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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 in October 2008 unfolded into a glamourous track. It 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

OTAI – OIL TECHNOLOGISTS ASSOCIATION OF INDIA WHAT IT IS ALL ABOUT

It is over six decades since OTAI has taken birth. An association where science and technology are the key players. Rightly so, When distinguished scientists and technologists headed the Association and made it to gliltter. They constantly emphasized The need is infuse science and technology beyong the confines of the Ivory Towers right into the midst of agriculture and Technical skills. The association played an unbiased role Nationally and Internationally. No rhetoric. It was pure and simple truth. Which exemplified the Association's role in its Interaction with government and people. No axe to grind! The result? It passed through many trials tribulations in pursuit of its objectives-truth and honesty. It came through unscathed... Barring few acrapes, if at all! Yet is was not Holier than Thou attitude. The expressions were presented with a sense of humility –one dares to observe! Times have changed. OTAI keeps marching with the pace and population. Many dramatic solutions are in the pipeline. To feed over One billion people spectacular scientific applications are required. Homegrown solutions, If you please. Diversified inventions towards Oleochemicals without sacrificing food needs. Biofuels to consolidate our energy needs and yet not at the cost of food needs. The future is challenging OTAI will accept the challenge. It will play a significant role in ensuring the right quality and quantity of fat and the nutrition of the people of India. At affordable costs! This is the Goal of OTAI

P.S. Hail "Dr". B.V. Mehta
EXECUTIVE DIRECTOR SEA, MUMBAI

Trade & Commerce

GENUINE?

All Probiotics may not be genuine

Probiotic products, for which consumers have to shell out 10-15% extra than regular offerings, may not actually be probiotic, and the government is now taking steps to sift genuine products from the artificial ones.

The Indian Council for Medical Research (ICMR), under the aegis of the health ministry, has set up a committee to formulate guidelines for probiotic foods. The guidelines are expected to be ready in about three-four months.
The guidelines will involve declaring specific ingredients on labels, which could include strain of bacteria, scientific, efficacy of ingredients, clinically proven cultures, and checks at products are dietary supplements with strains of beneficial bacteria or yeast. They are known to provide good nutritional value to the digestive system and are 98% fat free.

[source : Economic Times, July, 2008]

MANGO - JUICY !

Vapour heat treatment facility at navi mumbai to boost Mango exports

With Japan opening up as a destination for Indian mangoes, and Australia and New Zealand as potential customers, a vapour heat treatment (VHT) plant is being set up at Navi Mumbai to process the fruit prior to export.

A twin facility for irradiation, necessary for export to the US, is also being considered at the location.

This facility, and also an onion export faciliation at Kalwan in Nashik district is being funded jointly by the New Delhi-based Agricultural and Processed Foods Export Development Authority (APEDA) and the Maharashtra State Agriculture Marketing Board (MSAMB). APEDA is subsidising 75 per cent of the total projected cost of Rs 21 crore.

An MoU to this effect was singed on Tuesday at Pune in the presence of Mr Harshavardhan patil. Minister, Marketing, Maharashtra Government.

Though the Navi Mumbai VHT plant is essentially for mango, the facilities, which include cold storage with a capacity of 100 tonnes, tonnes, ripening chambers for 20 t and a packing line for 2 t/hour can be utilised by a host of fruits and vegetables.

Mr Asit Tripathy, Chariman, APEDA, said that Maharshtra topped the list of exporters of fresh produce and fruits which earned revenue of Rs 2,920 crore during 2007, 08 a growth of 21 per cent over the Rs 2,411 crore earned in the previous year.

Total exports of products government by the APEDA rose 36.6 per cent during 2007-08 to touch Rs 28,906.04 crore against Rs 21,150.43 crore in the comparable periods.

Exports of Indian mangoes touched 60,000 t last season, including 25,000 t from Maharashtra. The newest markets, the Us and Japan whose laws require fruits to be subjected to irradiation and vapour treatment respectively, accounted for around 350 t of these.

With the VHT facility, that is due to become operational by early next year, the mango export target to these destinations is around 1,250 t next year. The upcoming onion export centre will have a grading line with a capacity of 10 t/hour and storage for 500 t.

[source : Business Daily from THE HINDU group of publications August, 2008.]

WHO GAINS

Veg Oil duty hike unlikely to benefit growers and consumers

By
G. Chandrashekhar

The country's edible oil trade is in a heightened state of expectation about an imminent increase in customs duty on various imported oils such as palm and soya.

Reports of duty hike floating around in the market last two weeks have actually encouraged importers to expedite shipments inwards and stock up in the hope of a rise in domestic prices. If the duty expectation is realised, those with large inventory will end up making windfall gains; but consumers will be hurt.

According to trade reports, between four lakh and five lakh tonnes of various oils are in storage at various port towns.With the Customs announcing a revised exchange rate of Rs. 50.40 to a dollar, refined oils, on which there is a 7.5 per cent duty, are already set to become expensive on arrival. Restoration of duty to previous levels will exert a further inflationary effect.

Meanwhile the overseas markets have begun to react to external factors such as the crude market.

Crude has stopped falling and has begun to firm up in the last 3 to 4 days on the back of output cut announced by OPEC and expectation of pick up in seasonal energy demand in the US during winter months. This has lent some support to palm and soya oils – both of which have firmed up by $25 to $50 a tonne in the last two days.

According to a trade intermediary, on October, 30 degum soya was quoted at $723 a tonne FOB (free-on-board), up from $675 a tonne on October 27, Crude palm oil gained about $25 a tonne to be quoted at $450 to $455 a tonne on October 31. Given the large inventory of imported oils already built up and the ongoing harvest, there is belief that a duty hike on edible oils will not make any difference to domestic oilseed prices, but will be seen as a Government largesse to help traders with stocks to earn large profits.

