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# NEWS LETTER

OIL TECHNOLOGISTS' ASSOCIATION OF INDIA  
WESTERN ZONE

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- Solar Energy



*C/o. Department of Oils, Oleochemicals & Surfactants*

**Institute of Chemical Technology (Formerly UDCT)**

Nathalal Parekh Marg,

Matunga (East),

Mumbai-400 019. INDIA.

Tel.: 91-22-32972206

Fax: +91-22-24124017

Email: [info@otai-westernzone.org](mailto:info@otai-westernzone.org)

Website: [www.otai-westernzone.org](http://www.otai-westernzone.org)



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## *From the Editors's Desk*

*Back to Winning ways. Time to focus on self-development. All new findings in the oil industry must be wedded to dynamism of social causes. To ensure finally easy availability of this vital ingredient to the rich and poor. With the vast technological expertise we have in oil industry we could really manouvere to achieve flying colors. It could be a great achievement to blink at imports. Make it in India is the new slogan. Let us lead the pack.*



**DON'T ! DON'T !**

## **Neglect of Edible Oilseed Sector will cost USD 100 Billion per Year to Indian Economy**

by  
**VIJAY SARDANA**



FRIENDS, you all must be shocked to see the title and you must be saying, this is no fact, I also wish if I am wrong but unfortunately, facts are more dangerous than most of us think. If so, please take out your calculator and do some calculation with me. Unfortunately, if we continue the way we are working today, by 2024 election year, situation will be very grim.

You all must be thinking, why I am linking to the election year? I will prefer to use all food security parameters as Key Performance Indicators for the ruling government and Prime Minister, when they will go for re-election to renew the mandate.

### **Ground Reality**

According to author's estimates, if we do not review our oilseed production and edible oil trade policy towards, the cost of this negligence will be more than 100 billion USD 100 Billion per year by 2025. The foreign exchange requirement for imported edible oil, according to conservative estimates, will be about USD 40 to 50 billion by 2025. And loss of livestock productivity and production due to shortage of protein thorough oil cake and oil meals will be about additional USD 50 Billion per year.

It means, the total profit earnings in foreign exchange from IT, textile, pharma and engineering sector will not be sufficient to meet the import bill of just edible oils in India. This will have negative impact on food inflation and current account deficit. It is the duty of the government to ensure food security for the masses. To ensure that food security must be based on domestic production not based on imported food to protect our strategic and sovereign national interests and we will lose



our bargaining power at international forums. It is well known fact that beggars are no choosers.

Many of you must be thinking I am exaggerating the facts and numbers. Let me share some numbers with you all to clarify my point.

As you are aware, carbohydrates, oils and fats and protein are the basic food components for any living human beings and animals. Today we are self-sufficient in carbohydrates but not in oils and proteins (both for man and animals) due to our policies for wheat, rice and sugar. This is not food security, this is just/carbohydrates security.

### **Why Oil and Protein security is vital for Indian society?**

It is high time we should consider how to fill the gap for edible oils and protein. Unfortunately, due to too much focus on carbohydrate production, our soil health is suffering and due to protein deficiency our human and animal health and productivity is suffering. Balanced Diet is essential to ensure good health for all.

Malnutrition is a serious issue due to our economic policies which lacks qualitative focus and dimensions, we still believe in outdated concepts of imbalanced quantity concepts. That is even the produced quantity of food is also not properly managed.

Based on large number of studies, it is clear that our domestic production policies and import tax policies are not supporting production of edible oils and proteins in India and making India deficit severally deficit both in oil and protein supplies.

**Please give serious attention to Edible Oilseeds - source of edible oil as well as protein**

Edible oils form an essential part of the modern diet. These oils play a role as an energy source, and provide the diet with many beneficial micronutrients. Oilcakes are also major source of protein for livestock sector.

Like any other essential commodities, the main drivers to determine the demand of oilseeds and edible oils, are population and income.

**Demand Side Analysis for Oilseeds and Edible Oils in India  
Projected Population of India in 2025**

According to the Report of the Technical Group on Population Projections constituted by the National Commission on Population, Government of India, the population of India is expected to increase to 1400 million by 2025 at the rate of 1.2 percent annually. As a consequence, the density of population will increase from 313 to 426 persons per square kilometer.

**Projected Per-capita Income of India in 2025**

According to the Chairman of Prime Minister's Economic Advisory Council (PMEAC), it has been estimated if we grow at 9 per cent per annum, India's per capita GDP will increase from the current level of \$ 1,600 to \$ 8,000-10,000 by 2025. It looks more on optimistic side, with this growth; India will become part of the middle income group of countries when it achieves \$ 8000-\$ 10,000 per capita income. In order to plan the commodities requirements let me take a conservative estimate

***Today we are self-sufficient in carbohydrates but not in oils and proteins (both for man and animals) due to our policies for wheat, rice and sugar. This is not food security, this is just carbohydrates security***

growth rate of 5% and per capita income will be around USD 3,000 per year.

**Projected demand of edible oils and oilseeds by 2025**

According to an FAO study, food energy requirements for South Asian population will be about 2700 Calories /caput / day in the year 2025.

In terms of edible oil demand, it is estimated that it will be about 17 kg per capita per year. It means India will need about 23.8 million tons of edible oils by 2025. It means with an average yield of about 30% oil from oilseeds, we will need about 80 million tons of oilseeds. If yield is less India will need more seeds for oil production.

**Supply Side Analysis for Oilseeds and Edible Oils in India**

With the projected demand of about 80 million tons of oilseeds to produce about 23.8 million tons of edible oils, India will need two vital natural resources i.e. water and land.

**Land Availability for cultivation**

According to Minister of Agriculture, India will have about 0.12 ha. per capita land for cultivation by 2025. Net sown area is 140.02 m ha and it remains unchanged for last two decades. Total Arable land is about 182.47 m ha which is about 55% of India's reporting area and about 11% of world's arable land, out of this only one third of

cultivated land is irrigated and producing 55% of food grains.

About 78.17 m ha (2010) of arable land is rainfed contributing to 45% of Agricultural production including oilseeds. At the same time we have about 120 million ha. is degraded lands.

With the current productivity levels of 1.10 tons per hectare, we will need about 73 million hectare of land to produce 80 million tons of oilseeds. Where is the land for this much oilseed production? This is about 52% of the total agriculture land in India. Currently about 55% of agriculture land is already used to cultivate food gains i.e. cereals. It means with existing level of productivity and competing use of agriculture land, it is impossible to meet demand of oilseeds and edible oils by domestic production.

At present about 18 million ha. is used for production of oilseeds in India. It means we must develop an action plan to produce 4.5 tons per hectare per year from the same land to meet our demand for oil from domestic sources by 2025. Is this possible?

### **Water Requirement and availability**

According to Minister of Agriculture, India will have about 1700 m<sup>3</sup> of water per person and 84% of this water will be used for irrigation purpose. This is at stress level.

According to ICAR, Water availability for agriculture is estimated to go down by up to 12 per cent from the current level by 2025 from current level. In other words, farmers, in fact, will require 25 per cent more water in 2025 than what they are consuming currently to produce food for feeding the domestic population. By 2025, the water requirement for irrigation will be 790 billion cubic meter. Where is the water?

### **India will remain net importer of edible oils:**

According to authors estimate, the best of the efforts and resources India will be not be able to produce more than 60 million tons of oilseeds. This will be short of about 20 million tons of oilseeds. If we take the global average in oil seed production, we will not be able to produce more

than 40 million tons of oilseeds, which is half of the requirement of oilseeds required to meet domestic demand.

In terms of edible oil, India will always need about 12 to 13 million tons of imported edible oil every year in the year 2025 onwards. It means with current rate of exchange rate India will spend about USD 18 to 20 billion every year in import of edible oils. If we take the inflation at the rate of 6% per year and exchange rate unchanged, India will need about USD 40 billion to meet the short fall of 12 to 13 million tons of edible oils.

For some reason if we are not able to improve our productivity from 1.10 tons ha to 2.00 tons per hectare, the import bill will multiply.

I request all policy planners to provide us the road map for edible oil security for India.

Edible Oilseeds also provide protein for Live-stock population, which we are not factoring in edible policy.

Today, the poultry feed is more expensive than wheat for human consumption. Milk is touching Rs. 50 per liter because feed for milking animals is also very expensive. Poor quality soybean meal is as expensive as good quality rice for common man.

According to various data, India will need about 150 million tons of milk, 15 million tons of meat, 16 million tons of fish and 17 million tons of egg. These all are protein rich diet. In other world India will need 48 to 50 million tons of animal protein per year by 2025.

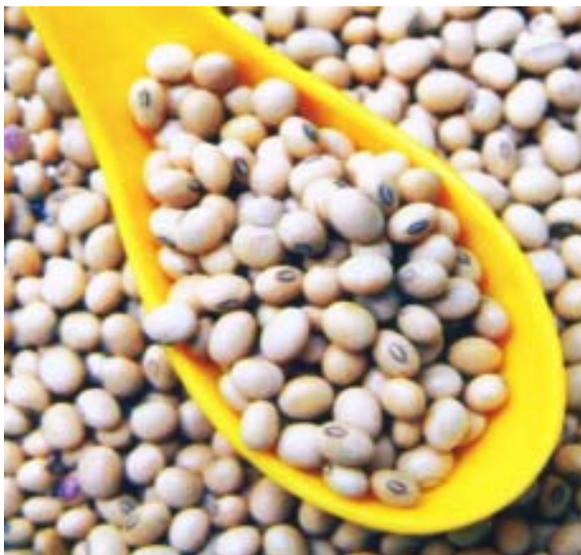
To produce these items, livestock will also need protein. Please don't expect animals to eat poor quality grass, poor quality feed and poor quality drinking water and give high quality milk, high quality meat and egg. This is not possible anywhere. Even God can help in this.

To produce 50 million tons of animal protein, animal will need about 125 million tons of good quality proteins in diet. Who will provide? In other words, we are talking about 280 to 300 million tons of soymeal equivalents. Who will provide this input?

## Implications on Indian Economy

Considering the above facts, India will have to pay USD 50 billion for import of edible oils and at the same time India will have to forgo the production of livestock products i.e. milk, meat, egg and fish worth USD 50 billion. This 100 billion dollar is direct cost.

Now you may add indirect cost due to poor health of people and animals, loss of employment opportunity for millions of youths in rural India, tax revenue loss due to less production and current account deficit.



**Currently about 55% of agriculture land is already used to cultivate food grains i.e. cereals. It means with existing level of productivity and competing use of agriculture land, it is impossible to meet demand of oilseeds and edible oils by domestic production**

Please also add cost of dependency on foreign sources for domestic food security and its implication of sovereign economic, political and foreign policy and its implications.

