungal, and viral infections, boosting the immune system, and for many specific health problems. It is also used to deter mosquitoes, fleas, flues, ticks, mites, and lice. Among other benfits, neem oil has been historically used to treat many conditions such as malarial fevers, urinary problems. leprosy, and stomach problems. Applications are also now being made in treatment for high blood pressure, hypertension, and blood circulatory problems, as well as many other health conditions.

INFORMATION

The International Neem Network (netlink:www.fao.org/forestry/site/neem/en) was established in 1994 under the aegis of the Food and Agricultural Oragnization (FAO) of the United Nations. National institutes pf 23 countries in Asia, Africa, Latin America, and Europe have taken part in the Network's activities, under the overall co-ordination of FAO's Forestry Departmenht with the technical support of the Danida Forest Seed Centre, a non-profit organization bgased at Hoersholm, Denmark. The Network focuses its work on exploring and evaluating the genetic diversity of the neem tree. It has the following long-term objectives;

1. improvement of the genetic quality and adaptability of neem to prevailing conditions

2. improvement of neem utilization through the world as a contribution to development in the countries concerned--in particular, meeting the needs of rural people

Neem oil has several potential industrial applicatios in the preparation of biodiesel, soaps, varnishes, creams, tooth powders, and tooth-pastes. It has been used also as film-forming material in formulation of alkyd resins and mix-tures of the resins in various proportions with urea formaldehyde and thiourea-forresins. The neem alkyd urea for blends and neem-alkyd theory have useful mechanical propertimicrobial activity.

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[Source: Neem Oil,Vol.17, Jun,13,.2008]

THE INTREPID ONE!

Biofuel maker IFK close to acquisition

Frim with 10K hectares of jatropha cultivation in crosshairs

BY
Shaleen Agrawal. New Dheli

IKF Technologies Ltd's privately held biofuel mak-ing unit is close to buying a company that has 10,000 hectare in Rajasthan under jatropha culti-vation to extract biodiesel, a company executive said.

"A deal is likely to firm up by the month end," said Vishal Rawat, president, IKF Green Fuel Ltd. He added that the target company has a assured credit line from bank of debt to farmers growing the crop.
The unit expect to earn Rs 3,500 core annually by 2015-16 by producing and selling 10 lakh tonne of biodiesel made form Jatropha plant seeds, Rawat said

The company is eyeing an annual yield of 30 lakh tonne of jatropha seed by 2015-16 as it is looking at bringing 5 lakh hectare under cultivation by 2011-12.

IKF Green Fuel plans to invest about Rs 1,200 crore by the year 2015-16 in acquisitions, refiner-ies and capacities required to make bio-diesel from jatropha oil as also to buy land for cultiva-tion. Rawat said.

"We will fund capacity building and expansion, acquisition and buying of land through a mix of equity and debt, while we are working with banks and financial institutions to provide credit to the formers growing Jatropha for it," he said. The pro-portion between equity and debt required will be worked out later. "If we need more funds, we may go for an IPO as well. It is however, is still in a conceptual stage," Rawat said. He said the par-ent company has committed an investment of Rs 200 crore into IKF Green fuel from the Rs 400 crore it plans to raise from issue of Global De-pository Receipts in the next two months.
The company except to have 50,000 hectare un-der Jatropha cultivation by year-end. With this Green intends to being commercial operation by 2010-11, when it will initially yield about 75,000 tonnes of seeds, in turn giving 25,000 tonnes of oil worth of Rs 90 crore, Rawat said. "The yield will grow and stabiles at about 6-7 tonne per hect-are, giving us about 3 lakh tonne of seed per year after four-five years of operations," he said,
The newly-established IKF Green Fuels Ltd, till the end of the last year, had 5,000 hectare under cultivation, and a refinery in Udaipur to process 3,000 liter of bio-diesel per day for trial and dem-onstration.

The company also plans to establish refineries in Madhya Pradesh, Meghalaya, Gujarat and Maharashtra, and to expand the existing one at Udaipur, to process bio-fuel. The actual capacity building and expansion will, however, depend upon the level of crop plantation the company able to achieve, Rawat said.
IKF Green has signed an MoU with HDFC Bank for a credit line of Rs 20 crore and has an in prin-ciple approval for credit line of another Rs 50 crore from Buldhana Urban Cooperative Society for cul-tivating about 60,000-70,000 hectare for the next two years.

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[Source: DNA, Sep,9,2008]

TRANCE?

NUTRITION FROM EDIBLE FATS & CONCERN OF TRANS FATTY ACIDS.

By
S.C. Singhal, President,
American oil Chemists Society,
(Indian Chapter)

The oils and fats are consumed primarily in food. The consumers have been confused regarding what are “good fats” and “bad fats” for health. How much of calories of total energy should be from edible oils and fats, there is lot of controversy of percentage of saturated fat and the ratio of omega-6 polyunsaturated fatty acid and also omega-3. The problems of lipid oxidation and its effect on food quality, shelf life and nutritional value of safely, which is connected with unsaturation in oil and fat composition increases the cholesterol level in blood which is considered bad for heart.

Now most recently some nutritionists and consumers have been concerned about presence of trans fatty acids as worst and declaring them to be harmful for health. The trans fatty acids' percentage is very small in natural oil & fats. The trans fatty acid in oils & fat are produced during processing, mostly by partial hydrogenation and also in small percentage during high temperature deodorization when temperature is increased over 250 deg. C. This temperature is generally not aimed. The major increase is in hydrogenation.

Historically, the process of hydrogenation was invented in early ninetees to produced a product from oils which resembles butter in consistency, shape and with increased shelf life to protect the oil from oxidation and rancidity as so also to food product made from oils, Now for more than 100 years, margarine and vanaspati produced by partial hydrogenation have been consumed all over the word.