As recent as On October 20, the Government went on record in the Lok Sabha that there has been no severe crash in prices of agricultural commodities this year. As evidence of this assertion, the Minister of State for Agriculture provided to the Parliament a table showing monthly wholesale price index (base year 1993-04=100) for agricultural commodities from January to September 2008.

According to the Government, the All Commodities Index increased every single month from January (218.1) to September (241.0), although from July it has shown some stability. As for Index for Primary Articles, there has been a sustained monthly increase in the first nine months of 2008, having risen from 224.6 in January to 251.5 in September. Very simply, looking at All Commodities Index and Primary Articles Index, it is clear, inflation is yet to be contained. The rate of increase may have slowed. but across-the board prices are still at elevated levels.

Specifically, for edible oil, the index stood at 182.4 in January and gradually rose to hit the peak of 201.3 in July, but declined to 196 the next month and down to 192.1 in September. Even assuming a further decline in October, the wholesale price index for edible oils is far above that in the first five months of the year. In other words, the conditions that prompted a zero-duty regime on crude edible oil have not changed significantly.

Similarly, in case of oilseeds, the index standing at 225.6 in January gradually increased to 259.8 by July, and then fell to 255.2 the next month and to 249.9 in September. But even this latest number is far higher than the index for oilseeds between January and May this year.
Any fillip to open market prices in the form of a

duty hike will waken the fight against inflation. A rise in wholesale prices may also have a disproportionately large effect or retail prices; and it is well known that edible oils have a high weight age in the consumer price index.

[source : Oils & Fats, Nov. 2008.]

IT IS TIME

National Policy on Biofuel

Focus on Plantation, Processing and Production Technology

The Government has approved the National Bio-fuel Policy. Under the policy, approved on September 11, the country aims to raise blending of bio-fuels with petrol and diesel to 20% by the year 2017.

Salient features of the policy are :

- An indicative target of 20% by 2017 for the blending of bio-fuels bio ethanol and bio diesel has been proposed.
- Bio-diesel will be produced from non-edible oil seeds cultivated in wastelands,degraded lands and marginal lands.
- The focus would be on indigenous production of bio-diesel feedstock
- Bio-diesel plantations on community lands, government lands and forest wastelands would be encouraged, while such plantations would not be encouraged in fertile irri gated lands.
- To provide fair price to the growers, Minimum Support Price (MSP), with the provisions of periodic revision for bio-diesel oil seeds, would be announced. The details about the MSP mechanism , enshrined in the National Bio-fuel Policy, would be subsequently worked out carefully and considered by the Bio-fuel Steering Committee
- Minimum Purchase Price (MPP) for the purchase of bio-ethanol by the Oil Marketing Companies (OMCs) would be based on the actual cost of production and import price of bio-ethanol. In case of bio-diesel, the MPP should be linked to the prevailing retail diesel price.
- The policy envisages that bio-fuels namely, bio-diesel and bio-ethanol,be brought under the ambit of “Declared Goods” by the government to ensure unrestricted movement of bio-fuels within and outside the states
- The policy states that no taxes and duties should be levied on bio-diesel.
- For research in bio-fuels, a Sub-committee would be constituted under the Steering Committee. It would be led by the Department of Biotechnology, Ministries of Agricul ture & Rural Development and coordinated by the Ministry of New and Renewable Energy.
- Major thrust i s to be given to Research, Development and Demonstration with focus on plantations, processing and production technlogies , as also on second generation cellulosic bio-fuels.

[source : Oils & Fats, Nov. 2008]

STEP UP

ASSOCHAM Moots 5 Point Strategy to turn existing Economic Crisis Into Opportunity

By
Sajjan Jindal, **President, ASSOCHAM**

Welcoming government initiatives to ease liquidity crunch, the ASSOCHAM has suggested five point strategies to turn

severe global financial crisis to "Advantage India."

At a Press Conference held at Mumbai, ASSOCHAM President Sajjan Jindal said that there is an urgent need for further reduction of CRR by 2000 basis points and repo rate by the same number to 7%. Creation of USD 25 billion special fund from the foreign exchange reserves exclusively to be utilized by the ongoing and sanctioned infrastructure projects. Removal of cap on interest rate for NRI deposits and to facilitate money market mutual fund access the repo window. Mr. Jindal accompanied by Sr. Vice President Dr. Swati Piramal and Secretary General Mr. D. S. Rawat, said that the government should create the conducive environment for India to acquire assets globally as the prices have gone down drastically.

Mr. Jindal also said the government should consider the reduction in interest rate especially for retail home loan buyers up to a particular limit(say Rs 20 lac) and explore the possibility for bringing down the risk weightage of Real Estate with manufacturing industry for finances by the banks.

The ASSOCHAM Chief also said the RBI currently provides liquidity to banks through the liquidity adjustment facility (LAF). However, such ropes are only overnight, as yet. In these uncertain times, the RBI should extend the term of such contracts to assure banks funds are available for a longer time horizon.

The policy approach the support INR has relied on relaxing restrictions imposed in the past few years for overseas borrowings by Indian corporate and participatory note restrictions. However, such a strategy, so far, has not been highly successful. Policymakers need to assure corporate that runaway INR weakness will not be tolerated by stepping up spot market operations and taking supportive policy steps such as:

Significantly free up foreign ownership restrictions in the debt market. Admittendly, the current US $ 8 billion ceiling is not fully utilized but that owes to the still small allocations – in a global context-for most investors. A piecemeal approach of relaxing the limit in phases, by say US$ 2-3 billion a year, will not suffice. There needs to be a policy change that permits considerably larger flows through this route, possibly of the magnitude of US$ 10 billion. The attendant near term debt market implications can be offset by a meaningful rise in issuance or perhaps a reduction in SLR.