### **What is the way forward to minimize import dependency for edible oils?**

With growing gap between demand and domestic supplies, it is important for Government of India to come out with a time bound action plan to minimize the dependency on imported edible oils. The growing dependency on imported oil will put pressure on current account deficit and food security of the country.

### **Oilseeds vital for nutrition security of India**

Oilseeds are not only important source of edible oils but also very vital and important source of protein for animal nutrition as well as human nutrition. Edible oil imports, if not managed properly, will have serious adverse implications on the domestic oilseed sector. This needs a very serious and calibrated policy intervention because over dependency on imports will hurt the local oilseed production. Any adverse impact on domestic oilseed production will increase dependency on imported edible oils but will also affect the supply of oil meal or oil cakes for livestock feed industry and protein source for human and animal nutrition.

### **Review Domestic policies and Import duties to promote domestic production**

Unless there is incentive to produce, no farmer will produce. In order to produce carbohydrates like wheat, rice and sugar government has developed all sorts of systems and incentive plans. Why same zeal is not there for pulses and oilseeds, which are more important for good health? This clearly indicates that agriculture policies lack sound logic and influenced by politics. It is high time, Government of India and all state governments should develop food security plan for India. Please develop a comprehensive plan and communicate to people of India what is their plan to feed 1450 million people by 2025 AD. Otherwise, sorry to say, that piece meal approaches by self-claimed experts with various motives will leave India with begging bowl to feed her.

## **Challenges in achieving productivity targets**

Based on the global experience average yield of oilseeds in the world is about 2 tons per hectare and the best possible average yield is 3.5 tons per ha in few countries. Considering the global experience, It means, on an average, we will be able to produce about 36 million tons to at the best about 60 million tons of oil seeds per year. In order to meet the production target, we must adopt agro-climatic condition based production policy to include soil health policy to support proper seed technology adoption, irrigation facilities and required agri-inputs and extension.

### **High yielding Oilseed Technology:**

India needs world class seed technology which can give quantum jump to the oilseed production. India must establish a program to produce high yielding varieties with the help of modern technologies like nanotechnology and nutri-genomics. Success parameters of such seed technology programs must be linked to the best in class in the world. Only research program where technology is designed to deliver best in the class output should be supported by tax payers' money. In order to achieve this even if global collaboration or partnerships are required, we should encourage this. In case new set of rules and policies are required, it should be done on priority basis to keeping national interest as priority.

**Minimize Cost of Production:** Edible oils will always remain essential components of basic human diet world over. Policies must be designed to encourage which should minimize the cost of production and processing of edible oils. In order to ensure this, if existing laws needs to be reviews and amended, it should be done on priority, so that corrective actions can start on time and country can save time and money.

Transaction cost and time needs to be minimized: On one side we have serious issues of ensuring food security on the other hand we have various laws which are adding unproductive cost and time lag in achieving food security for the country. It is high time we should review laws like Agriculture Produce Marketing Committee Act, various acts related to seeds and agro-chemicals, agriculture research and approval processes, etc.

### **Develop Free Agriculture Production Zone in Countries with less population density:**

Countries like Australia, Canada, and African Countries can offer their land bank for production of Oilseeds and pulses which can be mutually beneficial. Today, we are acquiring assets to extract energy and minerals in other countries, explore the similar arrangement for food production as well.

These are few thoughts more can be explored.

I am fully aware that various vested interests will object to any modifications in the existing regulatory and policy framework but in the national interest we should ignore these objections and move towards reforms which can ensure timely delivery and transparency in decision making process.

Besides improving food security of India, improvement in oilseeds and edible oil sector, will help in generating employment in rural India; provide animal nutrition security which is extremely vital for national food security and also save USD 100 billion worth national wealth.

This will also help India in reducing international pressures on its economic and foreign policies. Food security is precondition for any sovereign economic and foreign policy. •

*(Courtesy : SAARC OILS & FATS TODAY, November, 2014)*

## “ACTION PLAN”

# For increasing production and productivity of oilseeds to check the rising import of vegetable oils

*[Ministry of Commerce under directive from the PMO reviewing import items of value more than US\$ 100 million and asked the concerned organisations to submit an Action Plan for reducing India's dependence on imports . Import of vegetable oils falls under domain of SEA. SEA has submitted an Action Plan for increasing production and productivity of oilseeds to check the rising import of Vegetable Oils. The Action Plan is reproduced below for the information of members and readers - Dr. B.V. Mehta, E.D., SEA.]*

### Preamble:

In the last 20 years, the edible oil and oil seeds scenario has undergone a vast change. Our dependence on imports which was only 3% in 1992-93 has gone over to 55% currently. The main reason for this dismal state of affairs is that oilseed production has remained almost stagnant, while demand has been growing much faster, both because of increase in per capita consumption and population growth. If indigenous production does not go up significantly, our dependence on imports may even go up over 75% within next few years. The Oilseeds production and the productivity is stagnant at around 28-30 million tonnes and the productivity at 1000-1100 Kg. per hectare. The Government and the industry needs to go to the root cause of the problem and take appropriate policy initiatives to boost the production and productivity in the country to check the rising import of vegetable oils.

### Policy initiatives

#### a) Focus on Increasing Production and Productivity

In all policy initiatives, top most importance should be given to increasing the productivity of oilseeds. At present our farm productivity is just 1000 /1100 Kgs./ha. which is almost half of world average or one-third of the highest in the world. If we focus on increasing productivity by just 100 kgs. per hectare every year for the next five years, i.e. increase from a level of 1000kgs. to 1500 kgs. per hectare, we will be able to meet the growing demand and check the rising import of vegetable oils. We have crossed 10 million tonnes target for soybean and cottonseed. Now we must target to achieve atleast 15 million tonnes of Soyabean and Cottonseed each in next five years and at least 10 million tones of Rapeseed and Groundnut to meet the growing demand.

### Indian Oilseed yields compared to World Average yields

Crop	India Highest Yield	India Average Yield	Kg ./ha		Indian Average Terms of World Average Yield %
			India Average Yield in Comparison to Highest Yield %	World Highest Yield	
Soybean	1492	1080	38%	2650	47%
Cotton	737	590	25%	2070	56%
Groundnut	2113	1100	92%	3530	69%

The following factors, if implemented diligently, can improve oil seed productivity significantly:

- Genetic upgradation of available cultivators of oilseeds to increase productivity per se, coupled with insulation against biotic and abiotic stresses through biotechnology and genetic-engineering approaches.
- Development of integrated nutrient and fertilizer-management schedules.
- Deploying integrated pest and disease-management modules to control the diverse biotic stresses and make the oilseed crops more sustainable.
- Development of post harvest technologies and agricultural implements, particularly with reference to seeding, harvesting and threshing operations of oilseed crops suited to small farmers' fields.
- Providing proper irrigation through lift irrigation and water sprinkling.
- Feedback to farmers about soil quality & steps to be taken for improvement of its quality.
- Germination test of all planting material.
- Timely supply of appropriate inputs and incentives to farmers.
- Creation of a profitable oil seed marketing system.
- Support to oilseed growing farmers by private entrepreneurs through private partnership and PPP.
- To provide suitable transport, warehousing and other infrastructural facilities to reduce the loss of oilseed between farming and crushing mill, which is presently in the range of 5-10%.
- Creating overall awareness about deploying good farm-practices.

#### **b) Introduction of GM crop**

Most of the advanced countries like USA, Argentina, Brazil have moved to grow Genetically Modified (GM) Soybean to achieve higher production and productivity. There are certain advantages of GM crop viz. pest resistance, herbicide tolerance, disease resistance, cold tolerance, drought tolerance/salinity tolerance, which leads to higher productivity by about 20 to 25% from the conventional variety. GM crop may be one of the way to increase production in the country. BT cotton was introduced before few years only, which has doubled the cotton production in India. It is the high

time to explore the possibility of introduction of GM Soybean crop (non terminator) in India to achieve higher production and productivity. However, the farmers various concerns and particularly about the seed price be addressed properly by not allowing monopolizing few seed companies to supply GM seed at exorbitant high price. To overcome this issue, only non terminator GM be allowed.

#### **c) Encourage Production of Rice Bran Oil and its Value added Products**

Rice Bran Oil potential is over 16.0 lakh tons, against this potential the actual exploitation is 9.0 lakh tons. If full attention is paid and hurdles are removed, the production can be increased to atleast 12.0 lakh tons in next three years and maximum quantity can be made available as direct cooking medium and thereby reduce the import of edible oil to some extent.

Besides refined rice bran oil, a number of value-added products including nutraceuticals can be produced from the by-products generated during the refining of rice bran oil. Although India is the second largest producer of paddy in the world, but the concept of production of value added products is in the infancy stages in the country. Also, value addition of ricebran and by products will give better return to farmers without raising the price of paddy. It needs to be encouraged through appropriate policy measures. At present most of these products attract excise duty @ 16%. There is an urgent need to grant general exemption from excise to "Refining of Rice Bran Oil and Processing of its By-Products" with a view to encourage value addition in this area in the country.

#### **d) Exemption of Edible Oils, Oilcakes & Oilmeals from VAT**

There is upto 5% VAT on oilseeds, edible oils, oilcakes and oilmeals which is a heavy burden on the oilseeds sector and ultimately translates into higher prices of edible oils, oilcake, oilmeals and feeds for animal & poultry and lesser realization to the farmers for their produce. Central Government may impress upon the State Governments to exempt the edible oil, oilcakes and oilmeals from VAT, being the essential commodities in line with rice, wheat, pulses, sugar etc.

Secondly, India is importing nearly 60% of its requirement of edible oil which is not subject to APMC. However, the local production of oilseeds is subject to 1 .6% of APMC Cess which result into 6-10% tax on edible oils. It is ironical that Indian farmer is being taxed while foreign farmers enjoy the exemption. We, therefore, suggest that similar fruit and vegetable, oilseeds also be removed from the APMC Act. This will enable the farmers to sell their produce directly to the industry to save double transportation, loss in transit and same time farmer will realize better value for its produce.

*(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 6, SEPT., 2014))*

### **“GOOD MESSAGE”**

**At last something about funda of life-  
“Write down your goals today”**

**“If two people want to climb a mountain together, what is the most important thing they need to go to the top? Is it equipment? Or training? Or team work? Well they need all these for sure, but the most important thing is mountain itself. They need a clear goal.**

**Too often we get obsessed with the equipments and the training but have no clear goals. The best mountain climbing gear is of no use if you don't have a mountain to climb, our own goals.**

**And once you have your own mountain to climb, everything changes. Magically you get a sense of purpose. You begin to want to climb that peak. You become disciplined, committed, and passionate about your objectives. So instead of complaining about your equipment or your training, and worrying about buying more sophisticated equipment, set your own goals first. i mountain. That could be the first step towards transforming your life. Go ahead. Write down your goals today”.**

## **“TIME TO LEAP”**

**“VEGOIL TECH” - 9th National Seminar on  
Technology Upgradation in  
Vegetable Oil Industry  
8th Nov, 2014, New Delhi**

**Theme:  
Value Addition in Vegetable Oil Industry**

SEA in association with The Central Organisation for Oil Industry & Trade ,New Delhi is pleased to announce “VEGOIL TECH” - 9th National Seminar on Technology Upgradation in Vegetable Oil Industry to be held on 8th Nov, 2014 at Radisson Blu Hotel, Paschim Vihar, Outer Ring Road, New Delhi- 110063, India.