Although trans fatty acids in partially hydrogenated fats are known to have same detrimental effect as saturated fats in raising the ratio of LCD (Low density lipoprotein), the so called bad cholesterol to HDL. (High density lipoprotein), the so called good cholesterol. Trans fatty acid are now claimed to be actually worse than saturated fats because they lower HDL.

These claims are based on epidemiological studies using controversial meta-analysis from several published data pooled to improve their statistical significance. Dietary recommendation cannot be justified when based on epidemiological studies and statistical meta-analysis. However, the clinical studies have also shown that the level of plasma LCD cholesterol has the strongest relationship to heart disease and plasma HDL cholesterol is inversely related to heart disease risk. Moreover in addition to the diet; the other risk factor may be derived form the environment and life style as well as genetically inherited traits. Non-dietary factor that interact to cause high blood pressure, hypertension and blood toxins are also implicated in the development of heart diseases including stress, hypertension, obesity and lack of exercise.

Nutritional guidelines on edible oils & fats have been confusing with dietary recommendation to decrease and replace saturated and partially hydrogenated fats with PUFA including omega-3 & omega-6; no apparent consideration were made of resulting in increased susceptibility of these fats to oxidation, rancidity and thereby resulting in decrease of their nutritional safety. Moreover during frying operation, unsaturated oils & fats polymers are formed which are carcinogenic. An important question that should not be overlooked therefore is more harmful? Too much saturated fats transfer, PUFA or oxidation and rancid fats.

The role of lipids in causation of disease has received much attention and there is continuous controversy and debate about the benefits to health that might be gained by reducing the amount of oil & fat in diet also by modifying the nature of dietary oils & fats.

Some Of The Important Areas for The Future Research Are:

- Role of dietary oils and fats and the risk of coro nary disease.
- Role of omega-3 and omega-6 fatty acid in diet.

- Role of trans fatty acid in oils & fats and their effect on heart disease.
- The effect of high fatty diet causing obesity problems.

S would like to conclude this article saying that we should use a mixture of variety oils & fats in our diet. The present process used for partial hydrogenation of oils and fats should be modified so that there is minimum percentage of trans fatty acids formed during hydrogenation. The high temperature, high pressure, slow hydrogenation with spent catalyst should be modified to low temperature, high pressure, fast hydrogenation, with fresher catalyst so that lower amount of trans fats are form during partial hydrogenation. The hydrogenated fat should be further blended with 25% interesterified fat with no trance for producing low trans product, This product is further blended with 2% - 3% omega-3 and omega-6 containing refined oils for improving the nutrition of the final product. This product would be suitable for stability and shelf life with no risk of trans fatty acids.

The present trans content of 15% in our present vanaspati would be reduced to less than 7%-8%. The vanasapti consumption is 1 to 2 kg per capita as compared to row and refined oils at 1 to 8 kg per capita and with trans in vanasapti as low as 7 to 8 %, the total trans in our diet would be less than 1 to 2 % . Thus there is no need to be panicky as it is quite possible to produced like vanasapati with low trans up to 7 to 8 % and it over all effect in our diet up to 1 to 2%.

The blended product discussed about would have better shelf life, resistance to rancidity with better nutrition and functionality.

Research and Development Required in the Oils & Fats and Allied Industries in India in the 21st Century.

During the beginning of 20th century most of the edible oils used in India were in the form of raw vegetable oils. There was no production of refined oil or vanaspati nor there was any organized vegetable oil processing industry. The first vanaspati factor come into existence in 1930. Till the year 1950-51, the maximum consumption continued to be of row oil. vanaspati production was less than one hundred thousand tones and refined oil was almost negligible.

Nevertheless there had been significant development in the production and processing of oilseeds, during this period. the production of oil seeds increase from approximately 2.5 million tones in the beginning of century to 25 million tones. Now the consumption pattern also change from 3 kg per capita to 10 kg per capita.

During the latter part of the century, modernization of edible oil Industry started
both for the manufacture of quality product as well as for reducing growth the cost of product by using continuous and energy efficient process. There was a significant growth in soybean and sunflower production in India which necessitated the need for per treatment of oilseed before solvent extraction. The extraction of oilseed also made significant development during this period, and similarly the manufacturing of detergent started. The detergent production increased dramatically and surpassed the laundry soap production. The other important even that happened during this period is import of palm oil for which the new technology based on physical refining and fractionation is now established The small plants of oilseed crushing; refining and deodorization which were based on capacity ranging from 25-200 MT per day, were expanded up to 1000 MT per day. Now there is need for a relook about what we have done and what we should do in 21st century.

The major problem with oil processing Industry in India is low productivity per hectare pf oilseed. The productivity per hectare is half world average. This problem needs to be addressed immediately. The production of oilseeds, which has increased during the last 15 year in largely due to bringing in more area under oil seeds, cultivation. Therefore, research in this area should be done on priority basis. The following areas are suggested:-

Biochemistry, Biotechnology & Breeding of oilseeds:

- Application of tissue culture.
- Hybrid seeds.
- Genetically modified seeds.

The second important area for research and Development in the field of Oil & Fat is how to improve their use:

- Production and utilities of margarine and specialty fats.
- Transferring oils in chemicals, castor oil derivatives, high erucid acid from Mustard oil for grease production.
- Production of Bio-diesel, current trend and technical developments.

The third important area is the commercialization of new process:

- Super critical extraction of oils from oilseed.
- Enzymatic extraction of oils for oilseed.
- Enzymatic degumming of oil.
- Enzymatic inter-esterification.
- Enzymatic production of fatty Acids.
- Role of Enzymes in detergent.

The fourth area is Better Utilization of By – products:

- Fatty acid and Acid oil.
- Value added products from deodorization distillation.
- Oryzanol from rice Bran Oil
- Waxes from Rice Bran Oil
- Tocopherols and Tocotricenol and Carotenoids.
- Lecithin
- Protein isolates and concentrates.