In the wake of current financial turmoil the ASSOCHAM Chief said that every bank and financial institutions is unwilling to lend each other. There has been a total break down of trust in the banking industry. There is a need to guarantee inter bank lending by respective countries central banks, regulations and fiscal authorities with better co-ordination.

Financial markets needs to identify new set of assets as lending money against the present assets seems more riskier with markets finding it difficult to put a value to it. However, markets are eager to finance firms which hold how debt and quality assets on their books.

Th e number of financing source has reduced along with the cost of financiers has gone up substantially. Therefore a good strategy for raising funds that would diversify as many sources as possible by casting a world wide net. This induces the dose of exposure to any single source and induces competition among different sources.

To avail the opportunity India needs extraordinary measures by tackling the current liquidity crisis for maintaining the growth momentum and ensuring arrest of the further depreciation in the rupee said the chamber chief.

[source : Business Star from NNS publications Nov. 2008.]

GURGLERS

VEGETABLE OIL Imports Up by 14% in 11 months

According to the data compiled by Solvent Extractors of India, During November, 2007 to September 2008 (11 months) India has reported to be imported a total of 4,821,758 tones of edible oil as compared to 4,213,724 tones during the corresponding period last year.

In percentage terms imports have witnessed an increase of 14%. Non-edible oil is reported at 607, 489, tons compared to 588,429 tons, up by a modest 3%. The overall import of Vegetable Oil (Edible + Non-edible) during first eleven months of the Oil Year has shown a rise of 13% and reported at 5,429,247 tons compared to 4,802,153 tons during the same period of previous year.

Import of edible oils in September 2008 is reported at 623,208 tons compared to 569,538 tons in August 2008 and 446,721 tons for the same period of last year, while non edible oil import is reported at 44,708 tons compared to 58,818 tons for the same period of last year.

Imports during 2007-08 (Nov-Oct)

In view of the lean crushing season, import of vegetable oils is likely to maintain at around 6.00 to 6.50 lakh tons in October 2008, till kharif oilseeds crop is available for crushing in November 2008. The total import of edible oils is likely to be in range of 53.0 to 53.5 lakhs tons and non edible oils would be around 6.5 lakh tons. The over all import of vegetable oils ay touch 60.0 lakh tons (including import of vanaspati of 50,000 tons) for the oil year 2007-08 compared to 55.9 lakh tons in 2006-07.

Prices of Imported Edible Oils

In the last three months, CPO, RBD Palmolein, Soybean Oil and Sunflower Oil prices have gone down between US$ 500 to US$ 700 due to bearish trend in international market, thanks to high production and stock of palm oil in Malaysia and Indonesia, rollback of soybean oil duty by Argentina, increased production of sunflowerseed in Northern Hemisphere, likely increase of overall production of oilseeds to 420 million tons in 2007-8, fall in crude oil prices from US$ 146 to US$ 80 at present and improvement in domestic kharif oilseed crops outlook. The bearish trends are likely to continue for some more time.

RBD Palmolein Import on rise :

Import of Refined Oil (RBD Palmolein) is rising and reported at 139,349 tons in September 2008 compared to 115,170 tones in previous month, mainly due to Government buying for PDS distribution. The total import of RBD Palmolein during Nov 07 to Sept 08 is reported at 537.691 tones compared to 102,502 tons for the same period of last year. Crude oil import is reported at 4,284,067 tones (92%) compared tp 4,102,102 tons (97%) for the same period of last year.

Palm Soft Oil Ratio

In 2006-07, the ratio between palm and soft oils was 66:34, however this year due to high price of sunflower oil and disparity in landed cost of soybean oil, the ratio titled in favour of palm oil products. During November 2007 to September 2008, palm oil products share increased to 86% from 66% while soft oil (SBO & SFO) reduced to just 14% from 34% for the same period of last year.

Import of Non-edible Oils up by 3%

Import of non-edible oils in the month of September 2008 is reported at 44,7-8 tons compared to 58,818 tons in September 2007. The overall import of non-edible oils during November 2007 to September 2008 is reported at 607,489 tons compared to 588,429 tons for the same period of last year i.e. up by 3%. P.F.A.D., C.P.S. and C.PK.O constitute the major import of non-edible oils.

[source : Business Star from NNS publications Nov. 2008.]

POWAR POLITICS

Bio-Energy

Not at the cost of food security: Pawar

By
Sharad Pawar, Union Agriculture Minister

Reiterating India's stand on bio-energy the Union Agriculture Minister, Sharad Pawar said that promotion of bio-energy should not be at the cost of food security.

In his address at the World Food Day function at New Delhi on October 16, Pawar said conversion of foodgrains and edible oil seeds for producing bio-fuel will create food security concerns, as is evident already. While the quest of the world community for finding sustainable alternatives to fossil fuels is well appreciated, manufacture of bio-fuels at the cost of foodgrains needs to be examined in more depth. The impact of diversion of land which grows cereal for human consumption into production for bio-fuels is likely to be self-defeating. India's policy, therefore, has been for the use of non-cereal biomass, crop residues and for cultivation of jatropha on degraded and waste land for bio-fuel production.

Highlighting the need to prepare the country to tackle the adverse impact of climate change, the minister called for higher investment in agriculture, especially in research, and making research products easily available to farmers. He said: "What is needed is increasing investments in rural infrastructure and agricultural research and development and transferring new technology to farmers to enable them to cope with challenges of climate change. The use of frontier technologies in conjunction with sound conventional approaches and enhancing input use efficiency will go a long way in mitigating the effect of climatic change in the context of increasing foodgrains production and productivity. There is an urgent need to enhance investment in research and making research products easily available to the farmers."

Pawar said that the country is confident to meet the challenges of food security. He stressed that appropriate measure taken in the recent years have led to record foodgrain production and procurement. The emphasis being given to agriculture is giving good dividends, he said. We have had a record foodgrains for public distribution system has touched 51 million metric tonnes. The increase in food prices in India has also been moderate as against the global price increase during the last one year.