The Theme of the Seminar is “Value Addition in Vegetable Oil Industry”. SEA has focused on various issues confronting the industry and has put in sustained efforts to incorporate innovative techno trends prevailing from time to time into the existing setup. This has resulted in modernization of our industry and has also given better production, yield and better returns to the members & others. This important Seminar is likely to be attended by over 200/250 delegates, represented by Oilmillers, S.E. Units holders, Refiners, Vanaspati manufacturers, Plant & Machinery Suppliers, Consultants, Technocrats & Technical experts from the industry and the scientists from the reputed R & D Institutes all over India.

In today's Competitive Global Business Scenario, we must look at the technology Upgradation as the latest tool which can improve the quality of any product in line with the International standards. In many a cases, even by minor to moderate changes in the existing setup, it is possible to reduce the cost of production and also reduce the excessive consumption of steam, power and energy to make the industry more competitive and viable. At the same time, it is very important to impart training to the technical persons working in the industry with the latest state-of-art technology which is Eco-friendly, easy & safe to handle and useful for the growth of vegetable oil industry.

Value addition in Vegetable Oil Industry calls for adapting new, innovative outlook at the existing set up by each one of us and make it competitive

and efficient. With the help of modern technology, it is possible to carry out the efficient processing of the existing product with eco-friendly value addition and better quality. This Seminar will provide an opportunity to get exposed to the innovative technologies developed by the renowned R&D Scientists and the Institutes. There will be fruitful interactions between the Industry and Research Organisations, in which the Industry can get guidance from the R&D Institutes and experts from the industry to solve its problems.

Also, Water pollution in Vegetable Oil Industry is a major issue and Challenge . Similarly Regu-

latory requirement of Oil & Fat intensity and its compliance is the need of the hour. In view of these, we would be inviting experts of both these area to enlighten the participants.

With these objectives in mind, SEA invite to this important Seminar at New Delhi and request the members and others connected with the vegetable oil industry to take this opportunity and participate whole heartedly to derive the utmost benefit from the seminar.

(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 6, SEPT., 2014)

## “INTERESTING”

# PLATE CONDENSERS AND HEATERS FOR THE VEG. “ACTION PLAN” OIL SOLVENT EXTRACTION INDUSTRY

Ms. Sarmistha Nag

Alfa Laval (India) Ltd., Pune 411045.

Email : sarmistha.nag@alfalaval.com \* Website : <http://www.alfalaval.com>

## Introduction

In the extraction of oil from oilseeds hexane is commonly used as the solvent in the extraction process . Most of the hexane is recovered from spent meals and the miscella by vaporisation, steam stripping, condensation and exhaust scrubbing systems. Selection of the proper thermal equipment and their efficient thermal design is vital in ensuring a cost effective operation. The time has arrived to change the picture in the mind about a Plate Heat Exchanger. Compact heat exchangers are the ONLY answer to value addition to the Solvent Extraction Process .

## Recovery from meals De -Solventisation

Spent meals are heated up and hexane vaporised in the desolventiser at atmospheric pressure. The hexane vapor mixture is then partially condensed in an exchanger / condenser by the miscella stream with regenerative heat recovery . The driving force for the DT vapor to flow through these equipments is very low and total available pressure drop is therefore very limited , only about 4 kPa . Because of this low pressure drop limitation, an ALFACOND / SEMIWELDED technology plate condenser is suitable as primary

and secondary condensers to REPLACE the two large shell & tubes, due to its large connection size and short flow paths. The final exhaust which consists mainly of air (saturated with hexane) is sent to exhaust recovery system where the hexane is further recovered by scrubbing with mineral oil. A flow schematic is shown below.

## Recovery from Distillation

The heating of miscella by steam, the condensation of the evaporated hexane can be achieved by plate evaporators and plate condensers of semiwelded technology A flow schematic is below.

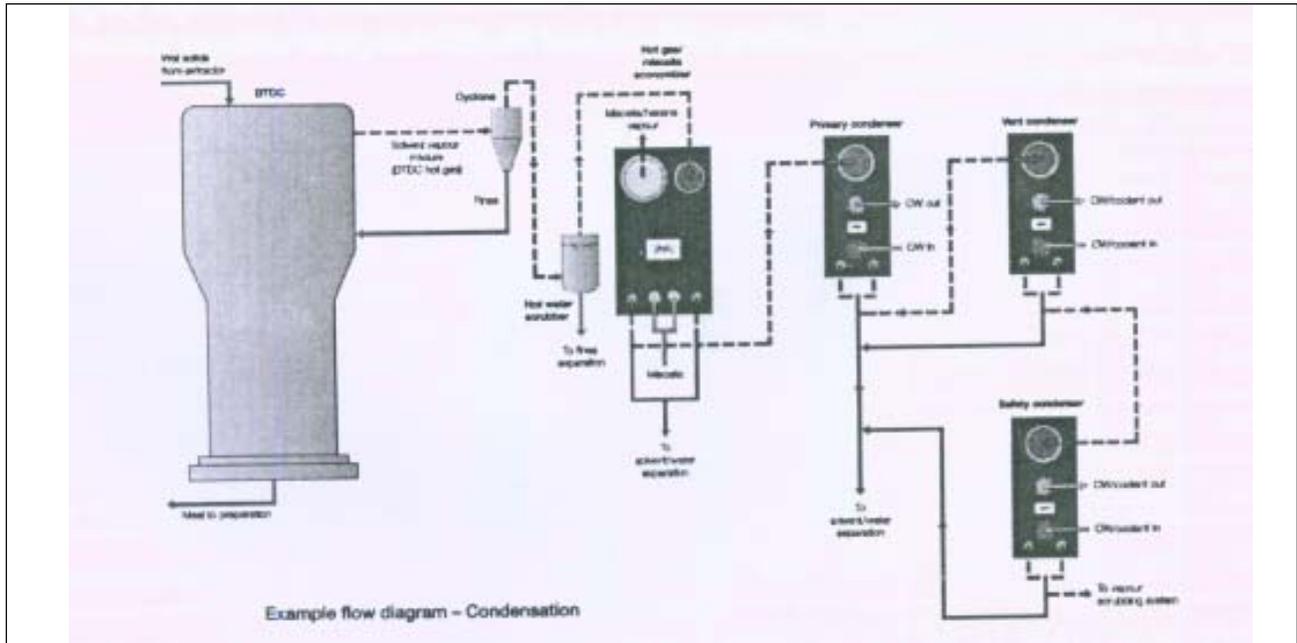
The flow schematic may vary somewhat for different process designers. Recovery from Exhaust Scrubbing System.

The exhaust from the blower, and the vacuum pumps are combined into one stream . The exhaust is then scrubbed by mineral oil where residual hexane is removed PHE plate vent condenser can easily bring the non condensibles to approx. 2 Deg C of chilled water temperature with large increased condensation of residual hexane. This high degree of subcooling is the most sig-

nificant advantage over other traditional class of heat exchangers. A flow schematic is shown below.

### Recovery from Exhaust Scrubbing System

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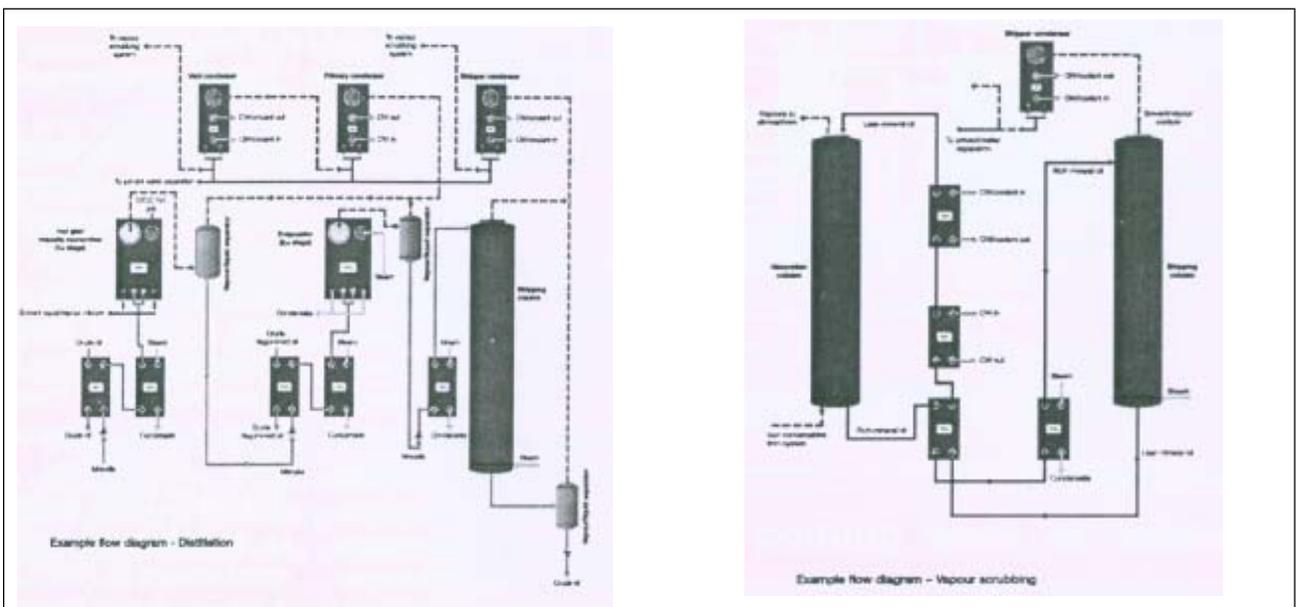


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(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 6, SEPT., 2014)

## “MIXED BAG”

# GLOBAL VEG OIL PRICE OUTLOOK 2014-15

DORAB E. MISTRY

Director, Godrej International Limited, London, U.K.

### Ladies and Gentlemen

We meet at Globoil India this year amidst a degree of optimism and excitement for the Indian economy. Expectations of the electorate are sky high and the new government has its work cut out. Fortunately they have begun well and are making all the right moves, in a phased, well thought out manner. We can only wish them well and look forward to stronger and more balanced economic growth. The test is going to come very soon when our industry makes its representations. We hope and pray that this Listening Government will respond.