The Next Important Areas Which Comes To My Mind Are:

- Production of trans free Vanaspti and margarine.
- Modification of oils and fats by fractionation and Crystallization.
- Application of membrane Technology for improving the quality of crude oils.
- Energy conservation for reducing the cost of production, lower Hexane loss, higher yields in refining of oils, reduced steam and power utilization.
- Atomization of process controls.

Health Concern About Dietary Oil & Fats :
The role of lipids in causation of disease had received much attention and there is continuous controversy and debate the benefits to health that might be gained by reducing the amounts and modifying the nature of dietary fats.

Some of the Important Areas for the future Research are:

- Dietary fats and risk of coronary disease.
- Role of omega-3 and omega-6 fatty acids in diet.
- Effect of high fatty diet causing obesity problem to the people.

Conclusion:
With this article, I have tried to place before the technologists, captains of Industry and the concerned Government. Departments of area in which research & development has to be done in the 21st century. There may be more challengers as we proceed further in this century but we have to implement first this suggestion further mentioned above before we look further and take appropriate steps to meet the further new challenges. The author is the former President of Oil Technologist Association of Ind ia and international Society of fat Research and currently, the president of Indian Chapter of American oil Chemicals Society (AOCS), U.S.A.

[Source: Technology Upgradation,Page No. 1to4]

PEEK INTO FUTURE

STRUCTURED LIPIDS AS SPECIALITY FATS

By
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Typical Fats and oils provided approximately 9 kcal/g of metabolizable energy compared to 4 kcal/g for protein or carbohydrate. In addition to the caloric and nutritional value, fats have many function in diet. interestingly, no signal vegetable oil or fat can meet all the nutritional and dietetic requirements. even though, Government of India allow blending of vegetable oils, only two oils are being permitted to mix and which not be useful to obtain optimum composition recommended by regulatory organization. The only alternative to obtain an idea fat is to design structure fats with a combination of oils. Structure lipids are triacylglycerols that have been modified by incorporation of new fatty acid, resurrected to change the positions fatty acid or fatty acid profile from the natural state or synthesized to yield novel triacylglycerols. Structure Lipids combine the unique characteristics of component fatty acid such as melting behaviour, digestion, absorption and mechanism to enhance their us in foods, nutrition and therapeutics. This type of fats are being considered as " nutraceuticals" also

Vegetable Oils with Specific Fatty Acid Composition: Interesterification of different vegetable oils is useful to prepare to trans-free Vanaspati like non-hydrogenated plastic fats with a define fatty acid composition for food application. Interesterification, catalytic (chemical or enzymatic) method of redistributing the fatty acids on the glycerol back bone, is anther method that can increase functionality without negatively affecting healthfulness. This process can create a random distribution, or it may be directed to a degree that actually modifies the physical properties, without increasing saturation or creating trans isomers. The main advantage of lipase-catalysed intensification over chemical intensification is to produce higher quality triglycerides with specific fatty acid at specifics positions. The lipase-mediated reactions are not sensitive to moisture. It is easy to separate the lipase from the reaction medium, as it is a heterogeneous catalyst unlike chemical catalyst. As there is lot of scope for the development of structured fats, it is useful to prepare different type of tailor made acylglycerols with defined fatty acid composition and positional specification with improved nutritional properties. These modified acylglcerols can be aimed to use in the regular cooking and also for specialty application in the field if parenteral nutrition and food formulations.

Coca Butter Substitutes / Replacers: The high price of cocoa butter has lead to the developments of alternatives. These alternative are classified in two main categories: tempering fats which have the same triglycerides as cocoa butter and non-tempering fats which are hard and quick melting but not based on the some triglycerides as cocoa butter.
non-tempering fats can be futher divided into cocoa butter replacers (CBRs) and cocoa butter subtitutes (CBRs). CBEs are based on oils rich in C16-C18 fatty acids such as soyabean oil and cottonseed oil and do not contain any layric acid (C12), ensuring good miscibility with high-fat cocoa powder or cocoa liquor. They are produced by means of hydrogenation and fractionation CBSs are based on palm kernel and coconut oils that are fractionated and hydrogenated. These processes may also be combined with interesterifiction. CBSs have high lauric acid content and known as lauric fats. Their miscibility with cocoa butter is poor and, therefore, they can only be used with low-fat cocoa powder (10% to 12% fat content).

One of the earliest lipase processes was the manufacture of cocoa butter substitutes. The fat has high level of palmitic and stearic acid giving it is essential property of displaying a sharp melting transition just below 370C. Cocoa butter can be made synthetically be acly transfer reaction between stearic acid and palm oil or sunflower oil. The fatty acid composition of triglycerides. fraction of palm oil in order to obtain cocoa butter substitutes. This was achieved by lipase catalyzed

acidolysis reaction to incorporate stearic acid in the 1-and 3-positions of the triglycerides. A short residence time in a reactor containing high enzymatic activity was desirable in order to avoid spontaneous acyl migration in the partial glycerides which are present as reaction intermediates. Acyl migration can lead to the incorporate of saturated fatty acid into the 2- position and thus trisaturated triglycerides can be formed which is not desire due to there high melting points. IICT is also actively working in this area.