Secretary,DARE and DG, ICAR, Dr.Mangala Rai stated that India has taken a number of steps to cope with the challenges posed by climate change. He informed that India is capitalizing on its vast genetic variability to find new ways to reduce the impact of climate change.

[source : Business Star from NNS publications Nov. 2008.]

HAZY

Reflections

The global financial crisis may hurt Indian economy. The financial crisis would be severe and prolonged. The credit squeeze has hit banks and companies and the global uncertainty is damping investment sentiment.

Prime Minister Man Mohan Singh
speaking to the press after a meeting with a titans of India Inc.

We will be finishing this fiscal in the red, unless more oil bonds are issued to us. Any price cut has to be on the monthly average price of crude in the international market and not on daily changes. For a price cut to happen, international crude prices will have to sustain at levels lower than the break-even point for at least a month. I do not see a trigger, unless political, for a reduction in fuel prices.

Sarthak Behuria, Chairman, Indian Oil Corporation

China and India are great countries whose people are only recently emerging from long histories of being incarcerated by communism or caste. The rise of their economies is creating a new middle
class that would be three billion strong within 30 years and that is setting a new benchmark for global competitiveness.

Media tycoon Rupert Murdoch

[source : Business Star from NNS publications Nov. 2008.]

FLUFFY

Success of cotton,cotton seed, cotton oil & meal

By
Dr. Anupam Barik,
Director Cotton Development, Government of India

Success of Cotton Sector

In recent years cotton sector had made a remark able progress. The lauching of TMC in right time and its impact has now been realized and well established in terms of increasing production, productivity, disseminating improved technologies, reducing contaminations & improving quality. I on behalf of Ministry of Agriculture, Department of Agriculture & Cooperation, congratulate all the cotton stakeholders, State Department of Agriculture & Cooperation, congratulate all the cotton stakeholders, State Department of Agriculture, State Agriculture Universities, ICAR, Krishi Vigyan Kendra (KVK) Cotton Corporation of India (CCI), Trade & Mills organizations, NGOs, Cooperatives and others for their collective efforts and sincere contribution to make the Technology Mission on Cotton (TMC) a grand success.

The contribution of cotton sector to farming community is also significant by way of increasing net income from cotton cultivation. Cotton crop now is getting importance at National level and became a thrust area of Hon'ble PM's Agenda. The policy makers are keenly interested to boost the sector further more. Today the textile Industry has grown to be largest Industry in India and the second largest in World Textile Industry.

Indian Cotton area in Global context did not showed any significant contribution. It was 24% during 61-62 and remains constant upto 2006-07. But during 2007-08 India contributed 28% of World area being the highest acreage (95.55 lakh ha) so far. The production contribution which was hardly 8% in 61-62 increased to 16% in 2007-08 as per DES and 21% as per CAB estimates. Presently India is the second largest producer & exporter of raw cotton in the world. The compound growth rate in production touched at 17% per annum during the decade period from 2001-2007 as compared to 2.29% per annum during the decade period of 1990-2000. The increased production, resulted higher domestic consumption and explored opportunities for export, thereby farmers are getting higher prices than the MSP. The contribution of Bt hybrids also can not be ignored in respect of increasing yield and reducing pesticide consumption.

Cotton Scenario during 2008-09

At the beginning of the season the National target of Cotton area to the tune of 94.78 lakh ha and production of 258.25 lakh ha was fixed for the year 2008-09. Till date an area of 89.09 lakh has been sown as against 91.32 lakh ha of last year. Bt cotton area is 66.61 lakh has which is 75% of the sown area. As such sowing was normal up to June but due to dry spell in July in almost all states, the sowing was affected and late sowing taking place. However sowing again picked up from 3rd week of July especially in Maharashtra and Andhra Pradesh after receiving good rain. By the closing of the year it is expected to touch 91.00 lakh ha as against 95.55 lakh ha of last year.

Mealy bug attack was initially observed in North Zone and now almost in all States its incidence is reported. But its damage is below the Economic

threshold level. However GOI, PPQS, NCIPM in collaboration with various state Department of Agriculture has started precautionary measure on Mealy bug Management as National agenda during 2008-09 so as to minimize its loss and suppress the attack. Under Mini Mission II of TMC several awareness campaign have been started in various states. Presently crop is in good conditions and the National target fixed could be achieved.

want to emphasize and suggest few points to sustain the productivity trend of Indian cotton in near future.

Integration of cotton production, ginning and Textile processing under one umbrella through separate pilot project in selected states are essential to ensure supply of quality cotton and value added products. The domestic consumption (243 lakh bales in 2007-08) need to be further increase instead of exporting raw cotton in huge quantity considering increased total production.

Enforcement of four to five varieties/hybrids of similar fibre quality in a particular identified region through contact farming will ensure uniform delivery of raw cotton to the mills.

Most of the seed distribution is now in the hands of the private seed Industry. Therefore their association in developmental programme are most essential. Seed companies also need to be taken under confidence in any Cotton Development Plan at Central & State level.

A meaningful regulation of Bt hybrids release, its distribution with quality assurance would serve not only as boon to farmers but also for the Industry to get quality cotton.

Integration of Public-Private cotton development activities for the benefit of farming community through training, dissemination of new technologies, awareness programme should be a regular and continuous process. Involvement of private Mills & Trade organizations, Input supply agencies, cooperatives, NGOs in Govt programme implementation must be strengthened.

Introduction of Farmers Field School (FFS) provided with T. V. Computer and internet in each village and running the same by public Private partnership would-be revolutionary attempt in technology dissemination for the future.

Use of Mass electronic media, through internet network for conveying message to the farmers in cotton development will be beneficial to reach the vast section of farmers in a short span period.