My congratulations to Kailash Singh and his team at TEFLA's for their success with GLOBOIL INDIA. My compliments go also to our out-going SEA President Vijay Data and my best wishes to the incoming team led by President Pravin Lunkad. SEA under Executive Director Dr B V Mehta does a huge amount of work and I am sometimes surprised at how little support they get from members. If we want SEA to get results, we must support the Association day in and day out - not just when it suits us.

### Background

The price forecasts I made at the Price Outlook Conference in Kuala Lumpur on 5 March 2014 were quickly over-taken by events and had to be abandoned. I have laid blame on the non-performance of bio diesel consumption targets by Indonesia and the non-appearance of a strong El Nino this year.

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*Paper by Mr. Dorab E Mistry, Director, GODREJ INTERNATIONAL LIMITED at Globoil India 2014 hosted by Tefla's & Solvent Extractors Association of India in Mumbai at Renaissance Hotel on 28 September 2014. Paper by Mr. Dorab E Mistry, Director, GODREJ INTERNATIONAL LIMITED at Globoil India 2014 hosted by Tefla's & Solvent Extractors Association of India in Mumbai at Renaissance Hotel on 28 September 2014.*

On 26 June at POTS INDIA, I forecast that CPO prices would trade in a band from 2300 to 2500 Ringgits for the next several weeks, given normal weather. This forecast too has been overtaken by events and has been broken on the downside. CPO futures traded at 1914 Ringgits on the Bursa Malaysia on 2 September.

Malaysia then exempted crude palm oil from Export Duty and this measure gave a bounce of about 200 Ringgits to the market.

Recently on 15 September at POTS CHINA in Shanghai, I expressed dismay at that rally and said it was making palm uncompetitive once again. I predicted a decline in BMD futures once again to 1900 Ringgits.

Before I talk specifically about palm oil, let me talk briefly about the macro environment.

### The worldwide Macro situation

It seems pretty clear that the unique experiment in Quantitative Easing, pioneered by Mr Ben Bernanke is now coming to an end. As one commentator wrote recently, the world financial system is at inflexion point as the US and China both switch off monetary stimulus. Since this piece was written, China appears to be attempting to bring in some form of stimulus because its growth rates have turned perverse.

Bank of America has warned clients that the glory days of Maximum Liquidity are coming to an end. The yield on 10 year Treasuries is forecast to jump from the present 2.5% to 3.1% this year and to 3.75% by the end of 2015. This implies a strong rally in the US Dollar- similar to rallies that took place when the FED tightened in the past in the early 1980s and later in the mid- 1990s.

When the US tightens, will the European Central Bank ease and even introduce some form of QE? That may be wishful thinking. Even if it did, the Euro would weaken further in favour of the Dollar.

Will China come to the rescue of commodities and create easy money to pump up the price of commodities? It is certainly NOT in China's interest to push up prices of commodities.

Goldman Sachs has recently talked cryptically of "the end of the Iron Age ". The global surplus of iron ore will triple to 163 million tonnes in 2015. Prices have already halved and are set to grind down for years to come. This cannot be good news for the Brazilian economy or for the value of the Brazilian Real. Commodity based economies like Russia and Indonesia are feeling the heat already. The Ruble has fallen for a number of reasons. Recently the Indonesian Rupiah has also fallen below 12,000 to the Dollar.

In short, we are facing a Strong Dollar - Soft Commodity Price scenario for the next year. Countries that import commodities - like China, India, Japan and Germany are likely to do nothing to stop this cycle. They will benefit directly from lower commodity prices while they set their national finances right. India, in particular, stands to benefit very much from lower prices of crude oil, coal, and even precious metals like gold.

I am elaborating this phenomenon because oil-seed, veg oil and oil meal prices cannot be divorced from the general commodity cycle. Already we have seen prices of soybeans and corn fall by almost 40% since January 2014. And I believe further falls are going to come.

### **Some big changes taking place in CHINA**

I believe commodity markets have overlooked or ignored some major changes that the new Government of President Xi has enacted in China. Only when commodity prices were impacted did the market wake up and take notice.

First, China has cracked down on wasteful consumption and on corruption.

Second, they have cracked down on Shadow Banking. Importers were importing too much at rock-bottom trade finance rates of 1 to 2% and then lending these funds into the local property market. This cycle of Shadow Banking is being attacked and such funds are drying up. Therefore China is in a De-Stocking Phase for most imports

Third, China has changed the way it supports its farmers. Earlier they used to buy everything that was offered at Guaranteed Support Prices. We call them MSP in India. Now China does not buy agri products as before and does not create huge stocks. They still have MSP but when the market price falls below the MSP, the government pays a subsidy directly into the bank account of the farmer. It achieves the same result but at much lower cost. The State does not have to own and transport and store unsaleable commodities which deteriorate with the passage of time. China will continue to hold Strategic Reserves but Temporary Reserves -in times of over-supply-will not be held. As a result, most commodities produced or imported by China are in a De-Stocking phase.

I also mention at this stage the Reserve of almost 5 million tonnes of rapeseed oil that China is holding. Most of this oil is at least 4 years old and is deteriorating. China appears ready to reduce and finally liquidate this stock over the next few years. It is significant that Chinese speakers at conferences these days are using the word De-Stocking more frequently and regularly !

### **PRODUCTION**

Palm oil: The performance of oil palms in 2014 has been well above expectation so far. I have spoken at length in Shanghai earlier this month on reasons for this out-performance.

In my paper at POC on 5 March in Kuala Lumpur, I had outlined that the previous on-going Low Cycle for oil palms would end only in May 2014. A new High Cycle would then start from June. This time table was disturbed by the 6 week dry patch of February-March. Dry spells tend to accelerate fruit ripening and we saw higher than expected production in March this year. I believe we commenced a new High Cycle from March rather than from May. So in retrospect, the previous Low Cycle lasted exactly 13 months - from February 2013 to February 2014 - somewhat longer than historic trend but not unusually so.

From March 2014 onwards we have seen each month, year on year increases in CPO production. In July and August we have seen a Surge. In some previous years, when we have seen a Surge in August, we have seen a small decline in Sep-

tember followed by a peak in October. The question that has to be asked is Will the current High Cycle be disturbed by the earlier dry spell of Feb-March or will production in Malaysia reach a peak in October ?

Based on current information, it looks like the High Cycle remains intact and therefore I am today forecasting that we have a very good chance of CPO production in Malaysia in 2014 reaching 19.8 to 20 million tonnes.

Indonesian production is also performing better than expected. Accumulation of stocks in Indonesia has been heavier. I am confident that my estimate of Indonesian production at 30.5 million tonnes will be exceeded. I believe palm oil stocks will keep rising and will peak in December this year.

**The paradox of palm production and palm exports**

I am repeating here some figures which I presented in Shanghai earlier because they spell out in stark relief why palm oil needs to re-capture its competitiveness.

During the first 8 months of 2014, Malaysian production was higher than 2013 by almost 991,000 tonnes. On the other hand, exports were down by almost 777,000 tonnes.

	<b>Jan-Aug 2013</b>	<b>Jan - Aug 20 14</b>	<b>Difference</b>
Production	11.769 mln mt	12.760 mln mt	+ 991 ,000 mt
Exports	11.767 mln mt	10.990 mln mt	-777 ,000 mt

These figures put into perspective the problem for the palm oil market. In September 2014, after a gap of 11 months, palm exports from Malaysia will finally equal or exceed the exports of the corresponding month in the previous year.

**Production prospects for other Oilseeds and Oils**

It now appears quite clear that the old adage Big Crops Get Bigger, is being seen in USA this

year. As one commentator has said - Yields are simply off the charts.

Earlier most of us who were bearish on soybean prices had forecast November beans to decline to US\$ 10 per bushel. We have now broken that and have gone much lower. US markets generally tend to make a Harvest Low. This means we can go still lower.

In 2014 we must also recognise that inland transport within North America is a mess. Last year Canada faced problems and this year already, US rail freight is problematic. If com and soybeans cannot reach ports in time, pressure on Chicago futures will increase.

Farmers in Brazil and later in Argentina are likely to switch to soybeans from com this year. If weather and rainfall in Brazil and subsequently in Argentina are normal, we could see new lows in soybean prices around January 2015.

**INDIA**

We have seen a surge in imports of veg oils into India in the last 2 months. The August import figure of 1.33 million tonnes was a record. Current projections are that for the Oil Year November 13 to October 2014, India will import almost 11.60 million tonnes as against my earlier estimate (at POC in March) of 11.06 million tonnes.

I have nothing more to add to current estimates of Indian oilseed production released by my friend Mr Govindbhai Patel of GGN Research.

I do wish to assert that Indian oilseed farmers are in a very difficult spot at present. The pressure of imported oil is tremendous and the price outlook for them is bearish. This year has been very difficult for oilseed farmers and many of them will give up on oilseeds if they get no help or protection from the government. Soybean prices have fallen by almost 25% in recent months in India.

I am endorsing the fervent plea of the SEA to the Government of India to come to the rescue to Indian oilseed farmers. Import duty of 10% on crude and 25% on refined veg oils will be appropriate. The time to enact these duties is now BEFORE the Kharif harvest comes to market.

I have been asked how much additional tonnage India will import for the Oil Year 14-15 in view of this year's dry weather. My answer is in 2 parts.

First. A bad Kharif Monsoon is usually followed by a good rainfall for the Rabi season. So we should not be surprised if our Rabi oilseed crops are better than normal.

Second. Making allowance for lower production of oilseeds in the Kharif campaign, for larger imports already and consequently, record Opening Stocks for Oil Year 14-15 and normal growth in consumption, I estimate India will need to import about 500,000 tonnes more at 12.1 million tonnes.

Finally on the subject of India, I commend the work undertaken by SEA on propagation of the Gujarat Mustard variety. This work needs to be undertaken on a much bigger scale with greater urgency than ever before.

Long term, a switch from Wheat to Mustard is also desirable in the major wheat belt of Punjab and Haryana. However, the first priority must be to make Oilseed Cultivation profitable. It has to be as profitable as or more profitable than wheat. And that only the government can facilitate. This is a challenge for SEA and COOIT to work jointly to lobby the Government.

## WORLD DEMAND

In recent years, world edible demand for veg oils has been expanding at between 3 and 3.5 million tonnes. This is expected to continue for Oil Year 13-14 as well as for 14-15.

The more interesting calculation is the expansion of world demand for veg oils used in bio fuel. This must not be confused with growth in World Bio Fuel Production. Veg oil usage in bio fuels is growing at a slower pace than world bio diesel production because of the system of Double Counting and the use of animal fats and Used Cooking Oil.

The Brazilian Government is raising the mandate for bio diesel from 6 to 7 % from 1 November 2014. The US EPA is yet to announce the new bio diesel mandate for 2014 and 2015.