Reduced Calorie Fats : With increasing consumer awareness of the risks associated with high fat intake, a market for reduced calorie fats and fat replaces has opened up. Carbohydrate and protein-based fat replace are currently available, but can not be exposed to high temperatures. Therefore, lipid-based fat substitutes are the only option for the use in cooking and deep-flying applications and for mimicking all the attributes of a natural fat. Reduced calorie fats are designed by taking advantage of either limited absorption of long-chain saturates or the low caloric value of short chain fatty acids. An extension for the search for the ideal fat which provides optimum benefits and minimum adverse effects is the development of non-digestible fat equivalents. Most of research in the area centers around designing a molecule with a similar structure to the fat but that is not completely digestable if at all thereby, reducing the caloric value . The ability of the body to digest a fat like molecule can be hundred either by the largeness or by the shape of the molecule. Among the fat equivalent synthesized to date are: sugar alcohol polyester such has sucrose polyester (SPE), polyglycerol esters, neopentyl-type alcohol ester, glycerol dialkyl ethers, triglycerides esters of alpha substituded carboxylic acids, diglyceride esters of short chain dibasic acids and trialkoxytricarballyate. The majority of reduced caloria fat and fat substitutes like caprenin and salatrim available today contain fatty acids that are not naturally present in edible oil and fats typically such products lack nutritionally important essential fatty acids. Another challenge to processors is to reduced to available calories of dietary fat without decreasing appeal or satiety expected in fat-congaing food. As the fat level in a number of foods in being reduced , the performance and functionality of the remaining fats and oils is of primary importance to the optimum development of these foods.

Medium-Chain triglycerides (MCT) are used to meet the needs if hospitalized patients. MCTs are metabolized more like carbohydrates than fats and, therefore, provide a quick source of energy. Some long chain triglycerides (LCT) are needed for intravenous feeding and for essential fatty acid requirements. Currently, MCTs are used for premature infants, as a flavor carrier, and sold in health food stores (some people believe they will enhance muscle growth). MCT is being tested in low-fat foods as source of quick energy. There are some more report on interesterification of a common oil like sunflower oil with medium chain fatty acids by means of an sn-1,3-specific lipase to yield triacylglycerols containing medium chain acyl moieties at the sn-1,3- positions and long chain acyl moieties at the sn-2 position and such products do not occur in nature and are difficult to prepare by chemical synthesis, may find interesting dietetic applications. The best method to prepare these compounds is also enzymatic approach.

A novel structured fat was synthesized enzymatically by IICT with improved nutrition and reduced calorific value (5.3 kcal/mole) from easily available renewable sources. The reduced-calorie plastic fat has the consistency of vanaspati without any deleterious trans fatty acids. The presence of essential fatty acids and natural antioxidants makes the reduced calorie fat superior to the other reduced calorie fats available in the international market.

Infant Formulations : The fat component of infant formulations contain the fatty acids, such as medium chain fatty acids, linoleic acid, linolenic acid, EPA, DHA in the same position and amount as those found in human milk. Human milk fats have a high proportion of unsaturated faffy acids at positions 1 and 3 together with palmitic acid at position 2. The vegetable oil-based substitutes usually used in formula food have a saturated fatty acid, such as palmitic acid, at positions 1 and 2. This palmitic acid is released in the gut upon hydrolysis by the pancreatic lipases where it tends

to form soaps with calcium ions. The calcium soaps are excreted in the faeces leading to constipation and excessive stool hardness. It also leads to a loss of calcium. Therefore structured lipids with high proportions of palmitic acid at the sn-2 position would provide a fat with improved absorption capability in infants. This type of structured lipids can be synthesized only through enzymatic approaches.

PUFA Rich Structured Fats: Many nutritionally enhanced fats are under development using enzymatic approaches. For instance, triacylglcerols containing the long chain polyunsaturated (n-3) fatty acids such as deocashexaenoic acid (DHA) and eicosapentaenoic acid (EPA) could be manufactured by this approach. A good source for DHA amd EPA is fish oil. Cost considerations are currently restricting application of this technology. DHA is the primary structural lipid in human brain tissue and is poorly synthesized by infants. Therefore, babies need a dietary source of DHA when their brain are developing. The primary source of DHA for infants is breast milk. A study recently published in The Lancet supports several earlier reports that breast-fed preterm infants have an advantage in IQ over formula-fed preterm infants. The n-3 faffy acids are essential in growth and development throughout the human life cycle and should be included in the diet. These faffy acids inhibit tissue eicosanoid biosynthesis and reduce inflammation. Diets rich in n-3 fatty acids also increase high density lipoprotein (HDL) cholesterol, while decreasing low density lipoprotein (LDL) and very low density lipoprotein (VLDL) cholesterol levels. The incorporation of gamma linolenic acid (GLA) also envisaged to exhibit interesting biological properties that might enable their use in specific nutraceutical products.

Diacyl Glycerol Rich Oils : DAG can be synthesized by an enzymatic process to produce mainly 1, 3-isoform DAG, 1,3-DAG oil is believed to have the ability to increase betaoxidation, to enhance body weight loss, to suppress body fat accumulation, and to lower serum tracylglycerol levels postprandially. While certain animal and human studies indicate that consumption of 1,3-DAG has positive physiological effects, others report no effect. The mechanisms of action of DAG are suggested to decrease the resynthesis of chylomicrons as well as shunting them directly to the liver through the portal vein, where they are oxidized. The increased fat oxidation may influence control of food intake by increasing satiety. Safety studies show no risks in consuming a diet rich in DAG oil. Overall, consumption of oils with higher amounts of DAG, specifically 1,3-DAG, may be useful in the battle against obesity. The recent studies reveal that DAG reduces plasma TG levels, body weight and waist circumference, visceral and subcutaneous fat in association with many other health benefits. The diacylglycerol rich oils are already sold as nutritional oil in Japan and are good for obesity patients. IICT is actively working in this area to develop a novel DAG-rich oil.
Development of novel methodologies using enzymatic reactions for the modification of lipids to prepare structured fats will have a great economic impact on vegetable oil processing industry. The lecture covers the recent developments related to the synthesis of structured fats for specially applications.

[Source: Technology Upgradation, Page No. 1to4]

NOT ONLY HUSK!