Exploring alternative means of increasing the returns from cotton farming by promoting by product utilization are need of the day.

Effective planning of area delineation and launching of pilot project under short, medium and ELS should be a National agenda to minimize mismatch between demand & supply.

Cotton Seed & by Product Utilization

It will be unfair of I don't mention the Cotton seed and its by Product utilization. The focus on Cotton seed & its by product utilization was first initiated as alternative some in late part of eighties due to acute shortage of edible vegetable oils. But till recently no such sincere efforts has been given priorities by any Government Sector. Various by-products of Cotton if utilized judiciously will definitely generate additional income to the farming community. The by-product of cotton seed and stalk have several applications and can be used as raw materials for various agro-industries. It will not only fetch additional income to the farmers but also open up avenues for rural Industries & self employment.

Ibelieve that, AICOSCA is the only organization who has made significant contribution in promoting the cotton seed oil, cotton seed cake, export of lintings through its members associates in the country. The Association is also involved in various types of development activities in cotton seed sector. Similarly CIRCOT, Mumbai is involved in generating technologies for utilization of cotton stalk and it by Product, production of bio-gas and bio-manure etc.

[source : Sea News Circular, Vol. XI Sep.2008, Issue-6]

AD NASEUM

Promotion of Biofuels won't be at cost of farm produce

The government has decided not to encourage biofuels at the cost of food grain production. While a policy for biofuels has been cleared last week and targets have been set to step up diesel blending, senior government officials are of the view that no foodgrain or oil-seed should be used for producing biofuels.

The idea is to prevent a repeat of the American experience where diversion of corn for ethanol production is being blamed for foodgrain price spurt across the globe. Therefore, use of even coarse grains for biofuel production would not be allowed. In the case of sugarcane too, there are concerns that focus on ethanol would lead to lower production of sugar.

Only wasteland is to be used for growing biofuel producing plants such as jathropa. While biofuel production is yet to catch up, there is growing concern over diversion of there is growing concern over diversion of farm land pushing up price of foodgrains. The risk cannot be afforded at a time when Indian entities are looking at purchasing farmland in south America, Africa and Canada to grow pulses and oilseeds. Land has become a scare resource and disputes are raging in various parts of the country over use of farmland for other purposes, including industrial development.

[source : The Economic Times, date 16th Sept'08]

SO WHAT?

Nutrition from edible fats & concern of trans fatty acids

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

Oils and fats are consumed primarily in food. The consumers have been con fused regarding which are good fats and bad fats for heath. How much of calories of total energy should be from edible oils and fats. There is a lot of controversy on the percentage of saturated fat and the ratio of omega-6 polyunsaturated fatty acid and also on omega-3. The problems of lipid oxidation and its effect on food quality, shelf life and nutritional value of sa fety, which is connected with instauration in oil and fat composition. Similarly it is well document that saturated fatty acid in oil and fat composition increase the cholesterol level in blood which is considered bad for heart.

Now, most recently some nutritionists and consumers have been concerned about the presence of trans-fatty acids, at worst declaring them to be harmful for heath. The trains-fatty acids' percentage is very small in natural oil and fats. The trans-fatty acids' percentage is very small in natural oil and fats. The trans-fatty acid in oils and fats is 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 nineties to produce a product from oils which resembles better in consistency, shape and increased shelf life to protect the oil from oxidation and rancidity of food products made from oils. Now for more than 100 years, margarine and vanaspati produced by partial hydrogenation have been consumed all over the world.

Although trans-fatty acids in partially hydrogenated fats are known to have the same detrimental effect as saturated fats in raising the ratio of LDL (Low density lipoprotein), the so called bad cholesterol to HDL (high density lipoprotein), the so called good cholesterol. Trans-fatty acids 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 justified when based on epidemiological studies and statistical meta-analysis. However, the clinical studies have also shown that the level of plasma LDL 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 factors may be derived from the environment and life style as well as genetically, inherited traits. Non-dietary factors that interact to cause high blood pressure, hypertension and blood pressure, hypertension and blood toxins are also implicated in the development of heart disease including stress, hypertension, obesity and lack of exercise.

Nutritional guidelines on edible oils and fats have been confusing with dietary recommendations to decrease and replace saturated and partially hydrogenated fats with PUFA including omega-3 and omega-6; no apparent considerations 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 and fats polymers are formed which

are carcinogenic. An important question that should not be overlooked therefore is-what is more harmful? Too much saturated fat, transfect, PUFA or oxidzied and rancid fats.

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

Some of the important areas for future research are

- Role of dietary oils and fats and the risk of coronary disease
- Role of omega-3 and omega-6 fatty acids in diet
- Role of trans-fatty acids in oils and
- fats and their effect on heart
- disease
- The effect of high fatty diet causing obesity problems.

I would like to conclude by saying that we would use a mixture of variety oils and 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, and fast hydrogenation with fresh catalyst so that lower amount of trans fats are formed during partial hydrogenation. The hydrogenated fat should be further blended with 25% interesterified fat with no trans for producing low trans product. This product is further blended with 2 to 3% omega-3 & 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 to 8%. The vanaspati consumption is 2 to 2 kg per capita as compared to raw and refined oils at 7 to 8 kg per capita and with trans in vanaspati 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 positive to produce a product like vanaspati with low trans up to 7 to 8% and its overall effect in our diet upto 1 to 2%.

The blended product discussed above 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 organised vegetable oil processing industry. The first vanaspati factory came into existence in 1930. Till the year 1950-51, the maximum consumption continued to be of raw oil. Vanaspati production was less than one hundred thousand tonnes and refined oil was almost negligible.