Indonesia is likely to increase somewhat its bio diesel usage in 14-15 and so will Malaysia. Overall use of veg oils in bio diesel expanded at about 1.7 million tonnes in 13-14 and by about the same tonnage for 14-15.

Next month on 29 October at POTS Malaysia in Kuala Lumpur I hope to release my projections of Incremental Supply and Demand for the oil year 2014-15.

## GLOBAL INCREMENTAL SUPPLY & DEMAND

We can now summarise the Global Incremental S&Ds as follows :

000 tonnes	Oct 12 to Sept 13	Oct 13 to Sept 14
Soya oil	.+ 100	+ 1,800
Rape oil	+ 500	+ 400
Sun oil	- 1,200	+ 1,600
Gn & Cttn oil	- 250	-----
Palm oil	+ 1,500	+ 3,500
Lauric oils	+ 450	+ 300
Total Supply Increase	+ 1,100	+ 7,600
Total Demand Increase	+ 4,500	+ 5,200

## Price Relationship between competing veg oils

The current year is marked by an almost flat relationship between competing veg oils. Earlier there used to be a three tier system with Rape and Sun oil at the top, Soya oil in the middle and Palm oil being the most competitive.

In 2014, Palm oil has lost its price competitiveness, particularly against Rapeseed oil and Sunflower oil. This is most apparent in a market like India where Palm has been replaced by larger imports of sunflower oil, soybean oil and even small quantities of rapeseed oil. To a lesser extent we are seeing the same happening in Europe where locally produced rapeseed oil and sun oil are restricting the scope for palm oil imports.

As I said in my recent paper in Shanghai, palm desperately needs to regain its competitiveness. Strange as it may seem, palm today is less com-

petitive than it was last year as well as in June this year. Its discount to soya oil FOB Argentina and to sun oil FOB Black Sea has been narrowing.

Malaysia has already abolished the Export Duty on CPO. From 1st October, Indonesian Export Duty on CPO will also go down to Zero. The removal of Export Duty is meant to make palm oil more competitive. Strangely, palm oil bulls pushed up the price of CPO on the Bursa Malaysia from its low point of 1914 Ringgits on 2 September by almost 200 Ringgits. This was done in the face of falling energy prices so that the Palm Oil-Gas Oil spread narrowed from \$ 245 to \$ 175. You do not make your product more competitive by pushing up its price.

I am going to repeat here what I have said earlier. How did palm tackle its crisis In Q4 2008 when we were facing a similar situation with regard to Supply and Demand?

At that time Palm rapidly made itself competitive and exported its way out of a crisis as Malaysian stocks peaked at 2.238 million in December 2008.

Let us look at the price discount for RBD Olein as compared with soya oil and sun oil in the 3 months immediately preceding this big export PUSH of December 2008. These figures are taken from Oil World.

2008	Nov \$	Oct \$	Sept \$
RBD Olein fob	521	577	774
Soya oil fob Arg	+ 176	+ 196	+ 209
Sun oil fob Black Sea	+ 211	+ 245	+ 236

That means RBD Olein must open up a discount to soya oil on a fob-to-fob value much larger than at present. Current discount is about US\$ 80 on the nearby and only US\$ 60 for JFM and as little as \$ 50 on AMJ. At this current price structure demand will gravitate towards soft oils and

away from palm. We must remember we are almost into the winter season in the northern hemisphere which is the main market for palm oil.

### PRICE OUTLOOK- Assumptions

I have assumed Brent crude oil will trade in range US\$ 95 and 110 per barrel. Energy prices are critical to bio diesel demand.

### PRICE OUTLOOK

I repeat today my prognosis that Bursa Malaysia 3rd month futures must decline to 1900 Ringgits in the first instance or US \$ 600 FOB. If the US Dollar gets too strong and the Ringgit weakens too much, it is conceivable that the local CPO price will be 2000 Ringgits with an exchange rate of 3.4 to 3.5 Ringgits to the Dollar. A bottom can be picked only after we have a better idea of October production and of Brazilian weather. Let us remember that in January 2015 we could get the first large export of soybeans from Brazil.

Soya oil price: As I forecast in Shanghai recently, I believe soya oil FOB Argentina will stabilise around current levels even if soya oil futures rise on Oil-Meal spreading. We are likely to see a level of US\$ 730 to 750 FOB Oct-Nov-Dec.

Sunflower oil: I believe sun oil has been the most dynamic oil this year and has adjusted its price to win new demand as supply has expanded. The discount of sun oil to soya oil has now eroded and sun oil will move to a small premium of US 30 to soya oil.

Coconut oil and Palm Kernel oil: I find it hard to believe that the market has pushed up the price of Coconut oil to an extraordinary premium of US\$ 250 to 300 over the price of Palm Kernel Oil. And in turn, CPKO is priced at a premium of almost US\$ 200 over the price of CPO. These premia should collapse in due course as more substitution takes place. Supply of CPKO is strong and stocks are expanding. Industrial demand for lauric oils is moderate and synthetic products are holding on to their market share. As in 2013, I believe CPKO has no option but to decline to the level of CPO on a GIF Rotterdam basis and make itself workable for inclusion in bio diesel feedstock. Coconut oil can trade at a premium of US\$ 120 to

the price of CPO and CPKO in Rotterdam.

### **What about castor seed and castor oil**

I forecast in March at POC that castor seed has the most bullish outlook of all oilseeds. In that forecast I have been vindicated. Whilst all other oilseed prices have fallen, castor seed prices have held their own. I believe castor seed prices will advance further between now and the arrival of the new crop in February.

### **Conclusion**

After several years of prosperous growth, the oilseeds and palm industry are in a bear market. The macro factors do not look very bright. Equity markets have been on an upward path for almost 66 months since their bottom in March 2009. India however is a beacon of light and hope in terms of her economy. India's agriculture will however face headwinds due to this bear market. It is for the Indian Government to take timely measures

to ensure that rural India does not suffer unduly as a result of this slow-down. So far, despite an indifferent and deficient monsoon, inflation in India has been kept in check. The Government has scarcely put a foot wrong. We must hope and pray India enjoys a fair share of good luck in the months to come.

The veg oils market begins the oil year 14-15 with turbulence. I shall leave you with this thought. We have to thank Mr Bernanke for ushering in this long period of economic growth and high commodity prices thanks to QE. Now when that era is coming to an end, we must batten down the hatches and be resilient. Fortunately, demand for our products is always expanding and so we face the future with confidence.

Good Luck and God Bless

*(Courtesy : SEA NEWS CIRCULAR,  
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## **“THE TRICKS”**

# **Techniques to be adopted in Oil Palm Cultivation to Overcome Delayed Monsoon Conditions**

OIL PALM is cultivated under irrigated conditions in India. Due to high temperatures during summer and delayed monsoon conditions, crop is not being provided with sufficient water. Many of the farmers are reporting bunches with spiny tepals, aborted / dried and less weight bunches. This could be due to unfavorable weather conditions viz., heat waves during summer, low RH, non retention of moisture in light soils, etc. To overcome prevailing situation, it is advised to adopt following techniques in oil palm cultivation.

Plant the oil palm seedlings in the main field under assured irrigation/ moist conditions only. Irrigation must be provided immediately after planting either through basin or micro irrigation.

Do not store the seedlings for days together in open place after lifting to the main field. Individual palms must be irrigated twice in a week in basin system of irrigation. Never run the irrigation channels along with the palm rows. Avoid excessive irrigation through basin or micro irrigation, which

may lead to loss of water and nutrients. It is advised to provide recommended water and fertilizers through micro irrigation. Soon after onset of monsoon apply recommended dose of potash in 1st split. Due to which palm will be relieved from the stress created due to unfavourable weather conditions. Apply 50-100 kg of organic manure or 100 kg of green leaf manure in the palm base. Avoid ploughing in inter and intra row space. Weeds may be controlled by applying Glyphosate or Paraquat @ 750 -1000 ml per hectare based on the nature of weeds and density. In juvenile Oil Palm plantations (up to 3 years) sow Sun hemp around the palm basin in 1 or 2 rows with a radius of 3 feet from the palm basin. Cut the Sun hemp during flowering stage and incorporate in the palm basin. While growing intercrops in Oil palm, care must be taken to provide recommended quantity of water and nutrients to Oil palm and intercrops separately. Mulching of Oil Palm basins is essential to conserve soil moisture as well as to control weeds. Practice ablation by removing male and female flowers produced in the

early stages. Trenching can be adopted in order to utilize slight rain fall received through pre-monsoon showers, form trenches across the slope for every 3 or 4 rows with 1 feet width and 2 feet depth, to allow rain water to recharge the surrounding palms. These trenches will also be useful to drain the excess water due to heavy rains/floods. Crop being sensitive to water stress, needs attention of irrigation and nutrient management during unfavourable weather conditions. Adoption of above techniques will overcome the unfavourable weather conditions, improve the plant growth, subsequently improve the production and productivity. (Source: DOPR News Bulletin - April-June 2014 issue).

(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 7, OCT., 2014))

## “GOOD AUGURY”

### India Inc's raw material costs begin to decline

IN the September quarter, India Inc's raw material cost (including fuel and Power) fell four per cent compared to that in the same quarter 2013-14. In the December and March quarters, this cost had grown by 15.3 and 17.5 per cent, respectively. In the June quarter, it rose 8.7 per cent. The fall in the September quarter is from the results of 138 companies (ex-services sector) that have declared results so far.

Dharmesh A Mehta, deputy chief executive of Axis Capital, said: “The impact of the fall has yet not been fully reflected in the results as several companies have contractual arrangements entered earlier. We would see that (full impact) happening in the coming quarters”. He also said several companies had implemented cost cuts which were yet not fully reflected in their balance sheets.

A strengthening dollar (on expectataions of a rise in interest rates; commodities also have an inverse relation to the currency and slowing growth in major regions such as Europe, China and Japan are major factors resukting in lower commodities prices. In the September quarter, the CRB/Reuters spot index of industrial raw materials fell 3.45 per cent. Measured from July, the index is down five per cent. According to Platt' data, Asian petrochemicals' prices had tumbled to multi year lows by mid-October, in line with the fall in crude oil.

Nic Brown, head of commodities research at Natixis, the French corporate and investment bank, said: “The dollar strength, caused by stronger US economic growth, could be positive for commodity prices but for industrial/ energy commodities, questtions of end user demand and supply are also important. Going forward, dollar strength is likely to be associated with expectations for higher US interest rates. There is, therefore, likely to be lower, albeit still negative, correlation between dollar strength and the price of these indusotrial/ energy commodities”.