Bihar Villages Get Power From Rice Husk

Two Virginia University Students have started a project with an India-based partner to supply electricity to villages in Bihar by burning rice husk, a process that may also help reduce carbon emissions. So far, two pilot rice –husk generators are providing power to about 10,000 people, which will save 200 tonnes of emission annually for each village if compared with generation of power form diesel or coal, the university said in a statement here. The project may help turn the huge piles of husks that accumulate in many villages into two valuable products- electricity and ash that can be sold as an ingredient for cement, the institute said. A bit of research suggested that the generators could be financially viable business that could be

expanded to hundred of villages. About 480 million Indians do not have access to power and 350 million of them live in village "rice belt", where the villagers are "rice-rich and power – poor"

[Source: Business Standard dated 15 May 08]

BETTER HURRY!

AGRO BIOTECH REVOLUTION IN INDIA

We started the revolution into agri-biotech in early 2002 with the govern ment giving its nod for commercial cultivation of Bt cotton. Since then, agri-biotech continues to be the fastest growing industry among all the biotech industries in the country.

Growth rate

The agri-biotech sector in India is growing at 30 per cent for the last five years, and it is likely to maintain the growth in the future as well. In 2006-07, the industry made Rs. 926 crore in sales, accounting for 10.84 per cent of the country's biotech market. In 2005-06, it registered a growth of over 81 per cent with a value of Rs. 598 crore compared to Rs 330 crore in 2004-05. Within six years, the Bt cotton acreage in the country has grown manifold accounting for about 70 per cent of the total area under cotton cultivation in 2007-08.

Coming to the food sector, India produces about 600 million tones of food products, yet India's share in international food trade is only 1.5%, value addition standing at 8% of the total production. The Ministry of Food Processing, Govt of India estimates the size of the processed food industry at Rs, 1449 billion. It is expected that the food production will double by the end of this decade and the consumption of value added food products will grow at a fast pace. Agro food production is expected to increase, from 60% of total food grain production to 80% by the year 2010. Fruit and Vegetable processing which is currently around 4% of total food grain production to 80% by the year 2010. Fruit and Vegetable processing which is currently around 4% of total production will increase to 10% by 2010. Value addition of food products is aimed to increase from current 8% to 35% by the end of the next decade.

Motivation

New techniques for understanding and modifying the genome of living organisms have led to large investments in agri-biotechnology research and development. Most of this development has taken place in North America, Western Europe and East Asia, with the United States being far ahead of the others.

Global Leaders

Today, six transnational agrochemical corporation [TNCs Monsanto, Bayer, Syngenta, DuPont, Dow and BASF] dominate the global arena for GM-crops, from R&D to marketing.

Prospects

Making our food supply safer for consumers and the environment and less expensive to produce is the objective. Adding a new gene to a crop plant may benefit growers and consumers. This technique is being used to produce crops that are less vulnerable to insects, diseases and weeds. in the future, scientists hope to develop crops that can be used to create new materials or energy sources, provide more nutrients, treat diseases or serve as vaccines to prevent diseases.

Intense debate is taking place in parts of the developing world about the potential benefits and risks associated with the introduction of GM-crops. The principal issues are the potential increases in yield, decreases in the use of synthetic pesticides and herbicides, impact on the physical environment, the health of human beings and animals (livestock), the livelihoods and socioeconomic cultures of small farmers, the ownership and control of genetic resources, and trade.

Infrastructure

The industry is well supported by the government through streamlined regulatory framework, policies and fiscal benefits that resulted in a functional genomics project with an investment of $8 million. The government has already initiated a

project to conduct genomewide research on a range of agronomically important crops.

Also, the recent infrastructure developments have provided an impetus to the agri-biotech sector in the country. private sector efforts to introduce agribiotech in India began in 1995. However, most research and development (R&D) works have been conducted in the public sector. A large number of specialist national laboratories, and research institutes and centers, and a limited number of universities and institutes of technology are also involved in R&D activities.

Integrated infrastructure (Agri-biotech parks and clusters), active involvement of private bodies and amendments in the regulatory framework are critical considerations.

Potential

The research finds that agricultural biotech in India has good development potential. The country can become a major grower of transgenic rice and several genetically engineered vegetables by 2010. It is emerging as an important destination for both biomarkers and validation services. There is an increasing use of molecular markers in crop breeding and a growing realization that some of these new technologies will lead to future growth in the productivity and quality of crops such as rice, wheat, eggplant (brinjal), tomato and okra. The agri-biotech sector is also reliant on a strong partnering model. Indian and US/European companies can derive synergies in. combining their research and commercialization expertise.

Strategic Considerations

This would not be possible without active support from alliances among seed companies, the report says. Alliances are becoming increasingly important in seed industry to bridge the gap between the field experience and emerging technologies. This is because research productivity and biotech companies represent one of the major sources of this cutting-edge research.

It is this symbiotic relationship that fuels an increasing number of opportunities. It also bring opportunities to operate collaborative R&D programmes in biotech, especially, in genetically modified field trials. As farmer face a limited choice of new seed traits, seed companies are looking forward to developing projects that are required to supplement their product pipelines. Biotech leadership of the country will certainly play a vital role to bridge the gap.

Recommendations

Some of the recommendations from the agri-biotech industry are as follows :

The Patents Act : While the third amendment of the Patents Act has made it TRIPs compliant, there is an urgent need to amend the Manual of Patent Procedure and Practice on the lines of the industrialized nations quickly. This would facilitate proper examination of the patent applications.

Training of patent : examiners : Crop Biotechnology is a very complex science and is relatively new to the Patent Examiners. Hence intensive training of the patent examiners designed at clarifying the complexities of the science would be required.

Protection of plant varieties and farmers rights : The Authority under the Act is just being established. It is meeting the industry representative to ascertain their concerns, which is a step in the right direction. However, while implementing the Act, it is hoped that the Authority will fully integrate the concerns of all stakeholders in an equitable manner so that innovation and technology are given a push.