The role of lipids in causation of disease has received much attention and there is a continuous controvery and debate about the benefit to health that might be gained by reducing the amount of oil and fat in diet and also by modifying the nature of dioetary oils and fats

Nevertheless, there had been a significant development in the production and processing of oilseeds during this period. The production of oilseeds increased from approximately 2.5 million tonnes in the beginning of the century 25 million tonnes. Now the consumption pattern has also changed from 3 kg per capita to 10 kg per capita.

During the latter part of the 20th century,

modernization to edible oil industry started both for the manufacture of quality product as well as for reducing the cost of production 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 capita treatment of oilseeds before Solvent Extractors. The extraction of oilseeds also made significant development during this period, and similarly the manufacturing of detergents started.

The detergent production increased dramatically and surpassed the laundry soap production. The other important event that happened during this period was the import of Palm oil for which the new technology based on physical refining and fractionation was established. The small plants of oilseeds crushing; refining and deodorization which were based on capacity ranging from 25 to 200 MT per day, were expanded up to 1000 MT per day. Now there was a need for a relook about what we have done and what we should do in the 21st century.

The major problem with oil processing industry in India is low productivity per hectare of oilseeds. The productivity per hectare is half of the world average. This problem needs to be addressed immediately. The production of oilseeds, which has increased during the last 15 years is 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.

Biochemicstry, Biotechnology & Breeding Of Oilseeds :

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

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

- Production and utilization of margarine and speciality 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 oil seeds
- Enzymatic extraction of oil from oilseeds
- Enzymatic degumming of oils
- Enzymatic inter-esterification
- Enzvmatic production of Fatty Acids
- Role of Enzymes in detergents

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 Vanaspati 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 utilisation
- Atomization of process controls

Health Concern about Dietary Oils & Fats:

The role of lipids in causation of disease had received much attention and there is a continuous controversy and debate about the benefits to health that might be gained by reducing the amounts and modifying the nature of dietary fats.

In this article, I have tried to place before the technologists, captains of industry and the concerned government departments, the area in which research and development has to be done in the 21st century. There may be more challenges

as we proceed further in this century but we have to implement first the suggestions 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 Technologists Association of India and International Society of Fat Research.

[source : Oils & Fats, Nov. 2008]

WATCH OUT

Omega-3 ALA from Plants

By
A.H.Stark, M.A Crawford, R. Reifen.

The health benefits associated with alpha-linolenic acid(ALA) consumption include cardiovascular effects, neuro-protection, a counter to the inflammation response, and benefits against autoimmune disease.

However, the longer-chain eicosapentaeonic acid (EPA) and docosahexaenoic acid (DHA) have received more study from scientists and more attention from the consumers.

"For many years, the importance of the only member of the omega 3 family considered to be essential, alpha-linolenic acid (ALA) has been overlooked," states a special article published in this month's Nutrition Reviews.

ALA is derived from plant sources such as flaxseed. EPA and DHA are derived from marine sources such as oily fish, and DHA can also be derived from microalgae.

Much attention has been paid to the conversion of ALA tot he longer chain EPA, with many stating that this conversion is very small. According to the review, between eight and 20 per cent of ALA is converted to EPA in humans, and between 0.5 and nine percent of ALA is converted to DHA.
In addition, the gender plays an important role with women of reproductive age reportedly converting ALA to EPA at a 2.5 fold greater rate than healthy men.
This conversion obviously contributes to the body's pool of EPA and DHA, which play a key role in, amongst other things, maintaining cardiovascular heath.

Moreover, benefits such as improved vascular tone, heart rate, blood lipid levels, inflammatory responses, blood pressure, and reduced hardening of the arteries, have also been associated specifically with ALA consumption. The conversion of ALA to EPA involves the delta6-desaturase enzyme to form stearidonic acid (SDA). An enzyme (malonyl co-enzyme A) then elongates the SDA from an 18-carbon chain to a 20-carbon chain, and further desaturation, this time by the delta5-desaturase enzyme, results in the production of EPA.

These enzymes are also involved in the elongation of the omega-6 fatty acids found in plants, with linoleic acid converted to gamma-linolenic acid (GLA) and then to arachinodonic acid (ARA).

Omega-3 versus omega-6

Competition for the 6-desaturase enzyme in the metabolism of both ALA and linoleic acid may have an important role to play in the inflammatory response. By increasing the intake of ALA, the 6-desaturase available will produce less ARA from linoleic acid, so the argument goes.

"It is thought that a higher relative intake of omega-6 fatty acids increases production of arachidonic acid (20:4n-6), which in turn is used to produce pro-thrombotic and proinflammatory omega-6 metabolites," wrote the researchers.

"Metabolites of omega-3 origin are anti-inflammatory and anti-arrhythmic. A high omega-6: omega-3 ratio is though to promote the pathogenesis of many diseases, including cardiovascular disease, cancer, osteoporosis, and inflammatory and autoimmune diseases," they added.

(source : Nutrition Reviews, Volume 66, Issue 6, Pages 326-332, Doi:10.1111/j.1753-4887.2008.00040., "Update on alpha-linolenic acid"]

VK INFO

Vitamin K

Vitamin K aods blood clothing, protects the heart, and helps to build bones.

Those who need to increase their Vitamin K intake can select foods from this high Vitamin K food summary list. Others, who wish to avoid Vitamin K because they are taking Coumadin, may also use the list to help themselves avoid excessive blood thickening. Vitamin K (blood thickener, clotting agent) decreases the action of Coumadin (warfarin – blood thinner, stroke preventer). It is not necessary to take Vitamin K supplements, to achieve a high level of Vitamin K nutrition.