### Falling Burden

Quarter ended	(Rs. Crore) Net sales	Rm* cost	Rm* as % of sales	(%) Y-o-v chg in Rm* cost
Sep'13	192,013	134,376	70.0	15.8
Dec'13	197,236	1 34,769	68.3	15.0
Mar'14	186,933	129,284	69.2	17.3
Jun'14	186,388	126,695	68.0	8.5
Sep'14	195,062	128,796	66.0	-4.2

\*Rm (raw material) cost = Rm cost + power & fuel

Common sample of 138 companies (excluding the services sector)

Compiled by BS Research Bureau

Source : Capitaline / (Source: Business Standard, Dated: 28th Oct 2014)

(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 8, NOV., 2014))

## “FOOD AHOY”

# FOOD PROCESSING INDUSTRY : PRESENT AND FUTURE

PRABODH HALDE\*

### 1. Introduction :

INDIA is the second largest producer of food and holds the potential to be the biggest on the global food and agriculture canvas, according to a Corporate Catalyst India (CCI) survey. The food industry in India comprises food production and food-related processing industries. The food processing industry is one of the largest in India - it is ranked fifth in terms of production, consumption, export and expected growth.

The Agriculture sector is the base for most of the food processing industry and this sector has touched a growth rate of 4.4 per cent in 2012-13. The food grain production at the India level is close to 245 Million MT. The Food Processing industry is growing at a 13% growth rate and for the Indian economy the growth of this industry is crucial for the overall growth of the Nation.

### 2. Food processing overview: Indian Scenario

India annually produces 205 million tons of fruits and vegetables and is the second largest country in farm production in the world but unfortunately the processing percentage is poor-only 4.6 %. In contrast, countries like the USA (65%), China (23%) and Philippines (78%) are far ahead of India in reducing wastage and enhancing the value addition and shelf life of farm products. This is an alarming signal for India as a large volume of the agricultural produce is wasted. About 35% of the fruits and vegetables are wasted annually due to poor storage facilities, amounting to a revenue loss of Rs. 500 billion. Also, 80% of the vegetables rot due to high water content and lack of processing facilities, resulting in a revenue loss of Rs. 125 billion.

The Agriculture sector is vital for any nation and in India it is the principal source of livelihood for more than 58 per cent of the population and I consider the Food Processing sector to be just an extension of the Agriculture sector. The progress of each sector is dependent on the other. In developed countries, because of a developed Food

Processing sector, a demand is created in the Agriculture sector. India will follow the same path.

### 2.1 Indian Food Industry

The Indian food industry is projected to grow from US \$100 billion to US \$ 300 billion by 2015, according to a report by a leading industry body and Technopak [footnote]. During this period, the share of processed food in terms of value is expected to increase from 43 per cent to 50 per cent of total food production.

The food processing industry is of enormous significance for India's development as it has efficiently and effectively linked the nation's economy, industry and agriculture. The linking of these three pillars has synergized the development process and promoted the growth of the nation to a great extent.

The Food Processing industry is one of the largest industries operating in India and is divided into several segments.

The Food Processing industry operates across various segments that include :

- Fruits and vegetables
- Meat and poultry
- Dairy
- Marine products
- Grains and consumer foods (including packaged food, beverages and packaged drinking water)

The fruits and vegetables processing industry is highly decentralized, and a large number of units are in the cottage, household and small-scale sectors, having small capacities of up to 250 tons per annum. Since 2000, the Food Processing industry has seen a large growth in ready-to-serve beverages, fruit juices and pulps, dehydrated and frozen fruits and vegetable products, pickles, mushrooms and ready-mix vegetables. The small-scale units engaged in these segments of processing are export-oriented. Value addition of food products is expected to increase from 8 per cent

to 35 per cent by 2025. Thus this sector is very important for overall growth of India since this sector takes care of farmers and ensures employment for skilled and unskilled / educated and non-educated labor.

I see a huge potential in post-harvest treatment for fruits and vegetables in the coming days. Due to changes in lifestyle and urbanization, the demand for high-quality fruits and vegetable is increasing. Even the demand for ready-to-use fruits and vegetable is increasing. The scope for cut vegetable is quite high due to the growing demand.

Apart from traditional food processing viz. Mango, Banana, Grapes, Sugarcane, Dairy, etc. this sector needs value addition which will give a good payback to the farmers and will also ensure inclusive growth (higher returns to all stakeholders).

India is witnessing a paradigm shift and the following sectors have a huge potential to fuel the growth of food processing in India. These will be the game-changers:

- Nutraceutical industry
- Wine processing
- Pre/Pro biotic Industry
- Packaged water industry
- Ready to eat industry
- Traditional foods processing
- Cut fruit and Vegetable industry
- Post-harvest treatment for fruits
- Export -Brand India
- Food additives
- Food equipment manufacturing

### 3. Challenges

For overall growth of the food processing industry, along with raw material, there are many other inputs which are required.

The biggest challenge is that the food processing sector is dominated by unorganized players who contribute to 80% of the food processing industry (by volume) unlike other sectors viz. Pharma, Automobile and IT where over 90% of the sector is under organized players. There is a conversion of un-organized to organized sectors but we still need to cross quite a distance.

In India 85% of the GSDP comes from service and industry sectors and only 15% is from the Agriculture and Food sector, but 55% of the population is dependent on Agriculture / food sector. If you look at this statistic minutely, 55% sector contributes only 15% in GSDP value and this is mainly due to the lack of processing non value addition. We need to change this scenario and money should go back to the farmers as per their value addition and thus Agriculture / food sector should equally contribute to its size (1:1 ratio) in GSDP. This is possible if we focus properly like many developed countries who have a higher ratio. This will fulfill our objective of “Sabka Sath, Sabka Vikas”.

The main challenges in the Food Processing industry are -

- Unavailability of processable quality and quantity of fruits and vegetables and raw material
- Low productivity of Agri products
- Low land holding per farmer
- Poor processing conversion
- Low technology base / low automation
- Labor-intensive operations
- High seasonality : Input availability
- High operating cost due to small scale operations

These challenges can be overcome by proper planning and focus given to this sector.

### 4. Market Potential

The Food Processing sector is called as Rising-Sun industry due to its inherent potential. In India today Food Processing sector has its own advantages like -

- Stable central government - Decision power
- Separate food processing ministry with able leadership and clear focus
- Good urbanization - due to many reason - market is expanding
- Good consumer purchasing power : Middle class segment is increasing
- Good Market potential - Domestic - husband / wife working need processed food
- New Food safety regulations - Nutraceutical industry is part of ‘Food’
- Good in Agri production
- Good infrastructure / investments
- Good in-flow of FDI in the sector

Let's see how much potential exists in India for the Food Processing market.

In India we have a population of 120 Crore.

Considering 4 members per family - we have a 30 Crore family base in India.

Let's consider each family spending Rs 2500 on food expenses (which includes milk, oil, grains, vegetables, fruits, etc.). Thus an amount of Rs. 75,000 crore / month is spent by India.

Which means we spend around Rs 9,00,000 Crore per year on Food consumption. This is the food market potential in India and these numbers are on basic needs, not included other high valued items. Over all the demand would grow only.

Now the question is what part of this market is catered to by the organized sector, retail sector or non-organized sector. Are we using our resources fully to cater to this market? Do we have the facility to fulfill this demand? Or are we dependent on import (other countries)?

## 5. Some Ideas

### 5.1 Focus on Market - Build quality brands at low-cost product development.

Today India is a big village. Recently the government has announced removal of the APMC Act and this will certainly fuel the trade from farmers to consumers. For export we need to work on supply qualities.

Government and Industry should focus on Market needs and try to meet the demand rather than putting our own production in the Market with low realization.

The focus should be Market backward rather than production forward. If the Market needs seedless Guavas or Oranges we should supply the same (I know it's a long process and will take time, but the Government, Agriculture universities and companies should focus on this) rather than supplying normal Guavas and fetching a lesser price. The best example is of Punjabi dhabas - just because of market demand, today we see the success of the dhaba model all across India

without any intervention from the government. Similarly, a product like paneer makhani has travelled from Punjab to South India. Idlis have travelled from the south to the north. Dhokla has travelled from Gujarat to Kolkatta and Rasagullahas travelled from West Bengal to all over India. But we need standardization of the processes and some help in developing products and brands.

There are some success stories like Grapes (seeded to seedless) and Banana (normal to tissue culture) which have changed the complete economics of the trade. We should follow the same route for other fruits and vegetable. In short, the Mantra is 'Meet the Market demand'.

### 5.2 Focus on Traditional Food processing and Technology

India has a great food map which is spread all across India. Every state has its own food culture and we need to cultivate and nurture this culture to maintain our long heritage. Why not invest R&D efforts to make the traditional food sector more modern with high science? Academia should be given priorities on traditional food R&D and some good innovative techniques should cater to the market. There are many market problems which can be solved by R&D efforts. There are over 300 Food Technology colleges and over 50 Food / Agri universities. They should fuel innovation in the area of Traditional food and bring some economical solutions so that the common man / housewife will get the benefit of such innovation.

Some example where small ideas can bring a big impact -

- Roti-making technology : Roti in pre-packed condition with high quality / long shelf life/low price and hygiene
- Idli / Dosa batter which can stay for 7 days at room temperature
- Dehydration technology at very low cost - This will make 'Ready to serve' products at low cost
- Freezing/Cold storage technology at low cost - This will change the face of farming
- Focus on food equipment design and R&D - Today we have to import most of the equipment. Even for Samosa making we import the technology from abroad.
- Use of traditional packaging materials to balance the environment impact -

### **5.3 Skill development through Food Technology colleges and Universities**

As mentioned earlier, we have over 300 Food technology / Food science colleges all across India. Can we use these colleges as skill development centers? Some basic curriculum can be made by the ministry and we can design training models which will be executed depending on the area and subject. The target audience would be women and unemployed youth. These colleges can be registered with the ministry directly and depending on the training, money would be reimbursed to the center.

### **5.4 Focus on agriculture universities to develop high yielding varieties and processable varieties**

Today India is No. 1 in production in many agricultural commodities still our average yield per acre is the lowest in the world. There are many reasons for this and one of the reasons is inappropriate varieties.

There should be a focus on high-yielding varieties and though it is a long term project, it should start with a definite objective and it can be made successful through the PPP model.

### **5.5 Use of Self-help group infrastructure to meet the local demand**

Today our main objective is to increase the processing percentages and it can be achieved by setting up low-cost processing centers all across India through use of the vast infrastructure of Self-help groups. Even if we pack grain/ fruits/vegetables in these centers in a kind of 'Amma model' of Tamilnadu, it can be a huge success. In countries like South Korea, the entire electronic industry has been spread across self-help groups. Big industries outsource the routine / low technology jobs to different households and literally every house becomes part of the industry. If it can happen for high-tech sectors like electronics, why not for Food processing? Lijjat/Amul model is based on the same principle. We should tap the opportunities of big retailers and let them work with self-help groups on win-win terms.