Approvals : We need to shift from hybrid based approvals to event-based approvals, as is the practice in most countries. This, will not only bring our system in harmony with the regulatory systems prevalent in other developed countries but will also make it faster and easier. Once the event has undergone the biosafetly trials and found to be safe from all considerations, its positioning in any new hybird should not pose any danger to the health of the environment, human beings, and animals.

The approval process for commercialization of approved events should not take more than two years as only agronomic evaluation is further re-

quired. Agronomic evaluation of the product can be part of post-approval monitoring, but should not be a precondition for approval. Approval of transgenic technology should solely be based on scientific evaluation of biosafety and validation of the specific claims made for the technology (efficacy testing).

There is still an opportunity to reduce the time period required for approval of hybirds for an approved gene. In fact the total approval process for such hybrids should not take more than two years while it is taking three years now. We have to review why each trial is required for such hybrids including the ICAR trial of two years, the LST and RCGM trials. This streamlining will help in bringing the approved products faster into the market thereby reducing the dependence of the farmer on unapproved products.

There should be no restriction on commcialization of Herbicide Tolerant crops. Worldwide, HT crops have been the most accepted GM crops because of the economic benefits to the farmers. The same is applicable in India as well.

Recognize the popular varieties as extant and effective varieties and accord them the same consideration as is given to the notified varieties. The Seed Act 1966 does not make notification a mandatory activity. The market share of the popular varieties is more than the notified varieties, signifying their superiority over the notified ones. It would, thus, be anachronistic not to recognize their value to the farmers. Definitional problems do exist, but these can be solved through dialogue with the industry.

Time bound regulatory decisions (the whole process from first submission of application to final approval/denial) after all the field should not take more than 30 months.

Food Biotechnology, Feed & Food Safety Sector : The next decade would belong to the food and feed sector. The guidelines/protocols for the testing of food and feed products would need to be established and made transparent, credible, predictable and in line with FAO/WHO/Codex guidelines.

Drive against illegal seeds : The presence of illegal Bt cottonseeds in different parts of the country is more than that of the legal varieties. Apart from posing risks of biodisaster, they maka mockery of the regulatory system and the laws of the land. Firm State action to contain and restrict the illegal activities is called for.

R&D Priorities : These need to suit Indian requirements. There must be emphasis on biotic and abiotic stresses, increase in nutritional values and lengthening of the shelf life of agricultural products. There is no need to restrict R&D on soybean. Biotech research is cost intensive and encouragement should be given to develop world-class facilities for biotech research. Set up biotech facility of International standard at five centers for supporting Bt research in private sectors at Hyderabad, Bangalore, Kharagpur, Pune and Delhi with latest equipment like sequencers.

Education and awareness campaigns : There is a need to carry the stakeholders along as a biotechnology is a complex and a new science. Hence educational and awareness programs by the State is the need of the hour. An intensive outreach program is called for. The industry would be willing to assist the State in this endeavour in any manner that the Government desires.

Consumers acceptance and ownership of the technology : The involvement of the civil society is essential for the success of the program. The State must take initiative in this regard and ensure that the civil society understands the process of risk assessment and management and expresses confidence in its credibility. The industry is willing to fulfill any role assigned to it in this regard.

Duties and incentives : Apart from nine equipment (as per Customs Notification No. 11/2005-List 27 A) that are being exempted from Customs duty, the following equipment may also be considered under duty free equipment for import : PCR Machine / Real equipment for import : PCR Machine / Real Time PCR, high speed refrigerated/ non-refrigerated centrifuges, microscopes, incubator shaker, hybridization oven, growth chamber, lyophilyser, gel documentation system, high pre-

cision balance, HPLC, gas-chromatograph and high throughput dispensing system.
There should be a single window clearance for setting up industry at every state. In lines of SEZ create Seed Production Zones (SPZs) to strengthen supporting infrastructure.

Biopesticides : Wherever registration of biopesticides is required, it should be done by a separate Registration Board, rather than the Central Insecticides Board (Cm). It is hoped that the suggested new Registration Board may view biological inputs differently due to the different nature of the products. Otherwise, the process of registration should be simplified with fewer requirements for toxicology and chemistry data. Bio-efficacy may be given top priority for registering the products.

A uniform policy should be implemented in all the states of India for research, development, manufacturing and marketing biopesticides. Create a policy environment more conducive for the improved production of biopesticides and biofertilizers to enhance the use of these eco-friendly inputs.

Allow contract research, contract manufacturing and consultancy service for biotech products (including biopesticides) to facilitate overseas clients to outsource their products of their brands and labels, under their licenses and IPRs.

Integrated facilities for testing, bio-efficacy, toxicology data and technology transfer should be made available.

Quarantine facilities should be available at all air and sea ports to facilitate biotech products in terms of their technicalities and faster clearance.

An ICRSAT – Bio Food Knowledge Center Project
Farmer well-being is a result of looking at agriculture as an industry driven by science and technology, instead of marking the sector for development support through subsidies and benefits.
Looking beyond food security, making India a potential global supplier of food products through systemic thinking and global alliances are the current demands from the policy makers for a liberated agri-biotech revolution.

Clearly defined regulatory support that provides guidelines for launching new crops and labeling foods demands an expert committee to relook at the global trends and applications in agri-biotechnology.

Value Chain approach to sectoral development by integrating the scattered resources, technology, research infrastructure, food science and regulations.

A Rs. 21 crore project stretched over a period of 5 years for creation of a centralized national level Platform for innovation and exchange of technologies and process which will he food processing sector.

Government of Andhra Pradesh has already funded this project with an initial funding of Rs.2 crore and the support is due from Ministry of Food Processing Industries and Department of Biotechnology, Government of India.

This is based on the Auther's presentation at a seminar on Bio-fuels & Agritech Industries in Andhra Pradesh.