USDA NDB Ref. #	Food Category / Description	Vit. K Per measure µgrams	Weight grams	Common Measure
	VEGETABLES	———	———	———
11464	**Spinach, frozen, chopped, boiled, drained, wo/salt**	**1,027**	190	1 cup
11461	**Spinach, canned, drained solids**	**988**	214	1 cup
11458	**Spinach, cooked boiled, drained,**	**889**	180	1 cup
11575	**Turnip greens, frozen, boiled, drained, wo/salt**	**851**	164	1 cup
11087	**Beet greens, cooked, boiled, drained, wo/salt**	**697**	144	1 cup
11569	**Turnip greens, cooked, boiled, drained, wo/salt**	**529**	144	1 cup
11271	**Mustard greens, cooked, boiled, drained, wo/salt**	**419**	140	1 cup
11101	**Brussels, sprouts, frozen, boiled, drained, wo/salt**	**300**	155	1 cup
11091	Broccoli, cooked, boiled, drained, without salt	220	156	1 cup
11099	Brussels sprouts, cooked, boiled, drained, wo/salt	219	156	1 cup
11291	Onions, spring or scallions (includes tops, bulb), raw	207	100	1 cup
11093	Broccoli, frozen, chopped, boiled, drained, wo/salt	183	184	1 cup
11658	Spinach souffle	172	136	1 cup

USDA NDB Ref. #	Food Category / Description	Vit. K Per measure µgrams	Weight grams	Common Measure
	VEGETABLES	———	———	———
11297	Parsley, raw	164	10	10 springs
11457	Spinach, raw	145	30	1 cup
11019	Asparagus, frozen, cooked, boiled, drained, wo/salt	144	180	1 cup
11439	Sauerkraut, canned, solids and liquids	135	236	1 cup
11252	Lettuce, iceberg (includes crisp head types), raw	130	539	1 head
11253	Lettuce, green, leaf, raw	97	56	1 cup
11090	Broccoli, raw	89	88	1 cup
11281	Okra, frozen, cooked, boiled, drained, wo/salt	88	184	1 cup
11110	Cabbage, cooked, boiled, drained, without saltt	73	150	1 cup
09310	Rhubard, frozen, cooked, with sugar	71	240	1 cup
11279	Okra, cooked, boiled, drained, without salt	64	160	1 cup
11196	Cow peas, frozen, boiled, drained, wo/salt	63	170	1 cup
11117	Cabbage, Chinese (pak-Choi), boiled, drained, wo/salt	58	170	1 cup
11251	Lettuce, cos or romaine, raw	57	56	1 cup
11144	Celery, cooked, boiled, drained, without salt	57	150	1 cup
11091	Broccoli, cooked, boiled, drained, without salt	52	37	1 spear
11205	Cucumber, with peel, raw	49	301	1 large
11303	Peas, edible-podded, frozen, boiled, drained, wo/salt	48	160	1 cup
11457	Spinach, raw	48	10	1 leaf

11457	Spinach, raw	48	10	1 leaf
11114	Cabbage, Savoy, raw	48	70	1 cup
11019	Asparagus, frozen, cooked, boiled, drained, wo/salt	48	60	4 spears
11192	Cow peas, immature seeds, boiled, drained, wo/salt	44	165	1 cup
11109	Cabbage, raw	42	70	1 cup
				Over **300 µ g.** shown in **BOLD BLUE.**

[source : USDA Nutrient Database for Standard Reference, Release 15Daily Recommended Vitamin K (phylloquinone=K1);80-120

µg Please note that the amounts listed in the chart above are all in MICRO grams. Too much: no upper limit has been set.]

A COMPLEX ISSUE

Vegetable oil complex - analysis of the fundamentals

By
Dorab Mistry
Director, Godrej International Limited,
London U.K.

A painful correction so far

The months of July and August gave us an extremely painful correction as vegetable oil prices followed the decline in the energy market. Two weeks ago on 25th August I spoke at a seminar organised by the **Malaysian Palm Oil Council** on the topic **"Why Palm needs Biofuel Demand for its long term success."** I shall today continue to analyse and explain the current fundamentals of the vegetable oil market and try to project what is likely to happen in the next few weeks.

Let me caution at the outset that today is not a very good time to analyse the fundamentals. We are on the doorstep of harvest in the major agricultural areas of the northern hemisphere. Weather at this time is extremely important. Also, we are due to receive within the next 48 hours the important September crop estimates of the USDA. should the USDA explode a bombshell on Friday, I hope you will treat me with indulgence.

India

The Indian government took the right step to curb inflation by undertaking a programme of vegetable oil imports through public sector companies for distribution at subsidised prices. Sadly the implementation of this policy has taken too long. Now with the dramatic delcine in world prices, this policy has become unnecessary and burdensome. **Public sector imports need to be stopped immediately.** They are now a drag on the local industry and the lossess on these imports have become intolerable. In some cases the entire subsidy of Rupees 15,000 per tonne or US Dollars 340 per tonne will be eaten away by the decline in prices.

The government also needs to pay attention to the plight of farmers who have enthusiastically planted oilseeds this year in the hope of receiving remunerative prices. A continuation of subsidised imported oil will compound the problem for everyone including the government. At some stage during harvest time the government will also have to seriously consider steps like raising the import duty on vegetable oil, to support domestic prices otherwise oilseed farmers will feel betrayed. The task of the Indian government is unenviable but the first step is to stop further public sector imports.

I have one more comment on India. **There is talk of large scale defaults by importers in India, China, Pakistan and Bangladesh.** This is a very sand and unfortunate. Shippers must exercise greater discipline in the choice of customer and must assess party risk adequately. Shippers must see the wood from the trees and separate the wheat from the chaff. In all these countries, the local trade associations are weak, ineffective and powerless to enforce discipline. They can do nothing to help. The only solution, sadly, is for Shippers in future to exercise discretion and resist the temptation of doing business with riff-raff.

Finally, may I also congratulate the governments of the **ASEAN countries and India on the successful negotiation of a Free Trade Agreement?** I am sure there was much goodwill and give and take on both sides. This FTA bodes well for a quantum jump in Indo-Asean trade and investment.