### **5.6 Standardization of curriculum of all food technology colleges**

Today we have various food technology courses under different names viz. Food tech / Food science / Food nutrition / Food Engineering / Food Bio, etc. Just as in the case of Pharma / Medical / Engineering there is a single standard syllabus, can we create it for Food Technology? The syllabus should focus on industry needs and entrepreneurship development. We could even have various NIFTEM branches in different states. We can bring in IT support and not only the syllabus but activities on research can be tracked with the help of modern IT tools. Research should be focused again on Market demand / Industry demand / Government requirement rather than other reasons. There should not be repetition of research by various universities and a universal research data bank should be available for common reference. We need to include the concept of food safety / Codex in the syllabus.

### **5.7 Special focus on Nutraceutical industry to reduce the burden on the Healthcare industry**

It is said that 'Anna he Puma Brahma'. Today food can be the best of healthcare remedies and we can let medicine be the 'sick care' industry. Preventive healthcare is a big industry and Food could be the best solution through Nutra-ceutical and Ayu-ceutical solutions. Food processing ministry can encourage this sector to bring in some low-cost nutraceutical solutions to take care of some basic healthcare problems like in the areas of Heart / Sugar/ Eye care / Kidney care, etc. There are enough bio-active agents which are known in these areas. We should recognize the nutraceutical industry as a special industry under food processing and this will reduce the burden of the healthcare budget. India has a 5000 years old tradition of Ayurvedic ingredients / botanicals which can be tapped for better use but what we need is low-cost models with effective results.

### **5.8 Special focus on Post-harvest technology with practical solutions**

Post-harvest is a typical topic on the radar of the ministry for the last 10 years, but what we need again is low-cost technologies and easy practical

solutions. E.g. today Calcium Carbide is banned for Mangoes, but we should have technology as simple as calcium carbide to offer to farmers or traders so they also can use the same for fruit ripening. The same is true for cold storage and de-greening chambers. We need a local model of success and it could be a non-electricity dependent model. Recently someone has innovated a 'Matka Fridge' to help farmers in Punjab keep their produce for 4-5 days in this structure without addition of extra cost. We need focus on such low-cost post-harvest solutions so farmers can use it effectively.

### **5.9 Link food processing with tourism industry to attract foreign visitors**

Every state has some special food products. Today Kerala has developed 'Ayurveda spa' and it is successful all across India and has attracted good tourism. Can we develop similar ideas for food? We can link food tourism with the help of Food and Nutrition colleges and again the focus here would be on quality and safety and authenticity.

### **5.10 Brand India - Quality**

We need to make the food processing sector very attractive and of excellent quality to develop brand India. Today the Ministry of food processing is basically focusing on fruit and vegetable processing sectors only. We need to cover all the aspects of food under the umbrella of food processing ministry and need to make a strong 'Brand India' for the international market.

Already Apeda has successfully done it for mangoes / grapes. We can do it for processed food. We also need to make careers in Food Processing more attractive & lucrative and there should be a good talent pool coming into this sector.

### **5.11 Encourage Big food industry to invest in India**

There are various challenges for food processing industry and many companies which are already in the sector helping Indian economy to generate employment and tax collection. We need to give special treatment to these industries and some relaxation in tax and subsidies. Government

should encourage investment in food processing sector and some schemes should be launch to attract new investment. Big companies (Multinational/domestic) should get confidence and get freedom to work in existing regulatory framework. Many states have started single window system to tackle the industry issues and same can be done at central level.

## **6. Conclusion**

Today the Indian food industry is a natural choice for foreign direct investment. Special sectors like Nutraceuticals / Post-harvest sector / Traditional food / Convenience food can bring good value addition to farmers, processors and consumers. This is best for overall growth of the economy. I have given some suggestions which could fuel the growth of the Indian food industry in a holistic way. I have not touched upon other aspects like taxation/ land reforms / subsidies which are anyway part of existing agendas. I am confident that with a focused approach we can achieve 20% growth year on year in the food processing industry in the coming 5 years and by 2018 India will reach a number of 25% processing with GSDP contribution of 40 % from Agri/Food sector. This will definitely bring our slogan true - "Bahujan sukhaya, bahujan hitai" .

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\* Mr. Prabodh Halde is the Head of Product Integrity Management at Marico Ltd.

(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 5, AUGUST., 2014)

## “BIG SWEEP”

# Sweeping changes in Essential Commodities Act on anvil to check food prices

THE consumer affairs department is proposing sweeping changes in the Essential Commodities Act including ban on the trading of essential food-stuffs including onion, potatoes and grains in the futures markets keeping in mind the concern for “food security” and to ensure enough supply of these items.

However, a new provision has been proposed to enable the government to notify from time to time certain items that can be exempted from the ban. Futures trading is seen as one of the key reasons behind disruption in supply chain. “Trading in futures of other agricultural commodities may be permitted,” the proposal says.

The department has also proposed that the amendment Act shall cover all food items -both perishable and non-perishable.

The consumer affairs department is on anvil to check food prices declare the stock quantity available with them.

The proposal that has been put in public domain for suggestions and objections says all dealers and traders would be made to declare the stock quantity available with them. A new clause

has also been proposed for securing the farmers’ interest which says the government may prescribe that all farmer-trader transactions be reported to an authority.

The proposed amendments, much of it drawn from the Narendra Modi Committee report on taming of food prices in 2011, say that violation of any of the provision in the Act will be treated as a cognizable and “non-bailable” offence.

Under the proposed law, the states shall set up special courts with single judge appointed by the high court for speedy trial.

In the proposed amendments in the Prevention of Blackmarketing and Maintenance of Supply of Essential Commodities Act, the department has suggested that the period of preventive detention under the Act should be increased from six months to one year.

*(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 5, AUGUST., 2014))*

## “GOOD SHOW”

# Indian scientists discover low GI rice that’s good for diabetics

GURMATIYA, an almost extinct rice variety with low glycaemic index and cultivated in Central India, could be the answer to the rice woes of diabetic patients, say scientists at the Indira Gandhi Agriculture University (IGAU), India. Dr Girish Chandel, professor at the university’s Plant Molecular Biology and Biotechnology (PMBB) department, has found that Gurmatiya, cultivated in the central state of Chattisgarh, can regulate the release of glucose in the blood, thus controlling sugar

levels in the body. Rice with GI of less than 55 is good for diabetics. Gurmatiya’s GI was found to be lower than that of Madhukar and Swarna varieties of rice developed by International Rice Research Institute in Philippines. However, this variety has low productivity. (Source : Business Empire July 2014 issue).

*(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 5, AUGUST., 2014))*

## “TAKE OFF”

### What is SWIFT?

SWIFT is an industry-owned, 1973 established cooperative through which the financial world conducts its business operations with speed, certainty and confidence. More than 10,000 financial institutions and cooperatives across 200 countries use its services. Over 1250 corporates are using its services worldwide to exchange financial information (payments, securities orders, reporting) with all their financial institutions through one highly secure, standardised communication platform, as opposed to multiple connections. The treasury services offered to corporates by SWIFT include transaction information and cash position sharing with banks and confirmation messages for all money and foreign exchange market derivative products with real time confirmation matching system. Other services offered to corporates include trade finance communication such as LC data electronically with banks, bank account management including reconciliation, handling investigations, e.g. of non-receipt of funds by a beneficiary. SWIFT's authentic 'envelope message' MT 798 enables corporate-to-bank and bank-to-corporate message transmissions covering trade finance such as LCs, standby LCs and guarantees through a single platform instead of accessing individual banks' proprietary platform for such communications. However, this 2008-introduced product has been taken up by just over a dozen corporates globally mainly due to high cost.

SWIFT is offering services in India since 1991. India occupies 25th position in the usage of SWIFT in volume terms. Most banks in India use this service. However, not many corporates in India have subscribed to SWIFT. As per press reports, Reliance Industries in India has joined SWIFT to increase its supply chain efficiency. Reliance Industries will use SWIFT to streamline its banking communications and treasury and end-to-end trade operations, including letters of credit, collections, payments and bank guarantees.

For the first time, SWIFT has launched a domestic service provider in a joint venture with the country's top bankers - Axis Bank, Bank of India, HDFC Bank, ICICI Bank, Punjab National Bank, State Bank of India and Union Bank of India - to create an exclusive platform for domestic transactions. With this, no forex payment is to be made for individual transactions thereafter. The platform will integrate the entire financial messaging requirements which a bank or a corporate may have including NEFT and RTGS.

*(Courtesy : INDIAN ENGINEERING,  
VOL 7, ISSUE 6, SEPT., 2014))*

## “AQUA MARIS”

### IDEAS THAT HOLD WATER

- \* *World population growth is intensifying competition for dwindling water resources.*
- \* *By 2025, two-thirds of the world's population could be living under water-stressed conditions.*
- \* *This features presents examples of how companies in oil- and fat-related industries are increasingly embracing water-saving technologies to cut back on water usage and recycle wastewater*

MANY companies in oil-and fat-related industries are embracing new water-saving technologies to cut back on water usage and recycle wastewater for other purpose.

Their motivations vary, “Water sustainability is very much a geographically driven challenge”, says Eugenia Erlij, director of global marketing at Ashland Water Technologies, a specialty chemicals and equipment company based in Wilmington, Delaware, USA. “Drought-ridden regions are pushing the envelope in terms of water-saving in novations and water reuse”. In contrast such improvements are usually not cost-effective in water-rich regions.

Some companies want to reduce water consumption to save money. And others make changes to comply with increasingly stringent regulations on both water use and the discharge of effluents to the environment.

Novozymes offers enzymes and microorganisms that help customers save water and energy. The company grows bacteria and fungi in large tanks to produce enzymes and other proteins by fermentation. They sell the microorganisms for wastewater treatment and agriculture (for example, bacteria that protect crops from Pests), and enzymes for the household care, food and beverage, textile, and biofuels industries.

Novozymes also sells enzyme blends that can replace some of the surfactants in laundry detergents. “Enzymes are biological catalysts that act like small scissors”, explains Nielsen. “They cut the dirt into pieces and make it easier for surfactants to remove the stains”. The Novozymes blends contain up to eight enzymes, mostly hydrolases, that target different kinds of stains. Enzymes work at lower temperatures than traditional

hot-water washes, reducing energy consumption and carbon dioxide emissions.

Also, enzymes are less toxic to the environment than the surfactants they replace because the enzymes degrade quickly, and they can be used at much lower concentrations than surfactants.

Enzymes can also save water and reduce pollution in the processing of oils and fats. In the degumming process of vegetable oil production, phospholipids are removed from the oil because they adversely affect oil quality and stability. The conventional method involves alkaline degumming, with a number of cleaning steps. “Because enzymes are very specific, they do the process with fewer cleaning steps and thereby save water, energy, and chemicals”, says Nielsen.