Abdul Rahman Ilyas
IC RISAT, Hyderabad

[Source : ZeeNews.com dated 8th may '08]

MORE OIL FOR LESS

Rapeaseed Of High Yield

Scientists at Hyderabad-based centre for Cellular and Molecular Biology (CCMB) have tweaked a gene to alter the sex life of a plant, a move that could lead sustained production of high yield crops. Lead researcher Imran Siddiqi has found a gene 'dyad' which is responsible for transferring the combined in the Arabidopsis plant, a member of the mustard family. "We have found the this par-

ticular gene exists in all plants whose genome has been sequences," said Siddiqi, who will now take forward the research with his Australian collaborators under an agreement signed here today. If their finding are taken to the logical end, a farmer can do without buying hybrid seeds to grow the high-yielding crop varieties.

"In the midst of a food crisis, this is a very timely initiative," Science and Technology Minister Kapil Sibal said after Council of Scientific and Research Organisation for collaboration in joint research.

[Source: ZeeNews.com dated 8th may '08]

ABOUT PALM OIL

Report On

By
Dr. S.G. BHAT

Seminar's conducted by Malaysian Palm Oil Council (MPOC) on Palm Oil Nutrition Awarness Programme (PONAP-2008) and 2nd International Palm Oil Trade Fair of Seminar (POTS-2008) at Knala Lumpur, Malaysia during Aug 26,2008 Both events were attended by nearly 500 delegates from Armenia, Australia, Bangladesh, Colombia, Egypt, Ethiopia, Finland, Ghana, Hong Kong, India, Indonesia, Iran, Italy, Japan, Kenya, Korea, Lithuania, Malaysia, Mauritius, Myanmar, Pakistan, Philippines, Poland, PR china, Romania, Rwanda, Singapore, South Africa, Spain, Taiwan, Thailand, Turkey, UAE, UK, USA and Vietnam. Dr. S.G. Bhat, Consultant, Oil Technologist was an minitee from India by the MPOC and a brief report is as follows.

The Palm Oil Awarness Seminar delegates were welcomed by Y. Bhg. Tan Sri Datuk Dr. Yusof Basiron, Chief Executive officer, MPOC, The topic on Nutritional & Food Application's of Palm Oil was presented by Dr. Kalyana Sundaram, Deputy C.E.O., MPOC, and on Palm Oil update on Health of Nutritional issues were presented by Prof. Dr. Pramod Khosla, Wayne state unit., Detroit, Michigan, ELSA. He stressed on the adverse health effects of directory trans monosaturated fatty acids (TFA) resulting from the partial hydrogenation of liquid vegetable only that has been the subject of ****** sorting in ELSA. This subject is relevant to India as the Indian Vanaspati is high in TFA an needs immediately attention by the food regulators.

The POTS – 2008 Seminar dealt with why palm needs Biofuel demand for its long term success by Mr. Dorab Mistry of Godrej International, London, the U. S. low carban fuel Legislation, the march of GMO oilseeds positioning palm oil and a public forum on spiraling food (Edible Oils) and Fuel prices by a panel of speakers, moderated by Mr. Yusof Basiron. The idea was to generate new ideas to enable MPOC to excel further information useful to the World the conference sessions were aimed at addressing the paramount issues facing the Global Market for Palm Oil and the opportunity of challengers then are abundant in this Industry and delegates interaction with captains of oils & fats. The exhibition displayed products of palm oil as also machinery available for production from overseas.

Some of the other presentation are given below in abstract forms. Further details can be obtaining from Malaysian palm oil ******,
Malaysia. [Tel. : 6(03)-7806 – 4097,
Fax : 6(03)-7806 – 2272] or from MPOC,
Mumbai – [Tel. : (022-6655 0755/56,
Fax : 022-6655 0757]
Contact Person : Ms. Bhavna Shah.

Abstract:
1)Branding certified Palm Oil, MPOC's Perspective by Tan Sri Datank Dr. Yusuf Basiren, MPOC

Abstract:
2)The March of GMO oilseeds – positioning palm oil by Mr. Kalyana sundaram, MPOC.

Abstract:
3)Marketing Certified Pal Oil: standards, reality in particles and financial Implications by syed Madhar, Sayed Hussain, SIME DARBY PLANTA-

TIONS.

Abstract:
4)Re-Energizing the Indian Market by Davish Jain, Prestige Group of Companies India.

Abstract:
5)Pakistan Oil & Fats Business : Market expectations and anticipations.

Abstract:
6)China: The Global driver for Economics consumption and Demand in the Oil & Fats Market by Tommy Xiao Jun, China.

Abstract:
7)The Foreign Market : Challenges + outlook for Oil & Fats Trade by Hor Weng Yew, Berhad.

Abstract:
8)Managing the impact of reach on the Oils & Facts Supply chain by Dr. Surima Ismail.
Abstract:
9)Can the Oil and Fats Industry meet the Demands of Global Food oil Fuel Supplies by Thomas lee Baner, Ranbobank International.

Abstract:
10)The U. S. Law Carbon fuel legislation as Global Warming Solution. By Dr. Somia Yeh, USA.

Abstract :
11)CDM & Carbon Trading Market Trends and Key Drivers for further development. By Soeren Varming, TL – SV Carbow.

Abstract:
12)Targeting opportunities & Managing changes in the commodities Market By John Baize.

Abstract:
13)Lesson from Europe – EU, policies on Renewable Energy and Bio Fuel sustainability. By Iimari Lastikka, Nester

The state trading corporation of India Ltd. Signs an agreement with SIME DARBY Bhd. One of the world's leading listed oil palm plantation groups are Aug. 26, 2008 at Knala Lumpur, Malaysia on the last day of the 2nd International Palm oil Trade Fair and Seminar 2008 in the presence of 500 delegates from all over the world. SIME DERBY has big palms of Opening up oil palm estate and setting up an edible oil refinery in India. The Executive Vice-President of plantation and agribusiness division Datak Azhar Abdul Hamid signed the memorandum of understanding on behalf of SIME-DARBY Bhd. While the Managing Director Dr. Arvind Pandalal signed on behalf of the state trading corp. of India. SIME DARBY is a Bio-Supplier of Palm Oil while STC is a big distributors in India.