World Vegetable Oil Incremental Supply and Demand

As I have explained in an earlier paper, In the current oil year, October 07 to September 08, northen hemisphere crops have shaped up extremely well and there have been bumper crops of rapessed and sunseed whilst soya production in USA has also been good when compared with the planting problems of June. The soya crop in China also looks like being much higher than last year at 18 million tonnes.

The USDA will bring out its latest estimate of the 2008 soya crop on Friday. Attention is fo-

cussed on yields. I would submit that a 50 million bushel revision in the USDA's crop estimate should not impact the market beyond a couple of days. **The market has to take on board the very real possibility that China's import of soybeans in the 2008-09 will be lower than the previous year. Soybean demand in the rest of the world is also likely to be hampered by the slow offtake of soya meal and the much larger availability of other oilseeds.** The general slower pace of economic activity in the big population countries always directly affects meat consumption. The recent reversal in the fortunes of the Brazilian Real should also lead to much better economics for soya farmers and lead to some expansion of acreage once again in 2008-09.

Palm production has also been very strong. On the other hand, the very high prices of the first quarter of 2008 led to an outcry against biofuels. The new regulatory and tax regimes for biodiesel in Germany and parts of the EU also led to a scaling back of biodiesel production and demand in the first half of 2008. **My estimate is that on an annualised basis, for the oil year 2007-08 we have lost 1 million tonnes of food demand and about 500,000 tonnes of biodiesel demand as a result of high prices. Some of this lost demand may be re-captured in 2008-09 but that is going to be the function of price.**

For the oil year October 2008 to September 2009 also, we are seeing big increases in the production of sunseed and rapessed.

For this paper, I have not altered the Incremental World Vegetable Oil Supply and Demand figures from what I presented two weeks ago.

World Incremental Supply for 2007-08 and for 2008-09 looks as follows.

000	**Oct 07 to Sept 08**	**Oct 08 to Sept 09**
Soya Mill	+ 1,800	+ 1,500
Rape Oil	- 500	+ 1,000
Sunflower Oil	- 1,000	+ 1,500
Groundnut Oil	+ 200	-------
Cottonseed Oil	-------	---------
Palm Oil	+ 4,500	+ 2,500
Lauric OIls	+ 450	+ 300
TOTAL	**+ 5,450**	**+ 6,800**

On the other hand, as I have said before, food demand grew in 07-08 by only 3 million tonnes and biodiesel demand by 1 million tonnes. **Hence for 07-08, Incremental Demand by almost 1.5 million tonnes and the bulk of this excess has come in the second half of the year.** The information of the last 2 weeks is more pronounced in terms of higher than expected supply and a worsening economic outlook.

It must be borne in mind that all figures for 08-09 are a guess at this early stage. Palm production may or may not be as high as we estimate and bio diesel demand may be higher or lower than expected.

Palm as a fuel must be cheap and profitable

Palm diesel must not rely on any mandate for its market. Many analysts make a big mistake when they take account of subsidies and incentives to calculate the viability of palm diesel. Subsidies, export tax rebates and mandates are aimed at encouraging local and domestic vegetable oils whether in the EU or in USA or in Argentina or Brazil. **Would it be reasonable to expect the Malaysian government to subsidies the production and consumption of Rape diesel?** Hence palm must stand on its own two feet if it is to expand its biofuel market-share sufficiently. Any incentive or subsidy in its destination markets must come as a bonus and must not be critical to its viability.

Many analysts have also overlooked what **Oil World** has very succinctly pointed out in its latest edition of **5th September. Oil World** writes "Palm's market share in Europe seems to have reached a maximum leaving limited scope for further expansion".

There is however a vast market for burning or co-firing palm oil as a fuel in boilers, furnaces and for electricity generation. This huge market becomes accessible only when one of two critical factors will happen:

either we get large amounts of Certified Sustainable Palm Oil (also branded as Green Palm oil), which is several years away;

or if palm oil prices decline to a significant discount to fossil fuels. T**his latter possibility is not unrealistic and may be the Quick Fix that the palm market is crying for.**

Palm has within itself the means to increase its biofuel market share so much that the surplus and the stocks can be cleared out without difficulty. The key to this is PRICE. **Palm prices have to reach that magical market clearing level where new additional demand kicks in.**

PRICE OUTLOOK

First and foremost, we must make an assumption that Nymex WTI crude oil prices will be stable at around US Dollars 100 with a 10 percent range.

With that assumption and assuming the US Dollar will be relatively stable from here onwards, we can calculate a market clearing level for palm oil prices.

I have come to the conclusion that we need a step by step approach. Therefore, my first price point for a market clearing level for CPO is a price of USD 600 to 650 FOB Malaysia which is a good USD 100 pmt below the price of WTI Nymex crude equivalent to USD 100 per barrel. The price of USD 600 to USD 650 FOB would equate to BMD futures at about 2200 Ringgits.

At that level, biofuel demand will be strong enough to absord the excess stocks. However, I must caution that if Nymex WTI crude oil falls further, to say USD 80 per barrel, that level of USD 600 to 650 will need to fall further.

I have seen some extremely pessimistic forecasts for economic activity in 2009 and some very pessimistic forecasts for commodity prices too. At present I am not prepared to embrace those and I believe there are many more complex factors to be analysed. I shall discuss some of these in my forthcoming speech **on 28th September at Globoil India in Mumbai.**

In the meantime there is some excellent news on the Sustainable Palm Oil front. **The**

Round Table on Sustainable Palm Oil has scored a major success with the first Audit Certificate having been awarded to United Plantations of Malaysis. I attended the first Award ceremony. It was a very moving occasion to see the very worthy sons of that giant of our industry Tan Sri Bek Nielsen continuing the traditions of their Late father.

[source : Sea News Circular , Vol.- XI, Sep.2008, Issue - 6]