In the food industry, an innovative water-saving product called the D-CARBONATOR™ won the International Baking Industry Exposition's B.E.S.T. (Becoming Environmentally Sustainable Together) in Baking Award in 2013. The D-CARBONATOR, developed by ChemxWorks in Del Mar, California, USA, is an appliance used in restaurants and bakeries to remove black carbon buildup from metal and aluminum equipment, such as pots, pans, hood filters, and baking racks. Carbon buildup result when fats, oils, and grease are baked onto metal equipment.

Many manufacturers are striving to maximize the reuse of water within their plants. Companies such as Ashland Water Technologies can help by providing specialty chemicals and equipment for water treatment. Treated water can be used for a variety of purposes, including makeup water for cooling towers, steam production, or cleaning, says Erlij.

“Process optimizing is one way to save water in a manufacturing plant”, says Glen Bowen, platform team launch manager at Ashland Water Technologies. “Our products are focused on minimizing the problems that arise when you start to use water more efficiently”, Cooling towers, with capacities of up to 2,000m<sup>3</sup>, are major consumers of fresh water. This water is recirculated, but over time the quality degrades. Without proper treatment, it could damage equipment or otherwise negatively affect the manufacturing process. Ashland supplies water treatment chemicals that prevent microbiological growth, inorganic scale deposition, and corrosion in cooling tower water.

A dairy that implemented OnGuard technology reduced its wastewater pollution, avoiding over \$ 500,000 in municipal surcharges.

Nalco, an Ecolab company with headquarters in Naperville, Illinois, USA, offers the 3D TRASAR™ technology for cooling water monitoring and optimization .

Similar to the OnGuard / controller, the 3D TRASAR continuously monitors cooling water and adds appropriate chemicals when needed. In 2008, 3D TRASAR technology won the Presidential Green Chemistry Challenge Award, given by the US Environmental Protection Agency.

In oilseed processing plants, water savings can be achieved in three ways: controlling in-plant water use, choosing processes and equipment that minimize water use, and treating wastewater effluent for reuse (Boyer, 2013). Zero or near-zero wastewater discharge is a goal for the industry, and several oilseed processing plants in

North America have installed their own wastewater treatment facilities to meet this goal, Boyer says.

Since in 1996, Fuji Vegetable Oil in Savannah, Georgia, embarked on a water-saving mission. Sixteen years and more than \$ 2 million later, they declared success. Fuji now has a state-of-the-art water treatment plant with zero wastewater discharge. All water used in manufacturing is re-used as cooling water. The facility processes 110-150 m<sup>3</sup> of water per day.

When wastewater enters the treatment plant, it first passes through a grease trap that removes much of the contaminating vegetable oil. From there, the water enters a 230 m<sup>3</sup> equalization tank, which helps ensure a steady flow rate and contaminant load. In an acidulation tank, the pH of the water is lowered to 2, and more oil floats to the top and is removed. Then, in a process called dissolved air flotation, flocculants and coagulants are added, and air is injected in the bottom of the water solution. This causes more oil to rise to the top of the solution, where it is skimmed off.

Finally, the water enters a membrane bioreactor (MBR), which contains microorganisms that ingest and degrade any remaining oil and other contaminants. The water is crystal clear and pretty close to drinkable at this point, and it goes to the cooling tower”, says Baker. “It’s critical for a water treatment plant to have the same type of water and the same amount of water on a routine basis. Also need for optimizing the MBR.

*(Courtesy : SEA NEWS CIRCULAR, VOL XVII, ISSUE 5, AUGUST., 2014))*

## “LOOK OUT”

# Domestic offtake will continue to drive imports of edible oils

INDIA's demand for edible oils has been rising consistently at a compounded annual growth rate of 2.7 per cent in the last three years and around 5.5 per cent in the last five years.

Apart from population growth, another significant factor driving edible oil demand is the increase in disposable income among the growing middle class. Usually, India imports about 60 per cent of its edible demand of 17-18 million tonnes. Its dependence on imported oil hit a record high this year and is expected to post fresh highs in the future.

According to Solvent Extractor's Association data, vegetable oil imports in September increased 21 per cent to 1.05 million tonnes (mt) from the year ago period, after hitting a record at 1.3 mt in August. Of total 1.05 mt of vegetable oils imported in September, edible oils made up 1.02 mt and non-edible oils shipments were 28,853 tonnes against 0.83 mt and 30,062 lakh tonnes in the same period a year ago.

Vegetable oil imports are turning cheaper following the efforts of Indonesia and Malaysia - two of the world's top palm oil producers - to clear their inventories. To curb cheap imports and protect local oilseeds farmers, industry associations have been demanding a rise in the import duty of crude and refined edible oils from current levels. The SEA has been demanding a rise in the import duty of crude and refined edible oils to 10 per cent from 2.5 per cent and in refined vegetable oils to 25 per cent from 10 per cent. Union Minister for Food Ram Vilas Paswan is reported to be examining the in-

dustry demand to raise the import duty on edible oils as oilseeds prices have fallen in the domestic market due to high imports along with arrivals of kharif oilseeds.

However, India depends largely on the imports of edible oil. Due to insufficient production of oilseeds, it imports a significant portion. Oilseeds productivity is still low compared to other producing countries. The main reason for low productivity is drop in oilseeds acreage on account of switch over by farmers to other profitable crops and dependence on rainfall rather than irrigation. Apart from productivity, there has been a paradigm shift in edible oil consumption pattern over the last few years.

Despite the government extending various incentives, the growth in oilseeds production has not been able to bridge the gap between production and consumption of the oilseeds leading to lower availability of raw material for crushing has also resulted into higher dependence on imports, even with the marginal increase in oilseeds production. Soyameal, derived from soyabean is currently not competitive in the export market leading to lower crushing of beans and increasing dependence on imports. In case of palm, zero export duty from Malaysia and Indonesia is leading to fears that more imports are on cards. Hence, domestic consumption is expected to continue driving demand for imported edible oil.

*(Courtesy : SAARC OILS & FATS TODAY, NOVEMBER, 2014))*

## “REALLY”

### Steps government needs to take to revive growth

THE biggest task before the new government is to revive growth that has plummeted to a decade low in the last two years but high fiscal deficit will not allow it to be too extravagant and interest rates cannot be cut as long as inflation remain high. BusinessStar charts out the agenda for new government.

First and foremost thing government should do is to spell out a clear strategy to rein in inflation as high inflation has forced RBI to keep interest rates high, high interest rates have discouraged consumers from buying goods or new homes and one of the reason for corporates not investing. It should release food grains in open market to check inflation and be ready to counter a deficient monsoon. Government should dismantle the APMC act and allow farmers to reach consumers directly.

Second government needs to do is form a clear roadmap for fiscal consolidation. High fiscal deficit has contributed to inflation and current account deficit. Lower fiscal deficit will give RBI room to cut interest rates if inflation falls. It should continue monthly increase in diesel prices to completely eliminate subsidy and do same for kerosene and cooking gas. Roll out GST and direct taxes code

to boost the revenues. Government should use direct cash transfers to better target subsidies. Government needs to improve business environment by easing government laws and policies. Corruption and subsequent backlash has stalled decision making. The poor business environment has undermined the investment. Stalled investment is the biggest reason for decline in growth. It should strengthen the project monitoring group mechanism and give comfort to bureaucracy to encourage decision making.

Another thing government should do is put extra effort on revival of manufacturing. Manufacturing is key to India reaping the demographic dividend, it can cut India's import and push exports. Manufacturing revival will help people move out of agriculture and reduce poverty. Government should give selective and well targeted tax sops to encourage local manufacturing and fast track stalled manufacturing projects. It should give a greater thrust to Delhi-Mumbai industrial corridor and revamp the SEZ policy to make it more dynamic..

*(Courtesy : BUSINESS STAR,  
JUNE 2014)*

# Technology

## “ANY TAKERS”

### Aseptic Packaging: A modernized packaging system

Aseptic packaging deals with the process of filling sterile products in sterile packages or containers in a fully aseptic (sterile) environment. It is a new and modernized packaging system which helps the manufacturers to enlarge their products' shelf-life and supply customers with fresh and juicy food and beverages. The market of aseptic packaging as a whole is operated by the beverage segment, along with the flourishing pharmaceutical industry. The process of aseptic packaging is viewed as a value-addition process rather than a manufacturing process.

The Aseptic Packaging Market benefits from numerous underlying global consumer trends. Trends such as growing pharmaceutical industry, consumer preference towards safer food, and the overall market are also influenced by the growing dairy market. People switched to better-quality and readily-available food as the development in the emerging economies is attributed to the health and wellness trend among the people. There was also a change in the shopping habits of the people due to the growth in disposable income, which is also responsible for the rise in demand.



Basically due to the emerging economies in the region and the climatic conditions in the South-East Asian countries, the Asia-Pacific market is expected to show a steady growth trend. India, China, and Brazil are considered to be the most potential countries for the Aseptic Packaging Market. They are poised to exhibit the fastest growth. The Aseptic Packaging Market controls a number of stakeholders, like raw material producers, suppliers, ingredient processors, distributors, and end-use manufacturers such as food and beverage industries.

## “UNFORGETTABLE”

### Taste the new Orange Oreo creme biscuits

Cadbury's India, a unit of Mondelez International, has introduced Oreo Orange Creme and added one more new flavour to its existing three forms of Vanilla, Choco Creme and Strawberry. The new flavour is a blend of chocolatey cookies along with a fruity orange creme center. This is the fourth launch by the biscuit brand since its inception in 2011 in India. Prices for orange oreo cream will be very reasonable. In every retail outlets across the country, the biscuits will be available for Rs 15 for a pack of 6 unit and Rs 30 for a slug pack of 12 units. Cadbury India runs in five categories - chocolate confectionery, beverages, biscuits, gum, and candy with brands like Cadbury Dairy Milk, Bournvita, 5 Star, Perk, Bournville, Celebrations, Halls, Choclairs, Tang, and Oreo.



## “SUN STROKE”

### Haldiram to make food products with the help of solar energy

In order to reduce the dependency on non-renewable sources of energy, solar solutions, Waaree Energies (solar solutions and products company) has established a solar photovoltaic power plant for Haldiram Foods at the factory premises. All this will enhance the manufacturing process for food products with the help of renewable energy. Waaree Energies Limited has successfully controlled the solar photovoltaic power plant of 1.5 MW. The captive solar power plant generated a record 9,200 units of electricity on the first day of its commissioning itself. This is basically the first kind of solar project authorized by Waaree in the Vidharbha region of Maharashtra. The power generated is directly supplied to the factory for internal consumption. This installation will help Haldiram Foods make food products using renewable energy that reduces its carbon footprint in the country.

*(Courtesy : Business Star, June 2014, Issue No. 06, Vol.25)*