ABSTRACTS & SPEAKERS' PROFILE

A Marriage between Palm and Soft Oils - The Path in Reducing Trans Fats in the US Fast Food and Catering Industries

The adverse health effects of dietary trans monounsaturated fatty acids (tFA), Resulting from The Partial Hydrogenation of liquid vegetable oils, has been the subject of intense scrutiny. In the united states, starting in 2006, Nutrition facts Panels started to display the tFA content. Subsequent to this, intense lobbying at the State and local levels resulted in New York Csity and Boston imposing bans on tFA in restaurants. In July 2008, California became the first state-to legislate a complete ban on tFA (from)2010 in restaurant products and all retail baked goods by 2011). Other states can be anticipated to follow this trend in the coming months. Hence replacement of tFA in the food supply is now of primary importance to manufacturers and retailers, due to the unprecedented awareness of the general public in relation to this issue. Thus replacements for tFA have to be readily available, affordable, process the desired functionality and... be healthier. An ideal opportunity exist for palm oil to fill the niche created by the gradual removal of tFA As has been show repeatedly for almost two decades, blends of palm oil with soya , canol and corn allow for complete elimination of tFA without compromising cost, functionality or health . Theoretical calculations revel that all tFA in the US food supply can be replaced with an equimix of palm and soya oils. As far as palm oil industry is concerned, the mere fact that palm oil is trans free – can no longer be used as its sole "selling" point. Palm oil now as to compete to new oils (produced by interesterification or genetic modification) that are becoming available in the market pace- and all of these are trans free. This paper will highlight the current and future trends on the usage of palm oil in the US fast food and catering sector arising from the new trans fat regulations.

Dr. Khosla has been on the faculty at Wayne State 1996, where he is currently the department's Graduate program Director. He has been working on diet and lipoprotein metabolism almost 20 years. Additionally, he has doing research on palm oil since 1989. After obtaining his PhD from the University of Western Ontario in Canada, he did post-doctoral research at brandies University in the USA, with professor KC Hayes. It was at Brandeis, that a series of studies in non-human primates, led to the formulation of the "threshold hypothesis" which in addition to establishing the pivotal role of linoleic acid in modulating cholesterol levels, paved the way for various human studies which have documented the "neutrality" of palm oil (in normocholesterolemic humans consuming diets that are currently advocated by most health agencies). These studies as well as an early non-human primate kinetic study showing that trans fatty acids were worse than palm oil, have provided the scientific rationale for palm oil being an ideal choice for fat formulations, requiring a solid-fat content. At Wayne State, recent collaborative studies by Dr. Khosla's group, were one of the first to document the appearance of supplemental palm oil-derived tocotrienols in various human lipoprotein fractions. Dr. Khosla is the author of some fifty original articles and has consulted extensively for the oils and fats industry for some fifteen years.

The March of Genetically Modified (GM) Oilseeds- Positining Palm Oil

By
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Planting of genetically modified (GM) agricultural crops including oilseed has registered impressive growth rates during the past decade and is currently estimated at nearly 115 million hectares of planted area . Nearly 23 countries actively encourage cultivation of GM crops backed by a proven high adoption rate among farmers and belly the fact that GM crops can deliver significant economic benefits. The United States retains its position as the global leader accenting for nearly 50% of global biotech planted area spurred by GM maize (for ethanol production) soybean and cotton. Argentina, the second largest GM cultivator dedicates nearly 16 million hectares for GM soybeans which is more than 50% of the global total GM soya planting of 25.8 million hectares. GM Canola planting is estimated at 5.5 million hectors. In GM oilseed, apart form trait improvements such as herbicide tolerance, insect and virus resistance modification and in the fatty acid composition is an important target. In the post trans area this has taken on grater urgency to fill the void for solid fats that were traditionally made with partially hydrogenated fats. Soya and canola varieties genetically modified for higher saturates, primarily as satiric are in the pipeline buoyed by a strong move to label stearic acid as a neutral saturate with respect to its cholesterolaemic response. However the road such nutritional labeling is still subject to scientific scrutiny since high stearic diets have been shown deleterious in some studies. To a lesser degree the introduction of lauric, (primarily for oleochemicals) and palmitic have also been initiated. A more successfully fatty acid modification trait has been towards high monounsaturated content, achieved by significance reduction in the original polyunsaturated in oilseeds. There high- mono cultivars from soya, canola and cottonseed impart higher heat stability especially during deep frying of foods and are finding demands from fast food franchises looking out for nutritionally superior frying fats to replace trans-frying shortenings. Full availability is however not anticipated until after 2011 since there is limited supply of the oil. New oil varieties do not always provide a glove fit for functionality and customer satisfaction and prices of this varieties are also much higher. Palm oil continues to quality as non-GM edible oil even as it biotechnology research is highly geared. GM enhanced trait for palm oil in the future include higher oleate and stearate content and separate insertions that will enable to oil palm tree to produced bioplastics, lycopene and improve fungal resistance. Meanwhile palm oil currently available competes head-on with GM oils

Dr.Kalyana Sundram is currently the Deputy Chief Executive officer and Director, Science and Environment, MPOC. He has more than 25 years of research experience related to various aspect of the palm oil industry. Much of his work centered on research into food, nutrition and analytical aspect of oils and fats especially palm oil.

He holds several patents in these areas, leading to successful commercialization of palm based product on global markets. Dr. Sundram is member of several international panels on oils and fats, and regularly acts as an invited reviewer of several international journals.